

The London School of Economics and Political Science

**Economic Evaluation of Gender Empowerment Programmes with a
Violence Prevention Focus: Objective Empowerment and
Subjective Wellbeing**

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Declaration

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Abstract

Prevalence of intimate partner violence (IPV) is high the world over, and in sub-Saharan Africa, between 30% and 66% of ever-partnered women aged 15 or over have experienced IPV at least once in their lifetime, and 37% on the African continent. Power imbalance in the household and unequal access to resources are often identified as triggers of violence. Microfinance interventions provide women with access to financial resources as well as soft-skills training (MF-plus). Evidence of microfinance's impact on IPV is still however contradictory, often confined to observational cross-sectional studies, with narrow definitions of IPV, and no clear link with a process of empowerment.

This thesis addresses these limitations by (i) analysing data from the randomised control trials (RCTs) of two microfinance and training interventions in sub-Saharan Africa aimed at reducing IPV; (ii) defining a conceptual framework for the analysis of impact that I term *eudaimonic utility* (EUD) and linking this with empowerment indicators; and (iii) interpreting this evidence with reference to sociological and economic models of IPV.

EUD is the self-actualisation component of psychological measures of wellbeing (WB). I derive EUD from the triangulation of the construct of wellbeing I found in the *milieu* of sub-Saharan African women targeted by one of the interventions, psychological indices of wellbeing, and properties of plural utility functions. It comprises three psychological dimensions: autonomy (deciding for oneself), meaningful relations with others (maintaining mutually supportive and emotionally meaningful relationships) and environmental mastery (ensuring that the external environment is conducive to one's flourishing). For the analysis of intervention impact, I group empowerment indicators on the basis of the factor analysis associations with EUD dimensions.

Impact estimates suggest that women who access MF-plus services gain more control over their own time, experience improvement in proxies of eudaimonia, and experience reduced IPV exposure. Women who trained in negotiation skills in addition to access to financial services experience limited increase in cooperation with their spouses, but no IPV reduction.

A mamma e papá

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List of Abbreviations

A – Autonomy

AEU – Augmented Experience Utility

Alceste - Analyse Lexical par Contexte d'un Ensemble de Segments de Texte

AEJ-AE – American Economic Journal: Applied Economics

APA – American Psychological Association

ATE – Average Treatment Effect

ATT – Average Treatment on the Treated

BRAC – Bangladesh Rural Advancement Committee (now known as BRAC)

CA – Capabilities Approach

CFA – Confirmatory Factor Analysis

CIA – conditional independence assumption

CRT – Cluster-randomised Trial

CTS – Conflict Tactics Scale

DG – Discussion Group

DCH – Descending Hyerarchical Classification

DHS – Demographic and Health Survey

D-i-D – Difference-in-Differences

DM – Decision Making

DR – Dispute Resolution

DRM - day reconstruction method

DV – Domestic Violence

ECU - elementary contextual unit

EFA – Exploratory Factor Analysis

EM – Environmental Mastery

EUD – Eudaimonic Utility

FA – Factor Analysis

FGD – Focus Group Discussion

GBV – Gender Based Violence

GDP – gross domestic product

GPI – Genuine Progress Index

GSOEP – German Socio-Economic Panel Study
HDI – Human Development Index
HITS – Hurt, Insult, Threat, Scream
HU – Hedonic Utility
IMAGE – Intervention with Microfinance for AIDS and Gender Equity
IPV – Intimate Partner Violence
IRC – International Rescue Committee
ITT – Intention-To-Treat
LATE – Local Average Treatment Effect
MCA – multiple correspondence analysis
MF –microfinance
MF-plus –microfinance plus add on training programme (life and/or negotiation skills)
MIMIC – multiple indicators multiple causes
MRwOs – Meaningful Relations with Others
NGO – non-governmental organisation
NGO – Non-Governmental Organisation
NIDS – National Income Dynamics Survey
OLS – Ordinary Least Squares
OR – Odds Ratio
PCA – principal component analysis
PWB – Psychological Wellbeing
PWR – Participatory Wealth Ranking
QoL – Quality of Life
RA – research assistant
RCT – Randomised Control Trial
SALDRU – South African Labour and Development Research Unit
SDGs – sustainable development goals
SDT – Self-Determination Theory
SE – Subjective Empowerment
SEF – Small Enterprise Foundation
SQA – Subjective Quantitative Agency
SWB – Subjective Wellbeing
TC – Transaction Costs
VAW – violence against women
VO – village organisations

VSLA – Village Savings and Loans Association

WB – wellbeing

WHO – World Health Organisation

Introduction

This work investigates how empowerment interventions may reduce women's exposure to intimate partner violence (IPV) by improving their agency and wellbeing. To this aim, it develops an innovative concept of utility – Augmented Experience Utility (AEU) – which marries the hedonic – mood related – and eudaimonic – self-realisation related – aspects of wellbeing. It also presents a first application of the eudaimonic dimensions of this measure to empirical data from two randomised control trials (RCTs) of microfinance (MF) interventions designed to empower women and reduce their exposure to IPV in sub-Saharan Africa.

The contribution of this thesis is threefold: the first is conceptual and lies in the detailed formulation of the aspect of AEU that I call *eudaimonic utility*, or utility of self-realisation; the second is empirical, and lies in the analysis of data from two randomised control trials of two empowerment interventions in sub-Saharan Africa. I establish a bridge between the conceptual and empirical contributions by using the AEU concept to define the underlying factors in the Exploratory Factor Analysis (EFA) of the empowerment indicators that I identify as potential intervention outcomes. Therefore, the selection of indicators reflects both the conceptual framework I introduce, and the way the data relate to it, providing a first test of how far empowerment indicators capture eudaimonic utility. The empirical analysis and comparison of the two empowerment interventions further contribute to developing the evidence base on the efficacy of IPV prevention interventions in developing countries, and sub-Saharan Africa in particular, and seeks to explain patterns of impact through the lens of AEU. The third contribution is methodological, and consists of the novel use I make of mixed methods to address which aspects of psychological wellbeing could usefully inform a concept of utility, how empowerment indicators relate to it, and how a concept of *eudaimonic utility* may help us explain patterns of impact.

Violence Against Women (VAW) is a widespread phenomenon. WHO (2006) suggests that worldwide, 30-60% of ever-partnered women experience violence at the hands of a partner, a stranger or both. Intimate Partner Violence (IPV) is the most common form of violence women suffer, accounting for at least 70% of episodes in various geographical areas worldwide, and for more than 90% in rural areas of Ethiopia and urban areas of Brazil (Garcia-Moreno *et al.* 2006; 2005). Moreover, recent global estimates put lifetime exposure to IPV among women 15 years or older at 30% worldwide [95% Confidence Interval (CI): (27.8%, 32.2%)] (Devries *et al.* 2013b). In Southern sub-Saharan Africa,

lifetime IPV is at 29.67% [95% Confidence Interval (CI): (24.27, 35.04)] (Devries *et al.* 2013b).

The WHO defines IPV as a “behaviour by an intimate partner or ex-partner that causes physical, sexual or psychological harm” and includes “physical aggression, sexual coercion, psychological abuse and controlling behaviours” (WHO 2014). In South Africa, and elsewhere, this is overwhelmingly perpetrated by men against women (Bruce *et al.* 2008; WHO 2014).

According to Norman *et al.*’s estimates computed with data from previous studies, past year IPV prevalence in South Africa is between 9.5% in rural areas (computed using the dataset for Jewkes *et al.* 2003), and 27% at antenatal clinics in urban settings (computed using the dataset for Dunkle *et al.* 2004). Based on these estimates, Norman *et al.* show that IPV accounts for 32% of the total burden of disease imputed to interpersonal violence in South Africa for females (Norman *et al.* 2010); past year exposure to IPV generates a burden of 0.12 Disability-Adjusted Life Years (DALYs) – a measure of both years of life lived with disability and “years of life lost due to premature mortality” (Murray *et al.* 2012) – per woman on average¹.

To capture the full impact of IPV, and in order to design effective prevention interventions, an understanding of the dimensions of wellbeing conceptually related to empowerment is necessary. IPV is associated with poor emotional wellbeing in both victim and perpetrator, both preceding and following exposure to violence in various socio-economic contexts (Devries *et al.* 2013a; Ellsberg *et al.* 2008; Ferrari *et al.* 2016; Hegarty *et al.* 2013; Howard *et al.* 2010; Ludermir *et al.* 2008; Taft *et al.* 2009; Trevillion *et al.* 2012). In their systematic review and meta-analysis of longitudinal studies, Devries *et al.* report increased likelihood of incident depression and suicide globally following IPV (Devries *et al.* 2013a). Adverse psychological outcomes constitute a large portion of the burden of disease associated with IPV and violence (Devries *et al.* 2013b; Heise *et al.* 1994; Stockl and Devries 2013), accounting for 16% of the burden in South Africa (Norman *et al.* 2010).

Moreover, IPV is associated with an unequal balance of power in the relationship (Jewkes *et al.* 2002; Jewkes *et al.* 2010; Ludermir *et al.* 2008). As further illustrated in chapter 1, this imbalance is underpinned by norms on gender roles (Abramsky *et al.* 2011) and negative constructs of dominant masculinity (Morrell *et al.* 2012; Wood *et al.* 2007) that

¹ Author’s calculations on updated data (Norman, 2010) following methods in Jan *et al.*, 2010.

normalise violence in the home and may lead to situations of “coercive control”, that deprive the woman of her right to self-determination (Stark, 2007). However, no consensus exists across disciplines on factors associated with IPV and, in economics, models of intra-household resource allocation hold that an increase in women’s income will decrease abuse due to the improved perspectives women would enjoy if they were to leave the union, making their bargaining position stronger and household choices more likely to align to hers. Microfinance interventions that attempt to redress this balance have so far recorded mixed results – in some cases associated with greater risk of violence (Koenig *et al.* 2003) and in others with a lower risk (Schuler *et al.* 1996), depending on context (Vyas and Watts 2009).

In addition, negative states of affect may be the consequence of or the enabling factor for IPV (Devries *et al.* 2013a). It is conceivable that economic difficulties, by causing cognitive load and psychological distress increase the likelihood of IPV exposure for women. Moreover, women who are exposed to severe forms of IPV are more likely to experience post-traumatic stress disorder and depression (Peltzer *et al.* 2013; Ferrari *et al.* 2016). However, there is also evidence to suggest that IPV affects women’s quality of life (QoL) in the social and environmental dimensions, regardless of the type or severity of the abuse (Hegarty *et al.* 2013b). In light of this, whilst a useful indication that something may be amiss, indices of hedonic wellbeing (WB) or life satisfaction (LS) frequently adopted in economics may be insufficient to generate clear policy guidance. For example, they have been shown to yield contradictory results on the wellbeing impact of expected adverse health shocks: while still negatively impacting affect, such shocks seem not to affect life satisfaction in a South African sample, in a study on the impact of HIV deaths on family members (Deaton *et al.* 2009). This may be because, by the time long-expected AIDS deaths occur, family members may have had some time to adjust to the adverse socio-economic consequences of the illness and death. Their global LS may thus have absorbed the shock and reversed to its mean values, and may therefore respond differently compared to a measure of affect (Graetz 1991). This is a possible explanation because in the South African socio-economic groups most affected by the epidemic, life satisfaction is more likely correlated with expectations regarding one’s role in society than with happiness, insofar as the perception of self is predominantly interdependent (Suh *et al.* 1998), as I discuss below.

This thesis responds to these challenges by introducing a concept of utility rooted in dimensions of self-actualisation – i.e. the realisation of one’s own potential (Ryff 1989;

Ryff and Singer 1998; Waterman 2008) – that clearly encompasses a social and an environmental dimension. Eudaimonic utility takes into account relations with others, and captures people's cognitive and behavioural choices as explained by their relational self – i.e. the sets of dyadic relations (with kin, peers, community) the individual continuously negotiates (Adams 2005) and which constitute the primary motivations for her actions (Suh *et al.* 1998; Triandis *et al.* 1988).

Autonomy – i.e. the ability to decide for oneself and act upon one's inner (or peer-group based) beliefs (Alkire 2005; Ryff 1989; Sen 1985) – is often, in its individuated form (Ryan and Deci 2001), unequivocally equated to agency (Alkire 2005; Sen 1985). This thesis investigates whether, especially in *milieux* and areas of decision-making where relational ties play a role, there is more to agency than individuated autonomy. In other words, it investigates whether eudaimonic utility also subsumes a measure of relations with others – the ability to (form and) maintain meaningful relations with others (Ryff 1989) – that may be impacted by changes in the views on gender roles often targeted by empowerment interventions; as well as a measure of environmental mastery – the ability to create an environment conducive to one's flourishing, which may both capture women's ability to face and solve challenges to their own development, or their partner's (or others') attempts at curbing this process by exerting various forms of control. More generally, it investigates whether this measure is inherently relational, i.e. whether all three of these dimensions may be expressed and measured in both an individuated and a relational mode.

In essence, current evidence suggests IPV prevalence is considerable, and presents a vast array of costly consequences for victims and for society (Devries *et al.* 2013a; Devries *et al.* 2013b; Walby 2004). Key policy levers around IPV hinge on effectively redressing unequal power relations in the household (Schuler *et al.* 1996) in both material (objective empowerment) (Aizer 2010) and psycho-social (subjective empowerment or SE) terms (Gupta *et al.* 2013). This would provide women with both greater access to resources, and improved skills and confidence to manage resources and negotiate their allocation effectively. Moreover, improved eudaimonic wellbeing may act both as prevention and coping mechanism in relation to episodes of domestic violence and mood-related sequelae. This would not only reduce risk of exposure but also mitigate consequences, with improved overall wellbeing for survivors and reduced costs to society from IPV.

To address these issues, this work tackles three key research questions. The first is conceptual, and asks whether current theoretical socio-psychological measures of

wellbeing adequately reflect the construct of wellbeing that pertains to *milieux* that are relational rather than individualist or collectivist; and how such measures may be refined to capture relational, in addition to individuated, constructs. It addresses this question from an emic perspective – i.e. by exploring the construct of WB of rural South African women, the *milieu* it is chiefly concerned with, through a series of focus group discussions (FGDs). FGDs were designed to encourage exchanges between participants on local perceptions of wellbeing that would provide material for the identification of the structure of this social construct (Adams 2005; Berry 1969). It derives the underlying social construct of WB from the statistical analysis of the FGD transcripts (Benzécri 1992; Bourdieu 1984; Lahlou 2008). It finds that in this *milieu* the construct of WB has a predominantly relational nature – i.e. is defined over women's roles in a series of direct dyadic interactions that provide the overarching motivation for their choices and actions. This is different from the achievement of personal goals, one of the key motives informing individuated agents' actions, which are more strongly associated with individuated constructs of WB (Brewer and Gardner 1996; Suh *et al.* 1998), and is consistent with recent findings in India where White *et al.* confirmed a seven-dimensional structure for their construct of Inner Wellbeing, which includes a factor capturing social connections and one capturing close relationships (White *et al.* 2014); as well as with related work focusing on developing countries (Coulthard 2012; Deneulin and McGregor 2010). This thesis further finds that the construct of autonomy is relational, as previously posited in the development and the socio-psychological literature (Ryan and Deci 2000), and supported by empirical findings in other developing countries (Camfield *et al.* 2006).

The second question is also conceptual, and builds on the findings on the emic WB construct of rural South African women to identify the wellbeing dimensions that substantiate a utility function designed to capture relational constructs and eudaimonic dimensions related to wellbeing. This function should provide information on the wellbeing impact of the wealth of empowerment indicators widely used for policy evaluation. I call this function eudaimonic utility (EUD), to signify its roots in Aristotle's concept of self-realisation (Ross 1925) and related contemporary socio-psychological thought (Ryff and Singer 1998; Waterman 1990). This question has an empirical counterpart in the test I conduct – with exploratory factor analysis (EFA) – of how accurately the three components of EUD explain the classic empowerment indicators used for the evaluations of the two interventions I discuss. This exercise is also the link between the conceptual and the empirical aspects of this work, and defines how the conceptual framework contributes to the interpretation of the data.

The third question is empirical, and investigates whether MF-plus interventions for the prevention of IPV do reduce the prevalence of IPV, and whether they also achieve other empowerment outcomes; this question is tackled with data from two randomised-control trials of interventions for the prevention of IPV in sub-Saharan Africa, and related to previous findings in the economics and public health literature on IPV through the lens of eudaimonic utility.

The remainder of the chapter introduces some key definitions and sets out the structure of the thesis.

Definitions of wellbeing terms

This thesis discusses various concepts of wellbeing. To help with clarity, this section contains the definition of key concepts.

Wellbeing: an individual's perception of living well, either according to a metric of pleasure, cognitive contentment, or fulfilment and self-realisation. In the remainder of this work, this term is used to indicate the most general acceptation of wellbeing, encompassing both subjective and psychological wellbeing.

Subjective Wellbeing (SWB): individuals' self-reported wellbeing as measured by numerical scales, and based on global evaluations of their circumstances. SWB has both a cognitive and an affective component. The cognitive component is captured by global life satisfaction – as well as satisfaction with specific domains; the affective component by the two dimensions of positive and negative affect (or emotions), in response to life events. SWB also includes basic feelings, such as engagement (Diener *et al.* 2013, 153), but this aspect is not of direct interest to this work.

Life Satisfaction: one of the three main dimensions of SWB, it captures individuals' cognitive assessment of their lives and how content they feel with it. It is a synthetic measure of wellbeing because it expresses an evaluation of several domains (one's income, marital status, employment status, etc., depending on the individual) with only one number, i.e. in one dimension.

Mood/Affect: a general term to indicate aspects of SWB specifically to do with positive (e.g., pleasant, happy, joyful) and negative (e.g., unpleasant, unhappy, distressed, apathetic) emotions. It captures the two other dimensions of SWB (positive and negative affect). Kahneman provides a graphical description of affect as a two-dimensional space defined by the two dimensions of arousal and pleasure (or valence – i.e. good/bad emotion): high pleasure (or positive valence) and high arousal bring us to a state of 'joyful

enthusiasm”; low arousal and low pleasure to a state of “apathetic depression” (Kahneman 2000, 11).

Happiness: the emotion of pleasure, or a state of affect (or mood) characterised by pleasure and either low or high states of arousal. Further, this is the quantity that Kahneman identifies as the candidate for his function of hedonic utility: “happiness is the temporal distribution of experienced affect” (Kahneman 2000, p. 12) and, further down, happiness is defined as “an index of the valence and intensity of current experience, which will be sensitive to the many kinds of pleasure and anguish in people's lives: moods of contentment or misery, feelings of pride or regret, aesthetic thrills, experiences of 'flow', worrying thoughts and physical pleasures.” (Kahneman 2000, p. 14).

Hedonia: defined by Aristotle as happiness as the experience of pleasure and absence of pain, this is the noun used to indicate a positive state of affect. Kahneman uses the adjectives hedonic and affective interchangeably (Kahneman 2000, p. 2), and implies that hedonia and happiness capture the same set of emotions. Measures with a strong hedonic component (e.g., “How happy are you, all things considered?”) have often been used to measure SWB in the social sciences; however SWB as a construct also contains cognitive evaluations of life satisfaction (Deci and Ryan 2008).

Eudaimonia: state of wellbeing that reacts (is sensitive) to experiences of self-fulfilment and realisation. Its etymological root is in the greek words *eu* – good – and *daimon* – “true self or potential”, which implies an idea of perfection or excellence. In Aristotle's original definition it had an objective nature, and was defined as “activity in accordance with one's daimon” (Waterman 1990, p. 40). However, in contemporary psychology, eudaimonia is defined as the perception, or cognitive-affective psychological state that individuals experience in situations where they are expressing their potential and feel fulfilled, and not in situations of passive enjoyment (Ryff 1989; Waterman 1990).

Psychological Wellbeing (PWB): an individual's assessment of their own circumstances in terms of the degree of engagement and fulfilment they experience (Keyes *et al.* 2002). It has a long tradition in humanist psychology, and has been codified by Ryff in a six-dimensional index, comprising:

- i. autonomy, or the ability to identify goal and feeling entitled to pursue and effectively do so;
- ii. positive relations with others, or the ability to establish and maintain warm and trusting relationships with others;

- iii. environmental mastery, the ability to define an environment conducive to one's own development, and sensitive to one's circumstances;
- iv. self-acceptance, or the ability to like oneself despite one's limitations;
- v. purpose in life, or the ability to identify and pursue long term goals that provide meaning and intentionality to one's life;
- vi. personal growth, or the ability to constantly develop and change as a consequence of life experiences.

I use Ryff's PWB index as the starting point to identify the concept of subjective empowerment I propose to substantiate the eudaimonic utility function, complementary to Kahneman's hedonic utility function. Importantly for this work, SWB and PWB, though distinct, are not completely separate: Keyes *et al.* (2002) show that PWB and SWB overlap over at least two dimensions and, in some models, over three: positive relations with others, environmental mastery and self-acceptance. Two of these are included in the subjective empowerment index I isolate from PWB. Waterman notes that PWB can be attained in the absence of SWB or hedonia (e.g., when one works on a difficult task and experiences a sense of engagement and/or purpose, but is not exactly in a state of enjoyment), but that positive hedonic states can also be experienced in the absence of positive eudaimonic states (e.g., when eating an ice-cream, or watching TV). This distinction is conceptually important, and has implications in terms of what we may want to measure to inform policy making; however, many scholars concur, and show, that the associations between the two types of measures are strong (Keyes *et al.* 2002; Clark 2016).

Subjective Empowerment: a concept first introduced by Diener and Biswas-Diener as a subset of SWB that reacted to changes in individuals' empowerment (Diener and Biswas-Diener 2005), it is developed in this work in the form of an index of wellbeing that straddles PWB and SWB. It is characterised by cognitive-affective states that react to domains of autonomy, competence and relatedness (Ryan and Deci 2000). It is three-dimensional, based on Ryff's PWB index (Ryff 1989) and inclusive of dimensions that overlap with SWB, namely environmental mastery and, to some extent, relations with others (Keyes *et al.* 2002). It is captured by autonomy, environmental mastery, and meaningful relations with others.

(Psychological) Dimension: a specific component of any wellbeing measure. This is a uni-dimensional (by definition) subjective index – in turn measured by a number of items; or, in abstract terms a concept (e.g., autonomy in PWB, or positive affect in SWB).

(Quality of life) Domain: this is an objective aspect of life that may (or may not) have repercussions on one or more dimensions of either PWB or SWB (e.g., decision making authority in economic and financial decisions in the household).

Items: in psychological measures, items seek to capture the psychological impact of relevant life-domains.

Structure of this Work

The remainder of the work is organised as follows: Chapter 1 presents an overview of the relevant debates: it first engages with the debate in psychology on the two constructs of wellbeing and of self, homing in on the concepts of psychological wellbeing and relational self-construal, and then illustrates how I propose to bring these insights to bear on the debate in economics. It then moves to the theoretical debate on the mechanisms that underlie the phenomenon of intimate partner violence, from the perspective of sociology and gender studies, with a specific focus on sub-Saharan Africa, and South Africa in particular, where a considerable body of literature has made important contributions to the understanding of IPV in relation to negative forms of dominant masculinity. It also presents evidence on the epidemiology of IPV in South Africa and, when available, in Burundi. Finally, it synthesises findings from models of intra-household allocation of resources, and empirical evidence on interventions for the prevention of IPV and for women's empowerment through access to financial services, from the fields of public health and economics, respectively.

Chapter 2 presents the methodologies used for the purposes of this thesis: an introduction to the broader philosophical framework of this work justifies the use of both quantitative and qualitative information for the analysis of a policy issue. The statistical methodology for the analysis of the qualitative data follows, with a discussion of its limitations. The quantitative methods section contains an illustration of the different estimation procedures, and their relative merits. Finally, conclusions illustrating the benefits of this integrated methodology for this and future studies are drawn.

Chapter 3 reports my qualitative investigations into rural South African women's construct of wellbeing. Chapter 4 introduces the concept of eudaimonic utility and identifies the relevant socio-psychological dimensions that substantiate it, engaging with the philosophical literature on utility, with the socio-psychological literature on subjective

wellbeing (SWB) and psychological wellbeing (PWB), and with notions of power widely used in the empowerment literature. Chapter 5 connects the conceptual discussion in Chapter 4 and the empirical analysis in Chapters 5 and 6: it performs exploratory factor analysis (EFA) on the empowerment indicators used for the evaluation of the interventions, and discusses how they capture the underlying construct of eudaimonic utility. This analysis generates three synthetic indicators used as proxies for the latent dimensions of eudaimonic utility and provides the framework for the discussion of results in the empirical chapters.

Chapters 6 and 7 present results from the evaluation of the two interventions investigated as part of this thesis. They discuss the evidence in relation to the extant debate on intimate partner violence in economics, sociology, and public health. Using the eudaimonic utility framework in conjunction with intra-household models of resource allocation suggests that the development of independent autonomy in South Africa takes the household to a separate-spheres non-cooperative equilibrium (Anderson and Eswaran 2009; Pollak 2005) with a sharp reduction in violence.

The Conclusion draws the direct implications at a conceptual, methodological and policy level that ensue from this thesis, and suggests how these may be taken forward. It reminds the reader of this thesis' original questions, and highlights key findings of theoretical and empirical relevance, contextualising these in relation to the happiness economics literature, and the empowerment and domestic violence research in economics and public health, respectively. It also draws the reader's attention to the benefits of a mixed methods approach, illustrating how the different methods and types of information complement each other in this thesis, and how the conclusions drawn are informed by this complementarity.

In addition, Appendix 1 describes the chronology of the interventions and my involvement therein. Appendices 2 and 3 report the methods and results for the matching estimates on the IMAGE data. Appendices 4 and 5 contain summary tables that report key characteristics of the studies cited in Chapters 1, 6 and 7, for the reader's reference.

Chapter 1 – Current Debates in Psychology, Sociology, Epidemiology and Economics on Wellbeing, Intimate Partner Violence and Empowerment

This chapter sets the conceptual framework for the thesis. It presents a review of debates in social psychology and economics on measures of wellbeing, and a review of debates on the social and behavioural nature of IPV, supported by relevant epidemiological data from South Africa and Burundi.

The first review investigates how socio-psychological concepts could be applied to current wellbeing research in economics. It proposes the isolation of a multidimensional concept of wellbeing extracted from existing formulations in social-psychology. The dimensions are selected based on their potential relevance to the evaluation of policies aimed at improving individuals' socio-economic conditions. Their relevance is determined by bringing an *emic* concept of wellbeing recovered from the exploratory analysis of narratives around wellbeing in a *milieu* of potential and actual policy beneficiaries to bear on pre-existing measures of wellbeing formulated and predominantly used in industrialised countries (Wissing 2014; White *et al.* 2014).

The second review presents current conceptualisations of intimate partner violence and gender norms in sociological and public health literature both globally and with specific reference to South Africa, and relates these to extant epidemiological data on IPV in both South Africa and Burundi. The aim of this review is threefold. First, to identify theoretical concepts that contribute to an understanding of patterns that sustain and justify abusive relationships; second how such concepts have been translated to understand intimate partner violence in specific sub-Saharan African contexts, and, third, investigate whether these interpretations are borne out by available data on prevalence.

The two reviews outline the two conceptual aspects of the central research question of this work. They aim to (i) define the psycho-social and economic nature of the policy problem and (ii) how to evaluate whether policy interventions tackle the psychological, as well as the economic and social aspects of the problem. The aim of the chapter is to arrive at a formulation of an operational wellbeing concept for the evaluation of socio-economic policies that reflects the relevant dimensions of the socio-economic policy issue this thesis is concerned with, namely IPV, as well as other problems that present similar socio-economic dimensions, if not characteristics.

Relational Self-Construal and Wellbeing Measures in Economics

Recent research in economics investigates how indices of life satisfaction and happiness relate to individuals' socio-economic characteristics and outcomes (Blanchflower and Oswald 2004; Di Tella *et al.* 2001; Easterlin 1974; Oswald 1997; Powdthavee 2004, 2006). Cross-sectional and large-n longitudinal studies in economics find that connectedness and wellbeing are associated (Helliwell and Putnam 2005) and that the relationship between happiness and income is mediated by interpersonal comparisons (Blanchflower and Oswald 2004; Luttmer 2005), suggesting that a relational view of the self is both directly and indirectly implicated in the definition of a person's wellbeing. This work contributes to the literature through the explicit introduction of relational dimensions in the utility function and the multidimensional eudaimonic component by isolating the conceptual pathways through which a relational view of the self influences utility. So, for example, the introduction of the dimension of meaningful relations with others could measure whether it is the enjoyment of others' company that captures the direct impact of relationships, or networks, on wellbeing or the perception of reciprocal trust (Ryff 1989; Abbott *et al.* 2010); it would also disentangle the impact of relative change in income on relational aspects of the self such as status (Markus and Kitayama 1991), closer to eudaimonia, as opposed to its generalised impact on happiness, mostly captured by mood.

My first research question investigates how psychologically-substantiated utility measures may be expanded to reflect the construct of wellbeing, and eudaimonia in particular, among *milieux* with a predominantly relational view of the self. A relational self-construal is one where the self is defined by a series of personal dyadic relationships, "and the networks of interpersonal connections via the extension of these dyadic relationships" (Brewer and Chen 2007). It is likely to be very salient for the women this thesis is concerned with, who grow up in extended family structures (Mönnig 1967), become part of female groups of peers as they become adolescents (Cock 1980; Mönnig 1967), and form alliances with other women as adults (Bozzoli 1990). Relational self-construal differs from collective self-construal in that it involves personalised connections with the members of the group(s) the individual maintains, in contrast to the connection with a symbolic group that does not necessarily require personal acquaintance, but rather the acknowledgement of "shared symbols and cognitive representations" (Brewer and Chen 2007, p.137). An individuated self-construal implies that the individual sees herself as separate from others and pursues independence and independent autonomy from them. However, these different views of the self are not mutually exclusive, and rather balanced

to attain both individuated expression and social cohesion in different social contexts. In particular, Brewer and Chen hold that while one of the three modes of perception of the self may be predominant in a given social *milieu*, all three are generally constitutive of self-perception in any *milieu*, albeit with varying degrees of salience. In turn, this implies that even in predominantly individuated *milieux*, relational self-construal would govern the way an individual perceives herself and others in very close, small group contexts, such as the family or small groups engaged in joint endeavours. Thus, the relevance of relational self-construal to the concept of utility is not confined to predominantly relational groups, but is rather universal, and its relevance more determined by the nature of the socio-economic phenomenon at stake, rather than the cultural context where the phenomenon is observed (Brewer and Chen 2007).

While for predominantly individuated *milieux* happiness is highly correlated to life satisfaction (LS), and SWB is largely determined by intra-individual experiences to do with feelings and mood, in *milieux* with a relational view of the self, SWB is more closely related to the person's role-relationships with others (Brewer and Chen 2007; Markus and Kitayama 1991; Suh *et al.* 1998), and a measure of happiness would be inadequate to capture their overall wellbeing. A relational view of the self also has implications for autonomy, another one of the three dimensions of eudaimonic wellbeing. While persons with an individuated self-perception tend to attribute their achievements to their own internal characteristics, and to want to assert themselves over others, persons with an interdependent self-construal tend to attribute merit for achievements to the group and to find the motivation for achieving in fitting into the group (Brewer and Chen 2007; Markus and Kitayama 1991; Markus *et al.* 2006). In turn, this implies a relational form of autonomy (Devine *et al.* 2008; Ryan and Deci 2001) where the laws that govern action are those of the group, and the empowerment of others in the group becomes a key component in the individual's empowerment (Markus and Kitayama 1991), because it becomes the way for the individual to remain part of the group. Self-assertion would instead separate the individual from the group, resulting in dis-empowerment from a relational perspective.

This in turn would suggest that co-operative rather than independent decision-making is the preferred mode of decision-related autonomy in relational *milieux*. Socio-psychological theory suggests that persons with a relational view of the self tend to negotiate relative positions to attain and maintain harmony within the group (Brewer and Chen 2007; Markus and Kitayama 1991). This may have negative implications where the

group is structured around role-relationships that are disempowering for some – such as the case of marital relationships where the balance of power is strongly skewed in favour of the husband (Camfield *et al.* 2006); but can be harnessed to foster empowerment through groups of peers, for example, such as the women’s groups that form the basis of MF organisations (Camfield *et al.* 2006; Schuler *et al.* 1996). Understanding relational dynamics is therefore important in understanding the mechanisms of empowerment and its wellbeing utility repercussions.

The literature on trans-cultural concepts of SWB has so far mostly focused on the dichotomy between the West – namely the US – and the Far East – namely Japan – (Kitayama and Markus 2000; Markus and Kitayama 1991) and has investigated how the perception of self as individuated *vs* collective informs these conceptualisations of wellbeing (Brewer and Chen 2007; Markus and Kitayama 1991). The constructs of SWB – related to ideas of life satisfaction and happiness – and related PWB – more closely related to an idea of empowerment and explicitly inspired by Aristotle’s concept of eudaimonia (Waterman 2008) – have not yet been investigated as such among rural South African women, to my knowledge, so that prior to assessing whether interventions have a positive impact on their wellbeing, I investigate the contours of their wellbeing.

The following paragraphs discuss the debate in the current economics literature based on SWB indices and illustrate the contribution multidimensional measures of SWB and PWB could make to populate the abstract concept of subjective empowerment Diener and Biswas-Diener (2005) theorised so that it may serve as the psychological substantiation eudaimonic utility.

Economics: From Happiness to Self-fulfilment

Contrary to current literature in economics that focuses on synthetic indices of SWB as the underpinning of uni-dimensional utility measures, this work explores different psychological dimensions of eudaimonic wellbeing as potential foundations of plural utility measures. In so doing, it isolates the concept of subjective empowerment, a sub-index of WB that brings together insights from both the SWB and PWB intellectual traditions (Keyes *et al.* 2002; Waterman 2008), to overcome current limitations of synthetic indices for the evaluation of socio-economic policy-making.

SWB is a complex construct, and is generally measured in economics with measures of life satisfaction whose sensitivity to various aspects of policy relevance are investigated in terms of statistical associations, generally within a regression framework (Blanchflower and Oswald 2004; Easterlin 1974; Pezzini 2005; Powdthavee 2004).

Happiness economics favours the application of SWB measures to policy evaluation, in an attempt to address the shortcomings of neo-classical measures of impact, and complement these with a measure that not only puts meaning back into the utility function, but also allows for cross-sectoral comparisons in policy impact by providing a standard measurement unit (Dolan and White 2007).

However, synthetic measures of SWB do not distinguish between different dimensions of SWB itself that may exhibit different responses to the same policy (Deaton *et al.* 2009; Graetz 1991; Kahneman and Deaton 2010) and may thus fail to generate clear policy recommendations. The interchangeable use of measures of life satisfaction – global measures of wellbeing that, by assessing life as a whole, may also conflate aspects of mood and self-fulfilment – and happiness – i.e. *hedonia* or mood – further weakens the evidence base this literature attempts to build: these are, in fact, different constructs and do not provide consistent evidence (Bruni 2010).

Contributions to the economics literature acknowledge this, and suggest that measures of life satisfaction and indicators of mood react differently to the same events. For example, Deaton *et al.* (Yusuf *et al.* 2009) find that adverse shocks that had long been foreseen negatively impact affect, while having no impact on a synthetic measure of life satisfaction; he further finds (Kahneman and Deaton 2010) that mood indicators stop responding to rises in income past a certain threshold – confirming findings from the literature on subjective wellbeing of the past 40 years (Blanchflower and Oswald 2004; Easterlin 1974; Oswald 1997). However, he also finds that measures of life satisfaction continue to rise as income does, capturing the fact that as the amount of money at one's disposal increases, so does one's perception of one's own ability to accomplish what one wishes (Kahneman and Deaton 2010). This contradictory body of evidence seems to suggest that each measure captures a different construct.

Well-established findings in social psychology further support the hypothesis that both SWB (Argyle 1999; Goldberg 1972) and PWB are multidimensional concepts (Ryff 1989). In addition, though distinct, empirical investigations suggest they partly overlap. In an exploratory study of the structures of psychological and subjective wellbeing, Keyes *et al.* interrogate data from a nationally representative sample of 3,032 US citizens aged between 25 and 74. They illustrate that the three-dimensional measure of SWB (LS, positive and negative affect) and the six-dimensional measure of PWB overlap, suggesting that the two concepts, albeit distinct, are not necessarily completely separate or orthogonal to one another. In their exploratory analysis positive relations with others,

environmental mastery and self-acceptance overlap, suggesting that both the relational and aspects of control matter across the wellbeing spectrum. Notably, overlapping is not confirmed for the relational dimension in subsequent factor analyses (Keyes *et al.* 2002); and the question arises whether this would be different in a relational *milieu* such as South Africa, where hedonic and eudaimonic overlaps have also been found (Khumalo *et al.* 2011)

In addition, the 12-item General Health Questionnaire (GHQ), a measure of psychiatric distress features frequently in the economics literature on wellbeing (Clark and Oswald 1994; Cornaglia *et al.* 2015; Gardner and Oswald 2007; McCulloch 2001; Oswald 1997). It is conceptualised by Oswald as a measure of disutility and considered very reliable (Argyle 1999; Oswald 1997). The GHQ-12 was originally designed by Goldberg for use as a uni-dimensional index (Goldberg 1972). However, investigations into its cross-cultural validity factor structure have frequently confirmed the three-factor structure originally identified by Graetz (Graetz 1991), encompassing anxiety/depression, social dysfunction and loss of confidence (Gao *et al.* 2004; Hankins 2008; Kilic *et al.* 1997; Penninkilampi-Kerola *et al.* 2006; Sanchez-Lopez and Dresch 2008). This structure further supports the hypothesis that measures of SWB, of which the GHQ-12 is one, can overlap with measures of PWB. Further, Graetz's seminal work showed how the anxiety and the social dysfunction dimensions responded differently to the shock of unemployment in more versus less educated people, and how the lack of difference in the aggregate measure between the two groups masked these changes in opposite direction. This suggests that global measures of wellbeing, by capturing a variety of factors, may obliterate specific wellbeing effect that may nevertheless be relevant for policy (Graetz 1991). In a similar vein, the study in Turkey (Kilic *et al.* 1997) found that women recorded an additional relational factor compared to men, suggesting a different wellbeing structure between genders that would not be captured by a unidimensional measure. Similarly, Cornaglia *et al.* in the UK find that in young girls the association between social dysfunction and educational performance is important for girls, but not for boys (Cornaglia *et al.* 2015). Both studies suggest that the relational dimension may be more relevant for women.

In addition, the happiness question included in the index, "have you recently been feeling reasonably happy, all thing considered?", tends to load on the anxiety/depression factor in individuated societies (Graetz 1991), and on the social dysfunction dimension in societies that have a more relational or collective make up (Gao *et al.* 2004; Sanchez-

Lopez and Dresch 2008). Though this is an empirical regularity that would need further testing, it is interesting to note that the overall evaluation of wellbeing, when coming after a series of questions that have primed both an individuated and a relational/collective view of the self, seems to be associated with dimensions found to be of greater relevance to the wellbeing of each respective self-construal: affect for the individuated, and social functioning for the relational/collective (Suh *et al.* 1998; Wissing and Temane 2008).

Moreover, *hedonia* and *eudaimonia* – or self-realisation – are different constructs (Ryff and Keyes 1995; Waterman 2008), as are life satisfaction and happiness (Keyes *et al.* 2010; Keyes *et al.* 2002). Consistent with this, LS and happiness will yield non-comparable conclusions if used interchangeably (Kahneman and Deaton 2010; Bruni 2010). This discrepancy may be exacerbated in relational *milieux*, where life satisfaction is more likely to reflect role relationships than hedonic wellbeing (Suh *et al.* 1998), as also just suggested in relation to the GHQ-12.

This lends support to the idea that a multidimensional index of wellbeing as the basis of a multidimensional utility function would yield clearer policy insights and prescriptions if it distinguished between hedonia and eudaimonia, reflecting the changing loci over which the “good life” across cultures and socio-economic *milieux* is defined (Suh *et al.* 1998), and the variety of wellbeing constructs that exist in both individuated and relational contexts (White *et al.* 2014).

Sociological Theories of Power, and the concept of Masculinity in Gender Studies and Public Health in South Africa: Understanding the phenomenon of IPV

A long tradition in sociological, especially feminist, research on IPV focuses on power dynamics and theories of control to understand how violence is justified by patriarchal institutions that allow men to use violence to control “their women” (Johnson and Ferraro 2000); similar theories are advanced in relation to the South African context, as elaborated further below (Morrell *et al.* 2013). Sociological research highlights the role of structure – i.e. institutions and predefined roles – in perpetuating and justifying patterns of violence against women. The structure is often identified with the patriarchal family and related institutions which play a key role in perpetuating gender norms that concentrate power in the hands of men. Insofar as this perspective assumes one centralised decision-maker, providing no explanation of the negotiation process that may occur within the household to arrive at a given decision, it may be assimilated to unitary models of the household in economics. These are solved as dictator games, where a benevolent dictator – whose utility function also encompasses those of the other members of the household – makes

centralised Pareto-optimal allocation decisions (Becker 1974; Pollak 2005). The dictator's altruistic utility function may be interpreted as an initial acknowledgment of a relational dimension to utility in that he allocates resources within the household so that others' utilities stay above the reservation level (Lundberg and Pollak 1993). However, because it is only concerned with others' outcomes (or payoffs in games) that are completely internalised by the benevolent dictator who only offers 'take-it-or-leave-it' options to other members of the household (Lundberg and Pollak 1993), it does not explore the implications of a relational perspective in determining the dynamics of the game. Neither sociological theories of control nor unitary economic models leave room for individuals to negotiate their stance relative to others within the predefined structure, so that neither captures the role of agency or relational considerations in determining household interactions and equilibria.

However, both fields have gradually encompassed individual agency. Since the mid-nineties the sociological literature on IPV has shifted its perspective from the structure to the individual, looking at the perpetrator's traits and psychological motivations for abuse (Jacobson and Gottman 1998, pp. 65, 282). Within this literature, some interesting work on theories of control looks at the role of control (or mastery) identity in ensuring the perpetrator's continued control over the partner (Stets and Burke 2005), and predicts violence may escalate when the perpetrator perceives a threat to his level of control, causing narrow forms of empowerment for the women (typically financial only) to 'backlash' in the form of greater exposure to violence (Dobash and Dobash 1979). This body of research introduces an element of agency and defines hypotheses on the outcomes of interactions between individuals.

Notably, Evan Stark formulates a theory of 'coercive control' (Stark 2007), which posits that physical, sexual and emotional violence are only extreme manifestations in a continuum of coercion aimed at controlling women: focusing only on the violence fails to capture the real nature of abusive relationships that are actually mostly characterised by low-level, persistent acts of control directed at micromanaging the victim's time. The direct attack is at the woman's agency and results in preventing her from accomplishing her purpose in the world, including through economic control (Adams *et al.* 2008). Further, though a key focus of this literature is on the impact of and attempts at regaining individuated agency for women, it attaches great importance to forms of relational agency, as Stark's work on refugees in the 1970s attests (Stark 2007, p. 201), as well as his analysis of churches and prayer circles as "safety zones" where women would regain

some degree of competence (Adams, in Stark 2007, p. 201; Stark 2007, p. 217). This work's eudaimonic perspective on policy, with a focus on individuated and relational forms of autonomy, perceptions of competence and relations with others is therefore particularly salient to the economic and socio-psychological dynamics around IPV, as further illustrated in Chapter 4.

Finally, despite mostly concentrating on the psychological nature of the interactions and the violence, this literature also acknowledges that abuse is rooted in wider gender inequalities, so that abuse is not just about episodic forms of physical violence, but more broadly in "sexual politics". It is in contrast with views that chiefly rest on the concept of "common couple violence", where partners are reciprocally violent to one another, and violence is not only episodic but also aimed at resolving differences in views (Johnson 1995). It understands abuse against women as a form of control whose impact also hinges on a wider social structure that enables the man to socially and economically isolate the female partner to an extent that the woman would be unlikely to mirror (Stark 2006).

Aetiology of intimate partner violence in South Africa

This interpretation of the phenomenon of IPV is consistent with the interpretation provided by scholars in gender studies and public health in South Africa. For scholars of global health and development, intimate partner violence arises at the intersection between socio-psychological, economic and institutional factors at the individual (e.g., individuals' personalities), community (e.g., social norms on the acceptability of violence), and macro, or structural, level (e.g., economic power (im)balances between men and women – which also contributes to shaping norms on violence and define the context for women's ability to avoid or leave abusive relationships (Heise 2011)). The specific interactions between these factors affect each woman's likelihood of experiencing IPV and a man's likelihood of perpetrating it. The next few sections discuss the evidence for these factors in the South African context, with a focus on women's economic empowerment, gender norms and models of masculinity, and the normalisation and acceptability of violence, as these are all of relevance to the type of programmatic interventions discussed herein.² Unfortunately, no similar evidence was found for

² Please note that education levels (Jewkes *et al.* 2002; Abrahams *et al.* 2006; Abramsky *et al.* 2011) and experience of childhood abuse and exposure to maternal IPV as a child (Jewkes *et al.* 2002; Abrahams *et al.* 2006; Abramsky *et al.* 2011; Seedat *et al.* 2009) are also known proximate causes of IPV in adulthood. However, I will not discuss them here, as they are not relevant to the hypotheses tested in the interventions included in this thesis.

Burundi, so that the following discussion focuses predominantly on South Africa, and its applicability to a fragile – i.e. post-conflict – setting like Burundi is limited.

Hegemonic masculinities and violence in South Africa

Within the ideal of hegemonic masculinity prevalent in South Africa, men can – though not necessarily do (Morrell *et al.* 2013) – enforce their dominance through abuse; in turn, acts of abuse are a manifestation of the men’s dominance both over other men and over women. Moreover, mirroring hegemonic masculinity and contributing to its reproduction is the complementary ideal of a hegemonic form of femininity. Within this, women acquiesce to abusive behaviours from male partners, and trade acceptance of their hegemonic male partners’ behaviour for financial security and social inclusion (Jewkes and Morrell 2010).

Women that comply with such feminine ideals are unable to negotiate sexual encounters, as Woods’ work on the nature of forced sex in early adolescence below reveals (Wood and Jewkes 1997), and tolerate careless behaviour from their partners, including the excessive drinking and infidelity that comprise the ideal of a dominant male (Hatcher *et al.* 2014; Jewkes and Morrell 2010). In fact, discussions over these issues are often reported by men as the cause of their abusive behaviour (Abrahams *et al.* 2006; Hatcher *et al.* 2014; Jewkes *et al.* 2002): negotiations around the man’s behaviours and choices can increase women’s risk of exposure to abuse.

Finally, invoking Raewyn Connell’s adaptation of Gramsci’s thought to the field of gender studies, Jewkes and Morrell observe that hegemonic masculinity, in South African men as elsewhere (Jewkes *et al.* 2015), is produced and maintained not necessarily, nor exclusively, through violence, but rather via social structures. These include social (e.g., the social sanctioning of violence to discipline female partners), legal (e.g., the lack of women’s right to inherit land, as well as brutal repression of dissent, such as in the apartheid system), religious and economic institutions. These structures are built around and support ideals of dominant masculinity and the behaviours that follow, further entrenching gendered disparities. This is consistent with Stark’s thought on coercive control (Stark 2009), elaborating on the normative and structural backdrop for the behaviours that constitute coercive control. Patriarchal societal structures, founded on ideals of tough men that dominate women, normalise phenomena such as concurrent sexual partnerships and risky sexual behaviours for men, abusive acts against women and tendencies to control them in the sexual, financial and social spheres (Jewkes and Morrell 2010).

Normalisation of violence in society

In South Africa the ideal of hegemonic masculinity that justifies violence as a form of establishing and reproducing dominance over other men, as well as women, has found one of its most brutal expressions in the apartheid regime that ruled the country until 1990 (Coovadia *et al.* 2009). The regime subjected non-white men and women to violent repression, police brutality and routine torture (Jewkes and Morrell 2010; Norman *et al.* 2010). Such practices escalated in the years leading up to its dissolution, with peaks in the mid-seventies and eighties (Tutu *et al.* 1998, pp. 256, 324-328, 523-527, 741-745). South Africa has one of the highest levels of violent crime in any country not at war: as of 2009, violence and injuries were the second leading cause of death in the country. The South African death rate from injuries of 157.8 per 100,000 was twice as high as the average world rate, and the rate of intimate partner femicide six times as high (Seedat *et al.* 2009). In addition, verbal and physical violence is common in solving disputes at work and among neighbours (Jewkes 2002). These facts suggest high levels of tolerance for violence at the societal level. Consistent with an ideal of hegemonic masculinity where violence is an acceptable means to solve disputes, they contribute to explaining why violent behaviour in young men is considered normal (Mager, 1999 in Jewkes *et al.* 2002; Morrell *et al.* 2013), and perpetration of IPV is linked to other forms of crime and violence (Bruce *et al.* 2008).

Normalisation of violence in the household

The gender-biased norms that view the woman as subordinate consistently present the woman as subordinate and explicitly privilege males; in addition, they justify abusive behaviour on these grounds.

Gender-biased norms: acceptability of violence against women and preference for male child

For example, in their study of 1,368 male municipal employees in Cape Town, Abrahams *et al.* report that men who find hitting women acceptable, all other things being equal, are more likely to have used physical violence both in the past year and in the previous ten. The authors fit logistic regressions of past one and ten-year physical violence on a battery of socio-economic indicators, structural factors and gender norms, where hitting women is interpreted as a proxy for gender inequitable attitudes and tolerance of violence against women. They highlight that these results are consistent with other epidemiological and ethnographic research that finds associations between gender inequitable views, tolerance of violence and perpetration of IPV (Abrahams *et al.* 2006).

In addition, Jewkes et al. found the partner's preference for a boy child, which they interpret as a marker of conservative views on gender roles, to be associated with violence in the past year (Jewkes *et al.* 2002). In a similar vein, they found that a women's view of gender norms, when equitable, was associated with exposure to IPV, and find this somewhat difficult to explain. However, this is not inconsistent with previous evidence that low education women who challenge inequitable gender norms are at higher risk of abuse (Schuler *et al.* 1998).

The 2010 Burundi DHS reveals that, of approximately 3,800 15 to 49 year-old men (sampled in 50% of the households), 44% found it acceptable to eat their wives; the acceptability of beating was highest among the younger, between the ages of 15 and 29. In the corresponding sample of approximately 9,500 women aged between 15 and 49 years, wife beating was acceptable for 73% of respondents, underscoring women's role in upholding negative forms of masculinities through submissive ideals of femininity (Morrell *et al.* 2012; Morrell *et al.* 2013). Differently from men, whose responses revealed varying taste for the acceptability of violence across the age spectrum, among women the acceptability of violence did not change from one age group to the other. Rather, women seemed to think that specific reasons were more acceptable than others for beating one's wife across all age groups. In particular, child neglect was reportedly the most acceptable reason for wife beatings, with all age groups recording an acceptability rate of around 60%. The lack of data on IPV prevalence, unfortunately, prevents the investigation of any associations between attitudes and behaviours in the Burundian population (Institut de Statistiques et d'Études Économiques du Burundi (ISTEEBU) *et al.* 2012, pp. 233-234).

Power imbalances in relationships

Imbalanced power distribution between intimate partners is captured as unequal decision-making authority between partners; it generally favours males, and is supported by patriarchal belief systems in line with an ideal of hegemonic masculinity (Jewkes *et al.* 2010). In a cross-sectional study of women attending ante-natal clinics in Soweto, a large urban neighbourhood in Johannesburg, Dunkle et al. find an association between exposure to IPV, both recent and historical, and partner control (Dunkle *et al.* 2004b). They measured partner control by the South African adaptation of the Relationship Control Subscale in the Sexual Relationship Power Scale (SRPS). Further, the likelihood of exposure to multiple episodes of physical or sexual IPV was found to be higher among women who lacked power within the relationship, in baseline findings from a cohort study of rural South African women in the Eastern Cape. Each of these factors in turn increased

the likelihood of incident – i.e. new – HIV at follow up: the authors estimate that 14% of incident HIV infections could be prevented if no women were in a gender inequitable relationship; and 12% if women did not experience more than one episode of IPV in their lifetime (Jewkes *et al.* 2010).

According to the 2010 Burundi DHS, women can decide independently on issues regarding their own health and visits to their own family in only 14% and 12% of cases, respectively. In matters of large purchases for the household, the decision is taken unilaterally by the partner in 42% of cases, and 50% of the women interviewed were never involved in decisions in these domains (Institut de Statistiques et d'Études Économiques du Burundi (ISTEEBU) *et al.* 2012, p. 231).

Forced sex

Moreover, consistently with the ideal of the hegemonic male, marital and dating forced sex are widely ignored and culturally accepted. Social norms that define roles in courtship rituals and relationships see women's default position as being coerced into having sex, and men as having the right to sexual intercourse at any point in the relationship, following the initial forced consent. In turn, this implies that it is very difficult to draw a line between some form of ritualistic refusal and true disinterest and unwillingness to engage sexually and, in turn, between ritualistic forms of strong persuasion and outright violence (Wood *et al.* 2007). Measuring the prevalence of forced sex is therefore a challenge, and survey tools need to be context sensitive and informed by qualitative investigations of what constitutes forced sex and relevant consequences. In 2005/06 approximately 55,000 rapes were reported to the police (Coovadia *et al.* 2009). However, relying on police reports may be misleading in South Africa due to poor record-keeping, in addition to the fact that only some of the women, generally younger and more educated, decide to report. In addition, the majority of reported rapes are by strangers, while it is plausible that a substantial amount of such events happen in intimate partner relationships (Jewkes and Abrahams 2002).

For example, in an ethnographic study conducted in a township in the Eastern Cape in 1999-2001, Wood explores the courting rituals among adolescents, finding that forced sex – i.e. penetration without consent – within a relationship is considered socially acceptable by both males and females, despite the women reporting negative feelings and experiences around such events (Wood *et al.* 2008). This perception is consistent with the ideal of dominant femininity that prescribes passive and acquiescent roles (Jewkes and Morrell 2010). Moreover, in their study of male municipal employees in Cape Town,

Abrahams et al. find that 15.3% of men report having either forced or attempted to force sex on a wife or girlfriend (Abrahams *et al.* 2006). This is therefore a key dimension for interventions, to increase women's awareness of their right to autonomous decision-making in matters of sexual intercourse, and to support them in developing the necessary skills to negotiate these choices.

Transactional sex and concurrent partners

Another product of the unequal distribution of decision-making power and access to resources between women and men is transactional sex, generally conceptualised as the exchange of sex for goods from men. The men women engage with in these instances could be older men that support them financially, or the father of some of the women's children, from whom the women need financial support; however, a woman could also engage in one-off sexual encounters after having let men buy her beers on nights out, accepting lifts, or similar. Access to goods or financial resources through transactional sex makes them vulnerable to being forced into unwanted sexual acts due to the inherent power imbalance in the relationship (Jewkes and Abrahams 2002). In a cross-sectional survey of 3,982 pregnant women aged 16-44 attending an ante-natal clinic in Soweto, Johannesburg, between November 2001 and April 2002, Dunkle *et al.* find that transactional sex (with non-primary partners) is associated with exposure to IPV, as well as with socio-economic disadvantage (Dunkle *et al.* 2004a). Approximately 50% of the women reported having secondary partners, with whom they had had transactional sex.

Multiple partnerships are common among both men and women in South Africa, and seen as natural and tolerated as long as they are maintained in secrecy (Dunkle *et al.* 2004a; Mönnig 1967). Men see having multiple partners, or concurrent partnerships, as a measure of their masculinity, and the woman's challenging this behaviour as a threat to their status, and a transgression of gender roles. Having concurrent partnerships is associated with IPV, including as a consequence of conflicts over the man's, or woman's, infidelity when this is made known. Men's use of violence is a means to restore their power and, in turn, their identity (Abrahams *et al.* 2006; Jewkes and Morrell 2010).

Alcohol

Excessive alcohol is also interpreted as a form of risk-taking consistent with a dominant form of masculinity. During apartheid, excessive alcohol drinking was also seen by some as a form of defiance against the system, both because the *shebeens* (informal township bars where people meet to drink and, traditionally, discuss political matters) where it took place were illegal establishments, and because the police could not arrest a drunken man,

provided he had his pass, so men would dare one another to walk up to policemen while drunk and show them their pass.³ Recent consumption levels put South Africa at the top of the list of countries with the highest consumption of alcohol per capita (Jewkes and Morrell 2010), and alcohol is estimated to have caused 7% of all deaths in South Africa in 2000 (Coovadia *et al.* 2009). Consistently with this, in the Three Provinces Study, Jewkes *et al.* find that women involved in conflicts over their partner's drinking are almost four times as likely to have experienced IPV in the previous year as women who are not. They interpret this to be the consequence of the women transgressing gender roles in the act of criticising men. Similarly, women's drinking *per se*, which may also be interpreted as a gender transgression, was associated with abuse (Jewkes *et al.* 2002).

Abrahams *et al.*, too, find that alcohol abuse by men, and its use by their partners, was associated with abusive behaviour. Men cite being drunk as one of the first elements in scenarios that describe abusive behaviours; and of the men that say it is acceptable to beat a woman, 24% mention her drinking as a reason (Abrahams *et al.* 2006). Women that protest and challenge men's dominance and their behaviours break away from the ideal of dominant femininity and society sanctions their punishment and/or isolation; while extreme forms of violence are condemned by society as a whole, in fact, the ideal of the dominant male requires that he remains in control of his woman, if necessary by means of violence.

Further, in a nationally representative sample of adult women, Gass *et al.* find that IPV is associated with a higher likelihood of the victim regularly drinking, as well as having other harmful habits, such as smoking – including cannabis – and taking analgesics without medical prescription. They analyse data from the South African Stress and Health (SASH) study, a nationally representative three-stage cluster random sample (Gass *et al.* 2010). The limitation of this analysis is that violence was only measured when physical (pushed or shoved, hit or grabbed, slapped or something thrown at), and may thus underestimate overall prevalence of abusive behaviours. It may also only depict a partial picture of associations between violence and health risk behaviours; nevertheless, it further supports the hypothesis that women who break with gendered norms of behaviour are more exposed to abuse, be this a cause or consequence of non-conformist attitudes.

³ Hugh Masekela, Hard Talk interview with Zeinab Badawi, BBC4, 23rd June 2015 – see <http://www.bbc.co.uk/iplayer/episode/b05zz9m5/hardtalk-hugh-masekela-musician-and-activist>

Finally, in a survey of young men in the rural Eastern Cape province of South Africa, Dunkle *et al.* find that men are more likely to report physically or sexually abusing their female partner if they also reported drug and alcohol abuse (Dunkle *et al.* 2006).

Earnings and income differentials

Notably, Jewkes *et al.* found violence not to be associated with employment status, income differential or age in their Three Provinces Study. In fact, women were less likely to have been exposed to IPV in the previous year in households where the main source of income was external than in households where either one or both partners are the main income earners. However, they found that women in these households were younger than the ones in self-sufficient households (average age: 26 vs 35 years), which would suggest that these findings may not apply to the women in the IMAGE sample (average age: 42), in the first place because it is unlikely that their households rely on third party remittances to such a large extent. Jewkes *et al.* interpreted this evidence as some support for the fact that conflict over resources may mediate the association between income and abuse. This hypothesis is, however, untested here, and this evidence is to be interpreted with caution, as the authors report no data to infer whether the management of resources was conflictual once they were acquired by the household (Jewkes *et al.* 2002). The source of household income being chiefly external may in fact also be interpreted as the presence of stronger social networks, however, especially where the third party was not a parent. The fact that the external source of income was associated with lower exposure to IPV may suggest that strong social networks (e.g., that can provide substantial financial support) are protective against IPV.

This section has discussed the public health and social science literature on the aetiology of IPV, as well as its epidemiology in South Africa and Burundi. It has highlighted how behaviours classified as systematic forms of control are embedded in normative and structural contexts that prescribe submissive roles for women. In turn these prevent women from realising their potential, and limit their freedom by enforcing subordinate social roles for women that make them dependent on the hegemonic male. This hegemony can, though it needn't, be enforced violently; however, even when it does not entail violence, it can perpetrate abuse by limiting women's freedom and right to self-determination.

This section has shown that the record of interventions to break hegemonic gender roles and vicious cycles of structural disadvantage is mixed. The interventions reviewed engaged with both men (Jewkes *et al.* 2008; Pulerwitz *et al.* 2014) and women (Pronyk

et al. 2006), as well as couples (Gupta *et al.* 2013). In some cases, tackling gender norms only with a specific group yields a reduction in IPV exposure. However, it tends not to yield change in its proximate causes (e.g. sexual behaviour, excessive alcohol consumption) (Jewkes *et al.* 2008). Interventions that change norms at the community level seem to be more effective, compared to interventions that only target specific groups (Pulerwitz *et al.* 2014), and to offer a more supportive environment for victims (Abramsky *et al.* 2014). Interventions that equip individuals with both life-skills and financial means seem to have a more marked effect when compared to controls that have no access to either of these (Gibbs *et al.* 2012; Jewkes *et al.* 2014; Pronyk *et al.* 2006). The incremental effect of life-skills in addition to access to financial services, however, seems to yield mixed results (Gupta *et al.* 2013), but is not widely investigated in this literature. This is because the public health literature tends to focus on complex interventions, and to see the impact on IPV as the joint effect of the intervention components.

Access to financial services

The economics literature, instead, focuses on the effect of access to MF-only services, i.e. microfinance services with no other programme attached. Only a few evaluate the incremental impact of life-skills or other training packages. Importantly, rather than on IPV or health-related outcomes, they generally focus on women's economic empowerment (see Appendix 5, Table 5.1). The exceptions are Schuler *et al.* (1996 and 1998), which reports on physical violence, and five papers in a recent special issue of American Economic Journal: Applied Economics (AEJ-AE) (Angelucci *et al.* 2015; Attanasio *et al.* 2015; Crépon *et al.* 2015; Banerjee *et al.* 2015a; Tarozzi *et al.* 2015). These studies measure women's empowerment in relation to resource allocation decisions within the household (e.g., share of decisions women have a say on, number of household issues on which conflict arises, number of children in school). They have no measure of gender norms, nor of abuse. At times their economic empowerment measures are somewhat limited (see Attanasio *et al.* 2015).

Schuler *et al.* (1996) and related papers report a reduction in the exposure to physical violence among women who joined the MF programme. Their evidence is however likely to suffer from biases caused by both non-random program placement and clients' self-selection into the programmes (Morduch, 1999). Non-random program placement stemmed from the fact that the two MF-NGOs in the studies had decided themselves which villages to offer MF to: they might have either entered villages with greater or

lower economic potential than others, depending on whether their mandate was to reach the underserved or make profit. Clients' selection bias arose from the fact that the MF clients in these studies were eligible individuals who had decided to join the programme, and were therefore likely to differ from non-joiners in ways that mattered to programme impact. For example, they could have been more capable of managing a loan or business, or could have had more network connections that allowed them to join the MF organisation as a group; conversely, they may have been more in need of financial help than non-joiners (Morduch, 1999). A number of subsequent papers applied various methods to mitigate these biases (Morduch 1999). McKernan developed a structural economic model and found no effect on women's profits from self-employment (2002); Duvendack and Palmer-Jones constructed a matching estimator and found that original estimates could have been explained by unobserved confounders to a non-negligible extent (2011).

The five AEJ-AE studies – which adopt more rigorous, experimental methodologies – find only limited impact on the economic empowerment outcomes measured (see Appendix 4, Table A4.1). In particular, they find that the opportunity to access MF has some impact on the take up of borrowing *per se* (Tarozzi et al. 2015; Banerjee et al. 2015a; Attanasio et al. 2015); and, in some instances, on the number of new female-owned businesses (Banerjee et al. 2015a). However, it generally only has a compositional effect on consumption, with a shift from non-necessary (e.g., alcohol and cigarettes) to necessary (e.g., food) items (Crépon et al., 2015; Banerjee et al. 2015a). More importantly, no study reports an effect on women's empowerment as captured by their decision-making authority on household matters. The exception are Angelucci et al., who do find effects on women's say on intra-household allocation of resources, and no evidence of intra-household conflict (Angelucci et al., 2015). This study's internal validity is however low, compared to companion papers, and its results should be interpreted with caution (see Appendix 4, Table A4.1, for more details).

In general, impact is small and does not seem to be transformative, even in cases, such as in Attanasio et al.'s sample, where the women had explicitly stated their intention to join. The authors observe that the very low joining rates are suggestive of the fact that microfinance is possibly not a solution for all. Relatedly, the modest effects they observe can also be explained in terms of the low take up rates: as many potential clients did not join, the service could only effect limited impact. This is in contrast to an earlier study on the effect of incentives to save (Dupas and Robinson, 2009), which have some positive

effect on women's savings and consumption, as well as on their investment in their business.

These results also suggest no harm from access to these interventions, in light of the limited data on socio-economic outcomes such as child labour, wellbeing and women's empowerment. The limited impact on women's empowerment they report, however, does not seem to suggest a high potential for MF-only to impact IPV, insofar as IPV is mediated by women's economic empowerment only.

Moreover, none of these studies has investigated the incremental impact of life or business skills training offered alongside MF services on pre-existing MF clients, nor did they investigate the total impact of MF interventions plus training. The first question is addressed by Desai and Tarozzi in a related paper (Desai and Tarozzi 2011), as well as by Kim *et al.* who, however, do this in a cross-sectional framework (Kim *et al.* 2009). Desai and Tarozzi (2011) find no incremental impact of an awareness raising campaign on women's use of contraceptive pills or condom (Desai and Tarozzi 2011). Kim *et al.* find that the MF-plus intervention has a larger impact on empowerment outcomes than the MF-only intervention, and reduces IPV to a greater degree. However, neither of these effects is estimated precisely (Kim *et al.*, 2009).

IPV and women's decision-making authority in the household

Developments in our understanding of MF's impact on women's empowerment are also to come from exploring whether women who access these services gain a greater say in decisions on the allocation of resources in the household (Armendáriz and Morduch 2011, p. 233). Material – particularly financial and economic – household dynamics are the focus of intra-household models of resource allocation in economics that bring in a framework for setting up statistical tests of these theories of control. This contrasts with the sociological literature discussed in the previous section, which is mostly based on case studies. The following paragraphs introduce recent contributions to the study of intra-household allocation models with relevant implications for the study of IPV dynamics and how these may be affected by women's access to financial and life-skills training services. These models will inform the discussion of impact of the two interventions presented in this work to further our understanding of the mechanisms of effect, and as an exploratory contribution to this area of research that Armendariz and Morduch see as a frontier issue in the study of microfinance impact (Armendáriz and Morduch 2011, p. 234).

In economics, non-unitary models of the household capture the impact of agency and a relational dimension by explaining interactions within marriage as a bargaining process (McElroy and Horney 1981) where individuals with different preferences negotiate and manage agreements leveraging on their threat position (Lundberg and Pollak 1993; Pollak 2005), generally equated to the wellbeing they would enjoy outside marriage – the utility of divorce.⁴ In these models, as long as each individual makes a positive contribution to the household public good, neither the optimal amount of public good nor individuals' utility levels in equilibrium are affected by who controls the resources to start with (Lundberg and Pollak 1993). However, there are transaction costs (TC)⁵ associated with cooperative bargaining processes that need to be more than offset by (perceived) returns from cooperation if individuals are to engage in bargaining (Lundberg and Pollak 1993). If individuals do engage in bargaining, all gains from transactions will be exploited and a Pareto-efficient equilibrium (such that it is not possible to increase the wellbeing of one of the spouses without diminishing that of the other) achieved. The distribution of goods within this equilibrium is determined by individuals' bargaining power as influenced by their reservation utility, i.e. the utility (or wellbeing) they would enjoy if they were in the best alternative situation (e.g., divorce) to the one they are in (marriage, in this case) (Lundberg and Pollak 1993). In this case, their reservation utility also coincides with their outside options, or the economic consequences attached thereto (McElroy and Horney 1981). Interventions that seek to improve spouses' relational skills, such as joint decision-making (DM) and dispute resolution (DR) strategies, enhance the probability that a couple will choose a limited – or local – cooperative equilibrium over leaving the marriage. However, at times divorce is not an available outside option, and other economic models envisage alternative, sub-optimal equilibria within the marriage (Anderson and Eswaran 2009; Lundberg and Pollak 1993).

The separate-spheres bargaining model introduced by Lundberg and Pollak (1993) envisages situations where the control individuals have over resources can lead to different equilibrium allocations within the household, which can persist even if sub-optimal in a Paretian sense (Lundberg and Pollak, 1993). Specifically, they hypothesise the existence of threat points, or fallback positions, within marriage, with reduced (or non-existent) levels of co-operation between husband and wife. These threat points are non-cooperative equilibria that constitute sub-optimal corner solutions attained as a result

⁴ Please note that in intra-household bargaining models the threat point is the next best alternative to marriage (McElroy and Horney, 1981). I follow the convention in many economic papers (Anderson and Eswaran, 2009; Lundberg and Pollak, 1993; Pollak, 2005) of using the term 'divorce' to label this option for individuals.

⁵ That is, the costs an individual incurs when engaging in the bargaining process, which may have to do, e.g., with the effort of discussing the rationale for alternative choices when buying a large TV with one's spouse.

of Cournot-Nash “utility-maximising strategies” where “each spouse takes the other spouse’s strategy as given” (Lundberg and Pollak 1993) when choosing their strategy. In other words, the rules that govern production and consumption (i.e. the relevant “utility-maximising strategies”) of the household public good (i.e. those goods that husband and wife share in the production and/or consumption of, such as, e.g., children, a house bought together) in this type of equilibria are pre-defined gender roles that spouses do not need to negotiate (i.e. each spouse’s “strategy” in a game-theoretic interpretation of household interactions, where spouses are seen as players in a multi-actor utility-maximising set of interactions, or game), and allow them to take the other’s choices (i.e. strategy) as given.

The introduction of non-cooperative equilibria provides a framework for the study of the interactions that may lead to one such equilibrium. Irrespective of whether it actually materialises (Pollak 2005), this defines a useful theoretical set-up to interpret IPV dynamics. This is a case, in fact, where sub-optimal equilibria – that see women stay in abusive relationships even when divorce options are available – are often observed empirically, and can be explained by elevated levels of psychological and material control the male exerts over the female partner (Morrell *et al.* 2012). They are also useful in the study of intra-household dynamics in contexts where divorce as an outside option is effectively not available, and non-cooperative equilibria within marriage are more likely to be observed (Anderson and Eswaran 2009).

Empirical contributions to this literature focus on the impact of changes in wages (Aizer 2010), work outside the household (Anderson and Eswaran 2009), and access to assets (Kabeer 1997, 1999) on women’s empowerment. These tests focus on the effects of improved economic perspectives on IPV or empowerment, and disregard the effect of improved eudaimonic wellbeing – i.e. autonomy, sense of relatedness and competence – that is instead increasingly acknowledged as important for socio-economic outcomes (Ghosal *et al.* 2013) and is a component of both the interventions in South Africa and Burundi.

The interventions in South Africa and Burundi provide tests for the local pooling⁶ and separate-spheres non-cooperative models described in Browning *et al.* (2010) and Lundberg and Pollak (1993). The IMAGE intervention is based on the hypothesis that increasing women’s independent autonomy will improve their ability to decide independently and reduce their exposure to violence via lower cooperation and increased

⁶ i.e. a situation where both spouses contribute to one household good, and a small redistribution of income between spouses does not change household expenditures.

unilateral decision making according to rules that favour her individuality; this is akin to the separate-spheres bargaining equilibrium (Lundberg and Pollak 1993). The Burundi intervention is instead predicated on the fact that increasing individuals' negotiation and conflict resolution skills will encourage spouses to co-operate more by reducing the transaction costs attached to, say, agreeing to make large household purchases together, and increasing individuals' perceived returns from co-operation in the consumption of one household common good (Browning *et al.* 2010). In turn, this is thought to make resorting to violence a less preferred alternative in the negotiation process, and thereby reduce the incidence of violence. Comparing the evidence from these two trials casts light on the effectiveness of encouraging co-operation versus independent decision making, and more broadly, relational versus individuated forms of subjective empowerment.

The interventions and respective recipients differ somewhat, as explained at greater length in the empirical and methods chapters, so the parallels are drawn with caution, but still provide useful insights into the related phenomena of empowerment and IPV. Specifically, from a theoretical perspective, the two interventions are each based on the distinct assumptions of the separate-spheres (IMAGE) and bargaining models (Burundi-VSLA). Both assume that the starting point of the households they observe is one where the women are in a subordinate position, and interactions are governed by patriarchal rules. The IMAGE trial observes the impact of an MF and life-skills package that is intended to bring the household to (another) non-cooperative equilibrium where the resource allocation and decision rules are also well-defined (Lundberg and Pollak 1993) so that they do not require negotiation, but see the woman gain in both economic power and autonomy. The Burundi-VSLA, conversely, tests whether lowering transaction costs associated to negotiation and dispute-resolution around decision-making encourages spouses to engage in cooperative processes that, though more costly than non-cooperation, also have the potential to yield the maximum benefits from the consumption of the household public goods and constitute an improvement over situations of non-cooperation (Lundberg and Pollak 1993). From a relational perspective, the two interventions test whether encouraging the development of an individuated form of empowerment, along with access to financial resources, protects women from violence in South Africa; and whether the development of a relational form of empowerment, in addition to access to financial resources leads to a reduction in the exposure to violence in Burundi.

Further, introducing a multidimensional psychologically-substantiated utility function such as EUD can improve our understanding of how household goods and production choices map into wellbeing levels. This, alongside models of Nash and Cournot-Nash interdependent households, has the potential to compute equilibrium levels of utility more accurately and identify pay-offs. For example, if women care more strongly about the relational dimension than men (Strauss *et al.* 2000), the threat to stop contributing to the production of some household public goods, such as raising children, may plausibly have a more negative impact on women's utility than men's (Kabeer 1996), and be more costly for them to implement. This is because an equal hedonic disutility caused by misbehaving children (the outcome), for example, would be compounded by the larger disutility women would derive from the deterioration in the quality of their relationships with the children and husband (the process), compared to men. The introduction of a utility function that distinguishes between these two dimensions can cast light on these and similar mechanisms that may impact women and men differentially, improving models' predictive power for observed outcomes and related commitment mechanisms inside the household.

The two RCTs of MF-plus interventions examined here, when examined through the lens of intra-household allocation models, provide evidence of how relational dynamics may pertain to the mechanism that explains impact on empowerment and IPV. In line with psychological theories of 'backlash', MF-plus interventions were introduced to reflect a concern in the development arena that simply providing women with access to financial services might put them at greater risk of both abuse and exploitation (Goetz and Sen Gupta 1996; Koenig *et al.* 2003; Mayoux 1999) precisely because it might cause their relational ties to deteriorate, especially with their partner. Current empirical evidence on the impact of MF-only interventions on IPV and empowerment in the socio-economic literature is contradictory, however, with others suggesting that access to financial services improves ties with either women's husbands or networks of peers, thereby contributing to the reduction of IPV (Pitt and Khandker 1995; Schuler *et al.* 1996), and some reporting no increase in conflicts following take up (Angelucci *et al.* 2015). Differing conclusions may often be explained by the use of different measures of impact, different methods (Banerjee and Duflo 2008), or a focus on processes versus outcomes (Kabeer 2001).

More generally, improved income opportunities for women may also have different empowerment impacts, depending on context and the status of women's relational ties. A

recent contribution of robust evidence to the debate on the impact of women's access to improved income opportunities are Aizer's findings from the US that men's use of violence is reduced when women contribute comparatively more to the household resources: once the women reduce the gap in contribution sufficiently to have the means to leave the house (i.e. pose a credible threat of using their outside option), men reduce the violence (Aizer 2010). These findings seem to support the bargaining model (McElroy and Horney 1981). However, Aizer's implicit assumption that the woman keeps control of the resources she brings into the household, thus more credibly securing divorce as an outside option, belies an individuated concept of the rational individual, i.e. assumes that the woman can choose to manage and keep her own money independently, and decide to leave. It further assumes that she values internal coherence with her own individuated goals over her role as a wife, and will thus attain maximum wellbeing by adhering to her intra-subjective self (Chirkov *et al.* 2003; Suh *et al.* 1998).

While this may hold more widely in the US, it may not hold in contexts where the predominant perception of self is relational and women are in an unequal power relationship (Kabeer 1997; Morrell *et al.* 2013) nor, as Stark would argue, in situations of 'coercive control' even in the US (Stark 2007, p. 205). From a researcher's standpoint, this means one cannot assume that the intervention recipient (or the salaried worker, in Aizer's case) will maintain control over the resources she has the potential to bring to the household (Goetz and Sen Gupta 1996; Kabeer 1997; Schuler *et al.* 1996), nor that her set of outside options includes leaving the household. It may, however, include lower levels of co-operation that would still require the development of some degree of individuated autonomy, but not such that the woman be prepared to face the social pressure that comes with leaving a relationship operation (Anderson and Eswaran 2009). This suggests that, in addition to the focus on the direct impact of income shocks on violence outcomes, especially in settings where individuated autonomy cannot be assumed, it is important to model relational components that intervene in the transmission mechanism between exogenous income shocks and violence reduction, such as individuated versus relational forms of autonomy, or the perception of gender roles, that could both determine whether the woman retains complete control over resources, or co-manages them with her husband, and the feasible set of outside options.

This perspective is particularly relevant in a context where decisions are more likely to be the result of dyadic interactions (Adams 2005; Camfield *et al.* 2006), inscribed in processes of reciprocal consultation (Triandis and Gelfand 1998) and happen within the

scope of predefined roles (Sen 1990) (Strauss *et al.* 2000) that one negotiates but cannot obliterate (Adams and Dzokoto 2003; Suh *et al.* 1998) and may in fact be relevant more widely in relation to socio-economic choices (Akerlof and Kranton 2010; Bruni 2010), in the economics of the household (Strauss *et al.* 2000); and in IPV situations.

Conclusions

IPV is increasingly understood as a consistent pattern of controlling behaviours, and supported by norms and structures that impose subordinate social roles on women (Johnson 1995; Morrell *et al.* 2013; Stark 2009). In turn, especially in relational societies, individuals' wellbeing is strictly intertwined with their role relationships (Suh *et al.* 1998). This understanding points to the need for gender-transformative interventions – i.e. interventions that change the perceptions of gender norms and consequent behaviours – for both men and women (Dworkin *et al.* 2013; Gupta *et al.* 2013), alongside access to other services, such as microfinance, that may redress structural imbalances of power.

Previous contributions in the public health and microfinance literature, however, have not addressed the incremental effect of life-skills curricula that aim to be gender-transformative on IPV, compared to the effect of access to financial services only. This work contributes to bridging this gap with the Burundi VSLA study. Further, no previous study on the impact of MF has investigated its impact on decision-making patterns in the household as mediators of IPV. This thesis tests the total impact of an MF-plus intervention and the incremental impact of a life-skills intervention against the backdrop of intra-household allocation models, providing an initial test of these models' ability to capture the role of intra-household resource allocation mechanisms on IPV.

Finally, as a negative expression of role-relationships, IPV is conceivably not only associated with the extremes of depression and suicidal behaviours (Devries *et al.* 2013). Dimensions of psychological wellbeing and flourishing, especially to do with the relational and a sense of control, are also likely to be of relevance both as triggers of abuse (Stets and Burke 2005) and as protecting factors from trauma or in enhancing individuals' ability to manage complex role-relationships (Wissing and Temane 2008). This may be particularly pronounced in *milieux* with a predominantly interdependent self-construal.

In addition, taking into account the structure of psychological wellbeing may help us incorporating shared perceptions of self-construal into economic models of choice and behavior. Insofar as such shared perceptions are a reflection of shared norms of behavior, they would capture some aspects of the environmental model epidemiologists use to explain VAW (Heise, 2014) Therefore, incorporating parameters that capture the

structure of PWB in the utility function economists use to describe models of intra-household allocation, could integrate the individual-agent choices typical of economics and the ecological drivers that epidemiologists see at the root of gender-based violence. This would equip us with potentially more powerful tools to understand the VAW phenomenon, with individual choices explained by micro-economic models directly linked to changes in ecological dimensions (such as gender norms) through model parameters capturing the socially shared structure of PWB.

Chapter 2 illustrates the quantitative and qualitative methods I use in this thesis, and provides the methodological justification for the use of mixed methods in this investigation.

Chapter 2 Methods

Introduction

This chapter introduces the analytical methods used to tackle the two research questions of this thesis: what constitutes wellbeing and domestic violence for the milieus this work is interested in; and whether interventions designed to empower women and prevent domestic violence can improve wellbeing by increasing empowerment and reducing emotional distress, alongside their impact on domestic violence. I use a mixed-methods approach rooted in the statistical analysis of both qualitative and quantitative data. In addition, factor analysis (FA) provides the link between the qualitative and quantitative data. It investigates how objective indicators of empowerment originally collected to estimate programme impact may be explained by the dimensions of wellbeing that emerged during the qualitative explorations.

As a mixed-methods investigation, this work can be characterised as a quantitative dominant design, as it uses predominantly quantitative methods (Johnson *et al.* 2007), and quantizes, i.e. numerically interprets, qualitative data (Sandelowski *et al.* 2009). The purpose of the quantitization is to generate latent variables for the exploratory analysis and hypothesis testing in Chapters 5, 6 and 7 – ultimately testing programme impact on indices generated from the quantitized qualitative data (Sandelowski *et al.* 2009).

This work follows a sequential explanatory design. In Burundi, study participants' perceptions on domestic violence were explored in focus group discussions (FGDs) to provide context for and contribute to the understanding of mechanisms of intervention impact (Clark and Creswell 2011, p. 81), as further illustrated below. In South Africa, the FGDs were conducted after the experiment (see Appendix 1 for a detailed timeline), and were used isolate the wellbeing concept explored with factor analysis, the relevant synthetic indices used to measure impact, and the groupings of the individual indicators. In South Africa in particular, the research question of what constitutes wellbeing for the *milieu* targeted by the intervention, and the method chosen to tackle it, arose from the desire to give a voice to a population group likely to differ (Johnson *et al.* 2007) from the population groups most likely represented in the then (2006) ground-breaking research on wellbeing in industrialised countries. In so doing, it followed a parallel path to research on South Africa (Wissing 2014) and other developing countries (White *et al.* 2014), reaching similar (preliminary) conclusions. This is exciting, and a promising avenue for future research.

The question regarding individuals' perceptions of wellbeing and domestic violence is an exploration of social constructs, i.e. people's ideas of wellbeing and domestic violence. I tackle it through analysis of people's narratives of wellbeing and domestic violence, using textual and statistical analysis to isolate the constructs underlying interviewees' discussions and map the structure of their perceptions of wellbeing and domestic violence. Textual analysis identifies the basic components of individuals' language; correspondence and cluster analysis identify patterns in the way these components appear in speech, revealing clusters of meaning that underpin participants' worldviews. Questions such as this, concerned with the structures that underpin social phenomena, belong to the realm of *methodological holism*, which holds that structures shape and direct human action, and see a reduced scope for agency (Durkheim 2001).

However, other research theorises a process of mutual influence between structure and agency (Liu and László 2007), and it is in this spirit that this work analyses individual level data to first derive the structural concepts just described, and then examines policy impact on specific agency domains directly connected to the dimensions that make up the structural concepts as measured by indicators that capture self-reported actions by individuals. Similarly, Giddens' structuration theory posits the "duality of structure", i.e. the notion that individuals' agency knowingly reproduces or transforms social structures (Giddens 1984). For Giddens, everyday conversation is an important constituent of encounters between agents, and provides useful information for the interpretation of the meaning that agents produce and exchange in these encounters. Giddens also points to the context of encounters as this is captured by the opening and closing moments, and by turn-taking in interactions – whose organisation should also be analysed in an effort to interpret the meaning individuals produce. In turn, encounters are distinct from reflexive moments, when one is asked to explain aspects of one's activities.

The textual data analysed in this work is produced within the space of focus group discussions (FGDs), as illustrated below. In Giddens' terms, FGDs may be interpreted as both encounters and reflexive moments, so that they may both contribute to transforming and influencing both researchers' and participants practices, as well as being reflexive moments: their very reflexivity may alter practices and, in turn, possibly as an unintended consequence, structure. More generally, the implication of Giddens' perspective is that in order to examine the social reproduction of practices, it would be necessary to observe day-to-day life (Giddens 1984). This highlights a limitation of the present work, as the author's access to local social practices was afforded by an eight-month long period of

fieldwork and focus groups over the course of two years, and no ethnographic fieldwork was conducted; however, the author had further prior knowledge of the area and worked closely with local residents as field researchers, as illustrated below and in Chapter 3. The limited observation of daily practice that this form of fieldwork afforded was mitigated by the explicit reflexive space on women's day-to-day lives the FGDs offered which, however, does remain a second-hand account of their social practices.

The question of intervention impact falls squarely into the realm of quantitative policy evaluation. It relies on quantitative data collected by means of questionnaires around two randomised controlled trials (RCTs), and analysed in the framework of frequentist statistical analysis, as is customary in applied micro-econometrics. I first use parametric techniques (logistic and ordinary least squares (OLS) regressions) to measure impact, and test the robustness of results through non-parametric matching estimates that correct for a larger number of baseline imbalances.

Questions such as this, that seek to evaluate the impact of an intervention at the micro-level and, in addition, openly seek to enhance individuals' agency – are subsumed under *methodological individualism*, based on a concept of the individual as an autonomous entity that can and does act independently of the structures society builds and defines around her. The two perspectives have traditionally been in antithesis with one another, though some scholars have sought to bridge this gap (Bourdieu 1984; Giddens 1984; LahLou 2008). Methodologically, this thesis is a contribution in this direction. The use of these complementary pieces of information and methods is necessary to shed light on the overarching question of this thesis, namely what constitutes domestic violence and wellbeing, and how both can be impacted via socio-economic interventions. The exploration of one without the other would be incomplete: a study of impact on individual agency without an understanding of the social constructs that underpin it would lack context (Bourdieu 1984); a study of people's perceptions of wellbeing and of domestic violence without a study of impact would lack an empirical test of its policy implications, and would fail to offer a contribution on how changes in individual agency might influence the social constructs that determine how agency is exercised and thereby bring about change.

The chapter is structured in three main sections: the first provides the background to two policy interventions for the prevention of domestic violence (DV) in South Africa and Burundi; the second introduces the tools and rationale for the statistical analysis of the qualitative data and describes the qualitative data; the third discusses the quantitative data

and methods for its analysis. A brief final section concludes and leads the reader into the chapter on eudaimonic utility.

Background: the Context and the Interventions

The IMAGE and Burundi-VSLA interventions are two of a number of public health and socio-economic interventions designed to tackle the normative and structural determinants of IPV. As discussed in the previous chapter, IMAGE inspired the Burundi intervention, and other in the field. Neither of these interventions rested on a theory of change as such; however, both had a clear hypothesis as to the mechanisms that would explain intervention effect. IMAGE had an explicit theoretical framework in Heise's ecological model to tackle the individual (behavioural), normative and structural determinants of IPV (Hargreaves *et al.* 2002, p. 24). Burundi-VSLA was rooted in an understanding of intra-household resource allocation decisions in the context of a non-unitary model, where the agents in the household negotiate over decisions (Pollak 2005). This work seeks to bring this out in conceptual terms. The next two sections describe the interventions.

Burundi

The Burundi programme was designed to increase women's participation in decisions on the allocation of resources within the household. However, in contrast to previous empowerment interventions (Kim and Watts 2005), it chose not to openly focus on women's empowerment, fearing backlash in the community and greater immediate risk for women. Instead, it encouraged discussion among partners to negotiate access to household resources under the hypothesis that encouraging husbands and wives to discuss household decisions may improve women's decision-making power. The courses aimed to help facilitate a household atmosphere where women's opinions are more valued and violence against women (VAW) becomes a less acceptable way of solving conflicts. This change in attitudes could reduce vulnerability to violence within the household.

The International Rescue Committee (IRC) introduced the pilot Village Savings and Loans Association (VSLA) programme in the Makamba province of Burundi, establishing 25 groups.⁷ CARE International's VSLA methodology was implemented alongside six discussion group (DG) sessions developed by researchers at the London School of Economics.⁸ The sessions addressed household decision-making, the respective

⁷ The groups were in different villages across the province: seven in Nyanza-Lac, six in Kibago, six in Kayagoro, and six in Mabanda.

⁸ Input from IRC was also included.

gender roles, and domestic violence against women in broad terms.⁹ Half of the VSLA participants were invited to attend these discussions with their spouses. Trained IRC staff members facilitated the groups.¹⁰

South Africa

The Intervention with Microfinance for Gender Equity (IMAGE) in South Africa was a collaborative pilot study between the London School of Hygiene and Tropical Medicine (LSHTM), Wits University in Johannesburg, and the microfinance non-governmental organisation (NGO) Small Enterprise Foundation (SEF), Tzaneen, South Africa. Women had access to SEF's micro-loans – rather than savings services, as in Burundi – through Grameen-style group-lending schemes: they applied in groups of five, generating between nine and thirty groups per village, and were jointly liable for the repayment of their individual loans (Kim *et al.* 2007; Pronyk *et al.* 2006). All group members obtained loans at the same time, and no-one could obtain a new loan until all had repaid. Loans were awarded following application from the group, under the proviso that all had repaid the previous outstanding loan. The interest rate was 23% during the IMAGE study implementation, and average loan size ZAR828 (US\$128, both at June 2004 values).¹¹ In addition, the intervention offered clients enrolled in SEF's pro-poor programme a ten session curriculum on life skills, health, and gender training, devised by the team of LSHTM and Wits researchers (Kim *et al.* 2002). IMAGE was introduced in the peri-urban area of Burgersfort, a mining town in Limpopo – one of South Africa's poorest provinces. Women involved in this programme came from the poorest strata of their villages (Pronyk *et al.* 2006). The ten sessions took place fortnightly at loan repayment meetings, and included discussion of gender roles and self-awareness, and communication on difficult issues (for example, HIV and household roles). Social workers trained by the research team facilitated the sessions.

Qualitative Evidence

This section presents the statistical methods for analysis of the qualitative information. To derive the socially shared perceptions of SWB and DV, I analyse transcripts from the focus group discussions (FGDs). FGDs were held with project participants in Burundi;

⁹ For more details see Iyengar and Ferrari, 2010.

¹⁰ This project was approved by Harvard University Human Subjects (Application Number: F15660-101).

¹¹ Author's own calculations on SEF's raw data, at June 2004 values, the end of the IMAGE study period.

and with both IMAGE beneficiaries and non-beneficiaries from the same socio-economic milieu of Pedi¹² women in South Africa.

As further discussed below, the *milieu* of IMAGE target participants reflects the general population in the Limpopo province, and particularly its poorest strata: unemployment among IMAGE study participants was at 56% at the time of programme implementation, compared to 50% in Limpopo; and 63% of participants had at most primary level education, compared to 45% in the wider municipality. Moreover, the ethnic group predominantly involved in the intervention, the baPedi, constitutes the overwhelming majority of the African population in the municipality (StatsSA 2001). In addition, the area has been at the centre of very large waves of migration throughout the past 500 years (Kuper 1982, p. 3, pp. 5-10), starting in the 16th century with the Tsonga traders settling in the area from the East (Delius 1983, p. 8) and the mass migration of the Difaqane sparked by the hegemonic push of the Zulu kings in the South (Delius 1983, pp. 19-30), to contemporary labour-related migration (Delius 1983, pp. 62-63; James 1999, pp. 8-9, 15) so that this people shares many fundamental traits with other Southern Bantu groups in the area, namely the Tswana, the Nguni, and the Tsonga who, together, account for 62% of the population of South Africa¹³, as well as with other Bantu speaking groups to the north (Kuper 1982, p. 3, p. 5).

The scope of the FGDs in South Africa is different from those in Burundi. The Burundi FGDs were explicitly designed to unpack mechanisms of intervention impact and explain patterns in results, hence their focus on specific questions around IPV: they served the purpose of investigating possible pathways to intervention effectiveness, and questions were tailored to address specific hypotheses. The South African FGDs, instead, aimed to investigate the abstract concept of wellbeing and the activities individuals associated to it. It assumed no a-priori knowledge, either of the construct or of its correlates or predictors, and was therefore characterised by a structure that encouraged participants to create spontaneous associations, rather than respond to specific questions. In essence, the structure of the two sets of FGDs differs insofar as they serve different purposes.

¹² Intervention recipients were all Pedi women. The baPedi are a southern Bantu people who speak a variant of the Sotho language called Northern Sotho, or sePedi. They are mostly settled in the north-eastern area of South Africa, in the province of Limpopo, one of the country's poorest. This is the area where the IMAGE intervention was implemented.

¹³ Author's own calculations on Table I in (Neff 2007). His data are based on the National Income Survey Wave of 1998, the closest to the time of the IMAGE data collection in 2001. The following wave was collected in 2008.

I use the results from the analysis of FGDs transcripts to derive the socially constructed perceptions of SWB, SE and DV (Reinert 1990). In turn, the perceptions on SWB and SE provide an interpretive context for the analysis of the quantitative data, and an empirically grounded conceptual framework for the concept of eudaimonic utility that I introduce in Chapter 4; the perceptions on DV gleaned from the Burundi focus groups are used to inform interpretation of the quantitative data on intervention impact in Burundi. The next paragraphs contain a brief discussion of the rationale for this analysis and of the data.

The Data

South Africa

This study was designed as an exploration of an unknown construct, as I had found no material directly investigating rural Pedi women's concept of wellbeing¹⁴. I therefore chose FGDs as a data collection tool, because they are preferable to individual interviews, where the focus is more on individual's perceptions. This may also be easier in a context where individuals prefer to express their ideas in a group, rather than on a one-to-one basis (Greco *et al.* 2015). The FGDs encouraged exchanges among the women in a form similar to their day-to-day interactions; the focused nature of the discussion, moreover, encouraged them to verbalise, share and negotiate their views of wellbeing, yielding a socially produced view of the construct of wellbeing (Kitzinger 1994). However, the group context may have primed at least some of the relational responses in women, especially around their collaborations with peers, so these results should be interpreted with caution. To probe this, I carried out three individual in-depth interviews with other women and did not identify any substantive differences in the content of their narratives.

FGDs participants were purposively sampled either from among IMAGE clients or from nearby villages to allow for the possibility that IMAGE clients had different world-views from similar women who did not have access to microfinance services. Only natural groups were enrolled in the study – i.e. groups of neighbours in the non-intervention villages, and of co-loanees or friends from the intervention villages, to ensure that participants were already familiar with one another and used to sharing ideas. This was designed to enhance participants' ability to tackle delicate issues, and to get an insight into the shared culture of the *milieu*. Moreover, the fact that participants knew one another provided an opportunity to check that there was some degree of consistency between their narrations of what they had done and what they had actually done, as others knew them

¹⁴ I only gained access to the work of Wissing *et al.* in 2015, when a volume collecting all their papers was published internationally.

and could engage with the stories. Each focus group spanned various generations of adult women; median age in the whole sample was 43 years, minimum 22 and maximum 65. Within groups, the minimum age range was 7 years, the maximum 36. I could also observe interactions among women at different stages in their lives and deduce some norms of interaction (Kitzinger 1994; Parker and Tritter 2006). IMAGE clients were selected from groups at different stages of programme involvement, to allow for differences in worldview associated with length of participation. IMAGE clients were invited to participate during loan repayment meetings, and other villagers were identified by the research assistant on the basis that they belong to the same socio-economic group as IMAGE participants. FGDs were moderated by me, with three local bilingual English and sePedi research assistants who provided simultaneous translation.

The FGDs were run between 2006 and 2008. Seven took place in 2006, two in May, five in August; and six in July 2008. Most had five participants to ensure everyone had a chance to contribute. Each focus group lasted an average of 3 hours, was usually held in a community centre room or similar to provide some privacy and ensure audibility for the recorder, and had four sections: introduction, brainstorming, activities and conclusion (Bauer and Aarts 2000).

During the introduction, I reassured participants that their privacy would be protected, and declared the absence of conflicts of interest between the discussion we were about to conduct and the activities of the microfinance NGO, where this was necessary. Individuals were briefed on FGD activities and expected completion time, and asked for oral consent. The introduction also served as an ice-breaker and we used songs or other similar activities to create a welcoming atmosphere. At times women would relate ‘praise songs’ – brief poems that told their personal stories.

The FGDs had a specific structure designed to encourage participants to interact among themselves to mimic a natural dialogue, with the intent of encouraging a process of knowledge formation within the FGD.

The brainstorming session invited participants to share the thoughts they associated with the concept of happiness, by asking the simplest question possible to identify WB correlates: “*When I say ‘happiness’ what first comes to your mind?*” Participants were invited to reflect quietly for one minute after the question to increase the likelihood they would be aware of their own thoughts as distinct from those of others during the discussion. The importance of variation in responses, and the fact that no answer would

be right or wrong were highlighted. During the discussion we reasoned on how the listed correlates would impact wellbeing (see Figure 1).

The choice of the word *happiness* was motivated by the fact that affective states tap in both psychological and subjective wellbeing (Deci and Ryan 2008) and, although the word was likely to conjure up associations with instances of pure enjoyment or lack thereof, I also found this to be the simplest question I could ask, without steering participants too strongly toward either SWB or PWB. The question in sePedi was posed as “*Ke thabile ga...*”, which emerged as the preferable question in discussions with key informants, including IMAGE trainers, the interpreter and translator, and my sePedi teacher, since 2005. The initial responses were at times more of a hedonic nature; however, as the conversations developed, other facets emerged.

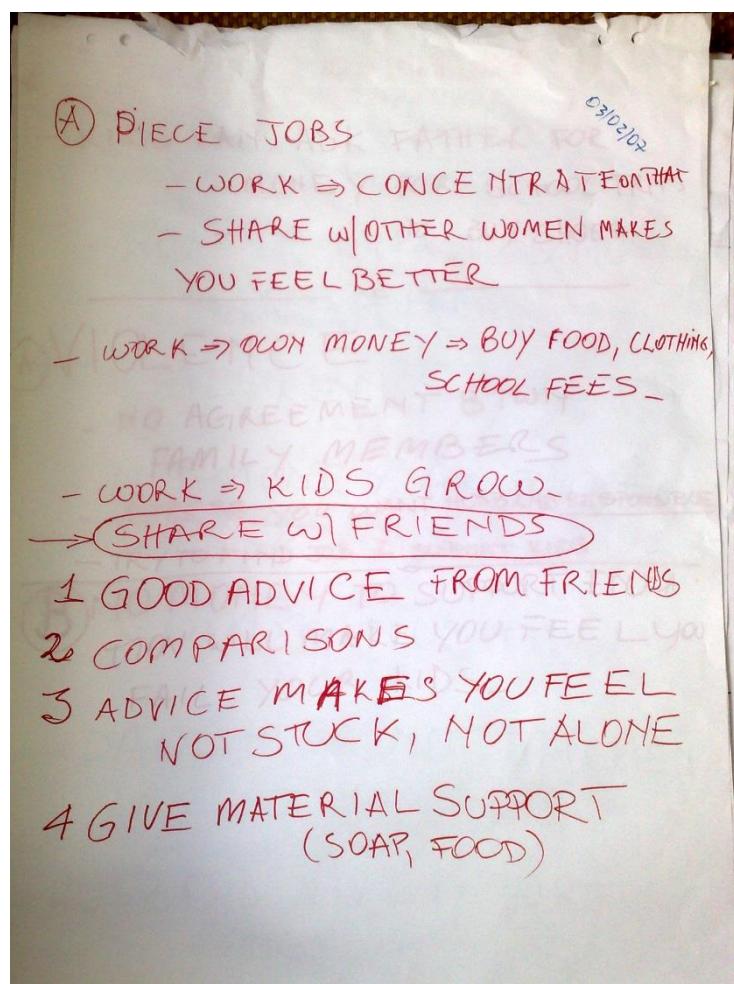


Figure 1 Sample of brainstorm flipchart

Two narrative activities followed: the ‘life histories’ and ‘the day before’. For both, one of the FGD participants would draw a simple graph on a flipchart, illustrating how she felt at different moments in the two time intervals. The life histories graph captured participants’ remembered utility in connection to key life events previously identified as

relevant SWB correlates in frequentist studies, e. g., having children, getting married and/or separated (Figure 2). It reported key life events in chronological order on the x-axis, and a 3-point scale to measure happiness on the y-axis.

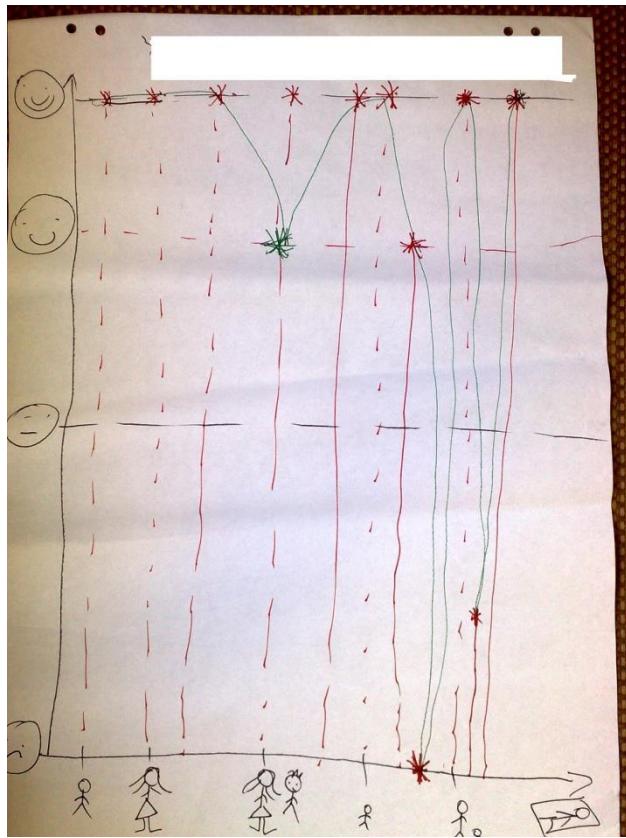


Figure 2 Sample Life History Graph

The narration of the day before was designed to increase the likelihood of picking up more correlates of SWB, as well as less stylized facts about an individual's existence. Its graph had the waking hours of the day, 6 am – 9 pm, on the x-axis, and a 4-point Likert scale to measure happiness on the y-axis, and it was populated by recording the level of happiness associated with specific activities and the people one carried them out with (Figure 3).

This exercise is similar to Kahneman's day reconstruction method (DRM) (Kahneman *et al.* 2004), and is adapted to measure moment-by-moment utility in a FGD setting. Individuals were invited to remember events from the previous day and record their level of happiness on the graph. Both their reports and the discussions that ensued around this exercise contributed to identifying the contours of the social representation of wellbeing (Bourdieu 1984), rather than statistical correlates.

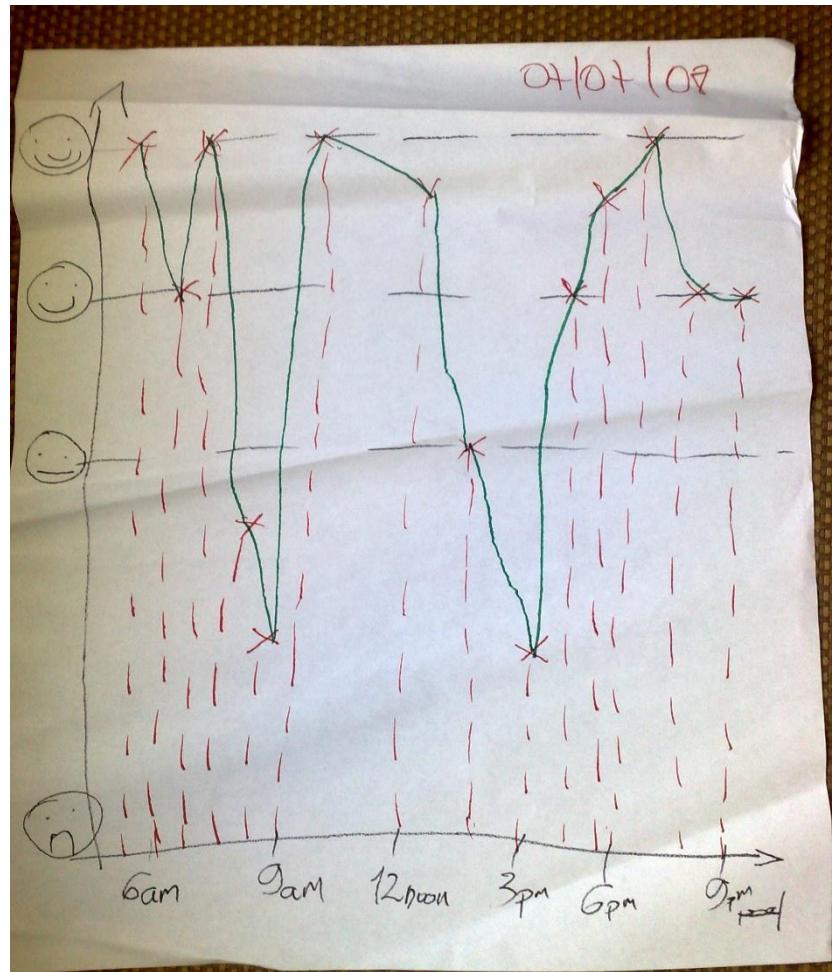


Figure 3 Sample day before narration chart

The FGDs ended with an open Q&A session, and acknowledged the upcoming end of the focus group in the way the group found most suitable. At times, this implied dancing and/or singing together. After each FGD, a light meal and refreshments were offered and shared with participants, providing further room for exchanges in a more informal setting.

The research had been approved by ethics committees at the London School of Hygiene and Tropical Medicine (LSHTM) and the London School of Economics (LSE).

Burundi

Following a sequential explanatory design, this part of the research in Burundi sought to identify study participants' perceptions of gender norms and violence to enrich researchers' understanding of the intervention impact and identify possible mechanisms of effectiveness, or lack thereof (Clark and Creswell 2011).

In January 2009, after the end of service delivery, and just prior to the last wave of data collection, IRC personnel carried out six focus groups. FGDs were highly structured both in terms of types of participants and in terms of processes, to Potential FGD participants were stratified by gender (and age, for women) and by treatment status: two FGDs were conducted with young women, two with older women, and two with men. Within each age/gender pair, one FGD was with treated participants, and one with controls. Participants were purposively sampled. Each focus group had between four and seven participants.

FGDs lasted between 2 hours and 2 hours 45 minutes, were conducted in French, tape-recorded, and transcribed and translated into English. They were conducted following a very detailed topic guide, listing specific short questions to ensure all FGDs left space for participants to express their views, and yielded comparable information. The topic guide explored three broad themes: negotiations within the household, domestic violence, and the community's response to domestic violence, each broken down into three to four sub-themes with a few questions each.

A female moderator and a female note-taker conducted the focus groups with the women, and a male moderator and a male note-taker those with men, because it was thought this would favour a greater degree of understanding and trust during the sessions. Moderators and note-takers were also administered a document with detailed instructions on how to take notes during and after the FGDs. However, notes were not shared, and are therefore not used for this analysis.

At times, especially for the most delicate parts of the discussion, moderators and interpreters explicitly appealed to this form of trust and understanding, to reassure participants that their thoughts would be comprehended, valued, and respected, as is evident from the excerpt below, where the female facilitator introduces the part of the discussion on violence to the women in the discussion group:

Let us now talk about violence. I would like to remind you that you are free to talk according to your understanding, and whatever you say will be confidential, you know we are almost the same age, so, feel free to express yourselves.

(Suggested script for facilitators of FDGs)

All discussions closed with the moderator and note-taker thanking participants for their contributions.

Analysis

The material from the focus groups was analysed with Alceste, a computer-assisted qualitative data analysis software (CAQDAS), to perform an exploratory analysis of the transcripts. With cluster and correspondence analysis, I synthesise the informational content of this discursive information by identifying patterns in the distribution of content words (i.e. verbs, nouns and adjectives) in the transcripts. These patterns identify clouds or groupings of content words that tend to appear together, forming clusters of meaning, as explained in further detail in the section below. This reduces the dimensionality of the space where the information is plotted (Greenacre and Blasius 2006, pp. 4-5) from the high-dimensional space of individual ideas to the lower-dimensional space of synthetic representations, characterizing the respondents' underlying worldviews in response to the prompts they were given.

It groups the textual data into simplexes – sets of elements (word roots and verb stems) – that reveal the underlying structure of social representations from the analysis of concrete instances of such representations (Durkheim 2001; Lahlou 2008; Moscovici 1963A), i.e. participants' contributions of concrete ideas and associations during the FGDs (Lahlou 2008, p. 217). In this constructivist framework, the social representations yielded by the combination of textual and statistical analyses are reified (Bourdieu 1984), becoming independent from the individual representations that contributed to create them, and rather representative of the social constructs of the totality of the individuals who contributed them (Lahlou 2008, p. 218).

It is these constructs that I use as evidence for the concept of eudaimonic utility and to interpret the outcomes of the interventions, providing a substantive interpretation of utility that is rooted in socio-psychological concepts, and an interpretation of intervention outcomes that does not rest solely on an abstract idea of an individuated rational agent, but on a richer rational make-up and related motivations. The following section provides further details.

This work aimed to explore if the construct of wellbeing among rural Pedi women differs from western constructs. Therefore, reliance on classic content analysis such as that carried out with the aid of NVivo or Atlas.ti was deemed inappropriate because the researcher had no a-priori hypothesis on what the construct may be. Rather, the need was for the analysis to be exploratory (Bicquelet et al. 2012), to generate a bottom-up categorisation of the different aspects of the concept with minimal contribution from the author (Bauer et al. 2014). This analysis is the first step in the identification of dimensions

that make up the concept of wellbeing among this population and requires qualitative data (Wissing 2013a).

The corpus was therefore analysed with Alceste (Analyse Lexical par Contexte d'un Ensemble de Segments de Texte), a software for the statistical analysis of textual data that requires minimum manipulation of the data by the researcher compared to standard computer-assisted qualitative data analysis software (CAQDAS). This was deemed preferable to coding in view of the high likelihood of inter-rater inconsistency in the analysis of FGD transcripts (Weinberger et al. 1998), and also because the author was the only coder, so coding reliability could not be tested and the degree of reliability of the coding would remain unknown. Alceste was designed for the analysis of literary text (Reinert 1990), and has wide application in the social sciences (Guérin-Pace 1998; Schonhardt-Bailey 2005; Hohl and Gaskell 2008) to capture individuals' worldviews, i.e. the sets of constructs that underpin their interpretation of the world.

Preparing the Data for Analysis

Once the transcripts were received from the translator, I read them initially to further familiarise myself with their content. I also compared them against the notes I took while in the field. The pre-FGD briefings and post-FGD de-briefings also helped me understand the context of the women's thoughts better, and this helped in the interpretation of the analysis results. During this stage of familiarisation, the interpreter and translator's versions of dialogues were compared for consistency. They did not differ substantially so only the translator's was retained. The analysis corpus constituted fifty-two thousand words from the transcripts of FGD participants' responses. The corpus was minimally manipulated for analysis, according to standard Alceste procedures. The text was structured into paragraphs corresponding to distinct moments in the conversation, delimiting the fundamental space for the analysis of the corpus, the Initial Contextual Unit, or ICU that defines the environment for Alceste. Punctuation was kept to a minimum to aid the software in identifying the corpus structure. Words capturing variation of no interest to the study were substituted with the general category they pertained to (e.g.: 'mealie-meal', a local semolina-like dish, was substituted with 'food') with no loss of insight for the analysis (Hohl and Gaskell 2008). Once formatted according to these standard guidelines, the text was submitted for analysis.

The Analysis

Alceste first classifies the components of the text: the main analysis reduces 'content words' (verbs, nouns, adjectives and adverbs) to their root form (or lexemes) (e.g. child

from children; or sleep from slept, sleeping, sleepless, etc.). All ‘function words’ (prepositions, auxiliaries, conjunctions and pronouns) are discarded, as they are determined by grammar and pertain to the superficial aspect of language; they are, however, reported in the output to further characterise the themes (Noël-Jorand et al. 2000). The unit of measurement is defined by the software as a sentence of a typical length that, for the English language, varies between 12 and 13 words, an ECU (elementary contextual unit). The first step in the statistical analysis is the creation of a matrix of lexemes and ECUs similar to a presence/absence table where element a_{ij} is equal to 1 if the i -th lexeme is present in the j -th ECU, and 0 otherwise. The software looks for word co-occurrence of roots (lexemes) in ECUs to identify clusters of meaning – i.e. groups of ECUs that contain similar lexemes.

This is the first step in an iterative process where Alceste assigns ECUs with similar profiles to progressively smaller and more homogeneous clouds (or themes). With the use of descending hierarchical classification (DHC), the text is first split into two sub-matrices (or classes/clusters), and then the larger of these is split in two, and so on iteratively. Repetition over each new cluster eventually generates an optimal number of clusters (themes), describing the whole corpus (Guérin-Pace 1998). The themes constitute the concrete textual manifestations of the social representations that I seek to identify, and are central to the analysis.

Each content word is assigned to a cluster or theme, and a χ^2 statistic computed that denotes the degree of association of the word with the cluster; similarly, typical sentences are also identified and assigned a measure of association. I examined the words in each theme, and the sentences that Alceste identified as characteristics of each theme, and determined its focus (e.g., women’s socialisation vs community) and named it. This operation also relied heavily on my familiarity with the text, furthered while reading it to assess which translation to retain, and while formatting it for analysis, as well as by my direct participation in each FGD.

I report the content words characteristic of each theme, so the reader may gain a sense of the theme. In this initial list, each word is accompanied by a number in brackets, indicating the frequency with which the word appears in the theme. I also report characteristic quotes, with ECU number and χ^2 alongside treatment group, FGD date and age of respondents.

The software also performs a correspondence analysis, plotting the themes on a two-dimensional vectorial plane whose axes represent the underlying dimensions of the

discourse (Guérin-Pace 1998). The plane illustrates the relationships between themes, as well as the relationships between the themes and the groups that produced the information. This relationship is expressed in terms of distances on the vectorial plane: the closer the themes are to one another, and the closer they are to specific groups, the more strongly associated they are. In some cases, themes may partially overlap, as illustrated below (see Figure 6). This graphical representation maps the deeper structure of language and reveals individuals' representations of the world (Bourdieu 1984; Lahlou 2008; Reinert 1990).

Limitations

This work has limitations at the data collection and the analysis stage.

It has some conceptual limitations as a result of its preliminary and exploratory nature. Because the structures of wellbeing in this context were unknown, it was important to use the simplest and most open-ended question to start the dialogue, and let the women, and interactions among them, generate more complex concepts. This allowed me to discover unexpected patterns (e.g. relationality). However, it may also have concealed more subtle aspects of eudaimonia that are relevant to the women, but would require more in-depth conversations and exchanges to be identified.

The group context may have primed at least some of the relational responses in women, especially around their collaborations with peers, so these results should be interpreted with caution. To probe this, I ran three individual in-depth interviews with other women and did not identify any substantive differences in the content of their narratives.

The natural groups might have inhibited participants from sharing experiences they thought might later have repercussions in interactions with friends. To minimise this risk, the RAs and I repeatedly stated the FGD was a moment to share and accept different views. In addition, the opposite scenario, where we would be discussing personal issues in groups of strangers specifically invited to participate in the group seemed less likely to yield relevant data.

Finally, the focus of this research was the identification of a socially shared meaning; and it was therefore more important to explore what groups thought were socially acceptable perspectives and narratives, rather than getting at some underlying 'truth' (Schneider and Palmer 2002).

I was present at and moderated all the FGDs. This could have influenced what the women chose to say during the meetings compared to a situation where they perceived themselves

as being with peers only. I tried to narrow the gap in various ways. First, I am of the same gender as the FGDs participants, so that gendered barriers in discussing difficult issues should not have interfered. I am familiar with Northern South African and Swazi culture, having lived in the area for four years, including during my high-school years in Swaziland, between 16 and 18 years old. As discussed, Swazis are similar in their social organisation and share important historical events with the Pedis, so that I was not a complete novice to the women's world. Moreover, I learned the basics of the language (I had learned some siSwati when at school, which helped somewhat), and used key words to let participants understand that I was interested in exploring their world, and was not a complete stranger.

From a relational perspective, the familiarity I had with the RAs contributed positively to the groups' acceptance of my presence. I had collected survey data in the field for the previous six months with the first RA, and we had spent days in the field together, socialising beyond work. I had spent long periods of time at the home of the second RA when in the field for both the quantitative survey and the cost data collection for the economic evaluation of the IMAGE intervention, between 2005 and 2006. I spent most of the weeks of fieldwork in 2008 at her home, located in the field site. The familiarity with these women, who were perceived as local, translated into familiarity between the groups and me and mitigated my being a foreigner, and contributed to establishing a relaxed and open atmosphere (Green and Thorogood 2014, 146).

Moreover, my presence in the FGDs implied that any unforeseen research-relevant complications could be immediately solved. It also provided me with familiarity with the narratives from the focus groups, as I made notes on flipcharts, and asked explanatory questions when I did not understand something that had been said.

The analysis was conducted with only one software programme for the analysis of qualitative data. I have attempted to mitigate this by reading the text several times, so as to become familiar with it and compare it against the notes I took while in the field. The pre-FGDs briefings and post-FGDs de-briefings also helped me understand the context of the women's thoughts better. To further test the robustness of these results, I am developing plans to write a methodological paper with colleagues expert in the use of NVivo to compare the results of the analysis I carried out with Alceste to their analysis of the same material in NVivo.

Quantitative Evidence

This section illustrates the data and statistical methods for outcome selection and the estimation of impact of the two DV prevention programmes: I use FA to select empowerment outcomes relevant to EUD dimensions; exploit random programme assignment to identify causal policy impact – a concept I explain below, drawing heavily on Duflo (Duflo *et al.* 2007); and apply econometric methods to estimate the treatment parameter of interest, as the following sections illustrate. The chapter concludes with an overview of survey timing and instruments, and a summary of similarities and differences between the two interventions, to establish the background for comparison.

Measuring Empowerment and Violence: Outcome Selection with Factor Analysis

The selection of the empowerment outcomes with FA involves two phases: one is conceptual, and generates hypotheses on the psychological dimension each empowerment indicator belongs to; the other, FA proper, is an empirical test of these hypotheses. In the conceptual phase, I first assign each indicator to one of Cummins' wellbeing domains, which have already been shown to matter to general wellbeing (Cummins 1996). These capture individuals' wellbeing in specific areas – such as intimacy, for example, or financial security – and are therefore less general than the psychological dimensions I use to substantiate the utility function (e.g., autonomy). I then assign each wellbeing domain to a dimension of eudaimonic utility, justifying my choices with references to specific measures of these psychological dimensions, where these are available (Abbott *et al.* 2010). This provides a conceptual link between the items in the questionnaire and eudaimonic utility. I test this conceptual association by conducting a factor analysis on all the indicators I identified as relevant by jointly using Cummin's Quality of Life (QoL) domains and the eudaimonic utility (EUD) dimensions. For the econometric analysis of impact in Chapters 5 and 6, I only retain the indicators that the FA results suggest are related to the underlying dimensions of eudaimonic utility: I exclude the indicators on women's rights in Burundi, because they do not load on any of the factors due to insufficient data; I retain, however, all other indicators that load on a factor, even if they have a high degree of uniqueness, which indicates that much of the variation is not explained by the factors, in view of the fact that the indicators were not originally designed to reflect psychological or subjective domains.

The key idea underpinning FA is that each of the underlying (latent) factors explains some of the variation observed in the data for each outcome:

$$x_i = \alpha_{i0} + \alpha_{i1}f_1 + \alpha_{i2}f_2 + \cdots + \alpha_{im}f_m + \varepsilon_i$$

where $\mathbf{f} = (f_1, f_2, \dots, f_q)$, is the vector of factors (i.e. the eudaimonic dimensions); with $E(f_j) = 0, Var(f_j) = 1 \forall j$, and $E(\mathbf{f}_i \mathbf{f}_j) = 0, i \neq j$. ε_i is the error – i.e. the amount of variation in the data that is not explained by the latent factors – with $E(\varepsilon_i) = 0, Var(\varepsilon_i) = \sigma_i^2 \forall i$, and $E(\sigma_i \sigma_j) = 0, i \neq j$.

In the analysis, I constrain the number of factors to three, in line with my hypothesis that eudaimonic utility consists of three dimensions, and these are the dimensions of wellbeing most responsive to empowerment. I include all the outcome variables identified in the a-priori selection process by intersecting Cummin's QoL domains, the outcome indicators of empowerment and the EUD dimensions as illustrated in Chapter 5, Tables 4.1a to 4.2c.

In general, the expected value of each outcome variable, $E(x_i)$, is such that $E(x_i) = \alpha_{i0}$; however, I standardise the outcome variables around their mean before performing the FA, to eliminate differences in scales between variables. This implies that $E(x_i) = \alpha_{i0} = 0$ (Bartholomew *et al.* 2008). The other coefficients, $(\alpha_{i1}, \alpha_{i2}, \dots, \alpha_{im})$ are the factor loadings, and indicate how much of each outcome is explained by each factor. For standardised outcomes, α_{ij} measures the correlation between outcome i and factor j (Armitage *et al.* 2001, p. 463). To test the robustness of results, I first run the analysis on the full set of outcomes, and then discard outcomes whose ε_i (or uniqueness) is higher than 0.8 in the full model, because such high levels of uniqueness suggest that most of the variation in the data is not captured by the factors.¹⁵ I retain all indicators for the econometric analysis as I privilege consistency with my conceptual framework over model fit (Armitage *et al.* 2001).

Once I identify the factors, I rotate them to identify a better fit to the data. I also relax the orthogonality assumption, $E(\mathbf{f}_i \mathbf{f}_j) = 0, i \neq j$, and allow axes (or factors) to display some degree of correlation. Non-orthogonal, rotated factors improve the interpretability of results by identifying an optimal solution that explains as much of the variation in the data as possible (Armitage *et al.* 2001; Roche 2008). Intuitively, this allows items designed to capture one factor – e.g., decision-making indicators for autonomy – to also load on other factors – e.g., meaningful relations with others – and generally identifies optimal factor loadings (Armitage *et al.* 2001).

¹⁵ That is, when I run the FA for the first time, including all the indicators I have selected as potentially relevant.

Once the factor loadings have been identified, I construct the factors using principal component analysis (Armitage *et al.* 2001).

In Chapters 5 and 6, intervention impact results are presented in three parts, one for each eudaimonic dimension. In each section, I first present results from the regression of the eudaimonic factor on treatment and baseline covariates, followed by results for the items that load on that factor according to the factor analysis.

Identifying the Causal Impact of Treatment: the Theory

The randomised evaluations in Burundi and South Africa estimate the causal impact of access to microfinance services and training packages on exposure to violence. I estimate the difference in prevalence of violence between treatment and control group which, for N large enough,¹⁶ tends to:

$$D = E[Y_i^T | T] - E[Y_i^C | C] \quad (2.1)$$

where Y is the outcome of interest, $T =$ Treatment, $C =$ Control, $i = 1, \dots, n$ is the individual.

This difference, however, contains both a treatment effect plus an element of bias, as illustrated below:

$$D = E[Y_i^T - Y_i^C | T] + E[Y_i^C | T] - E[Y_i^C | C] \quad (2.2)$$

where $E[Y_i^T - Y_i^C | T]$ is the *treatment effect* – the causal impact of the treatment I want to measure; and $E[Y_i^C | T] - E[Y_i^C | C]$ is the *selection bias*, i.e. the difference in prevalence of violence between the treatment and control groups, had the treated not received the treatment. Selection bias refers to systematic differences between the treatment and control groups that contribute to the difference. They cannot be observed because the term $E[Y_i^C | T]$ is by definition not observable, as it captures the idea of average outcomes for treated individuals had they not been treated – and is therefore in general difficult (or impossible) to quantify (Duflo *et al.* 2007; Duflo and Kremer 2008).

By randomly assigning individuals to either the treatment or control group, randomisation designs, when perfectly implemented, eliminate the selection bias and isolate the *treatment effect* researchers seek to estimate. This is because, when assignment to treatment is random, outcomes between treated and non-treated individuals differ, in expectation, only because of the treatment, and do not differ systematically. The difference between the expected value of the outcomes for the treated, had they not

¹⁶ I use limit quantities throughout this section to make notation lighter.

received the treatment, and the expected value of the outcomes for controls is zero, if individuals have been randomly assigned to treatment. Finally, under the hypothesis of no correlation between one individual's treatment status and another's outcomes, the following equalities hold (Duflo *et al.* 2007):

$$E[Y_i^T | T] - E[Y_i^C | C] = E[Y_i^T - Y_i^C | T] = E[Y_i^T - Y_i^C] \quad (2.3)$$

Random assignment, if rigorously designed and implemented, yields an unbiased estimate of the expected value of the difference in outcomes between the treatment and control groups, i.e. the causal parameter that captures the impact of treatment (Duflo *et al.* 2007): the total change in violence as a consequence of access to financial services and life skills training (versus no services), for IMAGE; of access to negotiation skills training (vs MF-only services), for Burundi VSLAs.

This is the parameter I seek to estimate combining random assignment and the econometric specifications I illustrate below.

Randomisation and Study Design

Burundi

In Burundi, the evaluation compares the impact of an MF-plus package over access to financial services only (MF-only). Thus, though it cannot assess the effectiveness of the VSLA programme overall – which would require a randomly assigned control group of non-recipients – it can assess the marginal impact of the negotiation skills training on women's empowerment, defined here as their ability to not only access economic resources but also participate in controlling them. In other words, this experiment draws its sample from a sub-population of individuals who choose to take part in an MF programme. Its findings may therefore have reduced external validity, and extrapolation to populations of non MF-takers is limited.

Within each VSLA cluster, half the members were randomly assigned to treatment – i.e. the DGs – through a lottery, held in each VSLA.¹⁷ Slips were drawn from a hat, and those

¹⁷The VSLA groups initially formed through members of the community designated as community based facilitators (CBFs). The IRC identified CBFs during community mobilization on the VSLA approach. The IRC was able to reach four communes and eight zones. After having explained the VSLA approach and the role of CBFs, community members elected two or three people. In each commune, the IRC invited four CBFs (for a total of sixteen CBFs) to a meeting where a transparent selection process was conducted to identify the eight CBFs. The IRC chose two individuals that fulfilled all or the majority of the criteria in each commune. At the end of the process, the IRC had retained eight CBFs, four women and four men as facilitators. Each commune had one female and one male facilitator. The CBFs were responsible for training groups in the VSLA methodology.

with ‘winning’ slips invited to attend a six-session course on household decision-making with their spouses.¹⁸

In order to determine the sample size necessary to detect a significant change in the outcome measures, I conducted a power analysis for a two-tailed test Treatment ≠ Control, referring to the IMAGE results (Kim *et al.* 2007; Pronyk *et al.* 2006). IMAGE found that average effect sizes among treatment group women revealed a reduction in IPV of almost half relative to their control group counterparts. With such a large effect, the pilot study sample of 500 would be sufficient to detect statistically significant change.

To determine if such a distribution was applicable to the Burundi population I compared the results from the baseline survey to the South African sample. Baseline results indicate that the distribution of violence among respondents in Burundi is similar to that of respondents in the South African sample analysed by Kim *et al.* (2007). Applying the same distribution (mean and standard deviation) of the population in Burundi would imply that the minimum effect size the pilot could significantly detect was a 30% change in outcome values. This is significantly smaller than the effects detected in Kim *et al.* (2007), and provided some buffer for the fact that the Burundi intervention was comparing the MF-plus versus the MF-only, rather than the MF-plus versus nothing. Because no other trials of similar interventions were known at the time, it was impossible to make more precise calculations.

To increase power for analysis, the sample was randomly drawn from each of the 25 groups so that the probability of being chosen for any respondent was 50% conditional on being in their VSLA group. Because of a small number of absences, the overall probability of any given VSLA member being chosen to participate in the DGs was 48%. Absences were orthogonal to the lottery, and so this slight divergence does not significantly affect the comparability of the control and treatment groups.

South Africa

The IMAGE evaluation measures the impact of the full MF-plus-life-skills (MF-plus) package compared to no intervention, i.e. the total impact of the MF-plus intervention on women’s empowerment and exposure to violence. It does not assess the additional impact

¹⁸ All participants were informed that due to space constraints, only half of the members would be able to attend. In each DG, individuals drew numbers from a bag or hat. Those who drew a ‘winning’ number were invited to attend the groups. The others, assigned to the waiting-time control group, were informed that they would not participate this time but would hopefully be able to participate in the next round. The lottery was conducted this way due to concerns that choosing half of the DGs would result in insufficient statistical power to detect an effect.

of life-skills training for people who already have access to the financial intervention – something the Burundi VSLA programme is instead designed to capture.

The unit of randomisation for IMAGE is the village: villages are the individuals for whom the study estimates impact. All eight study villages were first stratified by accessibility and matched on size within strata, to generate four village pairs: one pair of large and accessible villages, two pairs of medium and accessible, and one of small and inaccessible. It was hypothesized that larger villages closer to main roads would have more dynamic markets than villages that were smaller or further away from main roads, and that this might contribute to determining the outcomes, the systematic bias highlighted in equation (2.2).¹⁹ For each village pair, one village was randomised to immediate treatment and one to deferred treatment via a lottery (Hayes and Bennet 1999; Pronyk *et al.* 2006). The stratification and pair-matching should have increased the power and precision of the test, based on the assumption that distance and size were effectively correlated to intervention outcomes, despite some loss of power due to the reduction in degrees of freedom incurred when controlling for village pairs (Hayes and Bennet 1999).²⁰ The matching is retained throughout all analyses to reflect sampling design (Hayes and Bennet 1999).

The sample of study participants was drawn from the group of women deemed eligible to join the MF programme at the time the MF NGO entered the villages. Eligibility for the programme was determined – when participating villages had been identified, but before they were randomised – through a participatory rural appraisal exercise, called participatory wealth ranking (PWR). At the time of the study, PWR was a standard eligibility process at SEF: in each village, it ranks households according to their level of reported poverty (Simanowitz 2000; Simanowitz and Nkuna 1998). Only the poorest 60% are eligible to participate in the MF programmes. This threshold is strictly enforced and the measure's consistency with statistical methods of poverty measurement has been tested and discussed elsewhere (Hargreaves *et al.* 2007). In sum, IMAGE stratifies by village characteristic, and matches villages within each pair; to further enhance comparability, only individuals who are among the poorest 60% in each village are

¹⁹ Village characteristics were measured during field reconnaissance visits due to lack of census data on these villages at the time the pilot started (Pronyk *et al.* 2006)

²⁰ Power calculations for the IMAGE study could not rely on previous contributions as the study was the first of its kind. Hence, the study protocol published expected outcomes and relevant interval estimates, discussing the sensitivity of results to changes in key statistical parameters (Pronyk *et al.* 2005), protocol number: 03PRT/24.

allowed to join: stratification, matching and eligibility criteria generate highly comparable treatment and control groups with respect to observable characteristics.

Tackling self-selection bias in IMAGE

The impact of interest in the IMAGE study is the difference between (or odds ratio of, if I consider a logistic model) treatment and control village averages within each matched pair, post treatment.²¹ In order to measure an intention-to-treat (ITT) estimate, this would require that the outcomes of all eligible individuals be measured in each village, irrespective of whether they joined the programme or not. However, the study measured baseline and follow up outcomes for joiners only in the villages assigned to treatment, and compares these to a random sample of eligible women matched on age in the control villages. For every new joiner in the treatment group, a control individual was randomly selected in the matched village from the sub-partition of individuals of the same age as the joiner. This means that while I have a random sample of women, conditional on age, in the control villages, for the treated I only observe women who choose to take up treatment, given they have been offered the opportunity, i.e. are in the treatment villages.

Insofar as uptake is explained by observable characteristics (see Chapter 6, Table 6.2), I first control for baseline imbalances, and then account for unobservable, time-invariant characteristics that may be correlated to project uptake and outcomes by calculating a difference-in-differences (D-i-D) estimate of impact. This takes into account the fact that treatment and control individuals may be different at baseline, but assumes that their trajectories of change are parallel in the absence of an external shock:

$$[E[Y_1^C|T] - E[Y_0^C|T]] = [E[Y_1^C|C] - E[Y_0^C|C]] \quad (2.4)$$

where the subscripts 1 and 0 indicate follow-up and baseline, or time 1 and time 0, respectively.

Any difference in the changes in outcomes between the intervention and control groups is attributed to the intervention, under the assumption of parallel trends in (2.4):

$$DD = [E[Y_1^T|T] - E[Y_0^C|T]] - [E[Y_1^C|C] - E[Y_0^C|C]] \quad (2.5)$$

This approach controls for individual fixed effects – individuals' unobserved characteristics that may have influenced their decision to join and their outcomes, and do not change in time.

²¹ I also calculate differenced averages, as I illustrate below.

I also calculate two local average treatment estimates (LATE). By controlling for baseline demographics that are statistically significantly different between the two groups, and I think may reasonably explain treatment uptake among the treated, I obtain unbiased estimates of treatment impact “within each stratum defined by the interaction of the covariates” (Duflo *et al.* 2007):²²

$$E[Y_i^C | X, T] - E[Y_i^C | X, C] = 0 \quad (2.6)$$

where $X = (x_1, \dots, x_k)$ is the vector of k covariates.

I compute these estimates by including the relevant controls in my linear and logistic regressions. In the D-i-D specification equation (2.6) becomes:

$$\left[E[Y_1^C | X_0, T] - E[Y_0^C | X_0, T] \right] - \left[E[Y_1^C | X_0, C] - E[Y_0^C | X_0, C] \right] \quad (2.6a)$$

where $X_0 = (x_0^1, \dots, x_0^k)$ is the vector of baseline covariates.

The econometric specifications for these strategies are illustrated below, and results are compared and discussed against original IMAGE estimates (Pronyk *et al.* 2006) in Chapter 6.

The Econometric Specifications

The key D-i-D specifications are similar for both experiments, and the specifications for IMAGE also include the matching estimators.

Burundi

I performed regression analysis in Stata 14 computing an OLS ‘difference-in-difference-in-differences’ estimator for each outcome:

$$Y_{ijt} = \beta_0 + \beta_1 M_{ij} + \beta_2 T_{ij} + \beta_3 T_{ij} * M_{ij} + \beta_4 After_t + \beta_5 M_{ij} * After_t + \beta_6 T_{ij} * After_t + \beta_7 M_{ij} * T_{ij} * After_t + CFE_i + \varepsilon_{ijt} \quad (2.7)$$

where Y_{ijt} is the outcome for individual i in village j at time t ; the intercept β_0 captures the average value of the outcome among female controls at baseline; I use this as my benchmark when I discuss impact; the gender dummy M_{ij} equals 1 if the individual is male; T_{ij} is the treatment dummy, equal to 1 if individual i in village j belongs to the treatment group, and captures the difference in averages between female controls and participants at baseline in this equation; $T_{ij} * M_{ij}$ is the interaction effect between gender and treatment status: it is equal to 1 if the individual is a treated male; $M_{ij} * After_t$ is the interaction effect between gender and time, and captures the marginal change for

²² The formula in (4) can also be expressed as $Y_1, Y_0 \perp T | X$

control males post intervention; $T_{ij} * After$ is the interaction effect between time and treatment status: it is equal to 1 for individual i in village j at time 1 (i.e. post-treatment) if she belongs to the treatment group, and is the variable whose coefficient I am interested in: it reveals the average incremental impact of the intervention on treated women once the intervention is completed. $T_{ij} * M_{ij} * After$ is the interaction effect between treatment status, gender and time, and captures treated males post intervention. Finally, CFE_i is a term for commune (administrative district) fixed effect: IRC-VSLA villages span four communes; ε_{ij} is an error term clustered at the village level to capture the correlation in outcomes among individuals in the same village.

This specification compares the relative change in outcomes for the relevant groups, by gender, as a result of treatment to the initial situation. The randomization design allows me to attribute observed changes to the intervention.

South Africa

I compute estimates on the data from the IMAGE Cohort-I – i.e. intervention beneficiaries and corresponding controls from the Stata datasets contained in the official IMAGE release CD. I use Stata 14 for the analysis.

I first estimate impact with a logistic model that compares only follow-up (time 1) outcomes controlling for relevant covariates to reproduce results as close to the original IMAGE results as possible:

$$p(y_{ij1} = 1 | (T, age, \underline{x})) = \pi_{ij1}(T, age, \underline{x})$$

$$= \frac{e^{\beta_0 + \beta_1 T_{ij} + \beta_2 age_{ij0} + \beta_3 y_{ij0} + \beta_4 x_{1ij0} + \dots + \beta_{4+k-1} x_{kij0} + \beta_{4+k} VPFE + \varepsilon_{ij1}}}{1 + e^{\beta_0 + \beta_1 T_{ij} + \beta_2 age_{ij0} + \beta_3 y_{ij0} + \beta_4 x_{1ij0} + \dots + \beta_{4+k-1} x_{kij0} + \beta_{4+k} VPFE + \varepsilon_{ij1}}}$$

(2.8)

Where π_{ij1} is the probability that outcome y for individual i in village j at follow-up (y_{ij1}) is equal to one. T_{ij} is the treatment status of individual i in village j ; age_{ij0} is the individual's age at baseline, \underline{x}_{ij0} the vector of baseline covariates; y_{ij0} the baseline value of the outcome variable,²³ and $VPFE_j$ were village pair fixed effects to take account of the matched design; and the error ε_{ij1} is clustered at the village level, as illustrated below.

Also:

$$y | (T, age, \underline{x}) \sim Bernoulli(\pi(T, age, \underline{x})) \quad (2.9)$$

²³This includes a category for missing values as per the original IMAGE article (Pronyk *et al.* 2006)

To verify how closely I am able to reproduce original results, I compare my IPV estimates with those in the original Lancet paper (Pronyk *et al.* 2006).

I then replicate these results in an OLS framework:

$$y_{ij1} = \beta_0 + \beta_1 T_{ij} + \beta_2 age_{ij0} + \beta_3 y_{ij0} + \beta_4 x_{1ij0} + \cdots + \beta_{4+k-1} x_{kij0} + \beta_{4+k} VPFE + \varepsilon_{ij1} \quad (2.10)$$

Where $\varepsilon_{ij1} \sim N(0, \sigma_v^2 + \sigma_\eta^2)$ are clustered at the village level, and are of the form:

$$\varepsilon_{ij1} = \nu_{j1} + \eta_{ij1} \quad (2.11)$$

Where $\nu_{j1} \sim N(0, \sigma_\nu^2)$ is the component specific to each village, and $\eta_{ij1} \sim N(0, \sigma_\eta^2)$ is the individual-specific component, uncorrelated with any other individual specific error, thanks to the fact that ν_{j1} captures all the within-village correlation. With this error structure, the variance of the cluster-robust estimators becomes:

$$V(\hat{\beta}) = \left\{ 1 + \left[\frac{V(n_j)}{\bar{n}} + \bar{n} - 1 \right] \rho_\varepsilon \right\} * V_c(\hat{\beta}) \quad (2.12)$$

Where $V_c(\hat{\beta})$ is the variance of the classic OLS estimator, n_j the village size, \bar{n} the average village size, and ρ_ε is the intra-class correlation coefficient that reflects the error structure above, so that

$$\rho_\varepsilon = \frac{\sigma_\nu^2}{\sigma_\nu^2 + \sigma_\eta^2} \quad (2.13)$$

This error structure (Angrist and Pischke 2009, pp. 308-311, 323-325) and related standard errors tackle Donner's original criticism of OLS as opposed to GLS for the computation of estimates in CRTs (Donner 1985), because it accounts explicitly for the variance structure Donner identified as the reason for biased OLS standard errors. It also yields more precise estimates compared to the use of cluster (village, in this case) summaries used for the original IMAGE estimate (Pronyk *et al.* 2006). This method circumvents the intra-cluster correlation problem by inputting village summaries in the regressions, rather than individual level values, and is advantageous with low cluster numbers (Hundley *et al.* 2010); however, given the relatively low number of covariates to account for, I present the robust OLS estimates due to their higher precision.

The rest of the analysis is based on individual-level differenced estimators, to account for some of the selection bias in the data.

OLS Difference-in-differences

The D-i-D estimator is computed in an OLS framework and is comparable to the Burundi VSLA estimator:

$$Y_{ijt} = \beta_0 + \beta_1 T_{ij} + \beta_2 After_t + \beta_3 T_{ij} * After_t + \beta_4 Z_{ij} + \mathbf{X}'_{ij0} \beta_5 + \beta_6 VPFE_j + \varepsilon_{ijt} \quad (2.14)$$

where Y_{ijt} is the specific component of the empowerment index for individual i in village j at time t ; T_{ij} is the treatment dummy indicating whether individual i belongs to the control or MF-plus village j ; the dummy $After_t$ captures the time effect and is equal to 1 in the second (follow-up) period; the interaction $T_{ij} * After_t$ captures the impact of the treatment on the treated, once treatment has been administered; \mathbf{X}_{ij0} is a vector of socio-demographic characteristics at baseline such as age, education, marital status, past year work and wealth. It will first only include age to reflect sampling design, and then progressively all the socio-economic variables that differ at baseline between the intervention and control group to correct for imbalances and show how estimates change. $VPFE_j$ is a term for village pair fixed effects and takes into account the matched-pair sampling design (Hayes and Bennet 1999); finally, ε_{ijt} is an error term clustered at the village level, as discussed above.

Survey Instruments and Timing of Data Collection

Burundi

The evaluation relies on four sources of data: 1) a baseline survey conducted in January 2008, soon after the VSLA groups were formed, to determine comparability of treatment and control beneficiaries; 2) a post-DG survey conducted in July 2008; 3) FGDs in January 2009, after the VSLA groups had completed their one-year cycle, and savings plus interest had been distributed to all participants, to contextualize and enrich researchers' understanding of quantitative findings from the survey; and 4) a final survey conducted in April 2009.

The three surveys collected data on household consumption, decision-making and conflict resolution, gender roles, attitudes toward violence, exposure to violence, and women's rights (Table 2.1).

The first survey also included a household roster; while the second included sections on asset ownership and income, VSLA loans and savings, and wealth and wellbeing. The measure of exposure to violence used in this survey is the Hurt Insult Threaten Scream (HITS) instrument (Sherin *et al.* 1998). HITS was chosen due to its proven applicability

in a variety of settings, and because it allows for a rapid appraisal of past experiences of violence. Its measurement captures exposure to abuse in the two weeks prior to the interview.

The surveys were conducted by 12 interviewers, 4 of which were males. Each interview lasted approximately 30 minutes.

Table 2.1 Burundi Outcome Variables Values

Variable	Values
women should do as men say	
wife should give money she earns to husband	1 = Strongly Agree
okay for husband to abandon wife if he wants	2= Agree
woman's job to gather water, even if unsafe	3 = Disagree
women should have sex when husband wants	4 = Disagree Strongly
women should have as many kids as husband wants	
how money is spent spouse decides	
daily household purchases spouse decides	
large household purchases spouse decides	1=F: Spouse decides/ M: I decide
alcohol & cigarettes spouse decides	2=F: I decide/ M: Spouse decides
visit family & friends - spouse decides	3=I decide on some things, spouse decides on others
visit spouse's family & friends - spouse decides	4=Decide jointly
how many kids spouse decides	
have sex spouse decides	
how money is spent disagree: spouse changes	
daily household purchases disagree: spouse changes	
large household purchases disagree: spouse changes	1 = F: Do nothing-Spouse knows better/ M:Change Alone
large household purchases disagree: spouse changes	2 = Do nothing-Spouse won't listen
alcohol & cigarettes disagree: spouse changes	3 = F: Change Alone/ M: Do nothing-Spouse knows better
visit family & friends disagree: spouse changes	4 = Tell Spouse and Change
visit spouse's family & friends disagree: spouse changes	5 = Discuss with Spouse
how many kids disagree: spouse changes	
have sex disagree: spouse changes	
okay to beat wife if goes out w/out telling husband	
okay to beat wife if neglects kids	
okay to beat wife if argues w/ husband	0=yes
okay to beat wife if refuses sex	1=no
okay to beat wife if burns food	
okay to beat wife if does something annoying	
okay to beat wife for any reason	
never okay to beat wife	0=disagree / 1=agree
woman has been physically hurt (H)	
woman has been insulted (I)	1=never, 2=rarely; 3=sometimes;
woman has been threatened (T)	4=fairly often; 5=frequently
woman has been screamed at (S)	
Total HITS score >5	0=totit score between 0 and 5 1=totit score between 6 and 20
Felt hopeless in the past 2 weeks	1 = all the time

Variable	Values
Felt depressed in the past 2 weeks	2 = most of the time
Felt unable to concentrate in the past 2 weeks	3 = some of the time
Felt worthless in the past 2 weeks	4 = a little of the time
Felt that did not wish to see anyone in the past 2 weeks	5 = None of the Time
Found it more difficult to carry out day-to-day activities	
Weekly Mkt Consumption	Burundi Franc (1BIF=0.00081 USD2009) Mean: 15,299 (SD:15,642)
Weekly Total Consumption	Burundi Franc (1BIF=0.00081 USD2009) Mean: 13,578 (SD:15,240)

South Africa

Survey data were collected at two points in time: baseline, in 2001-2002, before the programme started; and follow-up, in 2003-2004, when treated women had been exposed to the programme for two years.

The IMAGE survey contained data on socio-demographics, group membership, community participation, household dynamics and resources, HIV/AIDS awareness and communication, gender norms, decision-making in the household, IPV including controlling behaviour, and response to abuse. A household questionnaire also administered to the women contained information on economic wellbeing and a household roster. The tool that measured exposure to violence in the IMAGE study – based on the World Health Organisation (WHO) indicators of domestic violence (García-Moreno *et al.* 2005) – measured exposure over a period of 12 months prior to the interview (Table 2.2).

Questionnaires took approximately 40 minutes to administer. Enumerators were all females. They received one month's training on the questionnaire and interviewing techniques on sensitive issues, prior to the first wave of survey data collection (Hargreaves 2003).

Table 2.2 IMAGE variables values

Variable	Values
Women should do all hh chores	
If paid lobola, wife must obey	
Wife asks condom, disrespectful	
Wife asks condom, sleeps around	
Man has g-friends, must tolerate	1=agree 2=disagree
Wife must not divorce	
Ok to refuse sex if not want	
Ok to refuse sex if no condom	
Ok to refuse sex if angry for other g-friends	
Ok to refuse sex if worried about AIDS	
Large purchases self, ask partner	
Small purchases hh, ask partner	
Medium purchases hh, ask partner	
Large Purchases hh, ask partner	
Visit family of birth, ask partner	
Visit friends in the village, ask partner	
Visit family or friends o/s vlg, ask partner	
Join credit association, ask partner	0=yes 1=no
Partner encouraged to participate outside hh	
Partner asks for advice	
Partner keeps from friends	
Partner restricts contact w\family	
Partner insists on knowing where she is	
Partner controls access to health care	
Partner boasts girl-friends	
Partner threatened eviction	
Spend own money - Ask Partner	1=all to husband; 2=part to husband; 3=self
Insulted by partner - Past Year Experience	1=yes 0=no
Pushed by partner - Past Year Experience	
Partner hit w\fist - Past Year Experience	
Had forced sex w\partner - Past Year Experience	1 yes 0 no
Had sex for fear of reprisal - Past Year Experience	
Total Violence (Push, Hit, Force sex)	

Discussion: How do the two interventions compare?

Both studies address the same policy question: whether it is possible to reduce women's exposure to domestic violence by providing them with access to financial resources and improving their ability to participate in decision-making in the household. They both test this hypothesis by evaluating interventions that couple MF services and life skills training for poor women (and men in Burundi) in rural or peri-urban areas of two sub-Saharan countries, providing evidence on programme effectiveness from two different contexts. These are important similarities and this is why I discuss the interventions together. Notably, neither of the studies has a Theory of Change. However, the IMAGE

intervention was explicitly based on Heise's ecological model, so that individuals' behaviours is inscribed within meso and macro structures which it can turn can change (Heise 1998; Pronyk *et al.* 2006); the Burundi-VSLA intervention was instead couched in the framework of intra-household models of resource allocation. Thus, both interventions had an explanatory model, albeit not explicitly formulated in terms of a Theory of Change. There are also some important differences between intervention packages, study designs and survey instruments that should be kept in mind in any comparison. These are discussed below.

Intervention Packages

IMAGE targets women only. This is inscribed in a philosophical and political paradigm that argues that victims need to develop an independent form of autonomy to overcome their oppressor (Kabeer 1998, p. 81; Nussbaum 2000). This paradigm is rooted in feminist thought, and frequently translated into women-centred policy interventions and studies in developing countries that aim to render women more independent from others and encourage shifts toward gender-equitable social norms (Mayoux 1999; Schuler *et al.* 1996). Burundi instead targets both women and men, focusing on the power dynamics between them. This was a pragmatic decision, dictated by the need to avoid community rejection, following a number of failed attempts at setting up women-only interventions. Both interventions look at the role of institutions and social norms in disadvantaging women. However, IMAGE collects information only on the women's decisions and outcomes,²⁴ while in Burundi information is also collected on their spouses. This is because the theoretical background of the Burundi intervention rests on intra-household models of resource allocation (Anderson and Eswaran 2009; Lundberg and Pollak 1993; Sen 1990) that explicitly incorporate the power dynamics between men and women, in line with a gendered approach to development (Kabeer 1994; Kabeer and Subrahmanian 2000), and provide a potentially fuller picture of the interactions around IPV.

This difference in target groups mirrors differences in the training packages, with greater focus on co-operation in Burundi, and on independence in South Africa. This may be reflected in the results, and may have different implications for IPV: women's unilateral decision-making may increase their vulnerability to IPV, because they are seen as threatening by males, while the dialogue inherent to greater co-operation may decrease risk of IPV; or it may be that in the short term independent women are better able to avoid

²⁴ There are other surveys within the IMAGE study that look at young people in the villages where the intervention was introduced, as well as a household survey, but these do not provide information on women's spouses that could be used for modelling intra-household decision making dynamics.

IPV than women who still seek to negotiate with their partner. Changes in IPV may be the result of very different dynamics. A reduced model of treatment impact on violence only would not cast light on the mechanisms, whereas the large number of ancillary empowerment outcomes in both trials helps cast some light on these underlying mechanisms. Moreover, the Burundi intervention provides a more complete picture of household dynamics for an understanding of the IPV phenomenon, having data on men, too.

Further, the conceptual framework IMAGE falls under hypotheses that IPV is associated with a multitude of individual, family and community characteristics (Heise 1998). Therefore, the challenge of IPV requires a full MF package that provides women with both a potential source of income, tools to develop greater independent autonomy within the household, as well as a context where they would forge alliances with peers. The Burundi-VSLA intervention instead, with its disciplinary perspective rooted in economics, seeks also to answer the question of what the minimum costs society needs incur to prevent IPV is, and hence the comparison between the MF-only and the MF-plus services.

Another element that differentiates intervention design is the different financial service offered to participants. IMAGE provides access to micro-loans, whereas the Burundi-VSLA intervention offers access to a rotating savings association. The difference in services is likely to generate differences in the type of client they attract: micro-loans should attract individuals who have some entrepreneurial interest, and are therefore more risk-prone than average; while savings may attract more risk-averse individuals. Further, as regards outcomes, savings have been shown to be more beneficial than loans in alleviating poverty, although in this case these differences may be mitigated by the fact that the loans SEF supplies to IMAGE clients are very small, even by local standards.

Measure of Domestic Violence

The tools used in the two interventions to measure experience of domestic violence differ somewhat. The Burundi study administered the Hurt, Insult, Threat, Scream (HITS) measure (Sherin *et al.* 1998)²⁵ while the IMAGE questionnaires contain the questions

²⁵ HITS (Sherin *et al.* 1998) is used globally now in China, Saudi Arabia, the Middle East, Africa, Europe, and South and North America. It has been validated for women in Spanish, and for partner violence with males. In the US, the HITS tool is used or has been recommended by Kaiser Permanente Group of Northern California, The New Jersey Hospital Association, the Alaska Department of Health and Human Services, Parkland Hospital in Dallas, the Department of OB GYN at USF in Tampa, the CDC, and others. It has been translated into multiple languages including Mandarin, Chinese and Arabic.

devised by the WHO multi-country study on violence against women (García-Moreno *et al.* 2005). The HITS tool is a "paper-and pencil" instrument for identifying both physical and verbal abuse (Sherin *et al.* 1998). It includes four items: physical abuse (such as hitting or punching), insults, threats and screaming. The four items are scored on a Likert 5-point scale measuring frequency of incidents.²⁶ Although differing slightly, both the HITS and the WHO instrument capture a measure of physical assault – "push, and hit with a fist or object" in the WHO instrument; "physically hurt", in the HITS measure – as well as a measure of insult, though the IMAGE instrument only records insults administered in public, and is therefore likely to capture fewer instances. The two measures differ in that the HITS measure also captures instances of threat and cases when the woman has been screamed at, and hence focuses on aggressive behaviour in general of the man toward the woman. The WHO tool looks explicitly at sexual violence, investigating whether the woman has been forced to have sex and/or has had sex for fear of the consequences of refusal, and also at controlling behaviour more generally. All questions in the WHO tool have binary yes/no answers, while the HITS tool measures frequency of events.

In both cases, the choice of questions is related to the context where the interventions were introduced, which in turn, determined the nature of the interventions themselves. In the case of IMAGE, the decision to ask explicit questions about sexual violence may be connected both to the widespread incidence of sexual violence itself, and by the fact that in South Africa this is an issue that is openly discussed in the media, and by policy-makers. In contrast the choice of the HITS tool – whose efficacy in detecting instances of domestic abuse is documented (Sherin *et al.* 1998) – has rather to do with the overarching spirit of the Burundi intervention not to focus explicitly on domestic violence in order not to alienate men and the general population in the communities where it was introduced.

To measure overall exposure to violence for IMAGE I use the original measure of impact (Pronyk *et al.* 2006): an individual is exposed to abuse if, in the past 12 months, she has either been 'hit', pushed, or forced to have sex. This, too, is a binary measure. The measure of total violence for the IRC-VSLA intervention is equal to 1 if the individual

26 It has been validated against the widely used Conflict Tactics Scale (CTS) (Straus 1990) in a study of 160 female patients in an urban/suburban family practice setting and 99 self-identified abused women. The HITS scores were strongly correlated with the CTS, with sensitivity and specificity of 96% and 91%, respectively. Positive predictive and negative predictive values in the family practice setting were 87% and 97%, respectively.

records a total violence score higher than 5, i.e. if they have had at least one form of abuse happen ‘fairly often’ and the other rarely, or two sometimes and the other two rarely.²⁷

Finally, the time period the two indicators refer to differs, the HITS tool asking about the previous two weeks, and the WHO tool looking at the past twelve months. This further implies that violence exposure estimates from the Burundi and IMAGE interventions are not directly comparable.

Evaluation and Study Design

The two interventions compare two different sets of treatment levels. This has implications for the expected difference in impact between the two. IMAGE compares individuals with a full MF-plus package to individuals who receive nothing; Burundi compares two groups of recipients of financial services randomly allocated to receiving an additional training component. With IMAGE I observe the aggregate effect of introducing an MF-plus programme; in Burundi, I measure the marginal impact of the life-skills package in addition to a pre-existing financial package. I should therefore expect the impact to be different²⁸ for IMAGE, because IMAGE controls have no access to any product, while VSLA controls do have access to financial services. If I expect the combined effect of the two components to be beneficial, IMAGE should lead to greater reductions in IPV.

Secondly, the unit level of randomisation differs between the two interventions. IMAGE randomises an entire village to immediate treatment or to a waiting list, whilst the IRC-VSLA randomises single individuals within each village to either treatment or control. Because IMAGE only looks at 8 villages, and the IRC-VSLA looks at 446 individuals, the IRC-VSLA evaluation has more statistical power to detect an effect.

However, because IMAGE only collects data on participants in intervention villages, and on randomly selected matched individuals in control villages, the original naive estimates (Pronyk *et al.* 2006) are not ITT comparisons between village averages, i.e. not the effect of being *assigned* to treatment, but rather the effect of taking up the treatment, given that one has been assigned to treatment. This potentially inflates the ITT effect for IMAGE, with respect to a comparison between village averages, because the outcomes for treated villages are only those of treated individuals, and outcomes for control villages only those of controls, rather than the entirety of the villages in both cases.

²⁷ There could be other combinations that add up to six, but these are the ones actually found in the database.

²⁸ IMAGE might report greater reductions in IPV, if the intervention were beneficial, but I do not know this *a priori*.

This leads to the final point, related to randomisation and self-selection. The measurements available for treated IMAGE villages are only for treated individuals, namely only on programme-takers. Data on non-takers in treated villages is not available, while it is not clear whether the control sample contains both.²⁹ This in turn implies that the IMAGE estimates, when calculated based on the naive assumption of perfect randomisation, cannot be taken as an ATE representative of the entire population of eligible individuals, even under perfect compliance post take-up, because I only observe those people who decided to take up the intervention, given they had been offered it. These people may well differ from the rest of the eligible population not only along observable dimensions (as the baseline data suggest), but also in unobservable aspects. In particular, estimates of treatment effect will not yield ITT, because not all individuals assigned to treatment are observed.

While at the analysis stage programme design and the difference in unit levels of randomisation between the two interventions cannot be changed, I can – at least to some extent – correct for the self-selection bias with the use of different estimation techniques. I write four different specifications of the estimation model to verify the robustness of the original estimates: I first run a model that is as close as possible to the original IMAGE specification (Pronyk *et al.* 2006) and reproduce the original estimates on the flagship domestic violence outcome; I then control for all significant baseline differences in socio-economic indicators and comment on how estimates change. In the third specification I implement a matching estimator that allows me to take advantage of the richness of the IMAGE data to construct a propensity score that matches people on far more dimensions than age only, as originally envisaged in the IMAGE study. Finally, I conclude with a sub-group analysis that compares women in different percentiles of the propensity score distribution, to test for possible heterogeneity in effects as these relate to observable socio-economic status. Although none of these analyses completely eliminates the bias, they cast some light on the robustness of the original estimates, and on how these relate to possible heterogeneity of impact.

This section has discussed differences between the two studies this work is concerned with, highlighting the rationale for the different choices in each case, indicating how this

²⁹ I made an attempt at clarifying this in 2008, looking to identify individuals in the old control villages that had joined SEF when it first opened, around 2006. However, it was unfortunately impossible to match these new clients with control individuals in the IMAGE database. Moreover, uptake had been extremely low, with only 195 individuals joining in the village with the largest uptake, out of approximately 900 eligible, from amongst whom the IMAGE controls had been randomised to the intervention. This made it very unlikely that any of the first takers were IMAGE controls. I therefore decided to abandon this route.

impacts any comparison drawn between the two, and discussing how these differences are addressed here when appropriate.

Conclusions

This chapter has illustrated the methods I use to tackle the different questions that make up the thesis. This thesis addresses two key research questions. It investigates an *emic* – i.e. rooted in the data – concept of wellbeing (WB) to substantiate a utility function that better captures changes in agency and takes into account the relational nature of human beings; and it evaluates the impact of two interventions aimed at empowering individuals, including reducing IPV exposure for women. This chapter has discussed the analytical methods I employ to identify the social constructs of SWB, SE and IPV among individuals in South Africa and Burundi, and to estimate the impact of interventions for the prevention of IPV in these milieus. This section briefly summarises the discussion and relates it to the rest of my investigation.

To map individuals' discrete perceptions of WB, SE, and IPV onto the corresponding social constructs, I apply a combination of textual analysis and statistical algorithms. Once reified and abstracted from the view of the single individuals (Lahlou 2008), the WB constructs I derive are of sufficient generality to substantiate the utility function I define in Chapter 4 and provide an interpretation of intervention outcomes rooted in the relevant social constructs. For the estimation of intervention impact I rely on random treatment allocation in the two interventions I investigate, and use a variety of empirical strategies to assess the robustness of initial findings from naive models that do not account for selection bias where this is present.

Methodologically, the use of mixed methods and data *de facto* represents a shift from pure *methodological individualism* that underpins contemporary quantitative neoclassical economic methods, and sees social outcomes as the result of actions of individual agents who have no concept of the aggregate consequences of such actions. It constitutes a shift toward acknowledging, to use Giddens' words, the "duality of structure", i.e. the idea that individuals' agency knowingly reproduces or transforms social structures (Giddens 1984). This is in accordance with, and further develops, Bourdieu's idea of reciprocal shaping between agency and structure (Bourdieu 1984; Lahlou 2008). In this thesis, this stance increases the empirical relevance of the concept of utility, and is used to provide a framework for the interpretation of impact.

This study has two main limitations in relation to the debate of the nature of mixed-methods investigations. First, it draws heavily on quantitative methods. The debate on the

extent to which qualitative data should be quantitized is at the heart of mixed-methods research, with some researchers expressing reservations (Sandelowski *et al.* 2009).

However, as further illustrated here, this study applies quantitative methods to explore the content of the qualitative data, rather than offer a predominantly frequentist account of the narratives. Second, the author did not have control over the processes that yielded the data, except for the FGDs in South Africa. Sequential explanatory designs tend to entail an iterative process where qualitative and quantitative data interact to generate relevant evidence (Clark and Creswell 2011, pp. 83-84). In this case, this was not possible, due to the timing of the author's involvement in the studies. This implies that the questions generated by the qualitative data can only partially be answered, for example: no quantitative measures of wellbeing were collected, so that no direct test of the hypothesis of impact on these can be carried out in this work. However, this initial exploratory analysis, with its limitations, has opened a number of new research questions that will be further pursued in the coming years.

The next chapter investigates the concept of wellbeing among poor South African women, drawing on both literature and empirical research, and relates this to current research in psychology in the region and the rest of the world, as well as to research on wellbeing in economics and development.

Chapter 3 The Meaning of Wellbeing and its Structure: an exploratory analysis of evidence from poor South African Women

Introduction

The quest for complex and universal indices of wellbeing is gathering momentum around the identification of the development goals for the new millennium, the sustainable development goals (SDGs). In an increasing push away from gross-domestic product (GDP) as a measure of progress, a plethora of indices is being defined that focus on various facets of wellbeing. These range from psychological and subjective wellbeing measures to objective wellbeing measures that include income, but account for losses deriving from activities detrimental to human wellbeing (e.g., crime) such as the Genuine Progress Index (GPI) (Lawn 2003); to measures that include aspects of both objective and subjective wellbeing, such as the New Economics Foundation's Happy Planet Index (2006) (Costanza *et al.* 2014). While monetary indices such as the GPI represent an advance over the GDP, such measures alone cannot capture the richness of individuals' quality of life (QoL) (Stiglitz *et al.* 2009), which also encompasses objective measures, such as capabilities, as well as subjective and psychological dimensions of wellbeing. Moreover, these measures are chiefly based on constructs of wellbeing prevalent among the North American and European populations (Wissing 2014b). In order to be truly global, these measures need to reflect the variation in constructs of wellbeing across the globe, and have the potential to include all relevant dimensions.

This chapter focuses on subjective and psychological measures of wellbeing, as a complement to other measures of QoL. It investigates which *dimensions* of subjective and psychological wellbeing measures may be relevant to specific groups of sub-Saharan African populations as distinct from European, North American and East Asians. Although *domains* (e.g. work, family, friendships) are also identified over the course of the investigation, the exhaustive identification of these is beyond the scope of this exercise. Its main aim is to identify dimensions of wellbeing of relevance to some sub-Saharan African populations and reconcile these with theoretical concepts of wellbeing used in frequentist studies in economics. The goal is to help define wellbeing indices that capture wellbeing constructs that may differ from those in Europe, the US and the Far East, for use in applied economics, especially in developing countries.

Forty years have passed since Richard Easterlin's seminal contributions on the nexus between income, growth and happiness in economics (Easterlin 1973; 1974) that fostered the field's interest in the concept of wellbeing. Work since then has mainly focused on

happiness or life satisfaction measures, and how SWB relates to important socio-economic characteristics beyond income (Kahneman and Deaton 2010), such as adaptation to different levels of income (Burchardt 2005) or poverty (Clark *et al.* 2014), relative earnings (Fafchamps and Shilpi 2008; Luttmer 2005), employment (Di Tella *et al.* 2001), marital status (Lucas and Clark 2006), participation in religious organisations (Dehejia *et al.* 2007), and health (Dolan *et al.* 2008), including adaptation to less than perfect health states (Oswald 2008).

Wellbeing and QoL research has been prolific in South Africa, too, in the form of nationally or regionally representative quantitative surveys investigating the associations between SWB and various life-domains. South Africans' wellbeing was positively associated with the transition to a democratic form of government (Dickow and Møller 2002; Møller 2001) as well as improved living standards (Møller 2007), despite the continued presence of large inequalities in both living standards and SWB among different groups (Møller 2013). It increases in relation to access to housing and transport for poorer South Africans; and to utilities, education and health for better-off citizens (Bookwalter and Dalenberg 2004). It is negatively associated with higher local crime rates, possibly via an increased likelihood of victimisation (Powdthavee 2004) and with distant neighbours' income, but positively with that of close neighbours (Kingdon and Knight 2007).

Similarly, positive psychology and its exploration of constructs of *wellbeing* as opposed to *illbeing* (Seligman and Csikszentmihalyi 2000) is a field that has flourished since Seligman's presidential address to the American Psychological Association (APA) in 1998 (Linley *et al.* 2006). Scholars in both fields aim to understand how individuals' wellbeing may be improved through policy, adopting a predominantly state-like view of wellbeing, i.e. one where wellbeing is determined by circumstances external to the individuals,³⁰ such as their socio-economic status and policy interventions that may affect this.

However, for the most part, these contributions have referred to the wellbeing construct of Western – especially North American – societies, whose philosophical roots are steeped in the Enlightenment and other positivist traditions that see the pursuit of an

³⁰ Both are aware of the traitlike components or predictors of wellbeing, so that positive psychologists enquire how traits such as optimism, for example, mediate individuals' experiences to balance their wellbeing state, and economists caution against the endogeneity regressions may be plagued by where, e.g., optimism may explain both the level of happiness of individuals' reports and their level of socio-economic success.

individual's self-assertion and happiness as the ultimate goal (Eaton and Louw 2000; Ryff 1989) – and Far Eastern populations – with philosophical roots in Buddhism and Taoism, which both see negative and positive affect as a necessary part of any given experience, and have a concept of individuals belonging to one indistinct whole (Lu 2001). They have largely ignored other cultures (Wissing 2013b; Kim-Prieto and Eid 2004) which may rely on different philosophical premises (Metz 2007; Eze 2008), corresponding to different constructs of self that may influence their perception of WB. Understanding what socio-economic domains affect wellbeing provides information to steer policymaking. However, understanding the nature of the wellbeing construct is essential to focusing these efforts (Khumalo *et al.* 2012), and it is important to investigate whether indices that reflect the relevant WB construct yield more accurate indications for policy making (Graetz 1991; Pflug 2009).

This chapter contributes to filling this gap by investigating whether the WB construct of Pedi women in South Africa differs from these theoretical constructs and corresponding measures, and whether the wellbeing measures used in economics, such as happiness and life satisfaction, and measures of psychological wellbeing defined within the paradigm of Western psychology (Ryff 1989) are sufficient to capture the construct of wellbeing among the South African women this thesis is concerned with and populations with a similar construct. If the construct of wellbeing among Pedi women differs from those captured by wellbeing measures dominant in the literature, and if such differences are articulated over generalizable cultural traits that make Pedi women different from the average US citizen, and similar to other non-western individuals, there may be grounds for justifying the adaptation of extant WB measures to account for such differences in wellbeing constructs. This chapter adds a further piece of evidence to the picture of South Africans' construct of wellbeing that cultural psychologists are piecing together (Khumalo *et al.* 2010; 2012; 2013; Temane *et al.* 2014; Wissing 2013b, 2014a, b), and aims to make this information available to an interdisciplinary audience in international development and economics, to encourage the use of more context-sensitive WB indices. The next two sections discuss the debate on South Africans' wellbeing in the economics and cultural psychology literatures and situate the contribution of this chapter in these debates.

Wellbeing correlates in South Africa

In the wake of the increasing interest in wellbeing in the socio-economic literature, a number of quantitative studies in economics and sociology investigate wellbeing

correlates in South Africa. SWB is associated with an array of socio-economic domains: it is positively associated with better housing conditions, sanitation, water, energy, transportation and personal safety. Housing and transportation issues seem to bear more relevance for the poorer, while access to utilities, education and health seem to play a more significant role for the more affluent strata of the population (Bookwalter and Dalenberg 2004).

The effect of relative income differs in South Africa from those seen in the West. In the US and Germany, Luttmer (2005) and Ferrer-i-Carbonell (2005) find that the reference group's income has a negative effect similar in absolute size to one's own income, and in Europe and the UK Clark *et al.* (2014) and Burchardt (2005) find that comparisons are upward. However, Bookwalter and Dalenberg (2010) find that these dynamics change by groups in South Africa, with non-white groups exhibiting positive associations between wellbeing and median community expenditure levels. Cramm *et al.*'s survey of 1,020 very poor urban households in the Eastern Cape province of South Africa (Cramm *et al.* 2012) shows that the very poor exhibit an increase in wellbeing as their neighbours' average deprivation levels decrease; and Kingdon and Knight report that, by race, there is a positive association between the in-group's income and wellbeing, and that the association becomes negative in relation to the income of other races or people that are geographically more distant (Kingdon and Knight 2007). This finding is in line with previous findings from Russia (Senik 2004) and Eastern Europe (Caporale *et al.* 2009), as well as with Ferrer-i-Carbonell's findings on Eastern Germans (2005). In terms of the relevance of the in-group as a reference group, it is also consistent with findings by Fafchamps and Shilpi in Nepal, who find that average consumption levels in migrants' district of origin affect one's wellbeing (Fafchamps and Shilpi 2008). However, Fafchamps and Shilpi find a negative association between in-group income and migrants' wellbeing, similar to the reference group effect found in the US (Luttmer 2005) and Germany (Ferrer-i-Carbonell 2005). Kingdon and Knight (2007) explain the positive association as an information effect: in poor communities, if one's neighbours are wealthier, this may provide one with the information that one may also become richer.

In a conceptual framework where individuals' self-perception can also be relational, this would not be a puzzling finding: individuals whose self-construal is relational could exhibit an increase in satisfaction when a member of the in-group, part of the network of dyadic relations that defines them, is richer than them because an accomplishment of a member of one's group is seen as an accomplishment for all members of the in-group.

Relational self-construal would also explain the lack of association between wellbeing and being richer than one's parents, and the negative association with being poorer than one's parents found by Bookwalter and Dalenberg (2010) insofar, for example, as it is the offspring's responsibility to look after the parents and ensure the family improve its lot.

Another relevant correlate of wellbeing emerged from large-N studies in Europe (Frey and Stutzer 2005; Lucas *et al.* 2003; Pezzini 2005) and North America (Shapiro and Keyes 2008) is marital status. Cross-sectional studies find positive associations between marriage and happiness (Easterlin, 2003). Following their initial 2003 study of the German Socio-Economic Panel Study (GSOEP), Lucas and Clark further test this association in a panel of 2,230 individuals from the GSOEP controlling for co-habitation. For individuals who married in the 19 years covered by the study and remained married till the end of the study, they confirm a "honeymoon effect" starting the year before the marriage, and show that this is sustained for a couple of years before individuals return to their mean levels of wellbeing. Thus, they contradict findings from studies of cross-sectional and aggregate cohort data that suggest a sustained honeymoon effect; however, even in their analysis, despite long term adaptation, people record a short-term "honeymoon effect" around the time of marriage in their sample. Interestingly, they do note that this is reduced for people who marry younger, and that people who marry at an early age experience a reduction in happiness after marriage, though this is not statistically significant (Lucas and Clark 2006).

In South Africa, Powdthavee finds that individuals in a civil law marriage are happier than individuals in traditional marriages in a nationally representative sample of more than 20,000 individuals in 1997, and speculates this could be due to the fewer rights someone in a traditional marriage enjoys compared to someone in a civil law relationship (Powdthavee 2004). Conversely, Hinks and Gruen find no impact of marital status on happiness in a pooled sample of approximately 3,400 individuals in Durban, South Africa, containing three waves of data from 1999 to 2004 (Hinks and Gruen 2007). Finally, a study conducted by the South African Labour and Development Research Unit (SALDRU) compares married and cohabiting couples in a 2008 cross-sectional sample of 4,900 individuals interviewed for the National Income Dynamics Survey (NIDS). Botha and Booysen find that wellbeing is lower for the married than the cohabiters. Most of the difference is explained by the wife's wage relative to that of her husband, absolute income and education (Botha and Booysen 2013). However, this study excludes not only singles, but also those in traditional marriages, and is therefore not representative of the

entire South African population: traditional marriages are concentrated in non-White populations; and were the marital status of 15% of respondents in Powdthavee's sample, and 2% of the pooled sample in Hinks and Gruen's study, situated in an urban area. This literature highlights nuances in the association between marital status and wellbeing compared to findings from developed countries and raises questions on the reasons for these differences.

South African studies on quality of life recover domains relevant to this construct using multivariate data analysis techniques on secondary data, as discussed in Chapter 4 (Neff 2007; Higgs 2007; Makiwane and Kwizera 2009; Bookwalter and Dalenberg 2004).

However, to this author's knowledge, neither literature seeks to recover the construct or its correlates from a direct exploration of South African individuals' narratives and perceptions. Where the construct in this *milieu* differed from what prevalent in *milieux* in relation to whom the indices were originally developed, these studies are at risk of omitting important domains and failing to unpack important mechanisms of impact that could provide more accurate information for policy making (Graetz 1991; Khumalo *et al.* 2012; Pflug 2009).

Wellbeing constructs: South Africa and the individualism-collectivism debate
Few explorations exist of the wellbeing construct among African populations. The socio-psychological theory of wellbeing has developed multidimensional concepts of wellbeing (Ryff 1989), and investigated how synthetic measures of wellbeing respond to different stimuli in collectivist versus individualist societies (Markus *et al.* 2006; Suh *et al.* 1998) However, this literature has focused predominantly on the US and the Far East, with few investigations into African (Matsumoto 1999) and South Asian (White *et al.* 2014) cultures, and assumed an individuated self-construct (Christopher 1999).

Where African cultures have been discussed, they have been assimilated to collectivist cultures (Ryff and Singer 1998), and assigned the same cognitive mechanisms to regulate wellbeing (Christopher 1999). Wellbeing constructs may differ between individualist and collectivist societies (Markus and Kitayama 1991; Suh *et al.* 1998), with the former guided by intra-individual coherence (i.e. I am happy if I adhere to my inner ambitions and aspirations); and the latter by inter-individual coherence (i.e. I feel that I fulfil the expectations of my role in society). For example, studies in Bangladesh find that social interactions are as important to individuals as financial capital, and that they can have both a positive and negative impact on individuals' wellbeing (Camfield *et al.* 2009b).

Moreover, there is evidence that in sub-Saharan Africa a different type of inter-related self from the collectivist type dominant in East Asia may be prevalent. This evidence suggests that sub-Saharan African individuals perceive themselves as inextricably linked to a web of dyadic relationships (Brewer and Chen 2007; Adams 2005) and not as part of a monolithic community, as seems to be more common among peoples from Far East and South Asia (Brewer and Gardner 1996; Eaton and Louw 2000). Insofar as self-construal shapes their wellbeing, it is important to gather qualitative data on the wellbeing constructs of sub-Saharan African populations, to investigate whether there are any aspects that differ from Western (e.g. U.S.A.) or Far Eastern (e.g., Japan) constructs: these diverging elements may not be captured by the current mainstream quantitative WB measures, as these were devised with individualist and collectivists constructs only in mind (Ryff 1989; Markus and Kitayama 1991).

Contributions in trans-cultural psychology have shown that the wellbeing construct in individualistic cultures is different from the construct found in collectivistic cultures (Markus and Kitayama 1991; Suh *et al.* 1998). There are conceptual (Markus and Kitayama 1991) and empirical (Markus *et al.* 2006; Pflug 2009; Lu and Gilmour 2004) grounds to believe this is influenced by individuals' self-construal, which differs between individualist and collectivist societies. Moreover, evidence suggests that African societies differ in their concept of self and type of collectivism from Asian collectivist societies (Eaton and Louw 2000; Adams and Dzokoto 2003). However, most early contributions in trans-cultural psychology focused on the US and the Far East (China, Japan, Korea, Taiwan) (Suh and Oishi 2004; Kim-Prieto and Eid 2004), overlooking the African continent. More recent contributions have begun to explore the WB construct in sub-Saharan Africa (Lu and Gilmour 2004; Pflug 2009), and there is a call within this literature for qualitative investigations that may uncover aspects and correlates of the WB construct (Wissing 2014b), to be conducted in homogeneous groups of the population to allow for deeper explorations of contours and relevant domains (Eaton and Louw 2000).

This chapter investigates the wellbeing construct of adult South African women from peri-urban areas in the Limpopo province, to explore its structure and correlates to generate hypotheses on how these may differ from other wellbeing constructs (Markus and Kitayama 1991; Markus *et al.* 2006; Ryff 1989) and their correlates (Easterlin and Sawangfa 2010; Kingdon and Knight 2007; Møller 2013; Powdthavee 2004, 2007). The women belong to the population of recipients for the Intervention with Microfinance for AIDS and Gender Equity (IMAGE), an empowerment intervention for the prevention of

HIV and gender-based violence (GBV) (Pronyk *et al.* 2006), described in Chapters 2 and 5, and in Appendix 1. The women participating in this study can be considered representative of poor women in Northern South Africa more widely (Niehaus, 2002; Delius, 1983, p85; James, 1999, p. 15; Stadler 2003). This thesis generates hypotheses on the structure of these women's wellbeing, and contributes to an increasing body of evidence on the WB construct of sub-Saharan African populations more generally (Wissing 2013b).

Results

In total, 79 Pedi women between 22 and 65 years old participated in the FGDs. Most were illiterate, or had basic literacy skills. Twenty-three percent were from villages not exposed to the intervention, and 77% were IMAGE clients. Of the 61 IMAGE clients, 36% had had less than 1 year's exposure; 39% between 2 and 3 years' and 25% between 4 and 5 (Figure 4). The IMAGE clients with 4-5 years' exposure were from the original IMAGE treatment group (henceforth "old" clients), the ones with 2-3 years' exposure were from the original IMAGE control group (henceforth "younger" clients); those with less than one year's exposure belonged to centres that had been opening in 2006 (henceforth, "new" clients); the ones with no exposure were from other local villages not involved in the intervention (henceforth "community" participants). By the 13th FGD, saturation of ideas had been reached: no new ideas were being put forward and data collection was considered completed (Bauer and Aarts 2000).

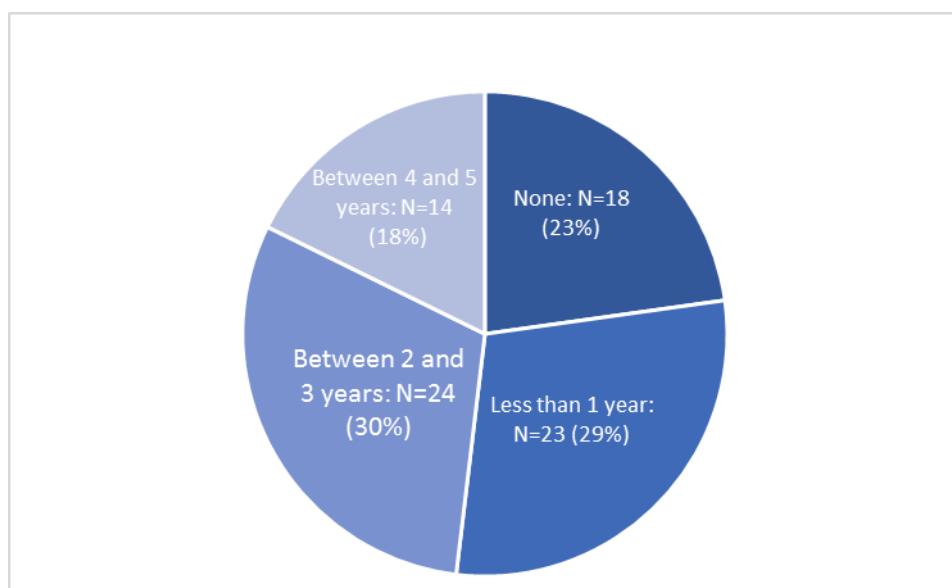


Figure 4 Years in IMAGE Programme

Overview

Analysis of participants' responses revealed five main themes, and corresponding sub-themes, reported in the table below. Theme 1, the female socialisation theme, describes the key periods and events in women's lives; Theme 2, the community, describes interactions within networks of neighbours, peers and family, and discusses issues of trust and rules, and of the diffusion of knowledge; Theme 3, the household chores, brings the body to the fore, illustrating how this is intertwined with the women's wellbeing, and describes the women intent on their chores, as well as at times of leisure; Theme 4, children and crime, illustrates the challenges women face in bringing up children in a violent society and in the middle of an HIV epidemic, and their anxiety about crime more generally; finally, Theme 5, the woman as an economic agent (*mulier oeconomica*) contains references to the women's ability to provide for their families, and their interactions with their husbands regarding choices on resources allocation, as well as their engagement in the community.

Table 3.1 Qualitative themes and sub-themes

Theme	Sub-theme
FEMALE SOCIALISATION (Theme 1)	Early childhood
	Adolescence
	Marriage
	Death and grandchildren
COMMUNITY (Theme 2)	Communication and support
	Interpersonal comparisons and envy
	Trust
	Formal institutions and rules
	Reciprocal empowerment and knowledge
HOUSEHOLD CHORES (Theme 3)	The physicality of day-to-day life
	The householder
	Recreation
CHILDREN and CRIME (Theme 4)	HIV/AIDS
	Crime
MULIER OECONOMICA (Theme 5)	Providing for the family
	Negotiating resources with the husband
	Health and volunteering
	Spiritual gratefulness

Within each theme, the women reported a variety of wellbeing states. However, some themes seem to be characterised by negative or positive states more than others. The bar graph below (Figure 5) reports the distribution of wellbeing words by theme, based on how frequently each word appeared in each theme. Themes are arranged in the same order as they appear along the vertical axis on the vectorial plane below (Fig.6). Only words that were statistically significantly associated with the themes are reported. The words happy/happiness and unhappy/unhappiness are the most frequently used, though this may have been due to the wording of the question (“When I say the word ‘happy’....”).

The distribution of wellbeing states in the female socialisation and the household chores themes are similar. However, the household chores theme records proportionally more instances of neutral wellbeing states, as would be expected for responses that imply a shorter recall period: these would be less vulnerable to the peak-end rule bias, where people judge an experience largely based on how they felt at its peak (i.e., its most intense point) and at its end (Redelmeier *et al.* 2003) compared to the life course memories, and therefore better able to identify moments with relatively muted wellbeing states. Further, compared to what people recall regarding female socialisation over the lifetime, they

seem to record a proportionally larger number of instances of negative states for the household chores theme than the socialisation theme. After the children and crime theme, this is the theme with the highest proportion of unhappy mentions (50% overall).

In sum, the issues that the women brought up spontaneously – themselves as entrepreneurs, the community, and the children, all seem polarised toward either a very positive or a very negative set of states; the themes connected to socialisation or daily chores seem to present a broader array of states. The theme on children collects the highest portion of extreme forms of negative affect (43% of wellbeing words are stressed, worried or angry) and, if we also consider ‘unhappy’ is mostly characterised by negative states of wellbeing (70%) – a much gloomier mood than the other themes. This, as I illustrate later, has largely to do with women’s fear that their children might become criminals. Next to it, 60% of the wellbeing words associated with the community theme are positive, but 20% are negative (angry or stressed). This is consistent with an idea of community that, while generally supportive, is not always benevolent, as the quotes further illustrate. Explicit references to being ‘satisfied’ are statistically significant only for the *mulier oeconomica* theme (7% of wellbeing words for this class), the theme with the highest overall percentage of positive states of wellbeing (71%).

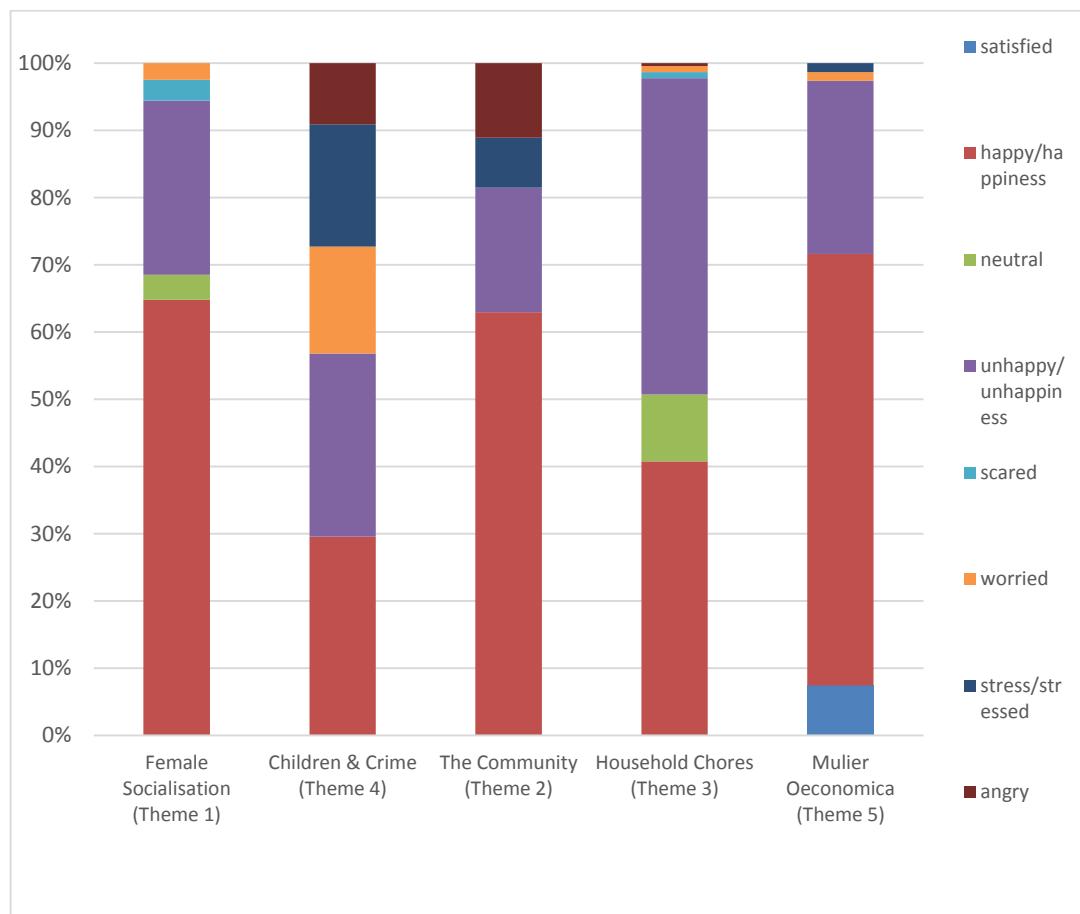


Figure 5 Distribution of wellbeing words in each theme

The next section reports quotes and characteristic words from each theme, to explore and contextualise these findings.

Female Socialisation

The female socialisation theme covers key events in women's lives and the associated feelings of wellbeing. The verbs associated with this theme capture the natural course of their lives – 'grow(37)', 'become(41)', 'die+(15)³¹', '(be) born(13)' – and socially codified interactions – 'dating(5)', 'divorce+(5)', 'marry(5)'. Nouns and adjectives evoke different moments in the socialisation process. They depict the life of the narrator, intertwined to all generations around her, ranging from her grandchildren to her grandparents: 'boy+(24)', 'child+(73)' (both generally referring to the woman's offspring), 'girl+(27)' (mostly referring to herself as a child); 'young+(30)', 'baby(12)', 'birth(8)', 'marriage(7)', 'old(16)', 'alive(6)', 'boyfriend+(8)', 'father+(12)', 'grandchild(5)', 'husband+(34)', 'parents+(20)', 'son+(8)', 'woman+(15)', 'daughter+(9)', 'children+(72)', 'in-law(s)+(3)'. All the nouns and adjectives above refer to socialisation the family, defining a theme that is closer to the private sphere than the 'community', 'children', or the '*mulier oeconomica*' themes.

The idea of a child as naïve is a recurrent *topos* in the women's narrations. The quote below illustrates how women frequently referred to themselves as naïve when they were children:

When you are still a **child** you are **happy**. When I was still a **baby** here, my **happiness** is **huge**. By then, I did not even **know** whether my **parents** were suffering because I was still **young**.

(ECU: 98 Chi²:26; IMAGE control group, 2006/08/11, 50yrs old)

They associated this time in their lives with a forgetful kind of happiness, often conjuring up a stylised idea of childhood innocence. In contrast, women who had suffered major adversities in their childhood reported an overall lack of happiness colouring that period:

Here I was still a **little girl**, I was about seven or eight **years old**. When I was still a **child** I was not so **happy** because, in my **life** as I was **growing** up, I never had a mother who would **raise** me and **give** me a motherly love.

(ECU:664 Chi²:17; IMAGE control group, July 2008, 37 years old)

In this quote, the loss of her mother is expressed by the interviewee as both the loss of someone who would guide and provide for her.

³¹Note: words that appear with a '+' sign at the end signify a root, suggesting that the root appears in different words the text. In the case of the root die+, for example, words in the text could include die, dies, dying, died, *et cetera*.

Another sub-theme here was related to women's initial experience of marriage. This was often traumatic, and associated with low levels of wellbeing and autonomy:

I was down, I did not like it because I did not **understand** why I had to leave my parents. But I eventually had to leave home. I **stayed** with my **in-laws** and they said that I will go back to school. But when I **stayed** with them I was unhappy because they did not **want** me to **continue** with my schooling, they just **wanted** me to sit down because I was a **daughter-in-law**.

(General Community group, 26th May 2006; 25 years old)

For some, however, experiences became so bleak that they had to leave:

And when he beats you up he would also beat the **child** you are **carrying**. So I used to live like an **animal**. I have never been **happy** at all. I just **experienced** now when I got a **new** partner. So that is when I **started** to see that here is **life**. But with my ex **husband** I have never **experienced** **happiness**.

(ECU:384 Chi²:16; New Centre group, 30_08_06, 48 years old)

In contrast with this phase in their life – where their will in important decisions is ignored and their status very low – is the social prestige they attain in old age, especially when they become grandmothers. They no longer carry out chores for other members of the household; rather, others in the family, including the grandchildren, take care of them:

We got blessed with a **son** and **girls** and the **happiness grew**. Even right now the **happiness is high**, he never **left** me. The **happiness** is continuously **growing**. So, here we have **grandchildren**. They go and fetch water for me. And here I am **older**. And they go and get me water.

(ECU:106 Chi²:16; IMAGE control group, 2006_08_11, 55 years old)

As the quotes above exemplify, when asked how they felt at various stages in their lives, women tended to describe themselves in their role-relationships (e.g. as daughters, or mothers), rather than in terms of their inner aspirations (e.g., talents they may have). The quotes suggest that the role-relationships they describe – i.e. the roles they play in society and the expectations others have on them as a consequence – are determined by patriarchal structures that see women as subordinates.

Children and crime

The association between wellbeing and children is chiefly mediated by women's ability to fulfil their role-relationship as child bearers. The theme is dominated by mothers' perceived powerlessness to protect their children (and themselves) from the social ills of crime, as well as HIV.

A gloomy tone is prevalent in the vocabulary used in this theme, including nouns that refer to disease or times of the day that are associated with danger, such as 'disease+(10)', 'hospital+(5)', 'assault+(3)', 'AIDS(2)', 'trouble+(6)', 'stress(5)', 'night(8)',

‘illnesses(2)’, ‘mess+(1)’; and verbs that evoke violence and aggression such as ‘beat(7)’, ‘break(5)’, ‘beg(2)’, ‘kill+(5)’, ‘force+(3)’, ‘undermine+(2)’, ‘fall(2)’, ‘annoy+(1)’, ‘hurt(1)’, ‘arrest+(1)’, ‘worry+(1)’; adjectives that indicate failure, or negative states of affect such as ‘worried+(4)’, ‘sore(1)’, ‘sick+(10)’ and ‘unsuccessful(1)’ are prevalent. The state of affect associated with this group is explicitly that of unhappiness that, together with the two other negative markers ‘stress’ and ‘worried+’, paints a picture that may be described as one of high negative affect.

The following quote exemplifies how the status conferred by childbearing influences women’s wellbeing:

Sometimes you have sex and you can’t have children. It becomes painful because your children must carry your legacy forward. So you have to have children to show that you are grown up, they are our legacy. So you feel good when you have children.

(IMAGE treatment group, 08/07/2008, 48 years old)

Yet, there is also a key focus on crime under this theme linked to young people, including their offspring. The women described their anxiety around the likelihood of becoming a victim of crime:

So we are always **worried** because we do not know which house they will **want** to **break into** next. So you are **worried** as to what will happen when he **breaks** in and he **finds** you in the house.

(ECU:766 Chi²:23; IMAGE treatment group, 2008-Jul-07, 53 years old)

If you do not have a cellphone or you are not dressed **nicely** they will **kill** you because they could not **find** anything valuable from you. So we are always unhappy and afraid. We are no longer free. [...].

(ECU:764 Chi²:7; IMAGE treatment group, 07/07/2008, 48 years old)

The reference here to a safer past (‘we are no longer free’) is consistent with police statistics on increased robberies at residential premises in Limpopo, between 2003 and 2010 (South African Police Service 2010) and elsewhere in the text women report having to avoid night vigils after villagers’ deaths – an important part of funeral rituals – for fear of crime.

Women also worry that their children might be implicated in criminal acts. The following quote describes the feeling of disempowerment women associate with not being able to prevent their children from stealing and committing crimes:

So you do not know what to do and you get **stress**. You are always **worried** that these children **walk** at **night**, and they **stay** at other people’s houses. And you think that maybe there is something that **excites** them in other people’s houses and they steal it. So you become frustrated you do not know whether to **beat** them or do something.

(ECU:371 Chi²:23; New centre group, 06/08/2006, 37 years old)

Further, there is another, more immediate, aspect to this dynamic that has to do with the process of successfully raising a child: the women feel powerless in their role as educators, and this in turn triggers high levels of negative affect:

Even when you always **try** to **reprimand** the child from doing wrong and the child continues doing wrong, you will then get unhappy. Because when you keep on **reprimanding** her and the child does not **want** to **listen** you might **end** up **assaulting** her. So you get **worried** the whole day.

(ECU:831 Chi²:23; New centre group, 30/08/2006, 52 years old)

During other FGDs, the women expressed frustration at the inability to guide children toward better choices when they deviated from the preferred path (e.g., attending school). In their view, this was caused by a mismatch between children's increased awareness of their rights to a childhood free from abuse, and parents' skills in educating children in this context:

[T]hey called the children and told them that they had freedom to do whatever they want. But they never explained to them what freedom they were referring to. Firstly, when a parent reprimands a child, a child is supposed to go to the police station and lay charges. [...] So when I reprimand him they say I abuse the child.

(New centre group, August 2006)

This suggests a lack of access to information and awareness-raising on positive parenting among parents in this area of the country.

Finally, the HIV/AIDS sub-theme also subsumes this tension between mothers' attempts at protecting their children from the disease, and their apprehension that children might not listen. The following quote, however, differs from those on crime in one important respect. Namely, while reporting some degree of anxiety at the threat the disease poses for their children, women in this case know how to tackle the problem:

When you see that they are **heading** for **trouble** and **try** to warn them they do not **want** to understand. I do agree with Elena concerning the children. **Right** now we know that there is a **disease** called **AIDS**, so you tell the children that take **care** of **yourselfes** and **stop** sleeping around.

(ECU:343 Chi²:35; New centre group, 30/08/2006, 44 years old)

This difference is suggestive of the learning process spurred by IMAGE around communication with children on risky sexual behaviours and HIV, and of the absence of a similar process in relation to issues such as positive parenting and 'deviance' that women seem not to have been exposed to.

From the perspective of the components of SWB, these passages convey different degrees of powerlessness. First, they illustrate why having children may cause wellbeing to be reduced. And, second, they suggest that women's perceived ability to raise their children as positive members of society is important to their attainment of a positive state of wellbeing.

This theme contains a relational element exemplified in the women's assertion of the social importance of having children. It also depicts some degree of breakdown of social trust in the discussions of crime, and of intergenerational tensions. It describes how relational ties can be detrimental to wellbeing and, in a context where HIV is taboo (Stadler 2003), shows some degree of transformatory agency when women discuss how they know they need to talk to children about HIV.

The Community

This theme describes the interactions between the women and their social networks, suggesting that these, too, are associated with women's wellbeing. It suggests that the social relations that matter for women's wellbeing are mostly with neighbours, peers, and within the church; and that they are not uniformly benign, as indicated by the most characteristic nouns of this theme:

neighbour+(24), church(7), enemies(5), friend+(13), problem+(35), conflict+(2)³²

The lexical context of this theme is characterised by verbs that express interactions and mutual support and understanding:

talk+(19), advi[s]e+(14), tell.(33), discuss+(8), resolve+(7), sit.(17), down(17), relate+(3), solve(3), forgive.(2), agree+(3), confide+(2), support+(7), share+(2)

These actions are evocative of the women coming together to share, and finding solutions to each other's problems; the preposition 'amongst(8)', also characteristic of this theme, further reinforces this sense of togetherness.

The importance of communication is connected to the idea of negotiating peaceful coexistence:

Talking to each other is good because it makes you live peacefully with other people. You do not shout at each other, you sit down and discuss things with each other.

(IMAGE treatment group, 08/07/2008, 55 years old)

³² 'Problem' generally appears in the text as something the women solve together, and is therefore indicative of cohesion; 'conflict' instead refers to contrasts with other community members and is therefore suggestive of tensions.

Giving in to conflict may imply exclusion from support networks at times of need:

So when you are always in **conflict** with **people** they would be reluctant to come and **help** you, asking themselves why do you always **fight** with **people**.

(IMAGE treatment group, 07/07/2008, 45 years old)

However, social networks are not always a positive source of wellbeing and empowerment. The quotes below show how the community is also the locus of envy, captured by interpersonal comparisons of welfare within the group:

As a **human** being you always have **enemies**, especially **neighbours**. When you do something good they do not like it and when you do **bad things** or when something **bad happens** that is when they get happy.

(IMAGE Control, 02/07/2008, 47 years old)

The word 'people' is sometimes used instead of 'neighbours' to indicate persons that harbour envy, possibly suggesting that women intend to establish a distance between themselves and the envious:

So you want to have food, money and everything and that is going to be a problem. People can become jealous because you have everything. Some of them do not have a husband and they can take your husband, because you have a husband and she does not have a husband. Also, if you are successful in life, your neighbour can become jealous. If you are living comfortably that causes jealousy³³ amongst other people.

(General Community group, 31/05/2006, 31 years old)

In turn, this also implies the need to distinguish between neighbours when sharing one's problems and exchanging support:

[...] **everyone** has **neighbours**; and **amongst** the four **neighbours maybe** these ones are not on good terms with you; but these ones are on good terms with you. But if I have a **problem**, there is only one **amongst** my four **neighbours** who I am going to **tell** about my **problems**.

(New Centre group, 30/08/2006, 53 years old)

Moreover, the distinctions women operate between different sets of neighbours further support a relational view of the self, as opposed to collectivist, as women discriminate between individuals to establish privileged dyadic relationships (i.e. an in-group, as opposed to an out-group) with only some neighbours at each point in time.

Trust is important in identifying which relationships to establish and maintain:

[...] if I **tell** her my **problems** before I get home she has already [gone] to Louise to **tell** her; and then she goes **around telling everyone**.

(New Centre group, 30/08/2006, 53 years old)

³³ i.e., envy

The breach of trust may lead to a considerable loss in wellbeing:

Because when I am **stressed** I would **tell** you everything **thinking** that you are my **friend**. But then I get a lot of stress when she goes and **tells** other **people**. I feel unhappy because you would be confiding in that **person thinking** that she is a **friend** and you can **tell** her your **secrets** but then she goes **around telling everyone**.

(IMAGE treatment group, 08/07/2008, 54 years old)

At times, the family and the private sphere as the seat of trust are contrasted to neighbours, supporting the notion that alliances with kin are the strongest in northern South African societies:

But my **family** would be **supportive**. I **think** it is better to **relate** with the **family**. Because they will not take your **secrets** and spread them **outside**. You would **talk** about it as a **family** and then it ends between you.

(IMAGE treatment group, August 2008, age unknown)

In addition to informal circles of friendship and neighbours, numerous semi-formal associations also provide support:

When we are at the stokvel it is just the same as when we are at SEF, we give each other advice concerning domestic issues as to how we should conduct **ourselves** as women.

(New centre group, August 2006, 25 years old)

Some provide rules of conduct to maintain good relations with others and socially sanctioned processes of reconciliation:

The church law is that you have to approach one of the elders and tell him that so and so did me wrong. So they would reconcile us and then we would forgive each other. The main thing is forgiveness. That is what they also give us other than the society. They give us rules. We go to get rules when we go to church.

(IMAGE treatment group, August 2008, 56)

Finally, the hypothesis that one's subjective empowerment is realised through relational interdependence is supported by various pieces of evidence. Firstly, by the fact that having helped others directly impacts women's wellbeing. The account below describes how Stella feels her wellbeing is augmented by helping her neighbour to overcome an impasse: Stella is not only happier because her friend is happier, but experiences a direct impact on her happiness from the fact that her friend has solved her problem:

Helping a neighbour makes me happy because she will also get **out of** a **difficult** situation. like if she had **problems**, I get happy when I **tell** her to do this and that and she does it and then she comes back to me and say my **friend** I did what you **told** me and I find that life is better these days.

(IMAGE control group, 55 years old)

Secondly, group members that dispense wise advice to the less experienced to help them overcome their difficulties become charismatic and a reference point for others:

Right now when I have problems at home I can go to Lulu and say I have problems here and there. And she sits down with me and says if it were me I would do this.

(New Centre group, 17/08/2008, 38)

During the FGD with Lulu, Regina and their friends, it became apparent that Lulu was seen as an understanding motherly figure for the more troubled members of the group. While encouraging all to speak their minds,³⁴ the RA and I also embraced Lulu's role, and sought to use her as a positive guide in the interactions. So, for example, Regina's story, while harrowing at times, was told in a very participatory manner, with Lulu and the others contributing comments, and discussing with Regina how accurate her memories were.

Moreover, consistent with this view that in-group sharing of experience is empowering, importance is attached to visitors that carry and share knowledge seen as intrinsically empowering. In this sense, I was also part of the in-group, as the quote below, not statistically significantly associated with the theme, but useful to illustrate the concept, suggests:

We are thankful to Tlhabologang school because it is the one which brings us people like Giulia so that we could be developed and enlightened. Right now we know much more about health issues.

(IMAGE control group, 11/08/2008, 50 years old)

In conclusion, this theme explores the associations between networks and women's wellbeing. Consistent with a relational perception of self, groups are made up of individuals with whom each woman constantly negotiates sets of dyadic relationships. Networks include friends and enemies, and wellbeing is reactive to both manifestations of friendship and enmity. Formal groups matter as well as informal groups, especially as they provide norms of conduct and spaces for reconciliation; and, finally, knowledge is transferred in the group through relational interactions. All forms of groups are seen as sets of dialectic/dialogic interactions. The only exception to this is the church, which sets its own rules.

³⁴ My fieldworker and I acknowledged how the senior participant's role might influence the tone of the debate, and ensured we gave everyone space to express themselves by emphasising how every opinion was equally valid, and welcoming diversity of opinions.

Household chores

This theme, and its sub-themes, emerge for the most part from women's responses to the household chores section of the focus groups. Methodologically, its findings may be considered as closely related to those from investigations based on day reconstruction method (DRM) and time use surveys, as the elicitation method I used is based on similar principles, adapted to a FGD setting. In this perspective, these findings are the closest, in this exploratory phase, to an idea of moment-by-moment happiness.

This theme depicts the women as mothers, housekeepers, wives, entrepreneurs and friends, and these roles capture both their desire for autonomy and their reliance on tightly-knit groups of peers, and how these dimensions affect their wellbeing. An unexpected element to emerge is the physical reality of life, reified in the body, and how sharply this is reflected in states of well (or ill) being.

The verbs typical of this theme are mostly evocative of a woman intent on running her household in a rural South African context: the pair of words 'fetch(7)' and 'water(18)' features fairly prominently, reminding us that the chore of providing the household with water by carrying it on foot from an access point in the vicinity of the village is a daily incumbency for the women. It is also associated with low, or negative affective states as the quotes below illustrate.

Other characteristic verbs in this theme are: 'prepare+(14)', 'wash+(14)', 'bath[e]+(8)', 'clean+(11)', 'cook+(12)', and 'sweep(3)'. Nouns that are also evocative of this theme include: 'bed+(7)', 'chores+(2)', 'sheets(3)', 'kid+(6)', 'wood(3)', 'blanket+(2)', 'floor+(2)', 'supper(2)', 'grocer+(3)', 'home+(22)', 'stove(1)', 'yard+(3)', 'river(3)'. Adjectives such as 'busy(4)', and 'dirty(2)', contribute to creating an image of a day full with activities in and around the household.

The physical dimension that does not appear in the others, as may be inferred from the words 'body(8)', 'tummy(5)', 'pain+(2)', and the mention of biological functions, such as 'sleep(25)', and 'wake(30)', or of adjectives such as 'asleep(4)' and 'tired(7)'.

The prominent role of physicality in the household chores theme is exemplified by the following quote – highly significantly associated with this theme:

Yesterday I woke up at nine antemeridian. I was so lazy when I **woke up**. My **body** was stiff I did not **feel** like **waking up** and **cleaning** or doing the **washing**.

(ECU:1013 Chi²:44; IMAGE control group, 02/07/2008, 33 years old)

Moreover, this theme records instances of associations between physical health states, women's sense of empowerment, and the affective states they experience:

Just before **seven antemeridian** my **tummy** got **better**. I had **energy** and I **felt** that I could **go** and do the **washing**, so I was happy, I **felt better**[...].
(ECU:695 Chi²:33; IMAGE control group, 09/07/2008, 30 years old)

In this quote, the link between the positive affective state and physical wellbeing is mediated by the ability to perform chores, i.e. accomplish one's duty as a householder. Another sub-theme is connected to leisure and characterised by the words 'watch+(9)', 'TV(6)', 'tea(6)', 'rest+(6)', 'story(3)'. This sub-theme mostly describes moments where the women relax with children and adults, either reading bedtime stories to children, or performing other recreational activities with them and other adults. It speaks to the affective aspect of relations with others, more than their purposeful side, as the following quote exemplifies:

I was very very happy because my **aunt** and my **brother** **came**. [...] then I started **cooking**. I then **watched** news on TV and then **watched** a **story** with my children and a neighbour's child and I was happy.
(ECU:1016 Chi²:31; IMAGE control group, 02/07/2008, 33 years old.)

In general, socialising is associated with positive affective states both in the hours before going to bed, and during the day.

In contrast, most of the descriptions of the women carrying out household chores depict them alone. This is in contrast to the descriptions in the *mulier oeconomica* theme, where they actively interact with others. However, most of the activities women perform are for the benefit of the family as a whole, and in particular their children, making for intrinsically relational activities:

At four **pm** I had to **wake up** and I had to **cook** again. [...] and then I **finished cooking** at six **pm** and I **bathed** the children.
(ECU:520 Chi²:37; New centre group, 30/08/2006, 35 years old)

The women represent themselves in their role as mothers, stressing their role relationships with others, particularly their children. The burden implied by these responsibilities can trigger states of negative affect:

Taking care of children can give you stress because they stress your mind. The next **day** you **wake up** the children have to **go** to school, you have to **wake up** and **bath[e]** them, **prepare** breakfast for them, do their laundry; all these things stress your mind and you become stressed.
(ECU: 168 Chi²:4; New Centre group, 15/08/2006, 23)

To put this quote in context, the interviewee's explanation of why the excessive burden triggers states of negative affect hinges on the feeling of loss of control over what should be done, as described below:

So you ultimately get confused because you do too many things, and you forget some things and your mind gets overwhelmed. Taking care of children can be too overwhelming.

(New Centre group, 15/08/2006, 23)

Reiterating positive and potentially empowering role-relationships, FGDs participants bring examples of associations with other women to solve problems that trigger stress:

When you feel **stressed**, you go and meet with other **women**, you **sit down** with them and then explain your **problem** to them. [...]

(ECU:183 Chi²:30; New Centre group, 15/08/2006, 23)

Sitting down, an expression characteristic of this theme, signifies the other women's willingness to take time and reflect: the relational nature of self-construal seems captured by the image the women allude to: 'you sit down with them', which suggests a shared element in the actions and subtly strengthens this feeling of togetherness.

Moreover, in relation to work tiredness accompanied by a sense of accomplishment may in fact be associated with a feeling of happiness:

At **seven antemeridian** I opened the windows at work and I was happy. **thereafter** I **cleaned** the office until **twelve** when I **went to lunch** by then I was happy, but my **body** was **tired**.

(ECU:1018 Chi²:25; IMAGE control group, 02/07/2008, 57 y. o.)

This suggests that a feeling of positive engagement may still trigger a positive state of wellbeing, despite also causing tiredness, which instead impacts negatively on wellbeing when it prevents purposeful action. This would seem to suggest that tiredness per se is not associated with negative wellbeing; rather, it is if it prevents the individual from accomplishing their goals, but it is instead associated with positive wellbeing if it is the result of positive engagement.

This theme revealed a complex set of interactions between women's wellbeing states and their role relationships, physical wellbeing and leisure. It suggests that both role-relationships and pleasure influence women's wellbeing. It focuses mostly on women's relations with others, predominantly as meaningful, purposeful interactions, though a minor, leisure and affect related theme, is also present. It suggests that purposeful engagement with their role dominates women's perception of their day-to-day, or moment-by-moment wellbeing, further corroborating the hypothesis of a relational self-construal and wellbeing. It also contains a degree of relational autonomy, as women

decide with others and for their children. This autonomy, despite being considerable, does not appear to be transformative: it is mostly played within boundaries predefined role-relationships and according to predefined rules.

Mulier Oeconomica

This theme depicts the women as mostly intent on economic transactions both in some form of marketplace and in the household, hence the label *mulier oeconomica*, to underscore the view of the woman as an economic agent.

Two additional sub-themes are linked to health ('health, ill, patient, clinic, condom'), and spirituality and gratefulness ('thankful(10)', 'god(23)'). In particular, the health sub-theme contains important indications on the altruistic attitudes of the women who report volunteering to help the sick in the community without financial recompense.

The verbs typical of this theme, such as 'buy(75)', 'sell(31)', 'pay(39)', 'work+(68)', 'build(25)', 'clothe(19)', 'spend(12)', 'employ+(7)', 'deposit+(4)', 'borrow+(14)', 'farm+(6)', and 'plough+(3)', refer mostly to economic transactions and production. The nouns also prevalently indicate concepts of economic relevance: 'money(139)', 'food(44)', 'school+(64)', 'car+(9)', 'fees(9)', 'house+(58)', 'loan+(7)', 'Rand+(17)' (the South African currency), 'stock(10)', 'chicken+(5)', 'grant+(7)', 'payslip(6)', 'business(7)', 'profit+(4)', 'credit(3)', and 'societ+(10)' (referring to organisations that connect people around a (generally financial/economic) motive, such as, e.g., burial societies – savings groups through which people save for their family's funerals, which in South Africa are very expensive events). Consistent with these patterns, several instrumental words characteristic of this theme indicate possession – 'me (103), mine(4), my (117), own(10), 'have(155)', and 'got(45)'.

As economic agents, the women work to provide for their families, and mostly their children:

It is important **to be employed**. **Employment brings** happiness in the **house** because at the end of the **month** when you get **paid** there is happiness, you are **able to take** care of the children; **buy** them **food** and **clothes** and they can even have a good uniform **to go to school**.

(ECU:405 Chi²:14; New centre group, 30/08/2006, 37)

This quote provides further evidence of the women's relational self-construal as the economic advantages from employment are interpreted as accruing to the whole household, and their children in particular, rather than to themselves. It is also plausible that clothes and uniform point to the "need" to signal dignity or standing in the community, further underscoring a relational view.

However, despite the positive association between a perceived increase in consumption and wellbeing, the process of negotiating consumption and related production choices is not always an equally happy experience. The ability to control their circumstances implied by women's reports of having repaid loans, is contrasted by the perception of an unequal distribution of the burden in household financial responsibilities, which are mostly shouldered by them, and by their unhappiness at having to act independently from a non-cooperative husband:

It **makes** me unhappy because I am the one who is always **buying**. Sometimes I even **take** the **money** I have **to buy stock** with and **use it in the house as well**.

(ECU:528 Chi²:19; New centre group, 30/08/2006, 33 years old)

Moreover, this is connected to husbands' perceived unwillingness to co-operate in sharing financial responsibilities:

He wants me **to** be the one **buying** all the time with my **money**, and he keeps his safe. So that **makes** you unhappy because his **money** is not **used**. So that **makes** you unhappy. So there is no cooperation. What **makes** me unhappy then is the **fact** that we do not cooperate.

(ECU:527 Chi²:5; New centre group, 30/08/2006, 34)

As evidenced by the origin of the quotes statistically significantly associated with this theme, the *mulier oeconomica* domain is mostly salient among intervention clients of the Small Enterprise Foundation (SEF), the partner microfinance organisation in IMAGE; and SEF features prominently in these narrations:

Personally [...]; what **makes** me happy in life is that my family and I are always happy because I am finished **paying** SEF off. It is the one that **made** me **able to** meet the needs of my family. We can get **food**, we can get **money to send** our children **to school**, and **buying stock to sell**.

(ECU:5 Chi²:16; IMAGE control group, 11/08/2006, 32 years old)

In this quote, the women's relationship with SEF is marked by a sense of independent responsibility as entrepreneurs ('I am finished paying'), though in other cases this is also seen as an interdependent responsibility, jointly with group peers; and is contrasted to their interdependent responsibility as householders ('We can get food', etc.), providing further evidence of the simultaneous salience of an individuated and a relational self in the theme.

The health sub-theme further supports the hypothesis of a predominantly interdependent self through the description of the volunteering activities the women carry out in the community to help the more disadvantaged:

[...] I am a **volunteer** at Makofane **clinic**. I am going **to talk** about our **volunteer work**. We are helping the nurses. We are **taking care** of **patients** at home. When we get **to a house** and there is a **patient** and no **carer**, we sweep the **house**, bath[e] the **patient**, wash the **clothes** and cook for them.

(ECU:37 Chi²:2; IMAGE control group, 11/08/2006, 38 years old)

Here, the relational component is expressed both by women's display of other-regarding preferences in choosing to help the vulnerable, but also by the switch in the narration from the first person singular to the first person plural, indicating a joint effort with other women.

The following quote expresses a sense of happiness connected to helping orphans in the community, contrasting this to farming, possibly for oneself:

Whilst waiting for the **grants** [the orphaned children we help] get **food** parcels. [...] It **makes** me happy because I was just sitting doing **nothing**, and only focusing on **farming**.

(ECU:40 Chi²:5; IMAGE control group, 11/08/2006, 38 years old)

While the quotes for this theme are from younger and new villages, discussions about volunteering work also took place in FGDs held in old villages, according to my field notes and transcripts. Both in intervention and control villages, volunteering was mentioned by younger participants. However, based on these data, it is not clear whether this is a generational change or a function of age, whereby younger women might have more time to dedicate to such activities or, possibly, less to lose in terms of prestige compared to older women by engaging in non-paid activities.

The sub-theme on gratitude to God expresses the idea that God supports women in achieving economic wellbeing and meeting their families' needs:

You pray that **God** help you **to get work** so that you can **send** him **to school**. He would then be **able to help** the younger siblings. [...].

(ECU:980 Chi²:18; IMAGE control group, 02/07/2008, 33)

Throughout the FGDs, women also mentioned God in relation to explicitly religious contexts, and in relation to support with health and relations with others; however, the idea that God supported women in achieving material goals and 'success' in their role as providers was not only the most significant, but also the most frequent representation.

This theme contains varying degrees of relationality and empowerment. The women portray themselves successful borrowers, as well as entrepreneurs, in a comparatively individuated fashion. They also discuss their role-relationships as providers, and volunteers in the local community, which yield a sense of accomplishment, in contrast to

the sense of disempowerment they find in the lack of co-operation on the part of their husbands.

This section has illustrated the content of the five themes, highlighting the varying degrees of relational self-perception and empowerment that emerge from the text. The next section investigates whether some themes are more typical of specific groups of women; as well as the relationships between the themes, to establish whether any underlying structure of the discourse may be identified.

Relational self-construal and empowerment

The vectorial space below (Figure 6) depicts the word clouds that populate the themes as they stand in relation to one another. Moving from the left to the right, the *mulier oeconomica* theme, which describes on the whole more empowered women, is on the left-most side of the plane; this followed by the community and the children's theme, where power is negotiated with a greater degree of effort and frustration; and finally moves to the female socialisation and household chores themes, where power is not in the hands of the women in a transformatory way (Kabeer 1999).

The themes can also be analysed along the y-axis, where they highlight the individuated-relational dichotomy. From the top, the *mulier oeconomica* theme contains the highest degree of (relational) individualism, depicting the women in their role as breadwinners by virtue of being entrepreneurs; in the household chores theme, despite playing roles dictated by gender norms that see women in charge of the household, the women describe themselves as making independent choices on the use of resources (e.g., their time, food, water) as they contend with the physical limitations of their bodies, so that this class contains some element of individuated decision-making, if not a form of transformatory agency (Kabeer 1999). The community and children and crime themes see the women negotiate alliances within networks despite betrayals and envy; and navigate motherhood in their role as educators, facing the challenges of keeping their children from committing crimes and contracting HIV. Both these themes contain an inherently relational component. Each in its own way departs from the role-relationships imposed by the local patriarchal society seen in the female socialisation theme. In the community theme, women speak of discussing and resolving problems together in processes of mutual empowerment and emancipation from stifling rules, similarly to what happens in other groups (James 1999, pp. 44-45; Lee 2009, pp. 146, 185). In the children and crime theme, women display shared behaviours that *de facto* are counter to local norms, when they openly discuss HIV/AIDS with their offspring, for example (Stadler 2003).

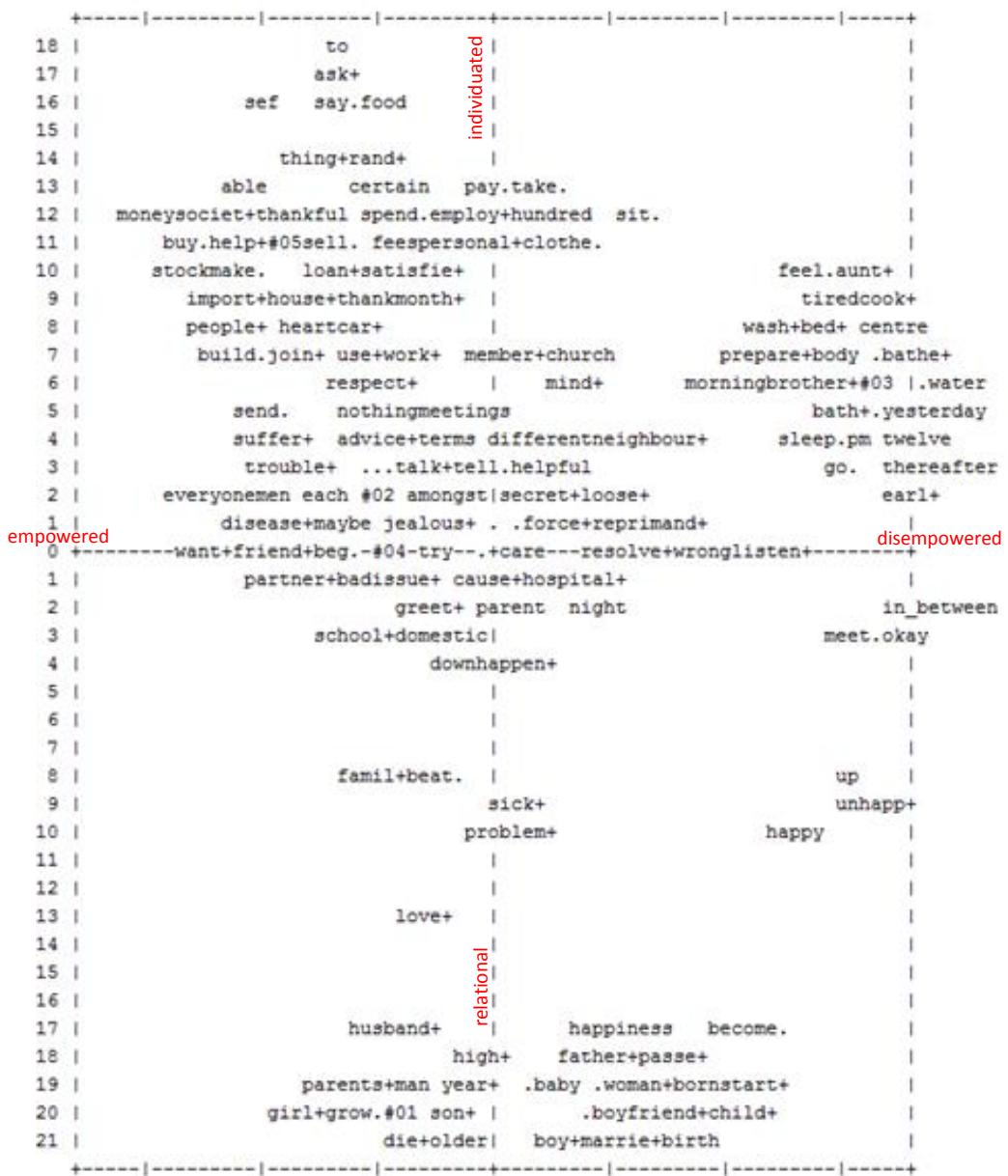


Figure 6 Vectorial Plane: two-dimensional space of empowerment and relationality

Groups' worldviews on wellbeing

The correspondence analysis identifies the groups of women most closely associated with each theme. This analysis depicts a difference between the general community group, the original IMAGE intervention groups, and the original controls. The community groups display the highest associations with the female socialisation theme, which records low level of empowerment and role-relationships almost exclusively dictated by local patriarchal rules ($\chi^2=31$). The original IMAGE intervention group, with 4 to 5 years of exposure to the intervention, feature strongest associations with the community ($\chi^2=42$) and the children and crime themes ($\chi^2=12$). This finding is consistent with the fact that women with the longest exposure to the treatment are more likely to have developed

higher awareness than others of the importance of negotiating social ties; as well as of social problems in the communities, and of ways to tackle them. The original IMAGE control groups, with 2 to 4 years exposure to treatment, are most strongly associated with the *mulier oeconomica* ($\chi^2=13$) and the household chores ($\chi^2=17$) themes. It may be that for these groups of more recent formation the economic aspect of the programme is still the most salient. This is also consistent with the fact that new villages show the same pattern of association as the original IMAGE control villages, albeit to a lesser degree. Moreover, the *mulier oeconomica* theme is only associated with the groups exposed to MF, and not with the general community group. This is consistent with the fact that women who qualify for and are enrolled in MF programmes may have, or develop during the programme, both a greater empowerment and some degree of individuated perception of self.

This analysis shows that the dimensions underpinning women's wellbeing are a relational perception of self and a sense of empowerment, and the ways these interact across the domains of daily life, the life course, women's entrepreneurial activities, as well as raising their children and negotiating their alliances in the community.

Discussion

This chapter has provided an initial analysis of the constructs of subjective wellbeing and subjective empowerment for adult Pedi women in rural Limpopo. It has discussed their conceptualisation in view of the dominant view of the self that emerged from the data, and highlighted a number of correlates that confirm findings from frequentist studies, providing further insights into the mechanisms through which these impact SWB.

Analysis of the FGD data suggests that women's wellbeing is rooted in an interdependent view of the self, and hinges on their ability to fulfil their roles as, e.g., mothers, entrepreneurs, and wives. Women's sense of wellbeing also rests on a sense of empowerment that encompassed both the ability to decide for oneself (or in collaboration with peers), and the ability to exercise some control over one's circumstances.

The interdependent nature of the self-construct the women exhibit is an unexpected finding from this exploratory research. Based on the women's narrations, it is rooted in networks of dyadic relationships (Brewer and Chen 2007). It pervades women's wellbeing construct which is largely influenced by the roles they play in a social context of relatively static networks that they cannot shed, but where they can negotiate relationships by either abiding by pre-existing (patriarchal) rules, or by changing them, often with the help of peers (James 1999, p. 50; Lee 2009, p. 131). It is distinct from the

constructs found in the Far East and in the West (Markus and Kitayama 1991; Markus *et al.* 2006). Participants' wellbeing is rooted in their role-relationships with others, consistent with a relational view of the self, rather than deriving from emotions and the adherence to one's actions and one's intra-individuated self, as in the West (Suh *et al.* 1998), or from a sense of belonging to an indivisible collective, as in the Far East (Markus *et al.* 2006).

This is further supported by the fact that when the women remarked that the FGDs had been an opportunity to learn new things, they explicitly pointed out how this learning process had been mediated by me as well as the group. This suggests that they viewed the production of knowledge as a relational group effort, rather than as an individuated process (Green *et al.* 2002).

The following section discusses how wellbeing correlates, as well as empowerment and relational self-construal emerge from the five themes that define women's experience of wellbeing: female socialisation and the household chores; the community, children, and the women's entrepreneurial activities.

Female socialisation

The theme revolving around female socialisation depicts the women in socially codified roles. Discussion of specific events (marrying, having children) and their impact on wellbeing is the result of the structure I determined for the focus groups, however, the women chose to speak of their role-relationships, rather than of their aspirations, which suggests a relational view of the self, as their changing social status affected their wellbeing (Wissing and Temane 2008). For example, their vulnerability as young wives contrasted with the prestige of being grandmothers. The women's perception of wellbeing is positively associated with the power conferred by social status, however overall levels of empowerment are still low because female social status is subordinate to a patriarchal hierarchies. Even in rare examples where power is exercised with female peers - such as when young women are sent to live with the newlyweds to help the wife overcome her fears –female status depends on the family of origin or on husbands, and by their ability to have children.

Memories of childhood events and wellbeing levels seem “essentialised” – i.e. overly simplified – and seem to display some degree of focusing illusion (Kahneman and Krueger 2006) and obey the peak-end rule isolated by Kahneman and colleagues (Redelmeier *et al.* 2003): women who experienced the loss of a mother as a child, for

example, report being an unhappy child, possibly attributing the acute emotional pain they experienced at various moments in their childhood to their childhood as a whole.

An important domain (or correlate) discussed in this theme is marriage. Women seemed to experience two distinct marriage phases in relation to their wellbeing: a “newlywed” and a later phase. Women who reported experiencing sharp drops in wellbeing around the time of marriage described episodes of abuse associated with their youth and lack of knowledge on sexuality. These narratives are consistent with other qualitative evidence on “romantic” relationships in South Africa, where women are forced to engage in sex and endure abuse in compliance with gender norms that see them as submissive and compliant with males’ desires (Wood *et al.* 2007; 1998).

Their narratives suggest they entered relationships based on traditional roles. Though I do not know for certain whether they were traditionally married, it is highly likely, as traditional marriages seem frequent in these communities. Most women in the IMAGE control villages – who had been randomly sampled from the age group of treated women – were married or living as married (N=146, 40% of total controls), and 136 (93%) of them were in a traditional marriage³⁵. Together, these numbers and narratives suggest that analyses of international datasets that find no substantial differences across nations in the relationship between marriage status and happiness by comparing married to unmarried people (Diener *et al.* 2000; Diener *et al.* 2013, p. 159) could be extended. Specifically, more nuanced distinctions between traditional and non-traditional unions could be considered to further probe the nature of this association, especially in areas where traditional forms of marriage are more common.

This evidence may also contribute to explaining the lower average levels of happiness among traditionally married individuals compared to those in civil marriages found in Powdthavee, and is consistent with the possible explanations he provided (Powdthavee 2004). Therefore, investigations of the changes in wellbeing over time and their associations with changes in marital status, extending Lucas and Clark’s work on marriage in Germany (Lucas and Clark 2006) to different types of marital arrangements in South Africa may yield insights into how disempowering role-relationships as seen in South African patriarchal societies might interfere with expected trends in associations around the time of marriage. However, possibly due to lack of data and the complexities

³⁵To complicate matters further, however, 53 (39%) of the women in traditional relationships had also entered into a civil and/or religious contract for the same relationship. There were no women in a civil or religious relationship that were not in a traditional relationship. The remaining ten may have been cohabiting.

surrounding marital status in South Africa (Botha and Booysen 2013), large-N studies in South Africa do not investigate changes in wellbeing as a function of changes in marital status in the vein of Lucas and Clark (2006), so this remains a matter of investigation for further research.

This theme suggests overall low levels of empowerment for women, as the narratives triggered by making key life events salient seem to cohere around a picture of low relational autonomy, characterised by submission to gender roles that are unfavourable to women, and consistent with a patriarchal view of society (Seedat *et al.* 2009). The theme highlights the negative implications of a relational view of self that relies on social status according to patriarchal rules to define one's identity, and only points to minor examples of mutual support among peers that are, however, still in keeping with patriarchal tradition, and are therefore not examples of transformative agency (Hatcher *et al.* 2011; Kabeer 1999).

Children and crime

In this theme, the relational aspect of women's wellbeing is evidenced by their discussion of their role-relationship as mothers and grandmothers, and the status these roles afford them. Children contribute to women's status among the Southern Bantu in particular, and generally in Black African society in the region (Kuper 1982, pp. 5, 14). This is reflected in the marriage custom of Southern Bantu people, rooted in the brideprice, or *lobola*, whereby the woman is transferred from her family of origin to that of the groom's upon his payment of a large sum of money or capital (often cattle). Following this exchange, the woman formally becomes part of the groom's family (Kuper 1982, pp. 18-20), but often remains at her parents' home until she has the first child. This, in fact, is the event that marks the fulfilment of the contract on the part of the bride's family. The husband's family, according to tradition, is entitled to rescind the contract if the bride does not bear children, so much so that *lobola* is also known, in juridical terms, as "child price" and payment is nowadays often completed after the birth of the first child (Kuper 1982, p. 20). This also chimes with my direct observations in the field, where women I knew, especially younger friends and colleagues, would at times see the final instalment of their *lobola* paid only after the first birth. Thus, the birth of the first child marks a clear change in the woman's status: she is officially accepted by her husband's family as the birth finalises her family's obligations toward her husband's family, and enters adulthood fully (Mönnig 1967, p. 98). Further, in an inherently relational perspective, she also contributes to her family's status, as may also be gleaned from older women's comments in the FGDs

regarding the importance they attached to their coffins being carried by their grandchildren. This attributes a specific social significance to having children, beyond the emotional experience attached to this life event.

FGD participants revealed both positive and negative mechanisms that illustrated the role of social status in mediating children's impact on mothers' wellbeing. Women attributed importance to their children's good educational outcomes and generally positive outcomes in life, consistent with that also found by Camfield et al. in Bangladesh (Camfield *et al.* 2009a), and older women seemed to derive prestige from the fact that their "grandchildren *would* carry *[their]* coffin". However, women also discussed the negative impact of children's involvement in crime on their own status and their wellbeing. A contrast emerged between the concern and their sense of competence in dealing with the treatment of HIV for their children, and their concern and powerlessness (van Straten *et al.* 2008) at raising children in a country that criminalised corporal punishment against children and had not taught them as mothers how else to raise their offspring. In the first instance, women's narratives suggest a sense of relational transformatory agency when they as mothers and peers feel they have one tool to tackle the HIV threat, acquired through the shared process of assimilating and jointly re-elaborating the IMAGE life-skills curriculum (Hatcher *et al.* 2011). In the second case, for crime, the mechanism is the same, however the women's narratives highlight their perceived inability to face the challenge.

In terms of correlates, this evidence supports previous findings that the presence of crime in a community diminishes wellbeing even among non-victims (Powdthavee 2004), and for the focus group participants was also justified by the actual frequency of criminal acts in South Africa as a whole, and by the fact that in the years 2003-2010 reported robberies at residential premises in Limpopo had been steadily increasing both in absolute numbers and relative to the population (South African Police Service 2010).

However, the data I report suggest that mechanisms explaining diminished SWB may go beyond an individuated anxiety triggered by fear of being victimised in the future, to encompass non-victims' concerns as mothers of potential criminals. This underscores the relational nature of wellbeing not explicitly captured in Powdthavee's econometric models, in so far as it derives from the women's inability to fulfil their role as mothers (reducing their sense of environmental mastery) and represents a threat to their social ties (damaging their relations with others) rather than from their fears of falling victim to crime.

This evidence would take the policy implications from Powdthavee's investigations one step further: the Government could consider equipping mothers with resources to support their children (White 2002) by, for example, offering mothers (and fathers) access to education in positive parenting techniques *ex ante*, i.e. enhancing their ability to raise children through reinforcement of positive behaviour, thereby possibly contributing to reducing crime rates, and not only psychological support to victims *ex post*. This evidence suggests another wellbeing-related hypothesis for testing could be whether interventions that improve parenting skills also improve recipients' wellbeing via the improved efficacy of their parenting style. Incidentally, such models of prevention could contribute to reducing at least some forms of crime (Seedat *et al.* 2009) as childhood abuse is a predictor of violent behaviours, including perpetration of intimate partner violence in adulthood for males (Abrahams *et al.* 2006; Jewkes *et al.* 2006), and of exposure to abusive behaviour for females (Jewkes *et al.* 2002).

In sum, this theme has highlighted the importance of the women's role-relationship as mothers, stressing again how the relational dimension informs women's construct of wellbeing. The domains of wellbeing most closely related to this role-relationship, based on the women's accounts, seem to have to do with their ability to face the challenges brought upon external circumstances to their successful accomplishment of their role as mothers.

Community

This theme explicitly discusses the domain of the community, informal networks, and trust.

The women's narratives suggest that they are sensitive to the quality of relationships within those networks, e.g. to betrayals, and networks' enabling characteristics. This, together with the more immutable nature of networks in a predominantly relational context, may imply longer term and stronger impacts of network quality on wellbeing compared to contexts where the perception of self is individuated and enemies eliminated from one's network (Adams 2005). Frequentist studies also point to the strength of this association even at low levels of income in South Africa, reporting that the association between social capital and satisfaction with life persists even among the very poor, even after the effect of income is accounted for, and at all levels of income within this group (Cramm *et al.* 2010; 2012).

This is consistent with evidence from OECD countries, where social networks also record a positive association with SWB, both in terms of their size and frequency of contact,

above and beyond individuals' income (Helliwell 2006; Helliwell and Putnam 2005). Together with the evidence I present here that social networks provide an important form of support, more research is needed to understand the determinants of Helliwell's finding that "the relative value of the social determinants of SWB (as measured by compensating differentials) is higher for residents of the generally richer OECD countries" that he attributes "to a [...] greater importance of the social variables in the richer countries", based on his general belief that "many of the poorest countries are also afflicted with [...] weaker supports from family, friends and public institutions" (Helliwell and Barrington-Leigh 2010). This belief would not seem to hold in the context of the present study, nor in Cramm et al.'s investigation, suggesting that further understanding how relationality influences individuals' wellbeing may contribute to understanding the reasons for the differences that Helliwell finds.

Moreover, the evidence from the FGDs differs from the finding that interpersonal comparisons influence individuals' wellbeing only beyond a given absolute income threshold (Layard 2005a, b). While it may be true – and the evidence presented here cannot engage with this debate – that the relative income effects will outweigh absolute income effects only past a given threshold for the average individual, relative income effects should not be dismissed as a factor influencing SWB among poorer strata of the population. For example, Cramm et al. find that the degree of average deprivation of the individuals in one's neighbourhood was negatively associated to one's wellbeing: individuals were happier the better off their neighbours were on average (Cramm *et al.* 2012). This is consistent with a relational view of the self, where neighbours may well, in most cases, constitute members of the in-group and their success interpreted as one's own, or as a predictor of one's own and associated with increased wellbeing, as well as with other findings from large-N studies in South Africa (Bookwalter and Dalenberg 2010; Kingdon and Knight 2007).

This is consistent with the findings from the FGDs, where discussions of envy and income comparisons seems to entail a process of othering of the envious, through the use of the word 'people' instead of 'neighbours' in the women's narrations. This process of othering in the attribution of envy is, in turn, consistent with historical and anthropological accounts, where envy is ascribed to poorer and older members of the community who are marginalised. They are deemed envious of younger individuals' socio-economic attainments and therefore accused of performing acts of witchcraft that bring physical or mental illness upon the young and successful victims of envy (Stadler 2003). Moreover,

the examples of envy reported by the women seem to hinge on status ‘goods’ (a husband, success, living comfortably), which would again suggest a relational view of the self; and on concepts of scarcity (“*Some of them do not have a husband and they can take your husband, because you have a husband and she does not*”), consistent with ethnographic accounts from elsewhere in sub-Saharan Africa, where feelings of envy determined by exclusion from access to local resources also explain policy choices (Brockington 2005). This phenomenon is associated with lack of alternatives or opportunities (Geisler 1995), and may be instrumental in the local manipulation of policies if not accounted for (Brockington 2005).

In summation, the community theme contains evidence on how women’s negotiations, reciprocal support and learning processes within networks, as well relative comparisons of resources matter to wellbeing. It is the theme that most explicitly explores a dimension of relatedness, with the narrative concentrating on meaning and purpose: discussing and solving problems with peers, identifying trustworthy neighbours, feeling rewarded when someone else heeds one’s advice. There is a sense of relational autonomy as a process of relational empowerment through the groups of peers, and a sense that relative comparisons of wealth and status matter.

Household Chores

The theme related to the household chores suggests, among other things, that wellbeing responds to physical health state, daily duties as a householder, and socialising – both over recreational activities, or to discuss challenges with peers.

The relational nature of the women’s WB construct is highlighted by the fact that the narration of the household chores depicts them mainly in their role as carers and householders. They report experiencing distress and feelings of being overwhelmed in association with their child-related duties, a contrast to the positive association between wellbeing and the status attached to having children. Reduction in levels of wellbeing associated with having children are also found in large-N studies in Europe and the US (Di Tella *et al.* 2001)³⁶, with mothers negatively affected by the birth of children after the first in Danish data from twin adults (Kohler *et al.* 2005). The data I report here suggest that the challenges attached to managing and carrying out child-related duties may explain a negative association, consistent with longitudinal studies from the US, despite the positive impact on wellbeing that status conferred by bearing children has, for women

³⁶ See regressions in Tables 2 and 3: number of children is negatively associated with the happiness and life satisfaction measures consistently throughout all regressions.

whose sense of self is relational. Moreover, the pattern of negative hedonic states (the women explicitly mention “stress” and “being overwhelmed”) while performing hard tasks in connection with meaningful activities (such as raising children, in this case), has been found elsewhere (White and Dolan 2009; Dolan 2014) for work related activities and tasks.

In a similar vein, and more explicitly related to a work-related setting, this theme reveals how a sense of tiredness following long hours of physical work is also accompanied by a sense of accomplishment and associated with a feeling of happiness, capturing a eudaimonic dimension of wellbeing, as White and Dolan (2009) and Dolan (2014) have shown: work activities associated with comparatively low hedonic levels may in fact be associated with high eudaimonic levels when they are clearly connected to a sense of achievement. Conversely, and consistent with Camfield’s findings in Bangladesh that women valued physical health in relation to the ability to carry out daily activities (Camfield *et al.* 2006), physical illness and tiredness cause distress and unhappiness because they stand in the way of the women’s ability to perform their duty, rather than further underscoring the relational nature of the self that emerges from this moment in the FGDs.

In the narration of the household chores, being with other adults is not only associated with a sense of mutual empowerment and support, though this element recurs in this theme too. Being with other adults in this theme also has a recreational component that triggers comparatively high levels of hedonic enjoyment – chatting with visiting members of the family of origin, and reading stories to or watching TV with friends and children, all trigger high levels of happiness; and the latter is explicitly reported as more pleasurable than the time spent with children carrying out chores (White and Dolan 2009). This is consistent with well-known findings in the wellbeing literature (Helliwell and Barrington-Leigh 2010; Helliwell and Putnam 2005).

This theme depicts women as carers, stressing a relational view and a role-relationship assigned to women by local patriarchal structures (Morrell *et al.* 2013). Finally, this theme contains the few mentions of statistically significant purely hedonic states, and highlights the importance of health to wellbeing.

Mulier Oeconomica

This theme supports extant quantitative findings on the positive association between income and wellbeing, and provides insights into the mechanisms that explain this association in this group. Moreover, the theme yields insights into how the women move

between an individuated and a relational sense of self. Their individuated self-construal tends to be prominent when they narrate their efforts toward repaying loans and conducting the business, while the relational self-construal emerges when they describe the use they make of the resources, i.e. allocating them to children, or negotiating with their husbands. The women act autonomously across this spectrum, inhabiting the entire gamut between an independent form of agency (Ibrahim and Alkire 2007; Alkire 2005) and a relational form.

In terms of wellbeing dimensions, it points to aspects of individuated and relational autonomy, as women make decisions on resource use both on their own and with their partners, and how they use their time as volunteers to care for the less fortunate in the community. The idea of working alone is associated with idleness and contrasted directly with the happiness attached to the idea of working together, implicitly assigning a sense of dissatisfaction to the idea of being alone (Rothmann 2013). Finally, the purposeful nature of interactions with others is consistent with an interdependent view of the self as also found in other South African ethnicities (Roos *et al.* 2013), and distinct from Ryff's concept of emotionally fulfilling relations with others (Ryff 1989).

Satisfaction of the family's basic needs, including feeding and clothing the children, as well as sending them to school, features prominently. The women associated income with wellbeing in every focus group during the brainstorming sessions. This provides qualitative evidence in support of large-n studies that report levels of wellbeing increasing with income, at least below a given threshold, in the US (Kahneman and Deaton 2010) and Europe (Clark and Senik 2011), as well as in South Africa more widely (Møller 2013; Møller and Theuns 2013). Moreover, women's narrations suggest the focus of their concerns is to provide for the family and children: the link between income and wellbeing is explained by them in terms of their fulfilment of their role as providers and householders. This is consistent with frequentist findings that poor South African women tend to spend a sizeable share of their income on the household, and to spend equitably on all children (Duflo 2000).

The difficulties in negotiating resource allocation decisions are consistent with the mixed evidence of the impact of microfinance on empowerment outcomes, where evidence of lack of control over the use of the loan and lack of autonomy in decision making around purchases (Ganle *et al.* 2015; Kabeer 1998, 2001) for at least some of the women, is contrasted with instances where women instead are more valued and play a more significant role in household decision making (Kabeer 1998; Hashemi *et al.* 1996),

including in spheres that go beyond resource management and encompass reproductive decisions (Schuler *et al.* 1997) and the negotiation of safe sex with non-spousal partners (Pronyk *et al.* 2008).

This theme provides insight into the different forms of autonomy the women experience, ranging between negotiations with their husbands to collaboration with peers, and is pervaded by a perception of higher effectiveness and transformatory agency, as women narrate about their ability to provide for the family – a role that in patriarchal societies is generally assigned to men, as also evinced from Camfield *et al.*'s 2006 study in Bangladesh. The theme also provides evidence of the importance of the absolute level of income, as opposed to relative comparisons that were highlighted in the community theme.

Conclusions

Findings in this chapter suggest that the concept of SWB among rural Pedi women differs from both the typical Western and Far-Eastern conceptualizations of wellbeing explored in trans-cultural psychology (Markus *et al.* 2006; Markus and Kitayama 1991).

In terms of the emotional and motivational aspects, the women I interviewed tend to have a perception of their wellbeing as more strictly intertwined with their relations with others, as opposed to being mapped onto an individualistic concept of self.

This implies, first, that though the correlates of wellbeing are largely similar to those emerging from large-N studies in other contexts, the associations with wellbeing exhibit different patterns, such as around the time of marriage, or may rest on different mechanisms, such as in relation to crime, or relative income. These findings suggest that exploring the construct of wellbeing among other African populations (Wissing 2013a), and relational populations more generally, is an important endeavour to enhance the meaning of wellbeing research in these areas and *milieux* (White *et al.* 2014).

Moreover, the data suggest that the common underlying structure of the women's concept of wellbeing (Bourdieu 1984; Lahlou 2008) rested on their ability to choose and make decisions, the quality of their relationships with neighbours and family, and their ability to face daily challenges (Khumalo *et al.* 2011). These are consistent with the basic psychological needs of autonomy, relatedness and competence identified by Ryan and Deci (Ryan and Deci 2000), and echo Nussbaum's basic human capabilities, especially practical reason, affiliation and control over one's environment (Nussbaum 2000). They also echo Sarah White's *et al.*'s (White *et al.* 2014) recent findings on Inner Wellbeing,

and their factors of economic confidence, agency and participations, social connections, close relationships, physical (and mental) health, and competence.

I did not find explicit evidence for the importance of mental health per se, nor for self-worth and values. The dimension of meaning in my evidence seems to be eminently relational. This is consistent with other findings in the region, where exploratory factor analysis reveals that collective self-efficacy is also captured by a separate factor of “wellness”. This factor results from perceived active cooperation among members of the community, and the greater in-group interdependency, compared to individualistic societies (van Straten *et al.* 2008).

Indeed, from the data, women’s sense of empowerment is the outcome of interactions with well specified others that pertain to the groups they belong to, and with whom they share ‘common bonds’ (Brewer and Gardner 1996); and is thus, similarly, a collective-relational experience. This in turn implies that their assessment of utility will be intrinsically connected to that of the women they share group membership with at a first approximation, and that their wellbeing and sense of empowerment will depend in meaningful ways on other individuals, too.

In turn, this reveals a construal of self that rests predominantly on a collective-relational perception of one’s identity. The women construct a sense of their own identity as a function of dyadic (i.e. one-to-one) relationships with other individuals – the relational component of the self – as these are formed within well-defined groups. The groups range from the peers in initiation rites, the clan-type ties the women are socialised within (Delius 1983, pp. 49-50), to networks of neighbours, various financial societies, churchgoers, and the family (Lee 2009, p. 98), as well as common interest groups (James 1999, pp. 44-45); these can overlap, at times. This is consistent with finding on the Tswana, a closely related Southern Bantu population (Wissing and van Eeden 2002; Wissing *et al.* 2006). The fact that these are relatively stable and that women negotiate their space within them, rather than changing friends and groups if they no longer like them (Adams 2005), suggests a relational view of the self.

In particular, while some women exhibit some degree of independent autonomy, the exercise of autonomy is, in general, relational in this group. It is the result of the assertion of a woman’s own relational laws, i.e. laws she has derived together with the group(s) of individuals that contribute to (and partake in) her development (Ryan and Deci 2001)

(Hatcher *et al.* 2011), rather than the assertion of her own internal laws, as is the case in Western civilisations.

The generalizability of these findings is limited to poor older women of Southern Bantu origin that live in rural areas. They are consistent with findings from mixed gender samples among the Tswana (Wissing and Temane 2008). However, they differ, in terms of the women's tendency to joining societies as evinced from these data and the IMAGE baseline survey, from attitudes toward societies exhibited by young third generation migrants to Cape Town (Lee 2009, pp. 85, 131), who may have different role models in an urban area. They are also broadly consistent with recent findings from India, where White *et al.* identified a set of dimensions that partly overlap with the dimensions that emerged from my data.

Though psychological, following Ryff (Ryff 1989), the fact that the themes are also consistent with Ryan and Deci's self-determination theory (Ryan and Deci 2000) is an additional reason why they are further explored in Chapter 4 as possible candidates for a function of eudaimonic utility.

The next chapter introduces the concept of eudaimonic utility, discussing empirical evidence on women's constructs against the background of socio-psychological research on WB and economic thought on utility theory.

Chapter 4 Eudaimonic Utility: the Wellbeing of Agency and Empowerment

Introduction

The concept of utility in economics “lacks a psychology and a politics” (Sen and Williams 1982, p. 21), and its uni-dimensionality is no more logical and certainly less realistic than a plural form of utility (Sen 1980-1981). This chapter introduces a novel concept of plural utility – *augmented experienced utility* (AEU) – that seeks to address these shortcomings by providing socio-psychological foundations for the concept of utility, and investigating their links with operationalisations of the concept of power widely used in the empowerment literature. AEU is plural to account for the fact that human beings value irreducible aspects of phenomena (Griffin 1988), and to allow for trade-offs between these.

AEU has four dimensions: one captures the idea of *hidoné* – or utility as pleasure and absence of pain (Bentham 1789; Kahneman and Krueger 2006; Kahneman *et al.* 1997); the other three capture aspects of *eudaimonia*, or self-realisation (Ross 1925; Ryff 1989; Waterman 2008).

The utility of enjoyment, or *hedonic* utility, has been widely investigated by economists in recent decades (Kahneman and Krueger 2006; Kahneman *et al.* 2004), alongside synthetic indices of life satisfaction (Clark *et al.* 2005; Deaton *et al.* 2009; Di Tella *et al.* 1997; Easterlin 1995; Kahneman and Deaton 2010; Oswald 1997). Equating happiness with utility *tout court* (i.e. with no addition or qualification) has the disadvantage of excluding mental states connected to agency that are relevant to individuals’ wellbeing but not captured by happiness, and are also potentially less prone to habituation and adaptation (Nussbaum 2001, p. 85); synthetic indices collapse *hedonia* and *eudaimonia* into one measurement, leading to puzzling results when the two dimensions are affected differently by a given event (Deaton *et al.* 2009).

AEU brings to the function of experienced utility (Kahneman *et al.* 1997) specific aspects of wellbeing concerned with the individual’s self-realisation – i.e. the attainment of her full potential, or *eudaimonia* (Nussbaum 2001; Ross 1925; Waterman 2008). *Eudaimonic utility* is the key new concept introduced in this work, and is the resultant of a *calculus eudaimonicus* that computes the net fulfilment the individual derives from her ability to realise her full potential. It is distinct from and complements the Benthamian idea of utility as *calculus felicificus* – the calculation of pleasure and pain the individual experiences equivalent to Kahneman’s *hedonic utility*, or the utility of enjoyment

(Kahneman and Krueger 2006; Kahneman *et al.* 2004). It adds an explicit focus on self-realisation, completing a plural utility function fully substantiated by a socio-psychological concept of wellbeing. Such a utility function therefore has the potential to provide both a coherent theoretical framework and concrete indications for the measurement of policy impact. As the next section illustrates, the inclusion of these dimensions does not fundamentally alter the mathematical and measurement properties of experienced utility as defined by Kahneman *et al.* (1997).

The salience of eudaimonic utility to policy making is especially apparent if we consider the plethora of development policy interventions (often motivated by Sen's capabilities framework (Sen 1979) funded by major donors and designed to empower individuals, i.e. to support them in developing their full potential, across all sectors of the economy, from health to education through to labour policies. A measure of utility rooted exclusively in a concept of enjoyment may fail to capture the impact of such policies. A function of eudaimonic utility that is instead rooted in the psychological components of self-realisation, and is sensitive to varying perception of identity (Akerlof and Kranton 2000; 2010) may be better suited to the measurement of impact in these areas of public welfare in a variety of socio-economic contexts.

Take, for example, the interventions that this thesis examines: both are designed to empower women by (1) supporting them in becoming more financially independent and more in control of their lives and (2) by encouraging them to act according to what they interpret as their own judgement, and improving their negotiation skills. Empowerment in these domains may indeed have a positive impact on the women's mood (or *hedonia*), but may also affect it negatively due to enhanced anxiety in the face of new responsibilities. The greater scope for impact lies in the women's ability to realise their own potential, their eudaimonic utility, despite the fluctuations in their mood these achievements may cause.

For example, a loanee from the microfinance interventions in this thesis may record high levels of distress attached to the repayment of her loan, but at the same time experience an overall sense of self-realisation at being able to support her family through the economic activity financed by the loan. A uni-dimensional measure of hedonic utility would capture the perception of self-realisation only insofar as it were correlated to a positive affect and, even then, would not disentangle the eudaimonic component from the purely hedonic; AEU instead captures the sense of self-realisation separately from her distress, yielding a clearer picture of the wellbeing impact the loan is having in her life.

AEU provides a utilitarian account of individuals' actions, outcomes and decisions. It is measured by means of socio-psychological tests, and should satisfy the mathematical properties of monotonicity, separability, concatenation, and continuity (Kahneman *et al.* 1997) that guarantee its meaningful socio-economic interpretation. Kahneman (and his colleagues) (Kahneman 2000; Kahneman *et al.* 2004; Kahneman *et al.* 1997) show that this applies to moment-by-moment hedonic utility, on the grounds that it is quantified with instantaneous measures. Each additional *eudaimonic* dimension of AEU is similarly quantified by means of psychological tests and can be shown to have theoretically the same properties as hedonic measures. The multidimensional nature of AEU adds further complexity to this issue, in that it is known that multidimensional measures of utility cannot establish a complete ordering of events, though this is insufficient reason for discarding them (Sen 1980-1981). I discuss these issues in greater depth in the next section.

Finally, eudaimonic utility is sensitive to varying perceptions of self, an aspect generally disregarded in theories of utility (Kahneman 2000; Kahneman *et al.* 2004; Kahneman *et al.* 1997), but acknowledged as relevant by Akerlof and Kranton (2000), and, indirectly, by Bruni (Bruni 2010), who advocates for a relational utility function. The perception of self is central to the definition of what constitutes wellbeing (Kitayama *et al.* 2000) and related concepts of utility (Akerlof and Kranton 2000 ; 2010). In this sense, this chapter also builds on previous work on measures of subjective quantitative agency that focused on the identification of concrete domains assuming an individuated self-perception (Alkire 2005). This work questions the universality of individuated self-construal and introduces inter-related forms of self-perception by including additional socio-psychological dimensions of utility in the AEU to reflect the relational component, which is salient for the socio-economic *milieu* of sub-Saharan African women it is mostly concerned with.

The following section formally introduces the concept of eudaimonic utility. It first situates it in relation to hedonic and experienced utility (Kahneman *et al.* 2004) – i.e. a measure of individuals' welfare. It also discusses how eudaimonic utility relates to the concept of decision utility – or the ‘utility of wanting’ (Kahneman *et al.* 2004) at the heart of mainstream neo-classical economics, and desire utility (Griffin 1988) and investigates its contribution to the analysis of policy making in a world where individuals are concerned with complex choices over the management of household resources, for example, or over health and education.

Eudaimonic Utility: Concepts and Definitions

This section investigates the contribution of eudaimonic utility to the utility and policy evaluation debate. It defines the concept of eudaimonic utility as one aspect of plural utility. It situates the plural utility function eudaimonia as part of – augmented experienced utility – in the debate on utility concepts in economics, and discusses its mathematical properties. The following section provides the motivations for factoring identity into economics (Akerlof and Kranton 2010), discusses the socio-psychological foundations of eudaimonic utility, and identifies the three socio-psychological dimensions that constitute it. These two sections provide the theoretical foundations of eudaimonic utility.

Together, hedonic and eudaimonic utility constitute AEU, i.e. a measure of utility that captures our overall sense of welfare and wellbeing. To properly situate eudaimonic utility (EUD) in relation to hedonic utility (HU), some clarifications are in order. In their 2006 paper, Kahneman and Krueger distinguish between ‘moment-by-moment’ and ‘remembered’ hedonic utility. They maintain that moment-by-moment measures are preferable because they guarantee that important mathematical properties hold. In particular, this is true of the property of dominance – i.e. the fact that prolonging an experience for a period of time in a worse (better) state will worsen (improve) the overall rating of the experience: if wellbeing is measured by means of moment-by-moment measures, global reports of a given experience satisfy dominance. Measures of remembered utility of a given experience obey the peak-end rule: i.e. individuals report levels of satisfaction that reflect peak and final levels of pleasure (pain) (Kahneman *et al.* 1997; Redelmeier *et al.* 2003). This causes remembered utility to violate dominance, and therefore pose problems in ordering the utility derived from events. Therefore, while acknowledging that remembered measures often provide the heuristics individuals use to make their decisions (Kahneman and Krueger 2006), Kahneman and his colleagues prefer moment-by-moment measures that satisfy the following axioms, and prove more mathematically tractable.

Moment-by-moment measures of wellbeing in connection to an experience can be integrated over time. This integral yields a global measure of utility that must – and when calculated over moment-by-moment utility does – satisfy the following axioms (Kahneman 2000, p. 681; Kahneman *et al.* 1997):

- i. Concatenating³⁷ a neutral utility profile³⁸ with a given profile will not change the value of the original profile;
- ii. If instant utility increases, the global utility of a utility profile will not decrease;
- iii. Given two concatenated utility profiles, substituting one of these with a higher utility profile increases the global utility of the concatenated profile.

Eudaimonic utility may be measured by both moment-by-moment and remembered tools (Diener and Biswas-Diener 2005), so that it can exhibit the same mathematical properties as moment-by-moment hedonic utility. In order that AEU be consistently measured in all its dimensions, I suggest here that EUD be measured as a moment-by-moment quantity, although the value of remembered measures for policy making is not lost on this author. Diener and Biswas-Diener (2005) suggest triangulation of different tools to reach an understanding of where and how discrepancies arise.

The additional challenge that a moment-by-moment measure of EUD poses is connected to its multidimensionality. EUD's three dimensions imply that there will always be two events x and y that may be such that they are valued equally along one dimension, while x may be preferred to y on one of the remaining two dimensions, and y to x along the other. In this situation, I cannot establish a complete ordering of events because the ranking of x and y based on the multidimensional utility function remains undetermined (Sen 1980-1981). Therefore, even if each EUD dimension satisfies Kahneman's axioms, these only guarantee dominance within each dimension, and the incompleteness of rankings remains a real possibility insofar as the function is multidimensional. Arguably, this is a form of open incompleteness (Sen 1980-1981): the dimensions of AEU measure different psychological components, but they are also different facets of one concept of wellbeing. It is therefore justifiable, where necessary, to derive weights for a linear combination of EUD and, more generally AEU, dimensions on psychological or moral grounds. However, despite the fact that partial orderings cannot establish a preferred choice in the aggregate, this work develops a plural utility function that may provide precise information on how different aspects of psychological wellbeing are affected by policy making.

³⁷ Kahneman et al. use the concept of concatenation in the following sense: it joins profiles in time, such that if the duration of utility profile f is x and the duration of utility profile g is y , then their concatenated duration is $x+y$, and the resultant concatenated profile coincides with f over the time period x , and with g over the time period y (Kahneman et al., 1997).

³⁸ A utility profile is defined as the integral of instantaneous levels of experienced utility for an episode that extends in time (Kahneman et al., 1997).

The goal of this thesis is to highlight dimensions of WB that differ from happiness and respond in a more informative manner to changes in functionings (i.e. achieved capabilities, or objective empowerment goals), and socio-economic policies more generally. In this sense, these dimensions of WB cannot be reduced to happiness, because they carry information that is different from the information in a hedonic measure, and are captured by a variety of measures such as, for example, indicators of mastery – or competence – and communal efficacy – or ability to achieve goals with others (Diener and Biswas-Diener 2005). The next section will identify the dimensions I include in subjective empowerment (SE) based on both existing socio-psychological concepts and empirical evidence.

Finally, this structure of the utility function is consistent with the philosophical formulation of happiness found in Aristotle, who identifies the two fundamental components of happiness as *hidone* (or pleasure) and *eudaimon* (or self-fulfilment) (Ross 1925; Sen 1985); and coheres with much of the research in social psychology (Ryff 1989; Ryff and Singer 1998; Waterman 2008) that interprets wellbeing either as subjective (SWB) and more related to emotions, or as psychological (PWB) and more related to a sense of self-realisation (Waterman 2008), though these two measures have been shown to overlap (Diener and Biswas-Diener 2005, p. 133; Keyes *et al.* 2002).

This chapter therefore investigates an interpretation of experienced utility that reflects this dichotomy, borrowing insights from both the philosophical and socio-psychological debates to substantiate a plural utility function that seeks to adequately capture the most proximate psychological implications of human flourishing and development, distinguishing between the *hedonic* (mood) and *eudaimonic* (self-realisation) component of wellbeing (Graetz 1991). Further, due to the empirical focus of this thesis on empowerment interventions, and in order to complement existing contributions on *hedonic* utility (Kahneman *et al.* 2004), the remainder of this chapter focuses on *eudaimonia*.

Having established the distinction between eudaimonic and hedonic utility, and clarified that they are both subsumed under AEU, this chapter now turns to the distinction between experienced versus decision utility in economics, and explains why this thesis focuses on the former. This situates AEU in relation to other forms of utility, so as to clarify its contribution to the measurement and conceptualisation of wellbeing.

Decision utility is the utility of wanting (Kahneman *et al.* 2004), or the utility of motivation (Akerlof and Kranton 2010, p. 23) thought to inform individuals' choices (Sen

1980-1981). In their shift away from Bentham's *calculus felicificus*, and toward Pareto's decision utility, economists reason that rational individuals³⁹ operate choices that maximise their utility, thereby revealing their preference for one course of action over another. In other words, individuals implicitly reveal the value they attribute to alternative options.

Rational preferences satisfy the weak axiom of revealed preferences, so that a clear relationship exists between individuals' preferences and their choices, i.e. it is true that 'if I value x , I choose x ' (Mas-Colell *et al.* 1995, p. 12). However, the converse – that 'if I choose x , I value x ' is less tenable: choice implicitly carries information on constraints and drivers of actions that cannot be disentangled from true preferences, if one looks at choice alone (Sen 1985). Choices may be dictated by these and made even when preferences are not rational, and specifically when they are incomplete (Sen 1980-1981): the focus on choices circumvents difficulties inherent to preferences, but does not solve them, and one should be cautious in assuming rationality lies behind choices (Mas-Colell *et al.* 1995, pp. 13-14). The assumption of rationality is challenged by contributions in behavioural economics that highlight a number of cognitive glitches, such as inter-temporal inconsistencies (O'Donoghue and Rabin 2000) connected to individuals' inability to predict how they will feel in the future (Gilbert 2006) as well as subjective perceptions of the self that do not fit with the definition of a rational individual (O'Donoghue and Rabin 2000). The identification of three psychological dimensions underlying eudaimonic utility, while bringing problems such as incompleteness of preferences and inconsistencies under the spotlight, may provide a useful framework in understanding individuals' motivations when observed alongside objective outcomes.

A similar criticism may be levelled at the utility-as-desire paradigm (Griffin 1988), that commits the same logical fallacy that equates the two statements 'I value, hence I desire'; and 'I desire, hence I value', and argues that we can derive values, i.e. preferences, from desires (Sen 1980-1981). In fact, Aristotle already pointed out how desire and happiness were but two sides of the same coin (Ryan and Deci 2001), so that the intrinsic difference between happiness and desire as the definition of utility remains unclear, but for the fact that one focuses on the goal (happiness) and the other on the motive (desire). Furthermore, Griffin's (1988) concept of utility-as-desire seem to condemn humankind to living in a permanent dreamlike state, where all that matters is the potential for realisations, but not

³⁹ That is, individuals whose preferences are complete, i.e. such that for any pair of goods, the individual can establish a well-defined preference relation between them, and transitive, i.e. such that if the individual is faced with "pairwise choices" these do not cycle (Mas-Colell *et al.* 1995, p. 7)

the realisations themselves. For, if all that matters is desire fulfilment, the man who is fed images of his ideal life in a dark chamber seems perfectly well placed to attain the fulfilment of all his desires for a valuable life. If all that matters is the fulfilment of desires, and the mental states attached to these fulfilments, what is the incentive for the man to leave the dark chamber? In Sen's words (1980-1981), Griffin seems to not attach sufficient relevance to the degree to which the desire account is connected to a state of mind, rather than of the world.

One criticism of utilitarian accounts by choice-oriented scholars concerns the phenomenon of adaptation: individuals adapt to their socio-economic circumstances and fine-tune their level of WB relatively independently of these (Clark 2009; Cummins 2000), as suggested by higher levels of SWB among more deprived individuals compared to less deprived ones (Sen 1980-1981). Adaptation is particularly strong for income (Easterlin 1995; Layard 2005a, b), at least when this is increasing, but not when decreasing (Burchardt 2005), nor to poverty itself (Clark *et al.* 2014). It is also strong for states that are not necessarily always salient – as shown by paraplegics, who report similar levels of happiness as perfectly healthy individuals (Gilbert 2006; Oswald 2008).

However, choices are equally as likely to reflect adaptation (and self-limiting aspirations) as self-reported measures of wellbeing (Qizilbash 1997; Sen 1985), and self-reported objective measures of functionings do not escape this same trap (Clark 2009; Qizilbash 1997). Considering adaptation to social factors that shape people's aspirations other than income (Clark 2009), one could consider the example of a woman who chooses to wear a burqa in a country where this is not legally mandated. If she does so because her aspirations have been moulded to make her think that displaying her face publicly is not an available option, then choice, self-reported capabilities and wellbeing will all give the same answer, i.e. that her utility is in fact maximised by wearing the burqa. If her preferences are misaligned with a choice that she is forced to make, then both self-reported wellbeing and capabilities will be more accurate indicators of her wellbeing than her choice. Choice and capabilities may therefore be just as inadequate a measure of wellbeing as happiness is – and choice may at times be more misleading.

Moreover, empirical evidence suggests that adaptation does not apply equally across domains: while it may be strong for income (Diener *et al.* 1999; Easterlin 1995) this is not necessarily the case for other domains, such as having a family (Easterlin 2004), and access to health services, for example (Clark 2009). Insofar as it is a self-reported measure, eudaimonic utility is likely to suffer from adaptation, too. The fact that it

includes specific dimensions of wellbeing such as autonomy, and relational and competence dimensions, as illustrated in the following section, may mitigate adaptation to income, but equally might increase adaptation to other socio-economic dimensions such as education, for example. However, measuring well-defined aspects of wellbeing may help us understand the dynamics of adaptation that are still unclear (Clark 2009).

Relatedly, decisions that clash with our self-image make us unhappy (Akerlof and Kranton 2010), negatively impacting our experienced utility. Understanding how our perception of self – or self-construal – influences our tastes and constructs (Bourdieu 1984; Durkheim 2001; Markus and Kitayama 1991), of which wellbeing is but one, may yield insights into how choices are made (Markus and Kitayama 1991) (Kitayama *et al.* 2004; Ryff and Singer 1998; Waterman 2008). In this respect, another limitation of utilitarian paradigms is the concept of an *individuated* economic agent, despite many of the choices it operates being guided by other-regarding motivations, such as sympathy and commitment (Sen 1977), and the fact that contemporary economic thought increasingly concerns itself with complex choices over education, marriage partners (Akerlof and Kranton 2010), the roles of networks in finding employment, and altruistic decisions, as well as intra-household decisions of resources allocation (Anderson and Eswaran 2009), where relational considerations are very important. This and consistent findings that social relations matter to wellbeing (Camfield *et al.* 2006; Helliwell and Putnam 2005; Putnam 2000) have led to Luigino Bruni's call for relational forms of utility (Bruni 2010).

Eudaimonic utility explicitly accounts for the relational component by both including a dimension that directly measures relations with others, and by allowing for both individuated and relational forms of all its dimensions, as the following section illustrates. Better understanding the motivations of relational agents – who perceive themselves as part of a specific web of dyadic relations – may not only capture the wellbeing impact of relational forms of agency (Diener and Biswas-Diener 2005; Ibrahim and Alkire 2007; Kabeer 1999b; Rowlands 1997) but also explain contradictory findings regarding, for example, the dynamics underlying aspirations that seem to work differently in different contexts, with some individuals adjusting their aspirations, and consequently their WB, to their surroundings, and others to reference groups left (often many miles) behind (Fafchamps and Shilpi 2008).

This section has introduced the concept of eudaimonic utility as one of the two facets of augmented experienced utility, together with hedonic utility (Kahneman *et al.* 1997),

drawing on philosophical (Ross 1925) and socio-psychological (Ryan and Deci 2001; Ryff 1989; Waterman 2008) investigations of the ‘good life’. It has discussed how the plural and subjective nature of EUD may limit its mathematical tractability, specifically in its inability to establish complete orderings of choices, and how this limitation is compensated by the richness of information EUD provides. It has further discussed how one of the key critiques to utilitarian approaches, adaptation, also plagues choice-based mechanisms and suggested how EUD may contribute to understanding this little-comprehended phenomenon. Finally, it has introduced how EUD would operationalise the shift from an individuated to a relational utility function as recently advocated in economics (Bruni 2010). The latter two aspects will be further investigated in what follows.

The following section identifies the socio-psychological dimensions of eudaimonic utility. The discussion is informed by insights from socio-psychological and psychological theory, drawn in light of findings from the focus group discussions I held with women from the social *milieu* this work is concerned with.

The Psychological Roots of Eudaimonic Utility: Subjective Empowerment and Wellbeing

So far, I have conceptually situated the abstract concept of eudaimonic utility in relation to other interpretations of utility. This section contains an analysis of the socio-psychological dimensions underlying eudaimonic utility contained in theoretical concepts of subjective and psychological wellbeing (SWB and PWB, respectively) in light of empirical evidence from focus group discussions (FGDs) with intervention recipients and other individuals in their *milieu*, to derive suggestions for a universal measure of EUD.

Subjective Empowerment and the Perception of Self

This section discusses how changing perceptions of self inform the construct of SWB and related concept of SE, and highlights the implications of this discussion for the definition of a synthetic concept of SE that may be universally applied as a measure of eudaimonic utility.

SE is the aspect of SWB concerned with individuals’ perception of their own empowerment (Diener and Biswas-Diener 2005). SWB is not determined in a vacuum, and the highly individual and intra-subjective experience of SWB is embedded within an inter-subjective experience (Markus and Kitayama 1991). This also applies to the perception of one’s SE. Insofar as individuals are ‘social beings’, the social context shapes the individual’s beliefs and behaviour and contributes to the continuous elaboration of an

individual's social identity (Liu and László 2007) which, in turn, contributes to shaping collective beliefs (Bourdieu and Waquant, 1993). Social representations change across social *milieux* (Bourdieu 1984; Lahlou 2008) and cultures, and the perception of self is one such social representation (Brewer and Chen 2007; Markus and Kitayama 1991).

The perception of one's own wellbeing and empowerment is intertwined with the perception of self: the self is both the subject of the formulation – i.e. the entity that formulates the assessment – as well as its object – i.e. the entity whose wellbeing is assessed. From this it follows that understanding an individual's perception of her own wellbeing and empowerment requires (or necessarily leads to) an understanding of her self-construal. In particular, this becomes apparent when studying how the perceptions of SWB and SE change across cultures (Markus and Kitayama 1991) or more generally across *social milieux*, where changes in the perception of self are more easily observed.

Kitayama and Markus (2000), and Markus *et al.* (2006) investigate how SWB differs between the US and the Far East, among populations with a predominantly individualistic or collectivist self-construal. This chapter contributes an emic exploration of sub-Saharan African women's SWB, suggesting that a SWB construct rooted in relational self-perception may be added to the individuated and collectivist forms reported by Kitayama and Markus (2000) and Markus *et al.* (Markus *et al.* 2006), and thus complete the spectrum of forms of SWB corresponding to the distinct forms of self-construal theorised in the socio-psychological literature and briefly discussed below.

Self-construal – i.e. the perception each individual has of her own self – is partly introspective (intra-individual level) and partly relates to other individuals (inter-individual level). A relatively large body of literature in social psychology discussed in Brewer and Gardner (1996) describes and elicits, via experiments and observation, the different forms of self construal, ranging from an individuated concept of self – i.e. the person's perception of uniqueness of her own self as opposed to others – through to the various forms of an interrelated concept of self – where the self is a function of relations with others (Brewer and Gardner 1996).

Brewer and Chen (2007) distinguish between three types of self-construal, introducing a finer distinction than the individualist-collectivist dichotomy of mainstream social psychology (Markus and Kitayama 1991; Triandis 1995). The dichotomic view equates interrelated with collectivist; Brewer and Chen introduce a finer classification of interrelated types, distinguishing between 'relational', and 'collective' (Brewer and Chen 2007), and introducing a trichotomic classification to distinguish between 'individualist',

‘relational’, and ‘collectivist’ self-perceptions. The relational self is defined by a number of dyadic relationships with specific individuals that are particularly close; these dyadic relationships in turn connect the self to the wider group of interpersonal connections. The collective self instead relies on “shared symbols and cognitive representations of the group” that do not depend on personal interactions with other members (Etzioni, 1968 in Brewer and Chen 2007), and is thus defined by a single relationship between the individual and the group entity the individual perceives him or herself to be part of.

These different levels of self subsume different interpretations of the world (Brewer and Gardner 1996). The relational self is defined in terms of “connections and role relationships with significant others” (Brewer and Chen 2007). An individual’s interpretation of the world is therefore informed by the place she occupies in these ties relative to others. The collective self instead appeals, in defining itself, to the idea of a group as the distillation of the characteristics shared by all the members of the group (Brewer and Chen 2007). The individual’s interpretation of the world is defined by salient group values and characteristics, and how she relates to these. So for example, while the local group of volunteers one belongs to appeals to one’s relational self, the group of all Oxford alumni appeals to the collective self of the (ex)-students of Oxford.

If distinct self-concepts imply distinct worldviews (Bourdieu 1984; Durkheim 2001), including on SWB, the introduction of relational as distinct from collectivist self-concepts has implications for the constructs of SE and WB.

While it is debated whether specific populations exclusively possess one unique view of the self, it is generally agreed that as the relative salience of different levels of self changes, so does the individual’s worldview (Brewer and Gardner 1996). This is consistent with the fact that different sets of norms and beliefs about one’s identity explain individuals’ tastes (Bourdieu 1984; Durkheim 2001), social constructs (Bourdieu 1984; Markus and Kitayama 1991) and even related choices (Akerlof and Kranton 2010), and also applies to the perception of SWB (Markus and Kitayama 1991).

However, the current literature on SWB conceives it as a dichotomic construct, either individuated or collective (Markus and Kitayama 1991; Markus *et al.* 2006). To my knowledge, it does not contemplate SWB and SE as relational constructs. The trichotomic concept of self I consider here, instead, introduces the possibility of relational concepts of SWB and SE. Such relational concepts would better describe the perceptions of wellbeing and empowerment in the socio-economic *milieu* of poor South African women and, possibly, among similar populations. To support this argument, I discuss the

available anthropological and sociological evidence, as well as qualitative data from the focus groups I ran with women from this socio-economic *milieu*.

Anthropological evidence suggests that personal connections are particularly salient for rural South African women, and this is consistent with a relational self-construct (Mönnig 1967). In its recent political history, the struggle that the black South Africans fought against the discriminatory system of apartheid encouraged the formation of networks of resistance. In *The Women of Phokeng*, Belinda Bozzoli (1990) explicitly observes that the connection the women had to a resistance movement that was national in nature, was predominantly through local – inspiring – leaders, with no mention of the wider national picture.

Moreover, while Ryff's attribution of a collectivist stance to African cultures *tout court* (Ryff and Singer 1998) seems unsubstantiated, recent investigations suggest that some other sub-Saharan populations – namely the Ghanaian – exhibit a perception of the self characterised by “relational individualism” (Adams and Dzokoto 2003). According to Adams and Dzokoto (2003), Ghanaian individuals decide who to accept in their closer circle on the basis of the relational connections with any potential new connection. It would therefore seem that the sub-Saharan African women I study and the Ghanaian population exhibit a similarly relational form of self-construal. In turn, this is likely to determine a perception of SWB and SE that differs from that of individuals in Far Eastern cultures, which instead rests on a collective view of the self where the individual is merged with a homogenous group (Markus and Kitayama 1991; Markus *et al.* 2006).

Below, I support the discussion of this hypothesis with material from the analysis of the qualitative evidence from the focus groups. In this sense, I provide an emic – i.e. from the perspective of the local culture – critique of an etic – i.e. from an outsider's perspective – approach, and use qualitative data from in-depth discussions to highlight the limitations of current theoretical concepts and suggest relevant developments (Adams and Dzokoto 2003). These findings could contribute to increasing the cultural validity of extant measures of SWB in relational *milieux*. Here, they serve the purpose of developing a concept of SE to substantiate EUD that encompasses relational self-construal.

The socio-psychological evidence on the existence of relational forms of self-construal (Brewer and Chen 2007), and the extant evidence of a relational self-construal among both South African and Ghanaian peoples suggest that investigating whether the women this thesis studies possess a relational view of SWB, and how exactly this is structured, fills a relevant gap in the knowledge of SWB constructs across cultures. Moreover,

positing a concept of perceived empowerment rooted in a perception of the self that allows for a relational perspective implies the measure may be meaningfully applied not only in contexts where the self is individuated, but also in those where a relational self predominates.

So far, this chapter has argued for (i) a concept of utility substantiated by a multidimensional notion of SWB; (ii) a concept of SWB that is formed of the two complementary aspects of *hedonia* and *eudaimonia* as the informational content of experienced utility; (iii) greater focus on *eudaimonia* for the purposes of (a) steering policy making, and (b) measuring the impact of changes in agency on individuals' perception of their flourishing, and; (iv) an expansion of the theoretical concept of SWB to allow for the inclusion of a relational perception of self in addition to the current individualist and collectivist formulations (Markus *et al.* 2006), and that this be reflected in utility measures. In the following sections, this chapter supports this last proposition with empirical evidence of a relational concept of self among a sub-Saharan African population, and evidence of how this worldview modifies the perception of SWB.

The next two sections discuss (i) the theoretical concept of SE that this chapter uses to substantiate eudaimonic utility and (ii) empirical evidence that supports the hypotheses that (a) SE is a subset of SWB and connects it to psychological wellbeing (PWB), more commonly associated with the idea of fulfilment and self-realisation; and (b) that South African women's SWB construct, in reflecting their relational identity, differs from the constructs found by Markus *et al.* (2006) among American and Japanese populations.

Subjective Empowerment: a subset of Subjective and Psychological Wellbeing

This section defines SE. It builds on pre-existing concepts of subjective agency based exclusively on autonomy (Ibrahim and Alkire 2007; Sen 1985), by including relevant dimensions from multidimensional socio-psychological constructs of wellbeing that are (i) concerned with the individual's sense of self-realisation; and (ii) outward-oriented, i.e. not evaluative of the self, but rather of the individual's ability to interact and act in a social context.⁴⁰ It also investigates whether SE appropriately captures the aspects of utility associated with agency, eliminating other confounding mental health states, such as

⁴⁰ Consider, for example, self-acceptance and autonomy, two dimensions of multidimensional measures of wellbeing. Self-acceptance does not qualify as a dimension of SE because it captures an individual's view of herself, and is not directly concerned with the repercussions this view has on the individual's interactions with the external world. Autonomy, conversely, is a dimension of SE because it captures the individual's ability to make her own choices and, more generally, act in a self-regulated manner. It therefore captures one aspect of the individual's ability to interact with the external world, which makes it a constituent of SE.

mood. This distinction between mood and self-realisation is also important from a mathematical point of view, in that greater measurement precision lends more credibility to the assumption that the dimensions of the utility function are separable.

The only psychological concept so far associated with agency in the economics and development literature is autonomy (Alkire 2005; Ryan and Deci 2001; Sen 1985). This points to an inherent contradiction in the non-utilitarian view of capabilities, so long as autonomy is a component of wellbeing; second, it also points to a limited interpretation of agency, insofar as autonomy is exclusively conceptualised as the assertion of an individual's *independence* from laws generated by others, while the two are distinct concepts and relational forms of autonomy are acknowledged in the psychology literature (Ryan and Deci 2001).

Firstly, Sen himself, in a statement that may be considered contradictory to his non-utilitarian stance, asserts that autonomy is the concept that best describes agency (Sen 1985). If, as this thesis argues, autonomy is but one of the dimensions of eudaimonic wellbeing (Ryff 1989; Waterman 2008) and of eudaimonic utility in turn, then Sen's observation that autonomy is an appropriate measure to capture agency is an implicit admission that some measure of impact on one's subjective state is necessary if some form of welfare meaning is to be attributed to functionings, and therefore contradicts his statement that utility does not capture wellbeing⁴¹ (Sen 1985).

Secondly, the statement that autonomy means acting according to one's inner laws, independently of what others hold, suggests an exclusively individuated view of the self (Ryan and Deci 2001). While the individuated assertion may be valuable in one's empowerment process, it is not the only avenue to emancipation. Relational autonomy captures processes of interrelated emancipation for individuals who obey rules jointly agreed with their peers, as evidence from the focus groups below suggests. Explicitly measuring relational forms of autonomy would benefit our understanding of empowerment processes in *milieux* with a relational view of the self (Bozzoli 1990; Ryan

⁴¹ In fact, his statement would not contradict his thesis that wellbeing only partially captures individuals' functionings, if he considered autonomy as a measure of wellbeing. In that case, his argument would be in line with the one put forward in this paper, i.e. that autonomy is one dimension of eudaimonia, *but that other dimensions of eudaimonia are necessary* to fully describe the impact of agency, and capture the mental states relevant to assessing the welfare impact of functionings. However, Sen does not explicitly acknowledge autonomy as a component of wellbeing, and instead restricts substantive wellbeing to happiness as hedonia, choice or desire (Sen 1980-1981). Therefore, his argument cannot be interpreted to mean that autonomy is only a partial wellbeing interpretation of functionings, as this paper instead argues.

and Deci 2001) and enhance our ability to foster such processes via policy interventions (Hatcher *et al.* 2011).

The concept of subjective empowerment incorporates the relational view of the self (and, ultimately the collective) into utility both formally and substantially. Formally, it introduces a concept of self-identity that varies from the individuated to the collective, focusing on the relational in particular. This transforms the very concept of agency to include more interconnected forms, for example interpreting autonomy not just as an exercise in self-assertion (I decide alone), but also as a collaborative exercise (I decide together with). Substantively, it includes two more dimensions alongside autonomy that are defined explicitly in terms of the individual's interactions with others and the external environment, in an attempt to encompass a broader set of psychological domains that more fully captures individuals' success at fulfilling their potential. Further support in favour of SE as the wellbeing measure that better corresponds to agency is to be found in the fact that it also provides a psychological correspondent for the different forms of power associated with the concept of agency, as shown in later paragraphs. In this, it is more akin to Aristotle's idea of eudaimonia as human flourishing or self-actualisation than autonomy alone.

The concept of eudaimonia is rooted in the idea of actualisation of one's potential (Waterman 1990, 2008). Like eudaimonia for Aristotle, the attainment of SE or self-fulfilment is not necessarily accompanied by experiences of positive affect in the short run (Alkire 2005; Ryff and Keyes 1995; White and Dolan 2009). It is therefore not captured by mood indicators, but rather by concepts ranging from self-efficacy (Bandura 1977), autonomy and competence, through to communal efficacy. All these concepts share an underlying idea of self-realisation (Diener and Biswas-Diener 2005), and are distinct from a concept of happiness, which is not necessarily associated with domains that foster self-fulfilment (Ryan and Deci 2001; Waterman 1993; Waterman *et al.* 2008).

Specifically, self-efficacy is defined as a domain-specific measure, and Bandura holds that perceptions of self-efficacy in one domain do not necessarily translate to global perceptions of self-esteem (Bandura 1977). Its lack of generality renders it inadequate as a psychological measure of utility. Ryan and Deci's (2000) self-determination theory (SDT) comprises measures of autonomy, competence and relatedness. Its measure of autonomy seems relevant for individualist and collectivist cultures alike (Chirkov *et al.* 2003), and explicitly acknowledges whether the individual attaches value to the action considered (Alkire 2005), and is therefore preferred by scholars within the capabilities

paradigm (Alkire 2005; Ibrahim and Alkire 2007; Samman 2007; Sen 1979). The three basic psychological needs that SDT posits as *determinants* of wellbeing, rather than wellbeing dimensions per se – autonomy, competence and relatedness – map one-to-one onto the relevant dimensions of wellbeing that emerged from my investigations triangulating women’s reports and multidimensional indices of psychological wellbeing (Ryff 1989), providing support for the universal applicability of eudaimonic utility.

The perspective of this work, rather than starting from a concept of agency and capabilities per se, starts instead from a concept of wellbeing, and seeks a psychological framework that reflects the concept of eudaimonia in order to systematise and interpret the empirical findings on women’s construct of wellbeing. The goal is to extrapolate the theoretical implications of women’s perceptions, and provide suggestions on how to further develop a concept of wellbeing originally designed to capture eudaimonia that may also be useful in substantiating a concept of utility. In this sense Ryff’s (1989) concept of PWB provides a rich theoretical framework by defining a global, rather than domain-specific, measure of wellbeing, and by explicitly acknowledging the concept of eudaimonia as its inspiration. It also contains a concept of autonomy – albeit individuated (Alkire 2005) – as well as, in its full form, an idea of self-realisation.

In her seminal contribution, Ryff (1989) explicitly builds on Aristotle’s concept of eudaimonia to identify six socio-psychological dimensions to capture human flourishing, drawing on the work of psychodynamic and humanistic psychology. Three are introspective, capturing the individual’s reflection on her own self and are directed at her own development. These are: ‘self-acceptance’, or the extent of one’s positive attitude toward one’s character; ‘purpose in life’, or the ability to develop a meaningful picture of one’s own life and set goals for oneself; and ‘personal growth’, or the ability to use new experiences to increase self-awareness, and to adjust behaviour to increase one’s effectiveness in light of experience (Ryff 1989). In a process of self-realisation these dimensions capture the individual’s effort at directing her own development, and entail a self-reflexive attitude. Because their direct object of evaluation is the individual herself, they do not qualify as substantive aspects of utility. This chapter proposes socio-psychological foundations for a measure of utility that respond to (or explain) actions, choices and policy directly. Reflexive dimensions of PWB are therefore excluded: though integral to a comprehensive socio-psychological concept of PWB and the related philosophical concept of *eudaimonia* proper, they are not necessarily relevant as socio-

psychological substrates of *eudaimonic* utility in that they are inward oriented and aimed at capturing the individual's interaction with herself, rather than explaining direct action.

The other three categories of PWB are: positive relations with others, capturing individuals' ability to create and maintain emotionally satisfying interactions; autonomy, or the ability to act according to one's inner interpretation of situations; and EM, i.e. the ability to interact successfully with the surrounding world (Ryff 1989). These three dimensions may qualify as socio-psychological foundations of utility because they capture the direct wellbeing impact of individuals' interactions with others and the surrounding environment, and are therefore well positioned to capture the direct wellbeing consequences of exposure to policy interventions, and wellbeing (or preferences-related) incentives and consequences of choices. The rest of this section further discusses the grounds for the inclusion of the latter three dimensions of PWB in the foundations of a measure of eudaimonic utility.

Autonomy captures the individual's ability to act according to her inner laws – independently of social norms. This dimension is widely acknowledged as the psychological underpinning of the concept of agency, widely investigated in the development literature (Alkire 2005; Kabeer 1999b; Rowlands 1997) and especially in the literature on capabilities and human development related to Sen's work on this important concept (Alkire 2005). Mirroring Sen's argument that agency and wellbeing are distinct, the few authors that have discussed the psychological dimensions of agency have interpreted it only as corresponding to autonomy, which in turn is seen exclusively as an aspect of PWB, and conceptually separate from SWB (Alkire 2005).

This thesis adds to this interpretation, suggesting that the socio-psychological ramifications of agency do not just equate to autonomy. Rather, the appropriate socio-psychological concept is three-dimensional, with meaningful relations with others (MRwO) capturing the inter-personal dimension, environmental mastery (EM) the environmental (or context-related) dimension, and autonomy the intra-individual dimension of agency. The following paragraphs discuss this selection on conceptual grounds; the following section brings empirical evidence from the focus groups to further support this choice of dimensions.

Autonomy remains a dimension of SE, describing the individual's ability to act in a self-directed manner. The introduction of different forms of self-construal introduces an important change in the way self-direction is understood, however. In this framework 'autonomous' is not to be confused with 'independent'. Along with Ryan and Deci

(2001), this work makes the distinction between autonomy – i.e. self-sufficiency in the determination of inner laws – and independence – i.e. non-reliance on other individuals. In particular, a person with a relational self-construal may still act autonomously (Ryan and Deci 2001). In fact, if the perception of self is altered to include a given group, then the norms expressed by that group are the norms expressed by self, so long as the individual perceives herself to be defined by belonging to the group. In turn, this implies that one can speak of an individuated form of autonomy – prevailing when an individuated perception of self is salient; and a choral or relational form of autonomy – prevailing instead where a relational perception of self is salient (Ryan and Deci 2001).

The first dimension that is added to autonomy in the concept of SE is ‘MRwO’. This captures the individual’s ability to establish and maintain meaningful relationships with other individuals. This concept is based on Ryff’s dimension of PWB labelled ‘positive relations with others’ (Ryff 1989) that points to the relevance of *emotionally fulfilling* relationships. This work concurs with Ryff and Singer’s (1998) view that this is a dimension of wellbeing, rather than a factor that influences wellbeing, as in Ryan and Deci’s self-determination theory (2001). It however agrees with both Ryff and Singer and Ryan and Deci that, in Ryan and Deci’s words:

“well-being consists in [...] being fully functioning, rather than as simply attaining desires[; and on] the content of being eudaimonic— e.g. being autonomous, competent, and related”.

(Ryan and Deci 2001)

Ryff’s concept is here modified from ‘positive’ to ‘meaningful’ relations with others, in order to capture an attribute of relationships that has previously been shown to matter for individuals’ SWB (Helliwell and Putnam 2005). The adjective ‘meaningful’ indicates a relationship whose attributes play a role in supporting (or hindering, when not present) the individual in her process of self-actualisation.

For example, for the women I engaged with in rural South Africa, the peers they had meaningful relations with were friends with whom they explicitly shared the responsibility of repaying the loans, or neighbours that either co-operated with them, or made it difficult for them to reach a specific goal, (as will be discussed in the paragraphs below). The specific concept of MRwO as distinct from positive relations (Ryff 1989) isolates the eudaimonic aspect of relations with others, allowing a clearer separation between the hedonic and eudaimonic dimensions of experienced utility. To the extent that

indicators employed to measure it are sufficiently narrowly defined, they will allow researchers to analytically separate eudaimonia from hedonia.

Finally, MRwO will take different shapes depending on which form of self-construal prevails: an empowering relation may rest on affinities in an individuated context, and be formed or dissolved where these arise and cease, respectively; it would more likely be found in dyads dictated by local norms or networks in a relational context, and rather than dissolve, its terms would be (re)negotiated as differences arise, as the material from the FGDs below, and previous findings among Ghanaians (Adams and Dzokoto 2003), suggest.

The third dimension making up the concept of SE, together with autonomy and relations with others, is EM. This is the individual's perception of her own ability to control the outer environment and create conditions conducive to her own development and thriving.

In particular, as a high degree of independent autonomy and independence from others acquire salience, EM will manifest itself as an individualistic exercise, i.e. the individual will aim to independently develop an ability to render the environment conducive to her own individualised flourishing. In predominantly relational contexts instead, EM is more likely to manifest itself as an ability to shape the surrounding environment for the benefit of a group, and this shaping is likely to be attained through a group process that rests on dyads as, for example, women's participation in the struggle against apartheid described by Bozzoli (1990).

In essence, the inclusion of autonomy, relations with others and EM as constituents of SE implies an understanding of SE that rests on a perception of some degree of control over the external environment (EM), that is attained either through the ability to decide independently for oneself (independent autonomy), or as a result of a more pluralistic process (relational autonomy) when the reliance on a group that is constitutive of one's identity dominates over a perception of individual independence. The concept of SE – and eudaimonic utility with it – is therefore more effective at capturing changes in perceived empowerment than autonomy alone, not only by expanding the meaning of 'autonomous' to include laws that are generated by a group, but also by expanding on the dimensions along which empowerment happens, to include interactions with others and the external environment. This is consistent with Ryan and Deci's self-determination theory (SDT) that states alongside autonomy, the two other key psychological needs are relatedness and competence, two domains that exactly match the two additional dimensions of SE as defined here.

Finally, EM has been found to also be subsumed under indices of SWB (Keyes 2002), suggesting that SE, while rooted in objective aspects of empowerment, rather than a sense of happiness *per se*, also forms part of individuals' assessments of their SWB. In turn, this implies that SWB and PWB are not separate. This further supports the argument for a plural form of utility that distinguishes between different aspects of *hedonia* and *eudaimonia* in order not to allow lack of precision in measurement to conceal impact (Graetz 1991).

Toward Universal Definitions of Subjective Wellbeing and Empowerment: the Empirical Evidence

This section has so far discussed how the trans-cultural psychology literature on SWB only accounts for two of the ascertained forms of self-construal, namely the individuated and the collective, found in the North American and Far Eastern contexts (Markus and Kitayama 1991; Markus *et al.* 2006), respectively. It has also presented evidence from anthropological and socio-psychological literature that Pedi⁴² women and other sub-Saharan African populations (Adams 2005) are characterised by a relational form of self-construal. In light of this, it has then highlighted the relational dimensions of the aspects of wellbeing it selects to inform *eudaimonic* utility. It has selected autonomy, EM and MRwO as dimensions of its measure of subjective empowerment (SE), drawing from PWB and highlighting SE's overlap with SWB measures, as well as its applicability to both individuated and relational contexts.

It now turns to presenting the empirical evidence on Pedi women's perceptions of wellbeing and empowerment that originally motivated the formulation of a relational form of SE based on autonomy, EM and MRwO. This evidence is the result of the cluster analysis carried out on the transcripts from the FGDs with Pedi women. Every group type (intervention, control, new intervention and general community) and age group is represented. Each quote is from a different woman, representing the views of 30% of the sample. The views reported here were more generally shared by the groups during the discussions. They suggest that these women's perception of SWB differs from currently documented constructs of SWB among US and Far Eastern populations (Markus and Kitayama 1991), both in terms of the cognitive mechanisms that underlie the attainment of wellbeing, and in terms of the perception of self that shapes the construct. The data I collected suggest that Pedi women put in place the same cognitive process of offsetting troughs with peaks in an active pursuit of happiness that Kitayama and Markus find

⁴² The Pedi are a South African ethnic and linguistic group in the province of Limpopo, and are the dominant population in the area where the South African intervention I studied was located.

among North American populations (Kitayama and Markus 2000). However, because their perception of self is of a relational nature based in a series of dyadic relationships, their concept of SWB is sensitive to their role relationships (Suh *et al.* 1998) and their sense of agency has a strong relational component. Unlike Far Eastern individuals, however, whose final achievement is attributed to a monolithic group in a conjoint perception of agency (Markus *et al.* 2006), among Pedi women the final attainment is attributed to the individual woman in her role and interactions with members of a group, rather than to the group as a whole, as the evidence below suggests. Finally, the correlates of SWB do not differ significantly from those so far found in frequentist time-use studies (Kahneman and Krueger 2006; White and Dolan 2009) among other populations.

The next few paragraphs discuss the evidence that supports these findings. They discuss the results from the cluster analysis of the FGD transcripts, first investigating the general cognitive process subsuming affective states and then discussing evidence of a relational view of the self, and its implications for the women's perception of agency, i.e. their SE.

The Cognitive Mechanisms of Wellbeing: Troughs and Peaks, or Detachment from Everything?

Pedi women employ cognitive mechanisms that contrast troughs in wellbeing with peaks, in an attempt to attain a positive state of wellbeing. This is consistent with behaviours found in the West, and the USA in particular. It differs from cognitive operations found in the Far East, where the belief is that the road to happiness is paved with detachment from each event (Kitayama *et al.* 2000).

The first quote reports the mixed feelings the woman experiences as she looks after her child and when with her peers:

I woke my child up. My happiness was in between. I was complaining to myself, but yet I was happy. I then went to meet the women and I was happy. We worked and I was happy because I like my work. I was in between. Because I always thought about a patient we have at home.

(IMAGE intervention group, 07/07/2008, 48)

In both cases, the neutral state of happiness ("in between") is explained as a result of the contrast between a positive and a negative state of affect simultaneously present in the interviewee's mind.

The following fragment brings the mechanism of the two opposing states generating a neutral state of affect into even starker relief:

When I got home the time was 3.45 pm, and I was happy, but the happiness was in between because the groceries that I bought were going to last for a short time.

(IMAGE control group, 09/07/2008, approx. 35)

Further evidence of this is found in quotes referring to either romantic entanglements or experiences of loss. Such events generate intense emotions that may trigger compensation mechanisms to restore an equilibrium in one's sense of wellbeing:

So when I got home he passed away after a short while. After my father passed away I then met the father of my children and my happiness went up.

(IMAGE intervention group, 10/07/2008, approx. 38)

I was raised by my grandmother. Yes, my mother passed away when I was still young. I was in school already, I started dating and my happiness was very high, because I was in love.

(IMAGE control group, 09/07/2008, 37)

In both these cases, the women contrast the expressed (or unexpressed) feeling of sadness generally associated with loss, with an opposite feeling of happiness. Another possible explanation for this pattern is the effect of time on the respondent's sense of wellbeing. However, more than whether the events they report were accurate, what matters here is again the offsetting mechanism they invoke, whereby a negative event that women stumble upon in the chronological narration seems to then trigger the narration of a positive one, as if to compensate for the negative impact on their mood the narration of the previous 'negative' may have had.

These associations in the narrative further suggest that the women may attempt to attain a balanced state of wellbeing by offsetting troughs with peaks in a fashion, according to Kitayama and Markus (2000), similar to that found in the USA, but different from that found in the Far East where, on the contrary, individuals seem to smooth peaks and troughs in every emotion, i.e. to achieve a neutral feeling, or maintain detachment, in relation to each event. This would suggest a greater comparability of wellbeing reports between North America and South Africa.

The Relational Self: Implications for Subjective Wellbeing and Empowerment

The evidence from the FGDs reveals a relational view of the self among Pedi women. A number of passages the analysis reveals as highly statistically significant to the construct of wellbeing capture the women's relations with others, suggesting a predominantly relational worldview. They suggest that women's relations with others are embedded in their perception of WB and SE, supporting previous findings that networks matter for

SWB (Helliwell and Putnam 2005; Kitayama and Markus 2000; Momtaz *et al.* 2009; Putnam 2000) and in addition suggesting mechanisms that explain this phenomenon. The next few paragraphs present the evidence and discuss how it supports the hypothesis of a relational self, and the implications for how we think of SWB and SE.

The narrators depict themselves as embedded in webs of relations in both formal and informal groups. These define the space where women find reciprocal support and re-define rules of conduct:

When we are at the stokvel⁴³ it is just the same as when we are at SEF, we give each other advice concerning domestic issues as to how we should conduct ourselves as women.

(New centre group, August 2006, 25 years old)

This fragment suggests groups are instrumental in fostering a sense of EM (“advice concerning domestic issues”) and MRwO (“conduct ourselves as women”) (Abbott *et al.* 2010). As further discussed below, through this process of mutual support, the group also becomes a place of reciprocal empowerment, where women share their challenges, and learn from each other how to manage difficult situations:

When you feel stressed, you go and meet with other women; you sit down with them and then explain your problem to them. Just like at SEF⁴⁴ where we are able to help each other regarding domestic violence. They can advice [sic] you on how to live peacefully with your husband.

(New Centre group, 15/08/2006, 23)

Problems are tackled as a group, rather than by the individual on her own, through a process of mutual support. This fragment provides an example of how the group contributes to the women’s development of a sense of EM (Abbott *et al.* 2010; Ryff and Singer 1998) by providing suggestions on how to manage relations in the household.

A person with a relational self-construal cannot easily eliminate undesired connections from her web of relationships, unlike one with an individuated view of the self (Adams 2005; Adams and Dzokoto 2003). Therefore, conflict resolution or prevention is central to the women’s representation of their lives. A number of statistically significant fragments mention either negotiation strategies or direct dialogue as a means to keep or restore good relations:

⁴³ Stokvels are informal savings groups very popular in South Africa that work similarly to rotating savings associations. Women often form *stokvels* with work colleagues, as well as with neighbours.

⁴⁴ SEF is the local provider of microfinance services that collaborated in the South African intervention this thesis investigates.

Talking to each other is good because it makes you live peacefully with other people. You do not shout at each other, you sit down and discuss things with each other.

(IMAGE treatment group, 08/07/2008, 55 years old)

This fragment suggests that the women associate MRwO (Abbott *et al.* 2010; Ryff and Singer 1998) to a sense of wellbeing. The time spent engaging in dialogue to maintain good relations is time especially well spent, if the ‘other people’ are fundamental to one’s perception of self. If the woman’s worldview is relational, certain other people cannot be ignored. It is therefore worth her while to keep relationships peaceful.

In addition, formal networks provide structured negotiation processes to restore peace where this has been lost, as well as rules of conduct that define roles and potentially contribute to minimising conflict:

The church law is that you have to approach one of the elders and tell him that so and so did me wrong. So they would reconcile us and then we would forgive each other. The main thing is forgiveness. That is what they also give us other than the society. They give us rules. We go to get rules when we go to church.

(IMAGE treatment group, August 2008, 56)

Coherently with a hypothesis of relational self-construal, the unit of reference in these fragments is the dyad (Adams and Dzokoto 2003; Brewer and Chen 2007; Triandis *et al.* 1988), as suggested by the use of the expression ‘each other’ to refer to interactions within the group, rather than a generic collective noun, as well as by the example of the reconciliation process that specifically evokes a contrast between two people.

Further, these fragments highlight the existence of a variety of formal networks that contribute to the mitigation of conflicts, and more generally regulate women’s lives. *Stokvels*, microfinance organisations, and church meetings provide structure to women’s lives: they provide rules, hierarchies and values that define individuals’ roles and desirable conduct with the potential to both empower and hinder, further supporting the hypothesis of a relational self.

In these fragments, women depict these as inclusive institutions, and as institutions that can, and do, enable women’s empowerment, as also shown elsewhere (James 1999, pp. 44-45; Lee 2009, pp. 146, 185; Mosse 1999). Measuring the contribution to women’s empowerment of the interactions these networks define and mediate allows us to draw the line between the instances when these networks are empowering and when they are not. In contrast to exclusively measuring individuated autonomy, measuring MRwO and

relational autonomy captures the additional positive contribution to empowerment that derives from group interactions, in addition to individuated self-assertion.

Moreover, the same rules and values – together with membership of formal groups – much as they define a clear in-group, also identify a clear out-group, potentially competing for resources and power. This in turn may generate tensions, as the fragment above suggests and as is observed in other settings (Stadler 2003; Beall 1997; Harris and De Renzio 1997; Putzel 1997), with the potential to further exclude some groups from access to resources. A clear understanding of group dynamics both pre and post policy interventions is therefore essential to appropriate policy targeting (Brockington 2005) if empowering disenfranchised sections of society is the set goal (Hatcher *et al.* 2011) and more generally for a clearer understanding of policy impact.

In parts of the narration similar to this fragment, the in-group emerges as a uniform entity, contrasted with an equally uniform out-group. However, groups and their constituent dyads are also identified as the *locus* of conflict, further supporting the hypothesis of a relational self-construal, where rivals emerge from the in-group as the individual cannot eliminate these individuals from her own network (Adams 2005).

Of particular salience is the implication of the relational view for interpersonal comparisons. Contrary to what is stated in the happiness literature, interpersonal comparisons matter a great deal to poor people's perceived wellbeing, as recent research from Nepal has shown (Fafchamps and Shilpi 2008), and the following passages suggest.

Competing for access to very scarce resources with individuals that are inextricably part of their networks and their definition of self, the women continuously establish and reassess interpersonal comparisons. As a 31 year old woman from the community group observes:

So you want to have food, money and everything and that is going to be a problem. People can become jealous because you have everything. Some of them do not have a husband and they can take your husband, because you have a husband and she does not have a husband. Also, if you are successful in life, your neighbour can become jealous. If you are living comfortably that causes jealousy amongst other people. Or sometimes if you have children and your neighbour does not, she would dislike your children.

(General Community group, 31/05/2006, 31 years old)

Anthropology has investigated this phenomenon through the concept of jealousy:⁴⁵ jealousy is triggered by interpersonal comparisons of access to monetary and relational resources with members of the women's reference group – i.e. the group of individuals they compare themselves to in terms of socio-economic outcomes (Layard 2005b). The fragment explicitly mentions the neighbours, who typically constitute the group of peers with whom the women also constitute the more formal *stokvel* and micro-finance groups.

Among the Pedi, feelings of jealousy triggered by interpersonal comparisons frequently revolve around access to both material and relational resources (Delius, 2001)⁴⁶. Jealousy is in fact more generally associated with paucity of alternatives or opportunities (Geisler 1995), and has been found to be potentially instrumental in the local manipulation of policies among other sub-Saharan populations, if not accounted for by the policy maker (Brockington 2005). Among the Pedi, it plays such a prominent role in interpersonal relations that it is traditionally associated with acts of witchcraft. Spells, typically ascribed to poorer and older members of the community envious of younger individuals' socio-economic attainments, are thought to bring physical or mental illness upon their victims (Stadler 2003). While it is possible that younger individuals' economic incentives to marginalise elderly and fragile individuals contribute to generating these beliefs, by casting the conflict in terms of jealousy triggered by differential access to resources, the narrative *de facto* shifts the focus on inter-personal (or better still, inter-group) comparisons in access to resources.

Both the evidence from my focus groups and these anthropological accounts suggest that interpersonal comparisons matter enormously in *milieux* characterised by particularly severe resource constraints. Moreover, the jealousy triggered by interpersonal comparisons negatively impacts individuals' wellbeing. According to another participant:

If the neighbours are jealous, we ignore them; however, it does matter to us that they are jealous. [...]⁴⁷

(General Community group, 31/05/2006)

This evidence contradicts the finding that interpersonal comparisons have a meaningful impact on individuals' wellbeing only past a given absolute income threshold, typically at \$20,000 for industrialised countries (Layard 2005b, 2006). Both the empirical data I

⁴⁵ Technically, the emotion explored in this literature should be named envy, as it describes a desire to possess others' possessions that one does not have. Jealousy is in fact the opposite feeling of not wanting to share one's possessions with others (I owe this clarification to Elena Della Rosa, of the Tavistock Clinic).

⁴⁶ Deborah James, Professor of Anthropology, London School of Economics, personal communication, March 2010.

⁴⁷ The final sentence of this fragment speaks to breach of trust and is therefore reported below.

present here, and the ethnographic studies (Adams and Dzokoto 2003; Brockington 2005; Geisler 1995; Stadler 2003) that have investigated jealousy in sub-Saharan Africa seem to suggest that interpersonal comparisons of access to resources do impact the SWB of individuals on the lower rungs of the income ladder, though cross-sectional investigations in economics find that these comparisons do not matter below the poverty line⁴⁸ (Gandhi-Kingdon and Knight 2003). The tendency to compare oneself to a reference group is connected to the scarcity of alternatives, may be related to aspects of MRwO such as fairness (Rabin 1993), and does not depend on market outcomes or interactions: in Nepal, households situated further from the market care more about comparisons than those situated closer (Fafchamps and Shilpi 2008). These results further suggest that efforts at poverty reduction should not discount local inequalities.

The other cause of distress that in women's minds is associated with a disruption of the positive role of networks is a breach of trust, another important attribute of MRwO (Abbott *et al.* 2010). Similarly to jealousy, and consistently with a relational view of the self, a breach of trust originates from the in-group (Adams and Dzokoto 2003), as illustrated by the two following fragments:

Sometimes you can have neighbours and you live peacefully with them, without any problems. Some friends may be good friends. You can confide in them and they would not go around telling people your secrets.

(IMAGE intervention group, 07/07/2008, approx. 48)

However:

A neighbour can also make us unhappy if she is deceitful, if she goes around talking about you.⁴⁹

(General community group, 31/05/2006, approx.. 31)

A breach of trust has a negative impact on an individual's wellbeing, as it directly impacts the aspect of MRwO to do with trust in one's relationships (Abbott *et al.* 2010; Ryff and Singer 2008). Repeated interactions, however, weed out the untrustworthy:

To put it clearly; everyone has neighbours; and amongst the four neighbours maybe these ones are not in [sic] good terms with you; but these ones are in [sic] good terms with you. But if I have a problem, there is only one amongst my four neighbours who I am going to tell about my problems.

(New centre group, 30/08/2006, 53)

⁴⁸ "Defined as Rand 251 (£170) per month in 1993 per household", *ibid*.

⁴⁹ Continued from fragment on disagreeableness of jealousy from a neighbour above (see footnote 46).

This is consistent with dynamics observed elsewhere, where repeated interactions over time encourage compliance and foster trust, possibly also through reputation (Feigenberg *et al.* 2010; Ostrom 2000) mechanisms. Among the women I spoke to, untrustworthy individuals are a cause of great distress as they may also represent a threat to the reputation of the person whose secrets they reveal:

Because when I am stressed I would tell you everything thinking that you are my friend. But then I get a lot of stress when she goes and tell[s] other people. I feel unhappy because you would be confiding in that person thinking that she is a friend and you can tell her your secrets but then she goes around telling everyone.

(IMAGE treatment group, 08/07/2008, 54 years old)

Consistent with anthropological notions that alliances with kin are very strong in Bantu societies, including the Pedi (Mönnig 1967), lack of trust among peers leads the women to resort to kin in order to guard private information:

But my family would be supportive. I think it is better to relate with the family, because they will not take your secrets and spread them outside. You would talk about it as a family and then it ends between you.

(IMAGE treatment group, August 2008, age unknown)

The implicit assumption that secret information should be shared either with peers or family further supports the hypothesis that the relational self is predominant among the Pedi women I interviewed, and that MRwO are an important aspect of this, as this fragment identifies a further source of wellbeing in “personal and mutual conversations” within the family (Abbott *et al.* 2010; Easterlin 2004).

Further evidence of a relational view of the self is found in the fragment below, where the individual’s status is determined by her seniority within the family, rather than her skills, as would happen in an individuated *milieu*. Women are generally assigned to the strenuous chore of fetching water for the household; however, the narrator below reports that as she ages, her grandchildren will do this for her:

We got blessed with a son and girls and the happiness grew. Even right now the happiness is high, he never left me. The happiness is continuously growing. So here we have grandchildren. They go and fetch water for me. And here I am older. And they go and get me water.

(IMAGE control group, 11/08/2006, age unknown)

Children are a blessing and an indication of status; grandchildren even more so. In contrast, in a society where the individuated self dominates, prestige is not necessarily a monotonic function of seniority, and it generally starts to decline, even within the family, once the individual’s productivity declines.

Further fragments suggest that in *milieux* where relational self-construal dominates, seniority begets status. However, particular prestige is attributed to senior individuals who are able to advise and support the young, both within and outside family circles. In the groups I observed, empowerment is realised through relational interdependence. In the quote below, Estelle is depicted as an invaluable source of support in the solution of deeply troubling dilemmas in the life of Marika, one of the younger group members, and more generally as a point of reference for the entire group.

Moreover, consistent with the view that in-group sharing of experience is empowering, importance is attached to visitors, connected to the group via dyadic relationships that carry and share knowledge with the group – which is seen as intrinsically empowering for the group in the face of future challenges, as revealed by the interactions between me and them.

The active choice of sharing knowledge within a web of dyadic relations triggers a process of mutual empowerment, rather than an individualistic exercise in assertiveness. This process enhances the women's sense of EM that has in itself a relational dimension, and accrues jointly with a sense of positive relations with others:

Helping a neighbour makes me happy because she will also get out of a difficult situation. like if she had problems, I get happy when I tell her to do this and that and she does it and then she comes back to me and say[s], my friend, I did what you told me and I find that life is better these days.

(IMAGE control group, 55 years old)

This evidence explains why it is important to conceive of a concept of agency that does not solely rest on individuated autonomy. While networks and webs of relations may at times penalise women, as noted by Sen himself (1979), they can also be a source of empowerment. It is therefore important to capture the impact of networks on a woman's agency and discriminate between, for example, the limiting impact of networks that cast her in a subordinate role, and the empowering impact of networks where she, together with others, is an agent of change.

This section has provided evidence to support the hypothesis of a relational self-construal among Pedi women, and discussed how this shapes their concept of WB and, consequently, of eudaimonic utility. It has shown that the women perceive themselves as enmeshed in a web of relationships where their role is well-defined, not only as a wife and a mother, but also as a member of a women's group. These perceptions speak to the eudaimonic dimension of MRwO. It has also shown that formal and informal networks can be the seat of shared processes of empowerment leading to shared control of the

surrounding environment – which feeds into the EM dimension of eudaimonia. It has also discussed how groups not only provide rules that strengthen a sense of inter-related autonomy and solutions to disputes that feed into a sense of EM, but may also generate exclusion both by implicitly defining an out-group, and as the locus of tensions that manifest through interpersonal comparisons (Fafchamps and Shilpi 2008) or breach of trust, thus leading to a negative impact on both SE and SWB.

To further investigate the relevance of eudaimonic utility to concepts of empowerment, the next section shifts the discussion from the abstract psychological domain to the relation between EUD and existing measures of policy impact. It discusses the concept of agency as power and the related concept of empowerment; and investigates correspondences between the aspects of agency as conceptualised in the development literature and the dimensions of SE that this work considers. In doing so, it provides further evidence and argument in support of SE and eudaimonic utility as plausible wellbeing and utility counterparts, respectively, for Sen's concept of agency.

Eudaimonic Utility and Agency

The next two sections situate eudaimonic utility with respect to Sen's philosophical concept of agency and the related concept of 'empowerment' that has repeatedly been used to operationalise agency for the purposes of policy implementation.

The first investigates whether eudaimonic utility, by shifting the focus from mood and hedonic utility to the utility of self-fulfilment, satisfies the conditions for a utility measure to correctly capture the mental states central to Sen's concept of agency. The second investigates whether the three psychological dimensions of eudaimonic utility correspond to the different concepts of power widely applied in both scholarly and policy work in gender and development (Kabeer 1999b; Rowlands 1997).

EUD and Sen's Concept of Agency

Insofar as utility is fully captured by measures of hedonic state, Sen's rejection of utility as a measure of agency is well founded: "there is more to agency than wellbeing" (Sen 1985). Sen's rejection of subjective wellbeing as a measure of welfare is rooted in the Benthamian idea of utility as pleasure and absence of pain, i.e. a framework that equates utility to a pure hedonic measure that, according to Kahneman et al., coincides with his idea of utility of enjoyment (Kahneman *et al.* 2004). In his Dewey Lectures, Sen (1980-1981) argues strongly for a clear distinction between wellbeing and agency. He stresses that wellbeing and agency are not unrelated, yet highlights that the informational content of "wellbeing as informational foundation" (WAIF) (p.185) is insufficient to cast light on

an individual's agency. In particular, he states that agency is connected to dimensions of autonomy – i.e. the individual's ability to make choices that derive from her inner moral values, rather than heteronomous values – that, Sen argues, go beyond an individual's wellbeing.

The concept of wellbeing this thesis introduces to substantiate eudaimonic utility changes this in two ways. In the plural utility this thesis introduces there is more to utility than *hedonic* wellbeing, and there is more to autonomy than individuated autonomous laws. Firstly, *eudaimonic* utility provides a measure of utility relevant to Sen's capabilities and functionings framework (Sen 1979) because it captures the direct psychological consequences that follow from functionings, beyond their *hedonic* impact. To this aim, *EUD* adds 'MRwO' (to directly capture the impact of, e.g., reciprocal support), and 'EM' (to capture the impact of outcomes such as the ability to generate community mobilisation) to the original concept of autonomy – which may be directly associated with, for example, functionings in the area of decision-making, rather than the benefits of co-operation.

Secondly, the introduction of a relational self-construct underlying the perception of utility further refines the psychological correspondents of agency to include forms of autonomy, MRwO and EM, that are not only individuated but also relational in nature. Thus, autonomy is not only dictated by inner laws the individual defines for herself, but also by laws she shares and produces with a group (Ryan and Deci 2001); meaningful and reciprocally empowering relations with others are exercised within networks of peers possibly also dictated by tradition, but that become empowering (James 1999, pp. 44-45, 48, 191) or transformative (Hatcher *et al.* 2011; Kabeer 1999b), and are not only based on personal affinities, as in individuated *milieux*. Finally, EM is the result of a concerted, rather than solitary, effort, so that meeting set challenges may also be perceived as a group effort.

This makes eudaimonic utility and, correspondingly, SE and agency more universal by going beyond exclusively individuated interpretations, to include a more nuanced notion of what constitutes an autonomic choice when one's self-construal rests on one's role in a web of dyads, rather than on one's place in a sea of individuated islands.

In essence, this work agrees with Sen that a concept of utility equated to happiness would fail to capture the repercussions of the exercise of agency on wellbeing. Work-related activities and, more generally, situations where an individual is required to apply skills of a certain complexity such as the fulfilment of obligations (Sen 1985), are in particular

more likely to be positively related to a sense of self-actualisation and may be negatively related to one of outright enjoyment. A utility of enjoyment equated to mood would not capture the wellbeing impact of such activities fully. Perhaps even more problematic, a utility of enjoyment as captured by synthetic indices of wellbeing – which does not clearly distinguish between mood (or hedonia) and self-actualisation (or eudaimonia) – instead conflates these dimensions, failing to yield any clear indication in either sense, and possibly causing opposite effects to cancel out (Graetz 1991). AEU, distinguishing between hedonia and eudaimonia and allowing for different forms of self-perception, has the potential to avoid these pitfalls.

As a concept of utility, it responds to Sen's critiques, in that it captures the psychological dimensions at the core of the concept of agency, valuing autonomy, MRwO and EM. It brings into the realm of utility all those aspects of wellbeing that do not coincide with happiness and respond in a meaningful manner to the exercise of agency, unlike happiness. It defines a world where, in Sen's famous example, it makes sense for the person having a picnic on the cliff to save the man who throws himself off it, because, while interrupting her picnic may have a negative impact on her happiness as hedonia, it will have an enormously positive impact on her autonomy, MRwO and sense of EM.

It defines a world where, in the other famous example in the literature, it makes sense for Jim to shoot Pedro, rather than one of the ten people in front of him that Pedro wants him to shoot. This is because, although killing Pedro is still murder, and this will induce negative affect in Jim, this choice will have a positive impact on his autonomy – as he chooses not to obey Pedro, and thus frees himself from Pedro's tyranny; on his MRwO – as he avoids killing an innocent person, and the gratitude the ten men he saved will bestow upon him; and on his EM – for the awareness that by killing Pedro, the villain, he will have spared the innocent lives of his co-prisoners, and created an environment that is conducive to his own, and others', flourishing.

Eudaimonic utility defines a world where individuals can operate trade-offs between pleasure and fulfilment, and where agency has a well-defined value. In Sen's (1980-1981) words, a plural utility is more realistic, and no less rational than a uni-dimensional utility concept. It also renders individuals free to exercise their own agency.

The implications of this extension of the utility concept for measuring the impact of policies aimed at enhancing individuals' agency are illustrated below. In general, for the purpose of policy evaluation, agency is equated to 'empowerment' (Kabeer 1999b; Rowlands 1997). The concept of empowerment has its philosophical and political roots

in Marxist thought, and is articulated in different forms. Operationalisations of empowerment for measurement purposes rely on Kabeer's and Rowland's distinctions between the various forms of empowerment (Kabeer 1999a; Rowlands 1997). The following sub-section discusses the construct of power as articulated in their work, and investigates the extent to which eudaimonic utility captures the relevant dimensions of power within this paradigm.

EUD and the Multiple Concepts of 'Power'

If a concept of wellbeing is to stand against Sen's critique that 'there's more to agency than wellbeing', it needs to adequately capture the psychological ramifications of the concept of power used to operationalise agency. The psychological construct of individuated autonomy provides only a partial account of both subjective empowerment and agency interpreted as 'power'. In particular, it only captures the dimension of agency interpreted as 'power *to*', i.e. the individualist aspect of power that reflects the individual's ability to steer her own life in the direction she desires (Kabeer 1999b; Rowlands 1997). However, the concept of power also encompasses the dimensions of 'power *with*', 'power *over*', and 'power *within*' (Kabeer 1999b; Rowlands 1997). The first two are substantively relational – i.e. such that their object is the presence or absence of relations with others or the external environment – rather than formally relational, i.e. relational in the form or structure as this is determined by the underlying self-perception that prevails in the individual, as relational forms of autonomy would instead be. They have a relational nature, in that they require the individual to interact with others by necessity – as suggested by the prepositions *with* and *over* – and correspond to psychological aspects that go beyond the concept of (individuated) autonomy (Kabeer 1999b; Rowlands 1997), and should be encompassed in a utility measure that adequately reflects agency.

Therefore, the following paragraphs investigate whether the concept of eudaimonic utility captures the aspects of power used to operationalise agency. They first explore the concept of 'power *within*', to probe its correspondence to the reflexive dimensions of PWB. An investigation into whether autonomy, MRwO, and EM effectively capture the psychological dimensions corresponding to 'power *to*', 'with', and 'over' follows.

'Power *within*' is intended both as self-acceptance (Rowlands 1997), and as the individual's awareness or perception of her own agency (Kabeer 1999b). The second instance is closer to a concept of subjective agency (Ibrahim and Alkire 2007), measured not only against reported decision-making and similar abilities, but also against the

individual's perception of her own, or the community's, efficacy at exercising such forms of agency (Ibrahim and Alkire 2007). The conceptualisation of 'power *within*' as self-acceptance is more restrictive than the conceptualisation of 'power *within*' as the individual's perception of her own agency. The latter interpretation is closer to an idea of 'power *within*' as encompassing the reflexive aspects of PWB, including self-acceptance.

In both acceptations, 'power *within*' entails self-observation, and is not directly linked to the action or choice itself. It is intended either as the psychological dimension of self-acceptance (Rowlands 1997), or as the perception of one's own agency (Kabeer 1999b). The interpretation of 'power *within*' as self-acceptance proper implies a logical discontinuity with the other aspects of power, however. Self-acceptance is effectively a dimension of psychological constructs (Graetz 1991; Ryff 1989), while the concept of power is not *per se* conceptualised as a psychological category within the empowerment literature. Kabeer's interpretation of 'power *within*' as the perception of one's own agency is therefore preferable. This form of reflexive power then arguably relates to the dimensions of psychological wellbeing that also entail self-observation, and are directed at guiding and shaping one's own agency: namely self-acceptance, personal growth and purpose in life.

From this it follows that 'power *within*' does not fall under the scope of this work, because its reflexive nature associates it with psychological dimensions connected to self-awareness and self-direction. Because these reflexive aspects of SWB and PWB are excluded from SE, so is 'power *within*' as a corresponding form of '.

Having discussed how SE and eudaimonic utility do not reflect 'power *within*', the remaining paragraphs in this section discuss whether they reflect power 'over' and 'with', instead. 'Power *over*' and 'power *with*' capture relational aspects of power relating to the individual's interactions with others and the surrounding environment. The concept of 'power *with*' points to the exercise of power jointly with a group (Rowlands 1997). It is usually intended as power directed toward the attainment of something outside the group, and carries with it a connotation of cohesion within the group. Here, it is intended more generally as the concept of exercising power in an inter-relational context, with no positive connotation attached to this *a-priori*. This is to reflect the fact that in a *milieu* where a relational view of the self prevails, acting with other individuals happens by necessity and, by this very quality of necessity and unavoidability, may entail both positive and negative repercussions for the individual. This is borne out in the fragments from the FGDs discussed in this chapter, where Pedi women describe alliances that are

constantly redefined within patterns of interaction that stretch out over time, so that while the relational aspect of power is kept, the specific alliances are constantly negotiated.

‘Power *with*’ is best captured by the aspect of SE that is rooted in the concept of relations with others as a source of empowerment. Thus, the concept of ‘power *with*’ in the realm of empowerment, and the concept of relations with others as one of the dimensions of SE capture the choral aspect, so to speak, of the process of empowerment. This form is increasingly recognised in the literature as an important form of empowerment (Devine *et al.* 2008), describing the concerted efforts of women to achieve emancipation through groups, and is particularly relevant in contexts where the perception of self is relational (or collective).

Crucially, explicitly measuring relations with others is not an assumption that individuals exclusively experience them in a relational (i.e. based on role-relationships), as opposed to individuated (affinity-based) manner, nor that they are unequivocally positive. Rather, it only allows for more accurate measurement of both their form and impact. As the data gathered for this analysis shows, a relational perception of self implies awareness of both positive and negative impacts of network relations, and may perceive them as either empowering or disempowering, rather than simplistically as either positive or negative elements. This confirms findings from some research on the impact of social capital development in general (Harris and De Renzio 1997; Putzel 1997) and on social exclusion in particular (Beall 1997), and suggests that this form of empowerment should be monitored and quantified to ensure it yields positive outcomes for individuals.

‘Power *over*’ describes the individual’s exercise of power in relation to external elements, be these other individuals or institutions, i.e. rules governing roles and interactions, more generally. It captures the individual’s ‘ability to resist manipulation’ (Ibrahim and Alkire 2007; Rowlands 1997), i.e. her ability to exercise control over her own activities without being unduly influenced by external structures or institutions (Ibrahim and Alkire 2007; Rowlands 1997). In the discourse on women’s empowerment as it relates to gender-based violence (GBV), it is often interpreted as the control that the man, as oppressor, exerts over the woman, as the oppressed (Kabeer 1999b). Here, ‘power *over*’ is intended in Rowlands’ more general meaning and refers to the individuals’ ability to act in a way that is conducive to her own flourishing, free from constraints imposed by others.

‘Power *with*’ and ‘*over*’ are therefore explicitly associated with the idea of a relational self, indicating as they do the exercise of power in relation to other people and the environment, either sympathetically or antagonistically. They are thus linked to the

substantively relational aspects of subjective empowerment – (meaningful) relations with others and EM – as opposed to the concept of ‘power *to*’, which does not explicitly refer to interactions with other individuals (or lack thereof), but may formally be either relational or individuated, depending on the type of self-construct that prevails in the individual.

This section has discussed the inadequacy of hedonic wellbeing as the wellbeing correspondent of agency and investigated how eudaimonic wellbeing is better suited to capturing relevant psychological impacts of changes in agency. It has also discussed the limitations of individuated autonomy as the sole psychological measure of subjective empowerment, and suggested extensions to this uni-dimensional individuated measure to fully capture the utility impact of Sen’s idea of agency by introducing the possibility of a relational self-construct, and including MRwO and EM as relevant dimensions of PWB alongside autonomy, already identified by Sen as a relevant measure of agency.

In view of this, it has also investigated the correspondence between PWB and the concept of power, used in the literature to operationalise agency (Kabeer 1999b; Rowlands 1997). It has found that the three dimensions underpinning eudaimonic utility correspond to the aspects of power that capture the exercise of agency in relation to the external environment and in interactions with other individuals: power ‘*to*’, ‘*over*’ and ‘*with*’. It has discarded PWB and power dimensions that are self-reflexive in nature, as these are not of direct relevance to a concept of utility designed to measure the individual’s wellbeing in relation to her actions and choices. These considerations support the hypothesis that eudaimonic utility is a valid utility measure for Sen’s concept of agency: it excludes *hedonia*, which Sen discarded as inadequate for the measurement of agency; it encompasses the three dimensions of psychological wellbeing that correspond to widely used forms of power, and it excludes the more reflexive forms of PWB that would not qualify as utility dimensions for being defined over the agent, rather than over the space of the agent’s choices.

Conclusions

This chapter set out to (i) investigate whether the conceptualisation of wellbeing among a population of sub-Saharan women differed from conceptualisations documented in the social psychology literature and attributed to populations in the US and the Far East, and (ii) map relevant aspects of wellbeing onto a utility function so that this may guide efforts at understanding people’s motives and choices. It has (i) found that the concept of SWB among Pedi women differs from documented socio-psychological concepts in a way that

reflects changes in the perception of self; and, because such changes are relevant to a variety of *milieux* beyond the one specifically investigated herein, (ii) introduced a plural concept of utility that captures these dimensions, providing a conceptual framework for current scholarly research not only into the socio-economic determinants of SWB, but also into the socio-psychological motivations behind people's choices, and the impact of socio-economic policies aimed at enhancing human and social capital. The next few paragraphs briefly summarise these findings.

This chapter found that, just like their US counterparts (Kitayama *et al.* 2000), rural South African women offset troughs with peaks in order to maintain a stable level of SWB. It further found that South African women's concept of SWB is relational, with MRwO playing a central role, and instances of interdependent autonomy (Ryan and Deci 2001) and EM, so that women's empowerment happens through dyadic interactions of reciprocal empowerment, rather than as an individualistic assertion. This is different from both the predominantly individualistic forms of SWB found in the US (Kitayama *et al.* 2000), and the predominantly collective manifestations in the Far East (Markus *et al.* 2006). This chapter advances the hypothesis that the relational view of SWB is rooted in a relational view of the self (Brewer and Gardner 1996) – which embeds the individual in a web of dyadic relationships, as opposed to either (i) existing as isolated individuals, or (ii) a homogeneous, collective whole. It found evidence of this in the results of the statistical analysis of transcripts of the FGDs with the women.

It incorporates these findings in the theoretical definition of the psychological construct of SE this chapter derives. To construct SE, it selects the outward-oriented aspects of PWB and SWB. These capture the psychological dimensions relating to the individual's interaction with the external environment and her immediate decisions, as opposed to reflexive psychological realms. Thus, autonomy, MRwO, and EM are chosen as the psychological dimensions for a utility function, in that they are better suited to investigate the immediate utility consequences of individuals' actions, choices and proximate motives, than self-acceptance, purpose in life and personal growth.

SE as composed of autonomy, EM and MRwO forms the substantive content of eudaimonic utility, introduced in this chapter as the complement to hedonic utility. The latter had previously been defined by Kahneman as the sole constituent of experienced utility (Kahneman 2000). This chapter investigated the appropriateness of a concept of experienced utility dichotomised into hedonic and eudaimonic utility to better reflect not only Aristotle's philosophical concept, but also current socio-psychological formulations

of wellbeing, which generally acknowledge the existence of both an emotional (hedonic/anhedonic) and a self-realisation (eudaimonic) side to wellbeing (Waterman 2008).

Within the plural form of utility it introduced, this chapter focused on eudaimonic utility as an alternative to hedonic, decision and desire-fulfilment utility for the measurement of policy impact and the understanding of the motives behind people's choices. It has shown how eudaimonic utility captures the aspects of SWB related to the individual's self-actualisation, and how these are relevant to people's decision-making processes as well as a pathway for policy impact. Given that, at times, emotions are negatively correlated to processes of self-fulfilment, it is important for policy makers to distinguish between *hedonia* and *eudaimonia* in order to fully appreciate the implications of their policy choices.

Defining a concept of utility that moves beyond pleasure to include self-realisation, this work addresses Sen's remark that "there's more to agency than wellbeing" (Sen 1985). Sen's critique was in fact rooted in an idea of utility that captures the hedonic aspect of utility that psychologists have variously shown as insufficient to reflect the achievements of agency (Ryff 1989; Waterman 1990). Eudaimonic utility, being by definition the utility counterpart of wellbeing derived from self-fulfilment, constitutes instead a better candidate for measuring the impact of agency on individuals' wellbeing.

To further probe this hypothesis, this chapter investigated how the concept of eudaimonic utility reflects relevant aspects of agency as 'power' compared to *hedonia* and autonomy used in isolation. While autonomy only reflects the concept of 'power *to*', SE also captures power '*with*' and '*over*' thanks to the inclusion of the two further dimensions of MRwO and EM, and so provides an all-encompassing socio-psychological measure of empowerment to support *eudaimonic* utility.

Having introduced the concept of eudaimonic utility, and illustrated how this relates to other aspects of utility, to psychological concepts of SWB, and to the concepts of agency and power, the next three chapters turn to the application of the concept of eudaimonic utility to the evaluation of policy impact, with reference to the specific introduction of empowerment interventions for the prevention of domestic violence. The next chapter uses factor analysis (FA) to investigate whether the three dimensions of eudaimonia capture latent wellbeing dimensions of objective empowerment indicators widely used to evaluate intervention impact. In light of these results, the two subsequent chapters report results from randomised trials of two empowerment interventions for the prevention of

domestic violence. They measure impact along the dimensions identified by the objective empowerment indicators analysed in the FA, engaging with the socio-economics literature on violence and empowerment, and referring to eudaimonic utility as an interpretive framework for the observed patterns.

Chapter 5 Finding Structure in Empowerment Indicators: Factor Analysis of Intervention Outcomes

Introduction

This chapter links the conceptual discussion of eudaimonic utility in Chapter 4 to the econometric analysis of impact for the two empowerment interventions in Chapters 5 and 6. Using exploratory factor analysis (EFA), it investigates how much of the co-variation among the domain-specific empowerment indicators of impact is captured by the corresponding latent dimensions of eudaimonic utility. To establish a link between the empowerment indicators and wellbeing, I first establish a conceptual link between the empowerment indicators and life domains. This increases the transparency of the a-priory hypotheses I make on how the available indicators relate to the latent wellbeing dimensions.

A large literature on quality of life investigates the links between life-domains and wellbeing, conceptualising life satisfaction as a direct generalisation of domain-satisfaction (Rojas 2007; Van Praag *et al.* 2003). Rojas (2007), Cummins (1996) and van Praag *et al.* (2003) identify domains of life satisfaction that could be sufficiently general to serve as groupings for the empowerment indicators in this study. Cummin's list is corroborated by a meta-analysis of over 1,500 articles and, excluding an explicit environmental dimension while including an explicit safety dimension that captures personal control, security, knowledge of rights amongst others, seems better suited as a tool to anchor the empowerment indicators to more general domains of life that have been shown to matter to subjective wellbeing.

However, Cummins' classification relies on studies conducted in several countries in Northern Europe and North America, suffering from the limitation that none is located in the Global South (Cummins 1996); Rojas and van Praag *et al.*'s papers, instead, only look at one country each – Germany, using the German Socio-Economic Panel (GSOEP) (Van Praag *et al.* 2003), and Mexico, specifically urban and rural areas in the Federal District (i.e. Mexico City) (Rojas 2007). Nevertheless, the domains identified by all three authors overlap to a considerable degree: they all include a 'health' dimension, as well as, e.g., a 'material well-being' (Cummins 1996), 'economic' (Rojas 2007) or 'financial situation' (Van Praag *et al.* 2003) domain, and so on.

This seems to suggest that the domains per se might not differ substantially between the Global South and North. On the basis of Cummin's greater geographical spread, and of

its explicit inclusion of dimensions of direct relevance to this work, I choose his classification as the framework to group the empowerment indicators in this study under more general life-domain; given that the three classifications do not differ substantially, choosing one over the other classification is unlikely to change the a-priori hypotheses put forward below.

In what follows, I illustrate how empowerment indicators are subsumed under each EUD dimension on conceptual grounds, by linking them to quality of life (QoL) domains (Cummins 1996). In turn, I associate Cummins' domains to each EUD dimension, in a process of increasing generalisation. I then employ FA to verify whether my conceptual attributions are supported by the data. For the impact evaluation in the following empirical chapters, I structure the discussion around the groups of indicators suggested by this analysis. This highlights patterns of intervention impact on EUD dimensions that I use to explain patterns of change in violence when testing the different socio-economic models of IPV.

This chapter contributes to the capabilities literature an investigation of how indicators of functionings – i.e. specific domains – may be subsumed under higher-order WB dimensions. Rather than identifying lists of dimensions (Samman 2007) and indicators (Alkire 2005; Ibrahim and Alkire 2007) on the basis of their psychological characteristics only, it selects widely used indicators of empowerment insofar as they reflect the underlying WB dimensions that constitute the concept of EUD, providing a link between empowerment indicators and a plural concept of utility. Its function is not to identify key capabilities, but rather to establish a link between WB and functionings in an attempt to provide assessments of policy impact that link 'objective' empowerment and utility.

The approach I adopt bridges the two sides of the debate on the selection of relevant capabilities in the capabilities approach (CA) literature (Robeyns 2005), polarised between Nussbaum's etic approach of capabilities lists (Nussbaum 2000), and Sen's view that their selection should be contextually driven (Sen 1985). I do not define a list of capabilities, but rather identify WB dimensions of relevance to capabilities. Specifically, the fact that the conceptual dimensions of eudaimonia have a joint etic and emic derivation defines a potentially universal underlying structure that systematises empirical data in synthetic theoretical dimensions and could contribute to identifying widely generalizable sets of capabilities.

This work makes three contributions to the CA literature concerned with the links between functioning and wellbeing: it contributes a WB concept motivated by the need

to substantiate a utility function, rather than identifying relevant psychological dimensions, as in the case of previous contributions (Alkire 2005; Samman 2007); it introduces a dimension of relationality generally lacking in this (Deneulin and McGregor 2010) and quality of life approaches (McGregor *et al.* 2009); it then also tests the relevance of this utility concept with empirical data, further adding to Samman's and Ibrahim and Alkire's contributions (Ibrahim and Alkire 2007; Samman 2007). With this empirical exercise, it also speaks to the empirical investigations in the CA literature that attempt to establish a link between functionings and specific aspects of wellbeing by providing insights into links between functionings and a general concept of WB. The remainder of this section situates the contribution of this work in relation to this literature, and discusses implications and limitations of this analysis.

EUD is a multidimensional concept of utility that provides the rationale for the selection of PWB dimensions most directly related to policy outcomes. EUD is thus intentionally a socio-economic measure of utility derived from joint socio-economic and psychological considerations, rather than an exclusively psychological measure, as in previous attempts at identifying plausible WB correspondents of agency (Alkire 2005) and capabilities (Samman 2007). As a consequence, EUD expands on Alkire's concept of subjective quantitative agency (SQA) (2005) in two ways: first by introducing two additional dimensions to capture the 'power *over*' and 'power *with*' dimensions of agency, in addition to autonomy's 'power *to*'; and second by including a relational aspect not only in MRwO and EM, but also in autonomy, in light of the emic process I use to derive EUD dimensions illustrated in Chapter 3. The relevance of the relational component is supported both empirically (Chirkov *et al.* 2003; Devine *et al.* 2008) and conceptually (Brewer and Chen 2007; Brewer and Gardner 1996; Suh *et al.* 1998) in psychology, and is increasingly seen as necessary in economics (Bruni 2010).

EUD also differs from Samman's list of WB measures by excluding the 'meaning in life' dimension, on the grounds that its self-reflexive nature is not well-suited to substantiating a utility function. Self-reflexivity would require the function to map on the agent's beliefs, introducing further scope for endogeneity, compared to autonomy, EM and MRwO which – though subjective – are defined over attributes external to the individuals, such as decisions, choices, or negotiation processes, for example.

This contribution differs from Alsop and Heinson (2005), who provide a broad ranging definition of empowerment that includes macro meso and micro level, based on the concept of agency and opportunity structure. Theirs is a rich conceptualisation that could

provide useful measures of empowerment to measure alongside psychological measures, and possibly also offer appropriate complementary indicators of psychological wellbeing. However, the authors offer a concept of agency that brings together its psychological dimension and other forms of agency related to access to information and the structure of meso and macro organisational structures. This work focuses on the socio-economic dimensions that affect individuals' PWB at the micro level, rather than the macro and meso-dimensions Alsop and Heinson focus on. It follows Alsop and Heinson's encouragement of the use of mixed methods to tackle the difficulties inherent to measuring psychological and social assets related to empowerment.

This chapter further adds to both Alkire's and Samman's contributions an empirical test of how well the EUD construct captures covariation among the relevant empowerment indicators. Results from this investigation inform interpretation of impact in the following chapters, and provide insights on how to improve our ability to capture impact on utility dimensions that are more directly linked with socio-economic outcomes than hedonic and mood-related aspects (Samman 2007). Neither Alkire (2005) nor Samman (2007) perform such an exploration in their work, and this chapter provides an initial investigation of how variation in existing indicators of functionings – in this case, empowerment indicators – is captured by underlying measures of psychologically-substantiated utility.

While Alkire's and Samman's general concepts of wellbeing are not tested empirically, CA scholars that explore more specific forms of wellbeing often use multivariate analysis to explore and synthesize wide arrays of functionings indicators: multiple correspondence analysis (MCA) reveals differing patterns of associations between wellbeing and functionings across ethnicities in South Africa (Neff 2007); multiple indicators multiple causes (MIMIC) models identify socio-demographic variables associated with children's wellbeing and upstream 'causes' such as parents' income and caste in India (Di Tommaso 2007); in other cases, principal component analysis (PCA)⁵⁰ computes indices of deprivation (Klasen 2000) or housing (Roche 2008) from components chosen on conceptual grounds; similarities in the distributions of wellbeing correlates (e.g. disposable income, employment rate, life expectancy) in time are used to identify

⁵⁰ PCA attempts to explain all the variance in the data, while FA only explains the common variance; PCA interprets the unique factor as a linear combination of the observed data, and yields a unique solution in the reduced dimensional space; FA conversely interprets the items as explained by the factors and its solutions can be rotated (i.e. are not unique) to favour better interpretation.

summary measures for dimensions of wellbeing at the macro level (Hirschberg *et al.* 2001) and, similarly to this chapter, FA identifies the underlying factor structure of relevant functionings for unemployed Belgians (Schokkaert and Van Ootegem 1990), and a measure of standard of living spanning material, health and psychological dimensions (Lelli 2001). This chapter bridges these two strands of literature by exploring patterns of covariation among empowerment indicators to establish links with the higher order WB dimensions that constitute EUD.

Of the various methods used in the above empirical investigations, PCA and FA more closely respond to my needs of summarising the information contained in the data. I discard PCA because it is not my intention to identify one single index or explain the total variation found in the data. Rather, I aim to identify multiple factors that explain the variance shared by the indicators I select (Balestrino and Scicione 2001; Lelli 2001), and hence choose FA. Moreover, FA allows factor rotation (both orthogonal and oblique) to improve interpretability of results while maintaining mathematical meaning (which PCA would not allow (Armitage *et al.* 2001; Bartholomew *et al.* 2008) and has also been endorsed by Sen as a tool for the analysis of functionings data (Sen 1990).

Though the structure revealed by this analysis is determined by the data at hand (Roche 2008), results suggest that the fundamental structure remains largely unaltered in the two different datasets, supporting the hypothesis that the grouping of indicators I find here may be generalizable to other contexts. The empowerment indicators I consider here are widely used measures of empowerment. This implies that this exercise may easily be replicated elsewhere (Roche 2008) to investigate whether the structure I observe is also found elsewhere, and how it may change as, for example, self-perception changes.

However, empowerment indicators were not originally designed to directly capture WB dimensions. I account for the missing step in the generalisation process by introducing a preliminary step for the identification of the relevant indicators that rests on conceptual grounds. In order to assign each indicator to each underlying socio-psychological dimension in an a-priori set of hypotheses, I refer to the work of Cummins (1996), who identified an array of Quality of Life (QoL) domains under which the domain-specific empowerment indicators at my disposal can be subsumed. Cummins' domains are interpretable as "end states of being in life" (Hagerty *et al.* 2001), and provide a link between the domain-specific empowerment indicators and Ryff's PWB dimensions with an intermediate level of generalisation by offering a rationale for the assignment of domain-specific empowerment indicators to the higher-order PWB categories. They also

provide a rationale for the initial selection of empowerment indicators from the rich datasets generated by the two trials I analyse.

The lack of data on specific psychological items is the key limitation of this analysis. The investigations in the CA literature establish associations between functioning and specific items, and are thus interpretable as construct validity exercises. Because of the large hiatus in levels of generalisation, this chapter does not intend to carry out a construct validity exercise but, rather more modestly, simply investigate how hypothesising the existence of three latent psychological factors explains the common variation in the relevant indicators. This is a valid exercise from a socio-psychological perspective (Penninkilampi-Kerola *et al.* 2006) and, as discussed, I provide a rationale for my attributions in terms of QoL dimensions that represent an intermediate level of generalisation. However, I also acknowledge that the underlying EUD dimensions cannot explain all the common variation in empowerment indicators, and that restricting the structure to a three-dimensional space will imply that a lot of variation in the data remains unexplained – indicators will exhibit high levels of uniqueness.

The aim of this exercise is also to highlight these gaps and provide the motivation for future research into the inclusion of specific items of socio-psychological measures alongside empowerment (or more generally functioning) indicators, to provide a more complete picture of both objective and more subjective policy impact. This is particularly relevant for impact evaluations of pro-poor policy interventions, where the correlation between psychological and ‘objective’ indicators of QoL is much stronger than elsewhere in the income distribution (Cummins 2000), and in view of recent evidence of the positive impact of improved psychological outcomes on investment and savings decisions among the relatively poor and marginalised (Ghosal *et al.* 2013).

In the present study, however, I simply investigate how co-variation among domain-specific empowerment indicators is explained by the underlying socio-psychological dimensions of EUD. I also choose to keep the original indicators alongside the three underlying dimensions I identify, unlike CA scholars, who generally only analyse synthetic dimensions (Lelli 2001; Roche 2008; Schokkaert and Van Ootegem 1990). This choice further acknowledges that the patterns I observe do not measure a proper construct, but rather only suggest how the underlying socio-psychological dimensions explain variation. It also has the advantage of providing a clearer insight into dynamics of changes in agency. It is relevant to this discussion, for example, to distinguish between changes in decision-making authority in the financial as opposed to the reproductive sphere, for

example, as these decisions refer to very different resources and norms, as well as a different concept of self, and have different implications for violence outcomes despite the fact that they both load on the autonomy dimension.

A-priori hypotheses on how indicators relate to underlying utility dimensions

This section assigns the empowerment indicators from both the IMAGE and Burundi-VSLA interventions to the underlying EUD dimensions on conceptual grounds. This is common practice in the CA literature that investigates relationships between specific functionings and underlying WB dimensions (Hirschberg *et al.* 2001; Neff 2007; Samman 2007; Schokkaert and Van Ootegem 1990), and I further strengthen my conceptual argument by explaining the connection between the domain-specific measures and the PWB dimensions with the QoL domains identified by Cummins (1996).

Cummins' classification is very reliable in that it is the synthesis of a very large number of studies, and has been found to perform better than 21 other measures of QoL based on a set of 14 criteria identified via a Delphi⁵¹ process (Hagerty *et al.* 2001). Cummins' classification results from the analysis of 1,500 scholarly contributions on QoL domains, and is referred to in the capabilities literature for the identification of relevant QoL domains (Samman 2007) and discussion of relationships between objective and subjective aspects of wellbeing (Alkire 2005). Cummins' QoL domains are designed so that they may be measured both by objective and subjective indicators (Hagerty *et al.* 2001), and therefore are an appropriate link between the domain-specific empowerment indicators at my disposal and the underlying dimensions of eudaimonia that constitute EUD.

I use Cummins' classification to bridge the gap between the very specific empowerment indicators, which look at very narrowly defined empowerment domains (e.g. the purchase of small goods for the household); and the wellbeing domains, which have a high degree of generality. In this way, I seek to minimise inaccuracies in attribution of each empowerment indicator to a psychological dimension and to make the attribution process transparent. Cummins uses 7 domains that influence quality of life derived from his ComQoL measure – a multidimensional measure of quality of life that he proposes as a proxy for life satisfaction (Cummins 1996): intimacy, material wellbeing, health productivity, safety, community, emotional wellbeing. In Table 1 in his paper (1996) he groups the QoL domains (hence: items) from previous studies under the 7 ComQoL

⁵¹ That is, a process of consultation with experts.

domains so that, for example the “material wellbeing” domain contains 19 items including, e.g., “financial situation”, “living situation”, “savings”; the safety domain subsumes 10 items, including, e.g., “control of personal circumstances”, and “financial security”, and so on for the other 5 groupings, as illustrated in the figure below.

TABLE I
List of terms comprising each domain and their frequency (×) of occurrence.

Material well-being	Health	Productivity	Intimacy	Safety	Community	Emotional well-being
Car (1)	Health (22)	Achieve success (1)	Child interaction (1)	Amount of privacy (1)	Acq. and contacts (1)	Beautiful things (1)
Clothes (2)	Hlth./Funct. (2)	Activ. available (1)	Children (4)	Control (1)	Area you live in (2)	Comfort from religion (1)
Econ. situation (2)	Intellect, perfor. (1)	Employment (1)	Contact with family (1)	Control over life (1)	City (1)	Emot. adjustment (1)
Food (2)	Physical fitness (1)	House-work (1)	Family (7)	Contr. pers. circum. (1)	Club belong to (1)	Free-time activity (1)
Finances (11)	Phys. strength (1)	Job (11)	Family life (8)	Financial security (3)	Community (1)	Fun (4)
Finan. situation (1)	Personal health (2)	Paid employ. (2)	Family relations (3)	How handle probs. (1)	Country (1)	Hobbies (3)
Home (1)				Legal and safety (1)	District (2)	Leisure (13)
House (5)		School (2)	Friends (7)	Privacy (1)	Education (7)	Leisure activities (1)
House appearan. (1)		Vocation (1)	Friendships (8)	Safety (5)	Education facilities (1)	Life opportunities (1)
Housing (4)		Vocat. situation (1)	Living partner (1)	Secure from crime (1)	Get on other peopl (2)	Non-work (1)
Income (2)		What accompl. (1)	Marriage (7)	Sec. of belongings (2)	Helping others (1)	Overall comfort (2)
Living situation (7)		Work (10)	Number of friends (1)		Location of home (1)	Psychol./Spiritual (2)
Mater. posses. (1)		Work and ed. (1)	Parenthood (2)		Neighborhood (4)	Reading (2)
Pay (3)			Partner relationship(2)		People in comm. (1)	Recreation (4)
Place of resid. (1)			Partnership (1)		People see socially (1)	Relax/Sitting around (1)
Quality of meals (1)			People live with (2)		Rel. others in comm. (1)	Religion (8)
Savings (1)			Relatives (3)		Serv. and facilities (2)	Self (1)
Socio-economic (2)			Rel. with family (6)		Social life (3)	Self-acutalization (1)
Stand. of living (6)			Role in family (1)		Social relations (6)	Self-esteem (1)
			Sex life (7)		Social organisations (1)	Spare time (4)
			Spouse (3)		Visiting (1)	Spiritual life (1)
			Time with friends (1)			Sports or games (2)
			Wife/husband (1)			Take night out (1)
						Time to do things (1)
						Yourself (1)

Residual Terms: Ability to get around (1), Ability to manage self care (2), Amount you worry (1), Appearance (1), Basic child care (1), Being a housewife (1), Beliefs of the women's movement (1), Biculturality (1), Body (2), Bone marrow transplantation (1), Children's education (2), Consumption (1), Cultural life (1), Daily activities (1), Democratic standards (1), Eating (2), Follow politics/voting (1), Future (1), Government (2), Government handles economy (1), Grocery shopping (1), Haltch care (2), House chores (1), Household maintenance (1), Housework (1), Immigration (1), Level of democracy (1), Life as a whole (1), Life in general (1), Life in the country (1), Life in USA (1), Living arrangements (1), Local council (1), Local government (2), Medical service (1), National Government (1), Number of others in home (1), Personal care (1), Place of living compared with hospital (2), Police and courts (3), Preparing/cooking food (1), Pressure at work (1), Psychiatric service (1), Relationship with sponsor (1), Resting (1), Shopping (1), Singlehood (1), Sleeping (1), Social work service (1), Space outside home (1), Television (2), Transportation (2), Travel (1), Trip to work (1), Welfare services (2), Your transplantation (1).

Figure 7 Cummins' domains and items (Source: Cummins, 1996)

The first step in the selection process of the empowerment indicators for the evaluation of IMAGE and the Burundi VSLA entailed using Table 1 in Cummins to identify which empowerment indicators measured the items subsumed under Cummin's seven domains. This implied, for example, that the decision-making indicators on purchases all went under the “financial situation” item listed in the material well-being domain for Cummins, and that the indicators on women's role in the household and negotiations on contraception fell under the intimacy domain, as illustrated in Tables 4.1 and 4.2 below. The only domain for which I could find no empowerment indicator was the domain of emotional wellbeing, because the IMAGE indicators focused only on objective empowerment measures.

This process characterised Cummin's domains for the purposes of this work. I then assigned each of the domains I had populated with empowerment indicators to the EUD

dimensions so that, for example, the autonomy dimension subsumed the domains of material wellbeing with the decision-making indicators; the MRwO dimension subsumed the intimacy domain with the “role in family” and “partner relationships” items captured by the empowerment indicators on gender norms, as illustrated in Tables 4.1c and 4.2c below.

In this exercise, I differ from Samman (2007) in two ways. She only identifies conceptual correspondences between the higher order psychological dimensions she chooses and Cummins’ domains, while my analysis also provides the link to the data. Samman also excludes empowerment on the grounds of it being a separate dimension. I disagree with this view, because in its original acceptance, empowerment is a process that describes an expansion in agency that, in fact, can – and should – encompass all life-domains. In what follows, I therefore consider what life-domains each indicator of empowerment pertains to and, in turn, which psychological dimension best captures each life-domain to provide a reasoned a-priori set of hypotheses of the groupings that the FA should identify. This will then serve as a benchmark for the evaluation of the FA outcomes and inform the discussion of the empirical results in the following sections. The next three sections and related tables outline these conceptual correspondences for each WB dimension for both interventions.

Autonomy

In both cases, available empowerment indicators point to the domain of material wellbeing as captured by financial decisions: this is the case of most of the decision-making indicators that focus on resource allocation and purchases. Role in the family and relationships with partner and children are captured by DM indicators that capture visits to friends and family and decisions about children. These two domains also map onto an individuated and relational view of the self, respectively. For IMAGE, autonomy also subsumes the productivity domains measured by housework.

Table 5.1a Ryff's Autonomy Dimension: IMAGE Indicators and Cummins' Domains

CUMMINS' DOMAINS	IMAGE QUESTIONS
MATERIAL WELLBEING (financial situation)	<p>Make small purchases for yourself</p> <p>Make small purchases for the home</p> <p>Make medium purchases for the home</p> <p>Make larger purchases for yourself (e.g. a cell phone)</p> <p>Make large purchases for the home (furniture, fridge)</p>
INTIMACY (role in family; partner relationship; children)	<p>Take your children to the clinic or hospital</p> <p>Visit your birth family</p> <p>Visit your friends in the village</p> <p>Visit friends or relatives outside of the village</p> <p>Join a credit group or other organisation involved with money</p>
PRODUCTIVITY (housework)	<p>Think about all the unpaid work you do to support the household, such as all the household chores you do (cooking, cleaning, fetching water). How is your contribution viewed by yourself?</p>

Table 5.2a Ryff's Autonomy Dimension: Burundi-VSLA Indicators and Cummins' Domains

CUMMINS' DOMAINS	BURUNDI QUESTION
MATERIAL WELLBEING (financial situation)	how money is spent spouse decides spend money disagree: spouse changes daily household purchases spouse decides daily household purchases disagree: spouse changes large household purchases spouse decides large household purchases disagree: spouse changes alcohol & cigarettes spouse decides alcohol & cigarettes disagree: spouse changes
INTIMACY (role in family; partner relationship; time with friends; friends)	when to visit family & friends - spouse decides when to visit family & friends disagree: spouse changes when to visit spouse's family & friends - spouse decides when to visit family & friends disagree: spouse changes how many kids spouse decides have sex spouse decides have sex disagree: spouse changes

Meaningful Relations with Others (MRwO)

In both interventions this dimension is captured by social norms on gender roles: these test participants' perceptions of acceptable behaviours from women toward their husband, both in general in the relationship, as well as specifically in the sphere of sexuality (IMAGE) and norms around the acceptability of wife-beating (Burundi-VSLA). For IMAGE there is an additional economic indicator that measures women's perception of her contribution to the household from paid work that captures Cummins' productivity domain as connected to work outside the household. This dimension is inherently relational, so that virtually no item captures an independent perception of the self, with the exception of the productivity dimension for IMAGE, and the item on women's (in)ability to manage money in Burundi.

Table 5.1b Ryff's MRwO Dimension: IMAGE Indicators and Cummins' Domains

CUMMINS' DOMAINS	IMAGE QUESTIONS
INTIMACY (role in family; partner relationship)	<p>Women should do all household chores</p> <p>If paid lobola, wife must obey</p> <p>Wife asks condom, is disrespectful</p> <p>Wife asks condom, sleeps around</p> <p>Man has girlfriends, must tolerate</p> <p>Wife must not divorce</p> <p>Ok to refuse sex if not want</p> <p>Ok to refuse sex if no condom</p> <p>Ok to refuse sex if angry for other girlfriends</p> <p>Ok to refuse sex if worried about aids</p>
PRODUCTIVITY (paid work)	<p>Think about the money that you bring into the household. How is your contribution viewed by yourself?</p>

Table 5.2b Ryff's MRwO Dimension: Burundi-VSLA Indicators and Cummins' Domains

CUMMINS' DOMAINS	BURUNDI QUESTION
INTIMACY (role in family; partner relationship)	<p>women should do as men say</p> <p>wife should give money she earns to husband</p> <p>okay for husband to abandon wife if he wants</p> <p>woman's job to gather water, even if unsafe</p> <p>women cannot manage money</p> <p>women should have sex when husband wants</p> <p>women should have as many kids as husband wants</p> <p><i>okay to beat wife if:</i></p> <p>goes out without telling husband</p> <p>neglects kids</p> <p>argues with husband</p> <p>refuses sex</p> <p>burns food</p> <p>does something annoying</p> <p>(for) any reason</p> <p>never okay to beat wife</p>

Environmental Mastery (EM)

In both interventions EM captures Cummins' domain of safety and control over personal circumstances. The items common to both interventions capture violence outcomes; for IMAGE, EM also includes husbands' controlling behaviour, which precludes women from exercising control over their own circumstances. IMAGE-specific domains also relate to safety in the financial sphere, looking at women's ability to support their household; intimacy, in terms of their role in the family as providers of financial support; and health – specifically HIV due to the original HIV-prevention focus of the intervention. Burundi-specific domains include safety of a legal nature – with items on women's legal rights – and the community – with items on women representatives. While IMAGE has a balance of independent and relational EM items, the independent items revolving mostly around women's financial role in the household, the Burundi-VSLA tool captures relational measures of EM more consistently. These hypotheses guide interpretation of the FA results in the remainder of the chapter.

Table 5.1c Ryff's EM Dimension: IMAGE Indicators and Cummins' Domains

CUMMINS' DOMAINS	IMAGE QUESTIONS
INTIMACY (role in family; partner relationship)	Have you ever had to give all or part of the money to your partner or have you been able to spend your money/savings how you want yourself?
SAFETY (financial security; how handle problems)	How confident are you that you alone could raise enough money to feed your family for four weeks? – this could be for example by working, selling things that you own, or by borrowing money (from people you know or from a bank or money lender)
SAFETY (financial security; control over life)	Would you say that your household's ability to survive this kind of crisis is better, the same or worse as it was two years ago?
HEALTH (personal health)	At any point in the last 12 months have you sought advice on any issues relating to sex, sexuality HIV, condoms etc
	Have you ever thought about your own potential risk of HIV / AIDS?
	In the last 12 months have you tried to do anything to decrease your risk of infection with HIV?
	In the last 12 months have you felt like you wanted to do anything to decrease your risk of infection with HIV?
SAFETY (control; control of personal circumstances)	He encouraged you to participate in something outside of the home that was only for your benefit (i.e. women's group, church group)
	He asked your advice about a difficult issue or decision
SAFETY (control; control of personal circumstances); INTIMACY (partner relationship); FRIENDS/TIME WITH FRIENDS, FRIENDSHIPS	He kept you from seeing your friends

Table 5.1c Ryff's EM Dimension (ctd): IMAGE Indicators and Cummins' Domains

CUMMINS' DOMAINS	IMAGE QUESTIONS
SAFETY (control, control of personal circumstances); INTIMACY (partner relationship, relationship with family)	He restricted your contact with your family of birth?
SAFETY (control, control of personal circumstances); INTIMACY (partner relationship)	He insisted on knowing where you are at all times? He boasted about girlfriends or brought them home?
SAFETY (control, control of personal circumstances); INTIMACY (partner relationship) HEALTH (personal health)	He wanted you to ask permission before seeking health care for yourself?
SAFETY (control; control of personal circumstances); MATERIAL WELLBEING (home)	He tried to evict you from the home? Are you able to spend your money/savings how you want yourself, or do you have to give all or part of the money to your partner?
SAFETY (control of personal circumstances); INTIMACY (partner relationship)	He insulted or humiliated you in front of other people? He pushed you or shoved you? He hit you with his fist or with something else that could hurt you? He physically forced you to have sexual intercourse when you did not want to?
	You had sexual intercourse when you didn't want to, because you were afraid of what he might do if you said no? Total violence

Table 5.2c Ryff's Environmental Mastery Dimension: Burundi-VSLA Indicators and Cummins' Domains

CUMMINS' DOMAINS	BURUNDI QUESTION
SAFETY (financial security; legal and safety; security of belongings)	rights for women to own and inherit land
COMMUNITY (community; country; social organisations)	women reps in national reconstruction programs
COMMUNITY (community; neighbourhood; social organisations, area you live in)	women reps in local community meetings
SAFETY (legal and safety; control over life; control of personal circumstances; safety; secure from crime)	increased penalties for spousal abuse
SAFETY (control of personal circumstances) intimacy (partner relationship)	woman has been physically hurt woman has been insulted woman has been threatened woman has been screamed at summative measure of violence (total violence)

Summary Considerations

This section has provided an initial set of hypotheses on how empowerment indicators may be explained in terms of EUD dimensions. This establishes a benchmark for the discussion of the empirical findings from the FA of empowerment indicators and a reasoned argument for assigning each indicator or item to the underlying EUD dimension, given that empowerment indicators were originally designed to measure objective forms of eudaimonia or self-realisation, and no theoretical underpinning had been directly provided to link them to underlying socio-psychological dimensions. This step is therefore important in the argument of this thesis, as it provides a theoretical justification for the initial conceptual associations I make between EUD dimensions and domain-specific empowerment indicators, and provides a clear conceptual background to the exploratory analysis I conduct in the following paragraphs.

The classification suggests that financial or productivity domains are relevant to each of the dimensions, underscoring the importance of material resources in the attainment of psychological wellbeing. This may be explained by the fact that material resources are fungible, and can play a role in the achievement of goals in different domains (e.g., the perception one can raise emergency money in the face of unexpected difficulties, which may impact on one's sense of environmental mastery; or the negotiations on how to allocate money for consumption, which may influence one's sense of autonomy). Further, across all three dimensions, these are complemented by domains to do with sociality – friendship; and role in the family, with the partner and children – which underscore the relevance of the relational. Environmental mastery also contains items to do with safety, health and legal issues, which isolate the non-monetary aspects of these domains (e.g., physical abuse, or women representatives in political bodies).

Finally, this exercise has highlighted one further limitation of this analysis. Although I have used an inductive approach for the initial identification of the relevant PWB dimensions, the data at my disposal is strongly influenced by intervention characteristics and may well not reflect what recipients found to be relevant. Though the advantage of including items that are widely applied to programme evaluation internationally in the development field remains, it is also true that this implies some loss of adherence to local perceptions. Future research may want to consider the suggested practice of asking participants how much they care about each item (Hagerty *et al.* 2001) and, possibly, integrating preliminary scoping exercises with recipients to identify relevant local

dimensions that may then be incorporated and related to more mainstream indicators of empowerment and functionings.

Factor Analysis

IMAGE

This section reports findings from the factor analysis (FA) of the IMAGE empowerment and violence outcomes. It investigates how they distribute along the three underlying dimensions of eudaimonia (the ‘latent factors’, in this analysis) that emerge from the combined investigation of Pedi women’s perception of wellbeing and theoretical socio-psychological concepts of SWB and PWB (Ryan and Deci 2001; Ryff 1989; Waterman 2008) presented in Chapter 4.

The FA of the empowerment data from the IMAGE intervention is the link between the concept of *eudaimonic utility* and the empirical evidence I present in this work: it tests whether classic empowerment indicators, such as those used for the impact evaluation of the IMAGE intervention, may be said to reflect the underlying psychological dimensions of the concept of empowerment. It also investigates how the violence outcomes – that *de facto* constitute a limitation of the woman’s agency – relate to this underlying factor structure. I use the results of this analysis, together with the insights from the analysis of the qualitative data, to explore some of the socio-psychological mechanisms that lead to the reduction of IPV as a consequence of the IMAGE intervention in the next chapter.

This section is structured in two parts: results, where I describe the statistical results of the FA, and discussion, where I provide an interpretation of the results in light of the concept of eudaimonia, and relate it to previous investigations of QoL domains. I also discuss the limitations of this analysis, and provide suggestions for further research.

Results

Results from the FA suggest that current empowerment indicators are satisfactorily explained by the three EUD factors. Decision-making indicators mostly cluster around the first factor – autonomy; indicators on gender roles around the second – MRwO; and indicators on financial coping in the face of a crisis and successful management of health threats (HIV) cluster around the third factor – EM. The three underlying psychological dimensions are correlated, and together they constitute a single construct – eudaimonia. The EM factor also groups the violence and controlling behaviour outcomes when these are included in the battery of indicators, suggesting that women see these behaviours as limiting of their ability to engage with the surrounding environment, i.e. as yet another

form of control. This lends support to the hypothesis of strategic use of violence and inscribes violent episodes squarely into a much wider pattern of “coercive control” (Stark 2009).

The FA of the empowerment indicators with three iterated principal factors captures MRwO, autonomy and EM, with eigenvalues 4.97, 4.31 and 3.55, respectively. The log-likelihood for this model is -1152.64, a marked improvement on a two and one factor model, according to Akaike’s information criterion (AIC), and fairly high, suggesting good model fit. Although the scree plot displaying the eigenvalues assigned to each factor suggest that factors four and five would contribute to explaining an additional 12% of the variation in the data, the first three factors explain 41% of the total variance found in the data in the original unrotated version. The Kaiser-Meyer-Olkin measure of sampling adequacy is 0.68 for the set of variables (items) considered, suggesting a mediocre sampling adequacy (Kaiser 1974). In view of these results and of the interpretability of the three-factor structure, I retain these three factors throughout this analysis, but discard the items with the highest levels of uniqueness, i.e. variation in the item that is not explained by any of the factors, to provide the factor structure with greater cohesiveness.

Rotating the underlying factors about the origin allows items to load more strongly on one of the factors, while reducing loadings on the others (Armitage *et al.* 2001, 458). The promax rotation that I choose here allows for some correlation between the three factors, and shows they are mildly correlated (correlations vary between 0.11 and 0.17). The overall measure of sampling adequacy according to the Kaiser-Meyer-Olkin measure is 0.77, ranking in the higher middling values (Kaiser 1974).

Table 5.3 shows three groupings of the items: indicators capturing gender roles and negotiation of sexual encounters cluster around Factor 3, suggesting this factor captures MRwO; all decision-making indicators load onto Factor 2, suggesting this is interpretable as the autonomy factor; finally, all indicators of partner’s controlling behaviour and the violence indicators load onto Factor 1, suggesting this is the EM factor, capturing the individual’s ability to create an environment conducive to her own development. The indicator on the women’s perceived non-monetary contribution to the household and the two on financial security of the household load on autonomy, introducing a relational aspect to this dimension. The indicators that capture HIV-risk and related behavioural choices, and the item for monetary contributions to the household, load on MRwO, highlighting the relational aspects of these choices and perceptions.

Table 5.3 IMAGE Factor Analysis

Variable	Environmental Mastery	Autonomy	Meaningful Relations with Others	Uniqueness
Women should do all household chores	-0.0273	-0.0138	0.5222	0.7300
If paid lobola, wife must obey	0.0283	0.1049	0.5497	0.6712
Wife asks condom, is disrespectful	-0.0242	0.0211	0.5603	0.6843
Wife asks condom, sleeps around	-0.0356	-0.0146	0.6628	0.5646
Man has girlfriends, must tolerate	0.0974	0.1266	0.4473	0.7556
Wife must not divorce	0.0656	0.0042	0.5210	0.7189
Ok to refuse sex if not want	-0.0786	0.0839	-0.6355	0.5877
Ok to refuse sex if no condom	0.0121	-0.0662	-0.6267	0.5947
Ok to refuse sex if angry for other girlfriends	-0.0588	0.0263	-0.6443	0.5792
Ok to refuse sex if worried about aids	-0.1173	0.0130	-0.5941	0.6250
Small purchases self, ask partner	0.0065	0.6052	-0.0350	0.6371
Take children to hospital, ask partner	0.2087	0.5338	-0.0129	0.6712
Large purchases self, ask partner	-0.0307	0.6432	0.0948	0.5637
Small purchases household, ask partner	0.0194	0.3833	0.0433	0.8469
Medium purchases household, ask partner	-0.0490	0.6556	-0.0567	0.5730
Large Purchases household, ask partner	-0.1244	0.5899	0.0113	0.6365
Visit family of birth, ask partner	0.0297	0.7289	-0.0872	0.4741
Visit friends in the village, ask partner	0.1001	0.5274	-0.0369	0.7143
Visit family or friends outside village, ask partner	-0.0352	0.7711	-0.0155	0.4070
Join credit association, ask partner	-0.0451	0.6187	0.0597	0.6044
Partner encourages participation in activities out of household	-0.2359	-0.0623	0.0107	0.9406
Partner asks for advice	-0.2161	0.0357	-0.0148	0.9516
Partner keeps from friends	0.4997	0.2396	0.0864	0.6726
Partner restricts contact with family	0.6891	0.0690	0.0675	0.5073
Partner insists on knowing where she is	0.4701	0.1884	0.0305	0.7377
Partner controls access to health care	0.4720	0.1708	0.0687	0.7347
Partner boasts girlfriends	0.5798	0.0457	0.0238	0.6585
Partner threatened eviction	0.4999	-0.1257	0.0992	0.7215
Confident she can feed her family alone in face of crisis	0.1111	0.3869	-0.0233	0.8390
Confident household would survive financial shock	0.0146	0.2913	0.1297	0.8894

Table 5.3 IMAGE Factor Analysis (ctd)

Variable	Environmental Mastery	Autonomy	Meaningful Relations with Others	Uniqueness
How to spend own money, decides alone	0.1733	-0.0064	0.0268	0.9686
Hers is main monetary contribution to the household	0.0731	0.0090	-0.1852	0.9625
Hers is main non-monetary contribution to the household	-0.0622	0.1550	-0.0448	0.9714
Is aware of own HIV risk	-0.0355	0.1288	-0.2158	0.9407
- has wanted to do something about it	0.1495	0.3102	-0.3366	0.7973
- has tried to do something about it	0.1438	0.2940	-0.3487	0.8001
Insulted by partner - PYE	0.7471	-0.0321	-0.0155	0.4425
Pushed by partner - PYE	-0.7446	0.1650	0.0741	0.4202
Partner hit w\fist - PYE	-0.6609	0.0944	0.1285	0.5482
Had forced sex w\partner - PYE	-0.5063	-0.0710	-0.0887	0.7223

Had sex for fear of consequences of refusal - PYE	-0.2262	-0.1207	-0.0147	0.9327
Total Violence	-0.7705	0.1826	0.0971	0.3728
PYE – past year experience				

These results support the hypothesis of a three-factor structure for EUD. They also highlight, however, that classic empowerment indicators lack a coherent psychological framework of reference: though the three-factor structure is interpretable and indicators cluster mostly as expected, the degree of uniqueness for some of the indicators remains high. In the next paragraphs I discuss, for each factor, the trade-offs between factors' internal consistency and adherence to the conceptual EUD framework as I exclude or include these items from analysis.⁵²

Factor 1: Environmental Mastery

The indicators measuring men's controlling behaviour and women's experience of violence all load on the EM factor. The experience of abuse – be it psychological or physical – is an external threat, with the locus of control of this threat being outside the woman. The internal consistency of EM improves when the violence indicators are included: the average inter-item correlation increases from 0.22 for the controlling behaviour only battery, to 0.30 for the factor that also includes the violence indicators. Cronbach's alpha also increases from 0.72 to 0.87. The KMO for sampling adequacy is the only indicator to slightly decrease, going from 0.72 for the full version to 0.73 in the version with no violence indicators. Because in the scale with the violence indicators the inter-item correlation increases, the increase in alpha may not only be due to an increase in the number of items in the factor, but may well reflect an increase in its internal consistency (Cortina 1993). Further, sub-factor analysis of the full EM factor show that three factors have eigenvalues greater than one, explaining 51% of total variance. However, the 1-factor structure explains 74% of the variance in the data and, though the AIC is lower for the 2-factor structure, the 1-factor structure is the only structure not to record excessively high uniqueness values for any of the items, and is therefore to be preferred.

⁵² The items eliminated from the second round of analysis due to high levels of uniqueness are: husband encourages participation; husband asks for advice; I can manage own money, perceived monetary and non-monetary contributions to the household; I know I am at risk of HIV; I had sex with my partner because I was afraid of what he would do to me (afraid sex); I do not need to ask my husband for permission to make small purchases for the household (sprchh); I am confident I can feed my household with just my own resources (feedalone); I am confident the household would survive financial shock (hhsurv); asking one's husband to use a condom is disrespectful.

Finally, excluding the indicators that record high values of uniqueness in the first round of analysis yields a factor with an alpha of 0.88, a KMO of 0.82 and an inter-item correlation of 0.40, suggesting no change in alpha, and increases in both internal consistency and sampling adequacy.

These results suggest that it is appropriate to include the violence indicators in the EM dimension because they generate consistent improvements across all measures, and that excluding the indicators with higher degrees of uniqueness improves the internal consistency of the dimension and sampling adequacy, suggesting it may be appropriate to discard these items.

Factor 2: Autonomy

All household decision-making indicators load onto one factor, suggesting this is the autonomy dimension of EUD. They all load positively, with loadings between 0.5 (visiting friends in the village) and 0.8 (visiting family and friends outside of the village). Excluding the indicators of financial confidence and contribution to the household – i.e. those with high uniqueness in this factor – does not appreciably affect the association between decision-making indicators and autonomy. The factors on financial confidence and contribution to the household also load positively on autonomy, though with much lower loadings. Removing them increases the internal consistency of the factor, not only increasing alpha from 0.85 to 0.88, but also improving the inter-item correlation factor by 37%, bringing it to 0.42; the Keiser-Meier Ohlin measure of sampling adequacy also increases from 0.84 to 0.87. Sub-factor analysis suggests a two-factor structure when all items are present, explaining 68% of the variance, and a one-factor structure for the final, decision-making only, version, explaining 67% of the variance. The internal consistency of the decision-making only factor is higher, as expected. However, the introduction of the financial indicators does not noticeably reduce overall consistency for the autonomy factor. This suggests that keeping the financial security items is justified on two grounds: the losses in internal consistency are only marginal, and their presence as factor items reflects the relational aspect of autonomy, thus providing an empirical counterpart to the concept of autonomy as both individuated and relational. High item uniqueness remains a, not unexpected, limitation given the original lack of intent to capture a single construct at the survey design stage, and may be suggestive of the fact that they characterise the relational, rather than individuated, aspect of autonomy, in contrast to the DM indicators.

Factor 3: Meaningful Relations with Others

The MRwO factor collects all indicators on gender norms regarding marriage and sexuality. MRwO also captures most of the variation in the indicators on HIV-related behaviour and, in the extended form, HIV risk and women's perception of the importance of their financial contribution to the household. Gender norms indicators are inherently relational, as they capture women's perception of their role in the marriage and intimate partner relationships. Arguably, the questions on HIV behaviour and perceived financial contributions to the household capture a more individuated aspect of MRwO, highlighting the independent component of decision-making around HIV, even as this by necessity interacts with others' decisions, and the individuated nature of women's contribution to the household, highlighting the connection between her independent role as an earner and her relational role as a member of the household.

Conservative gender norms load positively on the MRwO factor, suggesting that more progressive gender norms are positively associated with MRwO; and both the sexuality and the financial and HIV-related items load negatively⁵³. This pattern captures a negative acceptance of MRwO, reflecting a notion of 'power over' as a form of coercion (Kabeer 1999), rather than control over one's own circumstances and projects (Ibrahim and Alkire 2007; Rowlands 1997), consistent with the idea of abuse as an extensive exercise of "coercive control" (Stark 2007).

Removing the HIV-risk and the financial contribution items increases the internal consistency of the factor, not only increasing alpha from 0.81 to 0.83, but also improving the inter-item correlation factor by 27%, bringing it to 0.30. The Keiser-Meier Ohlin measure of sampling adequacy increases from 0.71 to 0.78. Sub-factor analysis suggests a three-factor structure for both versions of the factor, explaining 81% of the variance in the extended version, and 90% in the reduced. The internal consistency of the reduced factor is slightly higher. Keeping the HIV risk and financial indicators effects a small change in consistency for the MRwO factor, and most importantly determines a change of sign in the factor loadings, while keeping consistency across groups. This suggests that keeping the HIV-risk and financial contributions items, despite their high uniqueness values, only marginally reduces the factor's internal consistency, while keeping the

⁵³ Note: these are 0/1 dummies and are coded 1 if the statement in the table is true. This implies that all the gender norms items are coded 1 for the more disempowering view, while the sexuality and HIV awareness variables are all coded so that 1 reflects higher levels of empowerment.

individuated dimension in the empirical measure of MRwO is consistent with the thesis that all measures of EUD have both an individuated and a relational component.

Overall factor structure

The FA supports the hypothesis of three distinct factors (Table 5.4). The Pearson coefficient suggests that all three dimensions are correlated with the overall EUD construct, and that MRwO is correlated to both autonomy and EM, while the correlation between autonomy and EM is very low and fails to attain statistical significance.

Table 5.4 IMAGE Factor Analysis – correlations between factors

	Eudaimonic Utility	Autonomy	Meaningful relations with others
Autonomy	0.5909*		
p-value	p<0.001		
Meaningful relations with others	-0.8679*	-0.1257*	
p-value	p<0.001	p<0.05	
Environmental Mastery	0.6916*	0.0429	-0.1574*
p-value	p<0.001		p<0.005

These results lend support to the view that eudaimonic utility is a single construct, and is also articulated in the three sub-dimensions of autonomy, EM and MRwO.

Each dimension reflects characteristics of both related and individuated self-construal (Brewer and Gardner 1996; Suh *et al.* 1998), further supporting the hypothesis that an individuated concept of autonomy is insufficient to capture the psychological ramifications of agency, and supporting instead the use of a multidimensional measure of wellbeing that captures both relational and individuated views of the self to account for *milieux* where both may be salient.

Discussion

In sum, the battery of impact outcomes in the IMAGE database capture concrete norms and choices (e.g., decision-making on household matters, gender norms, etc.) whose joint distributional patterns at baseline suggest that three underlying factors may be sufficient to summarise them (Armitage *et al.* 2001). These patterns reflect women's perception of self as both interrelated and independent, further supporting the relevance of an interdependent self to women's identity construct (Coulthard 2012; Deneulin and McGregor 2010; McGregor *et al.* 2009). Women's identity is reflected in women's concept of wellbeing (Bourdieu 1984; Lahlou 2008) and should inform the concept of

utility (Bruni 2010), given it informs women's perception of their agency and provides the rationale for their choices (Akerlof and Kranton 2010).

The IMAGE indicators – widely used for the evaluation of empowerment interventions – map onto the three dimensions of eudaimonia: autonomy is mostly characterised by decision-making indicators that accentuate individuated choice, MRwO mostly by gender norms indicators that highlight relational positioning and socially-defined roles; EM by indicators of control and violence, which capture the limitation of power by virtue of external factors. These patterns suggest that the use of EUD to support the selection of empowerment indicators for impact evaluation would contribute to the identification of the appropriate concrete domains for measurement highlighting, for example, if one or other of the eudaimonic dimensions is not covered by the domain-specific items. A unidimensional measure of happiness would not provide this type of information, supporting Sen's assertion that "there is more to agency than wellbeing" (Sen 1985), especially if wellbeing is exclusively measured as happiness.

However, empowerment indicators currently used in the field to appraise empowerment interventions, while quantifying some salient features of the three EUD dimensions, fall short of fully reflecting them. The data in this sample suggested a strong internal consistency of the factors; however, the uniqueness of many of the items still remained high. This may be explained by the fact that the choice of indicators was not originally designed to capture a set of underlying socio-psychological constructs, but only discrete areas of functionings. It may also be due to the limited scope for domain-specific perceptions to fully transfer to higher-order dimensions, as in the case self-efficacy (Bandura 1995), where the converse is instead true (Bandura 1989). These considerations suggest there may be advantages to introducing indicators for the evaluation of policies that not only reflect the domain-specific policy goals (such as improving financial security for the household, for example), but also capture underlying aspects of eudaimonic wellbeing. Having harmonised sets of indicators that measure dimensions of progressive generality would contribute to testing these hypotheses, and provide policy makers and researchers with a clearer idea of policy impact on individuals' EUD and wellbeing more generally.

Burundi-VSLA

This section reports results from the FA of the baseline Burundi-VSLA data to attribute the indicators to the relevant eudaimonic dimensions for the interpretation of results. This analysis has two motivations: first, some of the items measured in the Burundi-VSLA

study were not measured for IMAGE, and may therefore be incorrectly attributed without conducting a FA; second, replicating the analysis on the Burundi data further probes whether the general categories of eudaimonia explain variation in the empowerment indicators as expected, and thus constitute an initial test of generalizability of findings (DeVellis 2003, 137; Roche 2008).

Calculations are performed on the entire sample of both men and women, to ensure the relevance of the FA patterns to the econometric analysis. A limitation of this dataset, however, is a non-negligible amount of missing data points due to non-response: the pattern of missing data at baseline implies that doing the FA on all 42 items in Table 5.2 restricts the sample to 52 individuals only. This is too small a sample for results to be deemed stable and generalizable (DeVellis 2003, 137). I therefore also run the analysis on a restricted set of items, based on the patterns of missingness I observe in the data. I identify the items that are missing most frequently and whose missingness pattern overlaps the least with other indicators (i.e. is non-nested within other patterns), so as to minimise the number of individuals dropped from analysis. This implies I exclude most dispute resolution (Table 5.2a) and all women's rights items (Table 5.2c) – eight in total. This leaves a sample of ninety-five individuals and a ratio of three items per person – still small, but closer to acceptable levels. I further test the factors I derive from this analysis with factor-specific FA to test whether it yields further sub-factors, and for reliability and internal consistency with Cronbach's alpha and a test of inter-item correlations. Both these tests further probe whether each factor can effectively be considered one single construct. All these sub-factor analyses are computed on much larger samples of between 120 and 386 individuals, enhancing the reliability of findings. Finally, as a further robustness check, and for greater comparability with the IMAGE sample, I also run the analysis on the restricted set of items on women only. In the remainder of this section I refer to the analysis on the reduced items list as the main analysis; the women-only sample is analysed on this shorter list only, and to the analysis on all items in Tables 4.2a-2c as the analysis on the full list of items. Results for women and on the full list are generally consistent with main results and with IMAGE; below I discuss relevant discrepancies and rationales behind assigning each set of indicators to a eudaimonic dimension for the analysis of impact in the chapters that follow.

Results

The analysis with three iterated principal factors assigns eigenvalues of 2.4 to EM, 2.7 to autonomy and 4.6 to MRwO. The Kaiser-Meyer-Olkin measure of sampling adequacy is

only 0.67. The log likelihood for the three-factor model is -260.2; with the six-factor model yielding only a small improvement on this, and all models with more than six factors being Heywood cases, i.e. cases with very high levels of uniqueness, which implies that no common structure is likely to be present. The three factors explain 46% of the variance. Considering all factors with eigenvalues greater than 1 would explain 64% but would hamper interpretability, as well as including Heywood cases. In general, the indicators cluster in conceptually meaningful ways around the three key dimensions of eudaimonia, and I prioritise interpretability over model fit in this case, given the first three factors explain almost half the variance, and given the well-defined nature of the conceptual framework of eudaimonia (Armitage *et al.* 2001).

Oblique rotation to improve interpretability induces moderate correlation among the factors: it is negative between EM and the other factors, and positive between autonomy and MRwO. The internal consistency of the item list is high, with Cronbach's alpha at 0.84. This, however, may be explained by the high number of items in the list that inflate the value of alpha, rather than effective internal consistency, as the low average inter-item correlation (0.16) suggests.

Table 5.5 presents factor loadings from the oblique rotation of the three-factor model, and broadly confirms the patterns found in IMAGE for the indicators the two evaluations have in common.

Similarly to the IMAGE data, gender norms load on the first factor, capturing MRwO; factor loadings indicate that both gender norms biased against women and beliefs regarding the legitimacy of beating one's wife are negatively correlated to MRwO⁵⁴. Violence indicators load positively on the EM dimension, suggesting that the EM dimension captures a negative form of 'power over'. All decision-making indicators load positively onto the autonomy factor. In contrast to IMAGE, where decision-making (DM) authority is measured by binary indicators of independent autonomy versus no autonomy, in the Burundi data the DM questions are inherently relational. This is because they are designed to measure the degree of cooperation within the household and measure autonomy on a relational scale that may also include absence of co-operation.⁵⁵

⁵⁴ Both sets of indicators are coded so that more disagreement with the statement is assigned higher values, hence the discordant sign in the table.

⁵⁵ The lowest score corresponds to 'I decide alone (or my spouse decides)', and the highest to 'we decided together'.

Table 5.5 Burundi Factor Analysis

Variable	Environmental Mastery	Autonomy	Meaningful Relations with Others	Uniqueness
woman has been physically hurt	0.0427	-0.0667	0.5404	0.6940
woman has been insulted	0.0615	0.0591	0.7297	0.4870
woman has been threatened	-0.0771	-0.1511	0.3393	0.8241
woman has been screamed at	0.0133	0.0269	0.6602	0.5724
total hit score	-0.0684	0.0468	0.8470	0.2790
how money is spent spouse decides	-0.0209	0.5290	0.0875	0.7350
daily household purchases spouse decides	-0.1171	0.6875	0.0513	0.5581
large household purchases spouse decides	-0.0547	0.5701	-0.1127	0.6481
alcohol & cigarettes spouse decides	0.1898	0.3370	-0.0112	0.8211
visit family & friends - spouse decides	-0.0781	0.4685	-0.2888	0.6574
visit spouse's family & friends - spouse decides	-0.0134	0.5328	-0.1714	0.6532
how many kids spouse decides	0.1527	0.5314	0.1232	0.6756
have sex spouse decides	0.2281	0.3470	-0.0178	0.7901
daily household purchases disagree: spouse changes	0.0809	0.2396	0.0166	0.9472
large household purchases disagree: spouse changes	0.0468	0.1305	-0.1468	0.9294
women should do as men say	0.2948	0.2215	0.0198	0.8391
wife should give money she earns to husband	0.2147	0.0202	-0.0248	0.9495
okay for husband to abandon wife if he wants	0.5240	0.0553	0.0591	0.7154
woman's job to gather water, even if unsafe	0.4853	0.2542	0.0030	0.6480
women should have sex when husband wants	0.3947	0.2816	-0.0527	0.7039
women should have as many kids as husband wants	0.3577	0.2441	-0.1315	0.7336
okay to beat wife if goes out w/out telling husband	-0.7024	0.0524	-0.0156	0.5217
okay to beat wife if neglects kids	-0.6586	-0.0111	-0.1082	0.5691
okay to beat wife if argues w/ husband	-0.7244	0.1544	0.0820	0.4829
okay to beat wife if refuses sex	-0.7990	-0.0277	0.0575	0.3363
okay to beat wife if burns food	0.6885	-0.0710	-0.0291	0.5368
okay to beat wife if does something annoying	0.5913	-0.0144	-0.0974	0.6309
okay to beat wife for any reason	-0.6192	0.0524	-0.0966	0.6308
never okay to beat wife	-0.4286	-0.1844	-0.0712	0.7563

1 The paragraphs below describe the remaining items that load on each factor, and highlight
2 differences, if any, from the IMAGE results.

3 **Factor 1: Meaningful Relations with Others-**

4 Together with gender norms, tolerance of (physical) violence loads on the dimension of MRwO.
5 These findings are consistent with the a-priori prediction I made at the beginning of this chapter,
6 based on the idea that items capturing aspects to do with Cummin's domain of intimacy (1996)
7 would load on the MRwO factor. The items on tolerance of physical violence (not measured in
8 IMAGE) capture whether acts of physical aggression toward one's wife are considered acceptable.
9 They therefore also imply social norms that define women's role as subordinate in marital
10 relationships, explicitly capturing a (limiting) form of MRwO. They load negatively, bar two, on
11 the MRwO dimension, indicating agreement with the view that women in a subordinate position
12 to their husband have low MRwO. This pattern is also observed in the full dataset, except for one
13 item⁵⁶ that loads on autonomy, as well as in the women-only sample, where exactly the same items
14 load on the MRwO factor.

15 Factor analysis on the 13 MRwO items is computed over 386 individuals increasing the likelihood
16 of a stable result generalizable (DeVellis 2003, 137), and yields only one factor with eigenvalue
17 greater than one (16), and an overall measure of sampling adequacy of 0.87. Cronbach's alpha is
18 high at 0.84 and the inter-item correlation is also fair at .3, suggesting a good degree of
19 cohesiveness among the items. These consistent findings across the multiple datasets (Roche
20 2008), and their agreement with the a-priori prediction lend further support to the idea that norms
21 on gender roles, and on tolerance of physical violence in Burundi, form one coherent MRwO
22 factor.

23 **Factor 2: Autonomy**

24 The autonomy factor collects all DM and one of the two dispute resolution indicators. This is
25 consistent with my a-priori prediction on this factor. It allows for self-construal to range between
26 individuated to relational, given these indicators measure the DM and dispute resolution styles
27 between spouses, ranging from independent to co-operative. The women-only sample also loads
28 most DM items on autonomy, and includes both available dispute resolution items. Analysis on
29 the full set of items generally confirms the loading of the DM items, even with a restricted sample
30 size of 52 individuals, and dispute resolution items straddle this and the EM factor.

31 However, dispute resolution items reflect available autonomy-related psychological questions
32 (Abbott *et al.* 2010). In the FA analysis for each of the two factors, the dispute resolution item

⁵⁶ That women should have sex when the husband wants.

1 attributed to autonomy is better correlated to the rest of the autonomy items than the dispute
2 resolution in the EM factor is with its own related items across measures of both factor
3 cohesiveness and reliability. On these grounds, I assign the dispute resolution items to autonomy
4 in the analysis of impact.

5 The FA on autonomy only is computed over 120 individuals for 10 items, yielding a 12 to 1 ratio
6 of indicators per person, which is considered more than acceptable to obtain stable solutions and
7 for generalizability purposes generalizable (DeVellis 2003, 137). It confirms the presence of only
8 one factor: only the first factor has an eigenvalue greater than 1 (2.5). Cronbach's alpha scores
9 0.78; and the average inter-item correlation is at 0.26, higher than for the whole battery of items.
10 The fact that there is only one factor with eigenvalue greater than one, accompanied by a slight
11 reduction in alpha, and an increase in the inter-item correlation suggests that this set of items may
12 be considered a single factor. This evidence from the two datasets, and relevant subsets,
13 consistently suggests that the DM and dispute resolution indicators are mostly explained by the
14 autonomy factor, as originally predicted.

15 Factor 3: Environmental Mastery

16 Together with the dispute resolution indicator on large financial decisions, the EM dimension
17 collects all violence indicators, which load positively. The loading of the violence indicators is in
18 line with my a-priori prediction, and consistent with IMAGE findings. I could not test the
19 hypothesis on items regarding women's rights, given the paucity of observations available. The
20 negative loading of the dispute resolution item further supports the hypothesis that in these data,
21 too, the EM has a negative acceptance of coercive control. Violence interferes with the creation
22 of an environment conducive to one's development. It is a negative form of '*power over*' (Kabeer
23 1999). Conversely, individuals who successfully manage to resolve disputes when co-operative
24 DM fails are better able to realise their projects or aims, and can exercise constructive control over
25 their lives. Analysis of the full set of items loads both the violence and all the dispute resolution
26 items on the EM factor, while the women only sample confirms the violence items, but loads the
27 dispute resolution items on autonomy. The consistent finding across this and the IMAGE dataset
28 is the loading of the violence indicators. This, together with the very low correlation this item
29 exhibits with the rest of this scale generalizable (DeVellis 2003, 98), and the high loading it has
30 on the autonomy factor, lead me to consider it as an autonomy item for the purposes of the impact
31 analysis.

32 More generally, the EM-specific analysis is computed over 252 individuals for 6 factors, yielding
33 a ratio of 42 individuals per item. That only one factor has eigenvalue greater than 1 supports the
34 hypothesis that this is one single factor. Its alpha is lower than other factors (0.68), but an average

1 inter-item correlation in line with the other factors (0.27), suggest a similar degree of cohesiveness
2 and reliability, given the much lower number of items. In sum, the EM factor captures a negative
3 form of ‘power over’ as expressed chiefly by the experience of violent behaviour, consistent with
4 IMAGE findings, and a-priori hypotheses.

5 **Overall factor structure**

6 The Pearson coefficient of correlation among the dimensions in this dataset shows that all three
7 dimensions exhibit a strong and significant correlation with the EUD construct (Table 5.6).
8 Autonomy is also significantly correlated to both EM and MRwO, while MRwO and EM are not
9 associated.

10 Similarly to the IMAGE results, these patterns support to some degree the hypothesis that
11 eudaimonic utility as measured by the available empowerment indicators is a single construct. The
12 associations between dimensions differ, however, with EM here associated with autonomy rather
13 than MRwO. This may be explained by the fact that in this dataset the EM and the autonomy
14 factors account for the dispute resolution items, which ask about strategies to solve conflicts in the
15 DM areas, subsumed under autonomy.

16

17

1 Table 5.6 Burundi Factor Analysis – correlations among factors

	Eudaimonic Utility	Autonomy	Meaningful relations with others
Autonomy	0.6779*		
p-value	p<0.001		
Meaningful relations with others	-0.8411*	-0.2967*	
p-value	p<0.001	p<0.001	
Environmental Mastery	-0.4388*	-0.3814*	0.0406
p-value	p<0.001	p<0.001	0.4196

2

3 *Discussion*

4 Using the Burundi data, this section has replicated the initial test conducted on the IMAGE data
 5 to investigate whether the latent EUD dimensions explain some of the variation found in data on
 6 domain-specific empowerment. The patterns of association between empowerment indicators and
 7 latent eudaimonic dimensions stay broadly the same across the two samples, providing some initial
 8 support to the generalisability of the concept of eudaimonia. They lend additional support to the
 9 hypothesis that indicators of DM are relevant to socio-psychological dimensions of autonomy
 10 (Ibrahim and Alkire 2007) as are domain-specific items of dispute resolution (Abbott *et al.* 2010).
 11 They also further support the hypothesis that EM in this policy area is mostly quantified as a
 12 negative form of ‘power over’ (Kabeer 1999), and captures an idea of coercive control (Stark
 13 2007). Finally, they provide further evidence that MRwO mostly explains variation in items on
 14 gender norms and implicit gender roles.

15 The key limitation of this analysis is the small sample size due to patterns of missingness across
 16 the list of indicators. I have tackled this limitation by reporting on different sub-sets of the items
 17 list and of the sample to probe the generalizability of initial findings (DeVellis 2003; Roche 2008),
 18 and found all analyses broadly concordant on the findings just described. This is only a first step
 19 in a proper test of generalisability that would require replication on a larger number of more
 20 populous datasets, as well as further triangulation with specific items in measures of socio-
 21 psychological wellbeing.

22 Further, similarly to IMAGE, the high degree of uniqueness displayed by some of the items in the
 23 Burundi data possibly highlights the lack of a cohesive socio-psychological framework underlying
 24 empowerment indicators, as well as potential issues of low correspondence between higher-order
 25 psychological dimensions and domain-specific measures (Bandura 1997). Future research could
 26 further explore these questions both via socio-psychological experiments (Bandura 1989) and by

1 designing surveys alongside interventions that include both existing empowerment indicators and
2 specific items in socio-psychological measures (Alkire 2007).

3 **Conclusions**

4 This chapter has made three key contributions. It has provided an empirical test of the utility theory
5 expounded in Chapter 4, building on Samman (2007) and Alkire's (2005) original investigations;
6 it has contributed to the debate on how domain-specific indicators of functionings may be
7 subsumed under more general wellbeing categories (Hirschberg *et al.* 2001; Lelli 2001; Neff 2007;
8 Schokkaert and Van Ootegem 1990); and has defined a framework of interpretation for the
9 analysis of impact in the two chapters that follow. The following paragraphs first present a
10 summary of findings, and further discuss them in relation to these three areas.

11 Results suggest that EUD can contribute to explaining variation in empowerment indicators,
12 yielding patterns that are consistent with prior theoretical findings in relevant strands of literature,
13 as discussed below. In both datasets, indicators of gender norms and on the acceptability of certain
14 social behaviours loaded on the MRwO dimension. This is consistent with the hypothesis that
15 MRwO captures, at least in part, the roles individuals play in their social environment, and not
16 only in terms of the emotional ties individuals perceive they have with others (Abbott *et al.* 2010;
17 Ryff 1989) – a hypothesis more consistent with an individuated concept of self.

18 Indicators of DM loaded on the autonomy factor, further supporting a vast amount of research that
19 connects this specific set of functionings to autonomy. The evidence I produce here contributes
20 considerations on how dispute resolution-related functionings also contribute to measuring this
21 dimension, as suggested by psychological classifications (Abbott *et al.* 2010); and on the relevance
22 of the relational component of autonomy, not often investigated, even when acknowledged
23 (Ibrahim and Alkire 2007). I have also shown that, though imprecisely, these dimensions are
24 already measured with indicators at our disposal, if analysed in an appropriate framework.

25 Finally, the two datasets consistently suggest that the EM dimension contributes to explaining
26 violence and controlling behaviour outcomes, supporting recent contributions in the domestic
27 violence literature that domestic abuse manifests as a pattern of consistent “coercive control”,
28 attained through both low-impact controlling behaviours, as well as sporadic episodes of explicit
29 violence (Stark 2007). This is an important element to bear in mind in the investigation of the
30 mechanisms behind intervention impact, and more generally in IPV dynamics.

31 More generally, this chapter is complementary to Samman's and Alkire's work on wellbeing
32 measures compatible with a CA approach because it provides an empirical test of the wellbeing-
33 founded utility measure I proposed in Chapter 4. This chapter has done this in two steps: it has

1 first established conceptual links between domain-specific empowerment indicators, and then
2 tested these initial hypotheses with FA. It has used Cummins' (1996) QoL domains to link the
3 domain-specific items to the global EUD dimensions, introducing an intermediate degree of
4 generalisation that provides the rationale for the attribution. This exercise assigned indicators of
5 material wellbeing, role in the family and relation to the partner to the dimension of autonomy,
6 chiefly capturing DM (Ibrahim and Alkire 2007) and dispute resolution indicators, plus some on
7 individuals' contributions to the household economy; it assigned indicators of safety and health to
8 the EM dimension, capturing items to do with control and violence, as well as health decisions,
9 consistent with the idea that domestic abuse is played out as a multidimensional pattern of control
10 (Stark 2007). Finally, it assigned the domain of intimacy as measured by one's role in the family
11 through gender norms to the dimension of MRwO, including indicators of social norms on gender
12 roles and the acceptability of gender-related social behaviours. This initial set of hypotheses
13 provided a structured background against which I conducted FA on the empowerment indicators
14 from the IMAGE and Burundi-VSLA interventions. This exercise contributes concrete hypotheses
15 on how abstract socio-psychological dimensions relate to domain-specific items, in addition to
16 identifying abstract wellbeing domains (Samman 2007); it also provides hypotheses on
17 correspondences between empowerment indicators and socio-psychological dimensions of
18 wellbeing beyond autonomy (Ibrahim and Alkire 2007).

19 The second step tested these initial hypotheses on two datasets resorting to FA, and also
20 contributes to the empirical debate in the CA literature on the correspondences between wellbeing
21 and functionings. These investigations use an array of multivariate techniques, including FA
22 (Roche 2008). Consistent with these contributions, I find that a multidimensional measure of
23 wellbeing is necessary to capture the impact of functionings on individuals' wellbeing (Hirschberg
24 *et al.* 2001; Neff 2007; Roche 2008; Schokkaert and Van Ootegem 1990): all my FA investigations
25 yield multifactor structures and, using both empirical evidence and theoretical insights (Armitage
26 *et al.* 2001), I discuss how the three-dimensional measure of EUD provides a useful structure for
27 the interpretation of the variation in empowerment indicators.

28 The originality of my contribution in relation to this literature is that I apply this investigation to
29 empowerment indicators, an area contiguous with, but distinct from, existing investigations on
30 standards of living (Lelli 2001), and functionings for vulnerable categories (Schokkaert and Van
31 Ootegem 1990); and that it contributes to studies investigating these correspondences at the micro
32 level (Lelli 2001; Roche 2008) rather than at the macro-level (Hirschberg *et al.* 2001).

33 Further, I provide an a-priori substantive interpretation of the wellbeing measure – the concept of
34 eudaimonic utility – that in turn stems from the conceptual critique of socio-psychological and

1 economic theories elaborated on in Chapter 4. This is in contrast to the empirical CA studies I am
2 aware of that instead provide an ex-post interpretation of the WB dimensions that result from their
3 analyses (Hirschberg *et al.* 2001; Lelli 2001; Neff 2007; Roche 2008). In turn, this implies that
4 the wellbeing dimensions they identify are fairly specific and could not be used to populate an
5 abstract concept of utility to be applied to a variety of policy settings, unlike the concept of EUD.

6 Finally, in this chapter I have conducted the same FA on two separate datasets to provide an initial
7 test of the applicability of the EUD concept to different contexts and sets of data. Replicability is
8 one of the key challenges of empirical investigations and a necessary step toward the
9 generalizability of findings (DeVellis 2003; Roche 2008). Results from my investigations suggest
10 that the initial findings from the IMAGE dataset are replicated in the Burundi-VSLA data,
11 providing initial evidence for the general applicability of the EUD construct.

12 This analysis suffers from two key limitations: one is data driven, and connected to the fact that
13 patterns of missingness in the Burundi data did not allow for a satisfactory sample size. I have
14 attempted to deal with this shortcoming by repeating the analysis on different sub-sets of
15 indicators, and different subsamples, but this analysis still suffers from limits of self-selection and
16 small sample size. The other is the large hiatus between the latent measures of WB I consider and
17 the domain-specific empowerment indicators. I have attempted to bridge this gap with specific
18 QoL domains (Cummins 1996) that would justify the attribution of the domain-specific indicators
19 to the latent WB dimensions. However, the ComQoL and Cummin's classification are based on
20 data from North America and Europe, and therefore not necessarily reflective of all the domains
21 that would be relevant in the contexts I study. Ideally, future research will take measurements of
22 psychological wellbeing alongside measurements of empowerment, to establish these associations
23 more clearly.

24 In sum, this chapter has yielded an initial systematic assessment of how the EUD framework may
25 contribute to explaining empowerment outcomes, as well as highlighting areas for future
26 improvement for similar exercises. The associations identified in this chapter inform the analysis
27 of intervention impact in the next two chapters and provide the rationale for the interpretation of
28 the mechanisms behind impact.

29

30

31

1 **Chapter 6 Impact on Empowerment and Intimate Partner Violence: the**
2 **IMAGE Intervention in South Africa**

3 **Introduction**

4 Intimate partner violence (IPV) has been found to be associated with poverty (Vyas and Watts
5 2009), unequal gender relations in the household (Jewkes 2002; Wood and Jewkes 1997) and
6 gender norms that see women as subordinate to men (Heise 1998; Schuler *et al.* 1996). The
7 association with financial independence is less clear (Vyas and Watts 2009), with some
8 investigations reporting negative associations (Goetz and Sen Gupta 1996) others positive (Pronyk
9 *et al.* 2006), and others mixed (Koenig *et al.* 2003b; Schuler *et al.* 1998).

10 **Intimate partner violence in South Africa**

11 This chapter investigates whether access to financial services coupled with health and life-skills
12 talks is effective in preventing IPV in South Africa, looking at the combined effect of improved
13 financial access and soft skills.

14 To this aim, it revisits estimates from the IMAGE study (Pronyk *et al.* 2006), conducting
15 robustness checks on the original estimates. It finds that revisited estimates seem to provide
16 support for Lundberg and Pollak's (1993) separate-spheres bargaining model of intra-household
17 allocation: following the intervention women make more autonomous decisions, retain their
18 income and experience lower levels of violence, a pattern consistent with a separate-spheres
19 equilibrium, as also shown in other research (Anderson and Eswaran 2009). From a eudaimonic
20 perspective, it finds women developed an individuated form autonomy, making more independent
21 decisions on the management of household goods, experienced an improvement in the sphere of
22 relatedness (MRwO), developing more egalitarian gender norms, and an increase in their sense of
23 environmental mastery (EM) through retaining control over their own income and suffering less
24 controlling behaviour from their husbands. This is consistent with theories that see IPV as a pattern
25 of coercive control (Stark, 2007) explicated not only through violent acts, but also through more
26 pervasive acts of control: positive impact on all eudaimonic spheres is associated with a reduction
27 in violence.

28 I revisit the original IMAGE estimates from logistic regressions of follow-up data. As the reader
29 may recall, for villages randomly assigned to treatment, the IMAGE database only contains
30 information on takers, so that estimates are takers' averages (odds) vs averages (odds) from a
31 random sample of individuals in the control villages, matched on age (Pronyk *et al.* 2006). By
32 computing difference-in-differences estimates that are robust to the time-invariant characteristics
33 underlying the self-selection mechanism (Johnston and DiNardo 1997, p. 397) that affects the

1 data, I tackle the self-selection problem within the constraints of available data. I first reproduce
2 the original estimates, and show how these progressively change as I first include more controls
3 for baseline imbalances, and finally compute D-i-D estimates. Results suggest that the estimated
4 IPV reduction originally reported in *The Lancet* (Pronyk et al, 2006) is robust to various
5 specifications of the model. It records an average reduction of .053 in my OLS D-i-D calculations
6 (Table 6.3a), essentially unchanged from the marginal effect of -.0589 corresponding to original
7 results (Table 6.3b). However, controlling for individual fixed effects causes the estimate to lose
8 significance.

9 Further, in interpreting results patterns, I refer to economic models of intra-household allocation
10 that interpret the bargaining as a non-cooperative game (Chen and Woolley 2001), and find that
11 the data is consistent with the hypothesis that the intervention increases women's reservation
12 utility by creating scope for a *potential* increase in their earnings (Pollak 2005), thereby increasing
13 their bargaining power relative to their partner, in turn this implies that – even if women cannot
14 (and do not⁵⁷) divorce and make use of their outside option, the possibility of enforcing a non-
15 cooperative equilibrium within the marriage, where they retain their income, is sufficient to
16 increase their (independent) autonomy, consistently with evidence from elsewhere (Anderson and
17 Eswaran 2009; Goetz and Sen Gupta 1996; Kabeer 1997), and attain sizeable reductions in
18 violence.

19 Finally, in terms of eudaimonic utility (EUD), these results suggest that improvements in all
20 spheres of EUD lead to a reduction in exposure to IPV. Specifically, the development of an
21 individuated form of autonomy, sustained by an increased sense of mastery in the use of her own
22 resources, and beliefs in more egalitarian gender norms are associated with a reduction in the
23 exposure to IPV, even in the absence of effective changes in income. This seems consistent with
24 theories of coercive control, where the key explanation for violence does not reside in actual
25 income earned, nor in income differentials, but rather on the degree of control the male partner
26 exercises on the woman's resources, be these income or time. The fact that income per se has not
27 changed, and reductions in violence are accompanied only by changes in women's bargaining
28 power and eudaimonic functionings is suggestive of the fact that a change in the power dynamics
29 is sufficient to bring about a reduction in IPV, even in the absence of a change in income.

30 The next section describes predictions of outcomes based on both the economic model of reference
31 and the nature of the intervention. I then report results from the impact evaluation: I first report

⁵⁷ Five out of 144 (3.5%) married women in the control group and 7 out of 161 (4.4%) of treated women move from being married at baseline to being separated or divorced at follow up. This difference is not statistically significant. Women who separate or divorce represent 1.2% of the entire control and 1.6% of the treated group respectively.

1 original IMAGE estimates, discussing limitations of the model and randomisation design. In light
2 of these, and given data availability, I propose OLS D-i-D as alternative estimates to at least
3 partially overcome the self-selection problem in the data, caused by the fact that only women who
4 decided to take up the intervention were interviewed. The OLS D-i-D estimator accounts for any
5 time-invariant difference that may exist between the two groups (Meyer, 1995) related, e.g., to the
6 fact that the women in the intervention group had all decided to take up the treatment. For example,
7 they could have been more entrepreneurial, on average, than control women, and this, in turn, may
8 have affected the impact of the intervention. These form the main set of results and are discussed
9 in light of current theories of IPV in sociology and economics; the chapter concludes by
10 highlighting limitations of the current analysis, summarizing the patterns observed in the results,
11 and introducing the Burundi intervention in relation to these.

12 Models of Reference and Predictions

13 IMAGE was designed as a structural public health intervention, i.e. an intervention tackling the
14 environmental causes of IPV (Heise 1998), rather than the individual level, behavioural causes
15 (Hargreaves *et al.* 2002). It takes the form of an MF-plus intervention, and in this sense reflects
16 the concerns of development and sociology scholars who argue that narrow forms of economic
17 empowerment may harm rather than benefit victims, because they do not tackle the psychological
18 power dynamics behind IPV (Johnson and Ferraro 2000; Kabeer 1998; Koenig *et al.* 2003a;
19 Mayoux 1999; Schuler *et al.* 1998).

20 IMAGE was designed to test whether the MF-plus package can reduce the incidence of IPV for
21 women. Because its counterfactual (the control group) receives no intervention of any kind,
22 IMAGE per se does not test whether including life-skills training benefits recipients over and
23 above access to MF. More generally, from the perspective of economic models of the household,
24 IMAGE can be interpreted as an exogenous shock to women recipients that, by providing
25 improved income and life-skills prospects, increases women's bargaining power. This work tests
26 whether it leads to reduced IPV via women's ability to enforce the threat point of a separate-
27 spheres non-cooperative equilibrium (Anderson and Eswaran 2009).

28 Other studies based on cooperative models, where spouses jointly negotiate resource allocation,
29 have found that exposure to labour market shocks that improve women's ability to sustain
30 themselves in the event of leaving the relationship increase women's level of empowerment
31 measured as the percentage of household resource use decisions (Majlesi 2012), and domestic
32 violence (Aizer 2010), and that the impact on violence is mediated by women's initial bargaining
33 power as captured, e.g., by age at marriage, or education (Heath 2014). However, these models

1 assume that spouses make joint decisions, women are able to maintain control over their wages,
2 and divorce is easily attainable. In the case of IMAGE these conditions may not attain.
3 The idea behind non-cooperative models is instead that couples may not co-operate. In this case,
4 it is plausible to posit that women start from an equilibrium where they have made initial
5 commitments in the marriage market through traditional forms of marriage that define gender roles
6 a-priori⁵⁸, and entered a marriage characterised by a separate-spheres non-cooperative equilibrium
7 (Anderson and Eswaran 2009; Lundberg and Pollak 1993; Pollak 2005) where their role is
8 subordinate to their husbands. By focusing on economic empowerment and fostering an
9 individuated form of agency, the programme aims to change women's bargaining power relative
10 to their husbands, and shift the household to a new separate-spheres non-cooperative equilibrium
11 where women act according to a new set of women-friendlier gender norms that enable them to
12 make decisions independently of their partner and are, contrary to the initial equilibrium,
13 beneficial for their own development. The intervention does this by encouraging women to
14 develop an individuated form of autonomy and more a more egalitarian view of gender roles,
15 besides providing them with access to micro-loans.

16 Notably, if economic empowerment failed to materialise as a consequence of the intervention, this
17 test would have two implications. From a eudaimonic perspective, it would be suggestive of how
18 important psychological empowerment – in the form of boosting women's individuated agency –
19 can be in reducing IPV, despite no change in economic circumstances; from the perspective of
20 modelling intra-household bargaining outcomes, it would reveal a pure reservation utility effect,
21 i.e. the pure effect of the improvement in bargaining power the women experience as a result of
22 being randomised to an intervention that improves their earning potential (Pollak 2005).

23 **Impact Estimates Results⁵⁹**

24 The remainder of this chapter presents the results from the impact evaluation of the intervention,
25 after assessing randomisation success.

26 **Verifying Randomization**

27 Assuming randomization was successful, I would expect no significant difference in pre-
28 programme socio-demographic and outcome measures between treated and control villages.

29 Among the baseline measures of the outcomes I investigated (presented in Table 6.1), only three
30 record differences between control and intervention groups at or below the 5% significance level.

⁵⁸ 95% of respondents married following the payment of a bride-price.

⁵⁹ Note: the first paragraph in this section, and the sections entitled 'Verifying Randomisation' and 'OLS difference-in-differences' are from Iyengar and Ferrari 2010.

1 Given the large number of outcomes considered, it is not surprising to find a few cases of statistical
2 differences at baseline.

3 One of these cases is from the group of indicators that measure attitudes to social norms. Women
4 in the non-participant group revealed themselves as more progressive than women in the
5 discussion sessions, on average disagreeing more with the proposition that women should do all
6 household chores. They also reported a more progressive attitude of the partner in relation to the
7 woman's seeking health care for herself; partners of women in the control group are on average
8 reported as expecting them to ask for permission less often than the partners of the women in the
9 intervention group. However, women in the control group disagree more at baseline with the
10 proposition that wives are entitled to refuse sex if they are worried that their partner may have
11 AIDS.

12

1 Table 6.1a Outcome Variables Baseline Values

		Baseline Outcome Variables							
		Control		Intervention		Summary			
		N	Mean	sd	N	Mean	sd	Diff	t
Autonomy	132	-0.16	2.1	153	-0.03	2.1		-0.12	-0.49
Small purchases self, ask partner	137	0.43	0.50	158	0.41	0.49		0.03	0.44
Large purchases self, ask partner	137	0.19	0.39	158	0.24	0.43		-0.051	-1.1
Small purchases hh, ask partner	137	0.8	0.4	158	0.87	0.33		-0.078	-1.8
Medium purchases hh, ask partner	135	0.41	0.49	158	0.36	0.48		0.047	0.82
Large Purchases hh, ask partner	137	0.1	0.3	158	0.1	0.3		0.001	0.026
Taking children to hospital, ask partner	135	0.59	0.49	156	0.6	0.49		-0.004	-0.061
Visit family of birth, ask partner	137	0.31	0.47	156	0.26	0.44		0.057	1.1
Visit friends in the village, ask partner	137	0.58	0.5	157	0.6	0.49		-0.022	-0.40
Visit family or friends o/s vlg, ask partner	137	0.20	0.40	157	0.23	0.42		-0.032	-0.70
Confident the house would survive a crisis	356	2.2	0.91	384	2.1	0.92		0.1	1.5
Confident she could feed house alone	356	2.3	0.95	384	2.1	0.93		0.15	2.2
Hers is main non-monetary contr to hh	358	0.94	0.24	384	0.97	0.16		-0.035	-2.3
Meaningful Relations with others	69	0.3	1.9	187	0	2.1		0.3	1.1
Women should do all hh chores	360	1.7	0.44	379	1.7	0.47		0.082	2.5
If paid lobola, wife must obey	360	1.7	0.48	380	1.6	0.49		0.039	1.1
Wife asks condom, disrespectful	347	1.8	0.39	370	1.8	0.38		-0.009	-0.3
Wife asks condom, sleeps around	346	1.8	0.39	369	1.8	0.4		0.015	0.52
Man has g-friends, must tolerate	361	1.8	0.4	378	1.8	0.38		-0.019	-0.68
Wife must not divorce	359	1.7	0.46	377	1.7	0.46		-0.004	-0.13
Hers is main monetary contr to hh	98	0.90	0.30	269	0.96	0.20		-0.061	-1.85
Ok to refuse sex if not want	358	1.5	0.5	378	1.5	0.5		0.01	0.26
Ok to refuse sex if no condom	351	1.5	0.5	376	1.5	0.5		-0.003	-0.084
Ok to refuse sex if angry for other g-friends	359	1.5	0.5	379	1.4	0.5		0.03	0.82
Ok to refuse sex if worried about AIDS	354	1.5	0.5	380	1.4	0.5		0.044	1.2
Has thought about own HIV risk	243	0.53	0.50	269	0.59	0.49		-0.068	-1.55
Has wanted to do something about it	258	0.49	0.50	273	0.54	0.50		-0.054	-1.24
Has tried to do something about it	258	0.48	0.50	273	0.53	0.50		-0.058	-1.34
Environmental Mastery	42	0.37	1.8	113	-0.16	2.3		0.53	1.5
Partner encouraged to participate outside hh	146	0.48	0.50	163	0.54	0.50		-0.060	-1.1
Partner asks for advice	146	0.58	0.49	163	0.56	0.50		0.018	0.3
Partner keeps from friends	146	0.88	0.32	163	0.87	0.34		0.012	0.3
Partner restricts contact w\family	141	0.93	0.26	160	0.92	0.27		0.010	0.3
Partner insists on knowing where she is	146	0.86	0.35	163	0.82	0.38		0.034	0.8
Partner controls access to health care	146	0.91	0.29	163	0.79	0.41		0.12	3.0
Partner boasts girlfriends	141	0.94	0.23	159	0.92	0.27		0.025	0.85
Partner threatened eviction	141	0.94	0.23	159	0.89	0.32		0.056	1.8
Spend own money - Ask Partner	42	0.95	0.22	114	0.96	0.21		-0.0038	-0.10
Insulted by partner - Past Year Experience	146	0.90	0.30	163	0.87	0.34		0.032	0.88
Pushed by partner - Past Year Experience	147	0.075	0.26	165	0.091	0.29		-0.016	-0.51
Partner hit w\fist - Past Year Experience	147	0.054	0.23	165	0.073	0.26		-0.018	-0.66
Had forced sex w\partner - Past Year Experience	147	0.041	0.20	165	0.036	0.19		0.004	0.20
Had sex for fear of reprisal - Past Year Experience	147	0.048	0.21	165	0.036	0.19		0.011	0.49
Any Violence (Push, Hit, Force sex)	147	0.082	0.27	165	0.12	0.32		-0.034	-1.00
Economic outcomes: gone without the following due to money shortages									
Food	362	0.17	0.38	384	0.24	0.43		-0.071	-2.40
Clothes	358	0.29	0.45	380	0.29	0.45		-0.002	-0.05
School uniforms	296	0.57	0.50	333	0.60	0.49		-0.036	-0.91
School fees	297	0.54	0.50	334	0.57	0.50		-0.031	-0.77
Fuel	362	0.26	0.44	383	0.32	0.47		-0.053	-1.61
Household items	362	0.25	0.43	384	0.32	0.47		-0.066	-2.01
Health care	360	0.40	0.49	371	0.45	0.50		-0.047	-1.30
Has begged in the past year	363	0.74	0.44	385	0.71	0.45		0.029	0.90

1 Of the socio-demographic variables, access to sanitation in the house and access to water differ at
2 the 10% and 5% level of significance between the participant and non-participant group. In an
3 attempt to capture the self-selection mechanism, I also compute women's degree of connectedness
4 as a count of the associations the women report being a member of at baseline. Access to the
5 intervention is granted to groups of five (Yunus 1999), which must be formed by participants prior
6 to joining. It follows that connected individuals are more likely to join than other villagers, and
7 may therefore differ from a random selection – i.e. the group of controls. In turn, more connected
8 individuals may also be individuals of higher socio-economic status, which may influence their
9 likelihood of exposure to violence (Vyas and Watts 2009); and could also be self-starters to a
10 greater degree, which would increase their chances of attaining positive outcomes from
11 participation (Kabeer 1998; Morduch 1999). In the whole sample, connectedness does differ
12 significantly between the two groups at the 1% confidence level, with intervention individuals
13 connected to at least 32% more organisations than controls⁶⁰; however, it does not differ
14 significantly between the women for whom longitudinal data are available.

15 Significant baseline differences were controlled for in the D-i-D regressions and corresponding
16 matching estimates reported in Appendix 3.

⁶⁰ Women were asked to list at most three organisations they were members of, so this may be an underestimate.

Table 6.2 Demographic Baseline Variables

	Control			Intervention			Summary	
	N	Mean	sd	N	Mean	Sd	Diff	t
Age	93	43	9.2	135	45	10.4	-2	-1.5
Marital Status	93	2.1	0.82	135	2.3	0.84	-0.16	-1.4
Parity	93	5.2	2.8	134	5.6	2.8	-0.36	-0.94
Connectedness	99	9.7	2.7	136	10.2	2.3	-0.50	-1.5
Maximum Schooling	98	1.3	0.50	136	1.3	0.50	-0.003	-0.04
Total Asset Value	90	6,268.23	10,079.05	134	4,960.70	9,171.10	1,307.53	0.99
Non-livestock Value	90	4,351.92	8,056.05	134	3,299.69	5,985.25	1,052.24	1.1
Livestock Value	90	1,916.31	5,036.14	134	1,661.02	5,766.69	255.3	0.35
Type of Toilet	98	2.3	0.5	135	2.2	0.38	0.11	1.8
Access to Electricity	98	1.2	0.42	135	1.2	0.36	0.069	1.3
Dwelling Walls Material	98	4.3	1.2	135	4.5	1.3	-0.13	-0.78
Access to Water	96	2.5	1.1	135	3.4	1.5	-0.9	-5.2

At follow up, raw means for both autonomy and meaningful relations with others suggest more progressive attitudes among treated women, compared to controls (Table 6.1b). For environmental mastery, only two controlling behaviours and one violence outcome record a statistically significant difference, though all differences point in the same direction. The five percentage point difference in prevalence of violence is not statistically significant. The control group is less likely to experience shortages, but intervention households beg less frequently. Raw means suggest that most economic outcomes have worsened or remained unchanged for both groups compared to baseline, except for a large reduction in begging for the intervention group.

Table 6.1b Outcome Variables Follow-up Values

	Follow-up Outcome Variables							
	Control		Intervention		Summary			
	N	Mean	sd	N	Mean	sd	Diff	t
Autonomy	132	-1	2	153	0.5	2	-1.5	-6.2
Small purchases self, ask partner	137	0.61	0.49	158	0.79	0.41	-0.18	-3.37
Large purchases self, ask partner	137	0.31	0.47	158	0.48	0.5	-0.167	-3
Small purchases hh, ask partner	137	0.89	0.31	158	0.98	0.14	-0.091	-3.1
Medium purchases hh, ask partner	135	0.63	0.48	158	0.85	0.35	-0.225	-4.5
Large Purchases hh, ask partner	137	0.18	0.38	158	0.35	0.48	-0.179	-3.6
Taking children to hospital, ask partner	135	0.66	0.48	156	0.83	0.37	-0.174	-3.4
Visit family of birth, ask partner	137	0.21	0.41	156	0.52	0.5	-0.308	-5.8
Visit friends in the village, ask partner	137	0.74	0.44	157	0.85	0.35	-0.116	-2.5
Visit family or friends o/s vlg, ask partner	137	0.2	0.4	157	0.43	0.5	-0.229	-4.3
Confident the house would survive a crisis	356	2	0.9	384	1.5	0.8	0.5	8
Confident she could feed house alone	356	2.22	0.83	384	1.7	0.84	0.52	8.4
Hers is main non-monetary contr to hh	358	0.94	0.24	0.91	0.28	0.027	1.4	0.91
Meaningful Relations with others	69	-0.6	2.38	187	0.5	1.88	-1.09	-3.4
Women should do all hh chores	360	1.6	0.49	379	1.7	0.43	-0.141	-4.1
If paid lobola, wife must obey	360	1.6	0.49	380	1.8	0.4	-0.178	-5.4
Wife asks condom, disrespectful	347	1.9	0.36	370	1.9	0.26	-0.074	-3.1
Wife asks condom, sleeps around	346	1.9	0.35	369	1.9	0.26	-0.066	-2.8
Man has g-friends, must tolerate	361	1.8	0.38	378	1.9	0.32	-0.055	-2.2
Wife must not divorce	359	1.6	0.48	377	1.8	0.4	-0.169	-5.2
Hers is main monetary contr to hh	98	0.82	0.39	269	0.87	0.33	-0.057	-1.29
Ok to refuse sex if not want	358	1.5	0.5	378	1.3	0.47	0.177	5
Ok to refuse sex if no condom	351	1.4	0.49	376	1.3	0.45	0.106	3
Ok to refuse sex if angry for other g-friends	359	1.4	0.49	379	1.2	0.43	0.133	3.9
Ok to refuse sex if worried about AIDS	354	1.3	0.44	380	1.2	0.38	0.092	3
Has thought about own HIV risk	243	0.56	0.50	269	0.66	0.48	-0.10	-2.28
Has wanted to do something about it	258	0.53	0.50	273	0.59	0.49	-0.055	-1.27
Has tried to do something about it	258	0.54	0.50	273	0.59	0.49	-0.051	-1.18
Environmental Mastery	42	-0.6	2.7	113	0.1	2	-0.64	-1.4
Partner encouraged to participate outside hh	146	0.64	0.48	163	0.71	0.46	-0.069	-1.3
Partner asks for advice	146	0.63	0.48	163	0.69	0.46	-0.063	-1.2
Partner keeps from friends	146	0.81	0.4	163	0.86	0.35	-0.051	-1.2
Partner restricts contact w\family	141	0.92	0.27	160	0.93	0.25	-0.009	-0.31
Partner insists on knowing where she is	146	0.66	0.48	163	0.79	0.41	-0.128	-2.5
Partner controls access to health care	146	0.79	0.41	163	0.89	0.31	-0.102	-2.4
Partner boasts girlfriends	141	0.94	0.25	159	0.95	0.22	-0.014	-0.5

	Follow-up Outcome Variables							
	Control			Intervention			Summary	
	N	Mean	sd	N	Mean	sd	Diff	t
Partner threatened eviction	141	0.89	0.32	159	0.91	0.29	-0.019	-0.5
Spend own money - Ask Partner	42	0.93	0.26	114	0.99	0.094	-0.063	-1.52
Insulted by partner - Past Year Experience	146	0.88	0.33	163	0.91	0.29	-0.031	-0.88
Pushed by partner - Past Year Experience	147	0.088	0.28	165	0.042	0.2	0.046	1.63
Partner hit w\fist - Past Year Experience	147	0.082	0.27	165	0.055	0.23	0.027	0.94
Had forced sex w\partner - Past Year Experience	147	0.082	0.27	165	0.048	0.22	0.033	1.2
Had sex for fear of reprisal - Past Year Experience	147	0.061	0.24	165	0.048	0.22	0.013	0.49
Any Violence (Push, Hit, Force sex)	147	0.12	0.33	165	0.07	0.26	0.05	1.47
Economic outcomes: gone without the following due to money shortages								
Food	362	0.29	0.45	384	0.47	0.50	-0.18	-5.19
Clothes	358	0.27	0.44	380	0.46	0.50	-0.19	-5.54
School uniforms	296	0.52	0.50	333	0.68	0.47	-0.16	-4.08
School fees	297	0.53	0.50	334	0.63	0.48	-0.11	-2.71
Fuel	362	0.45	0.50	383	0.60	0.49	-0.15	-4.22
Household items	362	0.41	0.49	384	0.60	0.49	-0.18	-5.12
Health care	360	0.60	0.49	371	0.73	0.45	-0.13	-3.76
Has begged in the past year	363	0.67	0.47	385	0.48	0.50	0.19	5.24

Replicating the Original IMAGE Results for the violence outcome

To establish a benchmark, in Table 6.3a I first recompute the original Lancet results (Pronyk *et al.* 2006), according to equation 2.11⁶¹, and crude ratios. In addition to crude ratios at baseline and follow up only, in columns 5 and 6 of Table 6.3a, I also report crude ratios at follow up only for the women who responded at baseline⁶². Estimates in the following columns are computed over these respondents.

My estimates are similar to those in the original Lancet paper reported in Table 6.3b (Pronyk *et al.* 2006), suggesting lower odds of exposure to violence among treated women compared to controls at follow-up (OR 0.46; 95% CI: 0.24, 0.89), controlling for a select group of baseline imbalances as indicated in the original publication. Moreover, computing average marginal effects of treatment from the logistic estimates suggest a reduction in the probability of being subject to violence among the treated equal to -.059 compared to controls (-.1078,-.0094), and are essentially identical to OLS estimates⁶³ (-.060, (-.1086,-.0114)) of this same model. The computation of marginal effects captures the average discrete change in impact between treated and non-treated over all observations.

⁶¹ i.e. equation number 11 in Chapter 2

⁶² Note that numbers for the crude ratios in my tables slightly differ from those found in the Lancet. My numbers are based on the current release of the IMAGE database. These small discrepancies suggest the current release might slightly differ from the database used for the analysis submitted to the Lancet.

⁶³ Not reported in the table.

Table 6.3a Reproducing Original Impact Estimates

		Crude Ratios*				Crude Ratios at Follow Up for women who answered violence question at baseline				Adjusted	
		Baseline		Follow Up						Follow Up	
		Control	Intervention	Control	Intervention	Control	Intervention	Odds Ratio	95% CI	Average Marginal Effects	95% CI
Total Violence		15/178 (8%)	20/193 (10%)	30/251 (12%)	17/297 (6%)	18/147 (12%)	12/166 (7%)	.46	(0.24, 0.89)	-.0586	(-.1078, -.0094)

Total Violence is equal to one if respondent reports one of either having been pushed, hit, or forced to engage in sex by her partner. The crude ratios report the number of individuals that reported exposure out of all respondents for this question. The adjusted odds ratio is from a logistic regression with independent variables age, village pair, marital status, parity, a measure of wealth, and the baseline measure of total violence. The functional form, following chapter 2 (equation 2.8), can be written as: $\ln(\pi_{ij1}/1 - \pi_{ij1}) = \beta_0 + \beta_1 * T_{ij} + \beta_2 * age_{ij0} + \beta_3 * y_{ij0} + \Gamma X + \Lambda Z + \varepsilon_{ij1}$

Where π_{ij1} is the probability that outcome y for individual i in village j at follow-up (y_{ij1}) is equal to one. T_{ij} is the treatment status of individual i in village j; age_{ij0} is the individual's age at baseline, X the vector of baseline covariates; y_{ij0} the baseline value of the outcome variable, Z a vector of village pair fixed effects to take account of the matched design; and the error ε_{ij1} is clustered at the village level.

*Note: discrepancies between the crude ratios in this table and those in Table 6.3b are due to the dataset obtained by the author. At the time of writing, it had not been possible to retrieve a different copy of the data.

Table 6.3b Original Lancet Impact Estimates
 (Source: Pronyk et al., 2006)

	Crude Ratios					Adjusted
	Baseline		Follow Up		Odds Ratio	95% CI
	Control	Intervention	Control	Intervention		
Total	16/177	22/193	30/248	17/290	.45	(0.23, 0.91)
Violence	(9%)	(11%)	(12%)	(6%)		

These estimates, however, are prone to bias due to the self-selection of treated individuals in the programme. In the next section, I therefore calculate further estimates of impact, to assess the robustness of these initial results. Here, I present results from an OLS D-i-D estimator that controls for baseline differences in observables between treated and controls, and allows for parallel trends. Results from differenced matching estimators I present in Appendix 3 support the findings I report in this chapter.

Difference-in-Differences Estimates

The OLS D-i-D are the main set of results for IMAGE in this work and I use these estimates to draw parallels with the Burundi-VSLA programme. I choose OLS D-i-D estimates because they produce consistent estimates of easier interpretability, despite the fact that the predicted values they generate lie beyond the (0, 1) interval even for (0, 1) outcomes. The next paragraph gives an overview of main results, and the next three sections focus on each dimension of eudaimonia in turn.

In testing the impact of the South Africa programme with an OLS D-i-D estimator, I find that participation in the discussion sessions reduced exposure to violence in the previous year among women by 38%, compared to women in the control group (Table 6.6b) (-0.08, $p=0.02$). This corresponds to an average total violence reduction of 0.13 for treated individuals compared to controls ($p=0.08$), larger than the original marginal effect estimates, even after controlling for a large battery of baseline imbalances and sampling design. There is no statistically significant change in the autonomy factor (Table 6.4a). However, both the meaningful relations with others (Table 6.5a) and the environmental mastery (Table 6.6a) factors record positive change for treated individuals compared to controls. This reflects more consistent improvements across environmental mastery and MRwO items (Tables 6.6b and 6.6c; and Tables 6.5b-5d, respectively), compared to items that loaded on autonomy (Tables 6.4b-4c).

Autonomy: Decision-Making Authority and Contributions to Household Production

One of the hypotheses tested was that women participating in the programme would be more likely to participate in decision-making (DM) in the household relative to women in control groups.

Results from the regression of the autonomy factor (Table 6.4a) suggest that image had no statistically significant impact on the factor as a whole (+1.35 standard deviations; $p=0.25$).

Table 6.4a Autonomy factor

	control	Treat (beta_1)	after (beta_2)	After*treat (beta_3)
Autonomy				
S.E.	-0.81 (1.40)	-0.10 (0.65)	-0.84 (0.79)	1.35 (1.07)
p-value	0.58	0.88	0.32	0.25
N		556		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 treat + \beta_2 after + \beta_3 treat * after + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

I also report results for each autonomy item, to show broader patterns and situate results in relation to microfinance evaluation literature.

The DM results in Table 6.4b show that one of nine outcomes records a statistically significant change in the direction of increased DM authority for the women. Women's participation in decisions on medium purchases for the home increases as a result of the intervention (0.27, $p < 0.05$).

The remaining eight indicators do not mark statistically significant change. However, they do indicate increased DM authority among discussion session participants in all areas. These patterns consistently suggest an improvement in individuated autonomy, though statistical significance is generally not achieved.

Measures of relational autonomy record some increase in autonomy, albeit imprecisely estimated (Table 6.4c).

Table 6.4b Decision Making Outcomes

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Small purchases for self, no husband permission	0.01	-0.06	0.18	0.20
S.E.	(0.27)	(0.09)	(0.10)	(0.12)
p-value	0.97	0.56	0.11	0.15
N		576		
Large purchases for self, no husband permission	0.12	0.03	0.13	0.11
S.E.	(0.25)	(0.12)	(0.13)	(0.21)
p-value	0.66	0.79	0.36	0.63
N		576		
Small hh purchases, no husband permission	0.63***	0.05	0.09	0.02
S.E.	(0.15)	(0.05)	(0.10)	(0.11)
p-value	p<0.01	0.41	0.39	0.87
N		576		
Medium hh purchases, no husband permission	0.12	-0.07	0.22*	0.27***
S.E.	(0.16)	(0.07)	(0.10)	(0.11)
p-value	0.46	0.33	0.07	0.05
N		572		
Large hh purchases, no husband permission	0.0050	0.0047	0.08	0.17
S.E.	(0.22)	(0.10)	(0.10)	(0.16)
p-value	0.98	0.96	0.46	0.32
N		576		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

Table 6.4b Decision Making Outcomes (ctd)

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Taking children to hospital, no husband				
permission	0.61	-0.03	0.08	0.16
S.E.	(0.34)	(0.13)	(0.21)	(0.25)
p-value	0.11	0.82	0.73	0.55
N		568		
Visit Family of Birth, no husband				
permission	0.27	-0.08	-0.10	0.36
S.E.	(0.34)	(0.14)	(0.16)	(0.22)
p-value	0.45	0.58	0.56	0.15
N		572		
Visit Friends, no husband permission				
permission	0.75	-0.04	0.17	0.09
S.E.	(0.22)	(0.10)	(0.14)	(0.17)
p-value	0.01	0.71	0.27	0.62
N		574		
Fam/Friends outside village, no husband				
permission	0.09	-0.0026	-0.01	0.21
S.E.	(0.29)	(0.11)	(0.11)	(0.18)
p-value	0.77	0.98	0.95	0.28
N		574		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

Table 6.4c Financial Security and non-monetary contribution

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Confident she could feed the house alone	2.51***	-0.04	-0.03	-0.36
S.E.	(0.30)	(0.14)	(0.20)	(0.33)
p-value	p<0.001	0.76	0.88	0.31
N		1444		
Confident the house would survive a crisis	2.48***	0.0026	-0.21	-0.40
S.E.	(0.26)	(0.13)	(0.26)	(0.32)
p-value	p<0.0001	0.98	0.43	0.25
N		1444		
Hers is main non-monetary contribution to the household	0.80***	0.04	0.01	-0.06
S.E.	(0.08)	(0.03)	(0.04)	(0.06)
p-value	p<0.0001	0.28	0.89	0.35
N		1,450		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

These measures capture household financial security and women's contributions in-kind, and suggest that women think their ability to provide financial support to their household has increased, though this is highly imprecisely estimated. These patterns suggest no significant economic impact of the intervention, as available information on household consumption further suggests (see Table 6.7 below).

Meaningful Relations with Others: Attitudes towards Gender Norms and Roles regarding Household Production, Sexuality and HIV outcomes

Another of the hypotheses tested by the IMAGE study was that women participating in the IMAGE programme would be more likely to exhibit gender norms more favourable for women, compared to controls.

Results from the regression of the MRwO factor (Table 6.5a) suggest that the intervention had a sizeable impact (+1.49 standard deviations) and that this change was statistically significant ($p=0.08$).

Table 6.5a MRwO factor

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Meaningful Relations with Others	2.13	-0.13	-0.98	1.49*
S.E.	(1.49)	(0.49)	(0.70)	(0.72)
p-value	0.20	0.80	0.20	0.08
N		502		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

I therefore reject the hypothesis that IMAGE had no impact on women's meaningful relations with others. To explore which empowerment domains mostly contributed to this impact, I also report results on the single indicators.

Tables 6.5b and 6.5c present the results on attitudes toward gender norms and financial contributions to the household: three out of seven domains record a statistically significant impact. These show more liberal attitudes in relation to women's role in the household, but no change in her ability to contribute financially to household production, further suggesting no economic impact of the intervention, as well as a low impact on relational dimensions. In particular, treatment group participants more likely to disagree that women do all household chores ($\beta_3=0.23$; $p=0.007$), more likely to disagree that women should obey if husbands paid a bride-price ($\beta_3=0.22$; $p=0.06$) compared to baseline controls. Importantly for their bargaining power, women are also more prone to accept that women divorce their husbands ($\beta_3=0.18$, $p=0.05$), making the possibility that they exercise this right as an outside option in a bargaining scenario more credible in the eyes of their partners.

Table 6.5b Social Norms

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
woman should do most hh chores	1.87***	-0.080	-0.14	0.23***
S.E.	(0.10)	(0.035)	(0.050)	(0.060)
p-value	p<0.0001	0.06	0.026	0.007
N		1,446		
wife must obey husband who paid lobola	1.57***	-0.055	-0.037	0.22*
S.E.	(0.15)	(0.048)	(0.093)	(0.10)
p-value	p<0.0001	0.29	0.70	0.06
N		1,446		
wife is disrespectful, if asks use of condom	1.97***	0.0015	0.03	0.07
S.E.	(0.11)	(0.03)	(0.05)	(0.06)
p-value	p<0.0001	0.95	0.60	0.26
N		1,402		
wife is unfaithful, if asks use of condom	1.97***	-0.023	0.05	0.08
S.E.	(0.074)	(0.021)	(0.05)	(0.05)
p-value	p<0.0001	0.29	0.37	0.15
N		1,398		
a man must have many girlfriends; wife tolerate	1.89***	0.010	0.020	0.047
S.E.	(0.10)	(0.039)	(0.10)	(0.10)
p-value	p<0.0001	0.80	0.84	0.66
N		1,444		
women should never divorce their husband	1.84***	-0.0011	-0.063	0.18***
S.E.	(0.16)	(0.046)	(0.07)	(0.08)
p-value	p<0.0001	0.98	0.39	0.05
N		1,440		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

Table 6.5c Monetary contributions to the household

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Hers is main monetary contribution to the household	<i>0.67*</i> (0.30)	0.063 (0.038)	-0.087 (0.063)	0.00049 (0.071)
S.E.				
p-value	<i>0.06</i>	0.14	0.21	0.995
N			716	

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

In the area of sexuality and HIV risk perception and actions (Tables 6.5d and 6.5e), none of the seven outcomes records statistically significant impact, though norms governing women's decisions when to have sex record sizeable in-sample improvements for treated women (Table 6.5d), compared to controls at baseline, except for refusing sex for fear that her husband has AIDS. They also show more progressive attitudes among the treated on norms regarding fidelity and condom negotiation (Table 6.5b), albeit imprecisely measured, such that the null of no effect cannot be rejected.

Consistent with these findings, Desai and Tarozzi find no effect of a joint family planning and MF package in Ethiopia on the use of contraceptive, nor do they find marginal effect of either programme on contraceptive use, and explain this in terms of a mismatch between the products offered by the programme (pills and condoms) and women's preferences for injectable contraceptives, which were being made increasingly available through the health system (Desai and Tarozzi 2011). These findings are further consistent with the difficulties women report in negotiating condom use (Christofides and Jewkes 2010).

Table 6.5d Sexuality

A married woman can refuse sex if:	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
She does not want it	1.36***	-0.0013	-0.020	-0.18
S.E.	(0.14)	(0.07)	(0.10)	(0.11)
p-value	p<0.0001	0.99	0.84	0.13
N		1,438		
husband does not wear a condom	1.34***	-0.0026	-0.12	-0.12
S.E.	(0.16)	(0.059)	(0.10)	(0.11)
p-value	p<0.001	0.97	0.30	0.35
N		1,420		
She is angry b\c other g-friends	1.36***	-0.037	-0.084	-0.11
S.E.	(0.16)	(0.053)	(0.081)	(0.10)
p-value	p<0.001	0.51	0.34	0.27
N		1,442		
She worries he might have AIDS	1.44***	-0.032	-0.21	-0.06
S.E.	(0.15)	(0.08)	(0.12)	(0.13)
p-value	p<0.001	0.71	0.13	0.65
N		1,434		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

In addition, measures that capture perceptions of HIV-related health risks and decisions to act to reduce such risks record no change (Table 6.5e). The fact that women do not seem to have considered their HIV risk despite the large amount of information the intervention offered them is consistent with the lack of access to treatment that was unfortunately still the reality at the time (WHO 2004)⁶⁴ and related processes of stigmatisation (McNeill 2009). Failing to think about or trying strategies to reduce this risk is consistent with this mindset.

⁶⁴ Only 2.7% of the 5,300,000 estimated number of people living with HIV/AIDS in South Africa were receiving antiretroviral therapy as of June 2004, the time of the IMAGE follow up survey. (Source: Jeff Eaton, Research Fellow, School of Public Health, Imperial College; personal communication).

Table 6.5e HIV risk and actions

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Has considered her HIV risk	1.17***	0.10	0.04	0.02
S.E.	(0.15)	(0.05)	(0.07)	(0.13)
p-value	p<0.001	0.09	0.55	0.89
N		1,002		
Has wanted to do something about it	1.01***	0.02	0.04	0.0041
S.E.	(0.15)	(0.05)	(0.08)	(0.12)
p-value	p<0.001	0.70	0.60	0.97
N		1,040		
Has tried to do something about it	0.95***	0.02	0.06	-0.0047
S.E.	(0.17)	(0.05)	(0.08)	(0.12)
p-value	p<0.001	0.67	0.45	0.97
N		1,040		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

Although sexuality indicators do not record statistical significance, an in-sample pattern emerges that shows treated women are generally more willing to negotiate safe sex in a number of circumstances: it is more acceptable to refuse if men have girlfriends, if the wife worries that her husband may have HIV, and if she does not want to. Moreover, consistent with their responses regarding women's role in the household, women become less tolerant of the husbands' girlfriends and more open to the possibility of divorce, compared to control women at baseline.

The programme seems to have increased women's ability to maintain relationships with (their significant) others that are more conducive to their own development. They seem better able to negotiate sex on their own terms. Further, they seem better able to recognise a more egalitarian relationship, and to consider divorce as an acceptable option. Overall, IMAGE has had some impact on women's perception of their relational self in the direction of greater equality of roles with their husbands. (WHO 2004)

From the perspective of an economic model, impacts in the sphere of relatedness (MRwO) seem to suggest that women have updated their beliefs toward more egalitarian gender norms in relation to household chores, the unacceptability of the need to obey their husbands and decision to divorce them, so that it is more likely that they act accordingly, because the disutility from failing to act in a more emancipated way in line with their current beliefs has become higher.

Environmental Mastery: Exposure to Violence and Controlling Behaviours

The primary objective of the programme was to reduce women's exposure to domestic violence. In contrast to the Burundi study, the IMAGE programme was specifically targeted at reducing violence as a mechanism for HIV reduction and, as a result, it was expected to reduce violence substantially. The specific hypothesis was that women in the IMAGE programme would be more likely to record a reduction in the exposure to abuse.

The EM factor records an improvement of 1.2 standard deviations ($p=0.10$) as a consequence of exposure to the intervention (Table 6.6a), suggesting IMAGE was effective at reducing women's exposure to abuse conceptualised as the combination of violence and controlling behaviour (Hester and Westmarland 2005).

Table 6.6a Environmental mastery factor

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Environmental Mastery	-0.04	-0.25	-1.05	1.23*
S.E.	(1.56)	(0.28)	(0.63)	(0.64)
p-value	0.98	0.40	0.14	0.10
N		304		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 treat + \beta_2 after + \beta_3 treat * after + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

Overall, results in Table 6.6b appear consistent with the hypothesis tested in this section: the IMAGE intervention reduced prevalence of physical or sexual violence among treated women by 38% relative to the control group at baseline – with a marginal effect of -0.08 ($p=0.02$) – conditional on baseline values of women's parity, connectedness, employment status in the previous year, access to drinking water and sanitation and an index of wealth.

Table 6.6b Violence Outcomes

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Insult	-0.04*	-0.04	-0.0	0.06
S.E.	(0.28)	(0.02)	(0.03)	(0.03)
% change on ctrl grp at bline		-9%	-5%	13%
p-value	0.09	0.12	0.47	0.11
N		604		

Push	0.22	0.01	0.01	-0.06
S.E.	(0.12)	(0.02)	(0.04)	(0.05)
% change on ctrl grp at bline		3%	6%	-26%
p-value	0.12	0.71	0.73	0.28
N		610		
Hit with a fist	0.24**	0.01	0.03	-0.04
S.E.	(0.09)	(0.01)	(0.02)	(0.02)
% change on ctrl grp at bline		4%	12%	-17%
p-value	0.04	0.36	0.28	0.15
N		610		
Forced Sex	0.10	-0.01	0.04***	-0.03
S.E.	(0.06)	(0.02)	(0.01)	(0.02)
% change on ctrl grp at bline		-14%	42%	-30%
p-value	0.13	0.47	0.003	0.23
N		610		
Violence	<i>0.56*</i>	0.003	0.08	<i>-0.13*</i>
S.E.	(0.25)	(0.02)	(0.06)	(0.06)
% change on ctrl grp at bline		1%	15%	-23%
p-value	<i>0.06</i>	0.88	0.21	0.08
N		610		
Any physical or sexual violence	<i>0.21*</i>	0.01	<i>0.04*</i>	-0.08***
S.E.	(0.11)	(0.02)	(0.02)	(0.03)
% change on ctrl grp at bline		7%	20%	-38%
p-value	<i>0.10</i>	0.46	0.09	0.02
N		610		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

This is consistent with results from the continuous indicator of violence, reporting total instances of exposure to any type of violence (beta_3=-0.13, p=0.08). These estimates suggest that the magnitude in the reduction of IPV prevalence is robust to controlling for a large number of controls, including the degree to which women are part of formal networks. In fact, the marginal effect computed by the OLS D-i-D estimates on the binary measure is 50% larger than the original IMAGE estimates (beta_3=-0.059, p<0.05).

Further, the rate of insults among participants also indicates increased levels of empowerment: women disagree more with the statement that their husbands insult them in public (beta_3=0.06, p=0.11), though this result is only marginally significant. This suggests that women experience a reduction in both emotional and sexual and physical violence combined. This supports the hypothesis that the IMAGE package, with its mix of financial services and life-skills talks reduces

women's exposure to IPV even after controlling for respondent fixed effects in a D-i-D framework.

Husbands' controlling behaviour (Table 6.6c) is a form of abuse in that it limits women's ability to make their own decisions and act accordingly, and limits their ability to pursue their own projects and aims: as the factor analysis suggests, it is a negative form of 'power over' (Kabeer 1999) that negatively impacts women's EM. It is a form of emotional abuse strongly associated with other forms of IPV, such as physical and sexual abuse (Taft *et al.* 2009), and constitutes the underlying coercive control abusive men exert over their partners.

It is, in some cases, an explicit effort directed at limiting or directing women's access and ability to contribute to household resources. It takes the form of, for example, attempts at evicting victims or limiting their participation in initiatives or work outside the household, or accessing health care, so that women's ability to pursue their own interests and wellbeing may be hampered (Stark 2007).

The IMAGE intervention reduced husbands' controlling behaviour as perceived by the women in three out of nine areas. The largest change on baseline values is in the wife's ability to independently seek health services ($\beta_3=0.23$, $p=0.03$), possibly reflecting the health focus of the intervention. It is also less likely that their husbands evict them: at follow up, more treated women than baseline controls do not experience this threat ($p=0.05$); and that husbands want to know the women's whereabouts at all times ($\beta_3=0.15$), though this is marginally significant ($p=0.11$).

Improvements are also recorded in the woman's ability to contact her family of birth, the husband's attempts at keeping her from seeing friends and flaunting of girlfriends, as well as encouragements to get involved in activities outside the household and requests of advice on difficult issue, though impact in these domains does not reach statistical significance.

Table 6.6c Husband's controlling behaviour

	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
permission for participation outside hh	0.12	0.08	0.17**	-0.01
S.E.	(0.26)	(0.03)	(0.06)	(0.09)
p-value	0.65	0.05	0.03	0.88
N		604		
asked advice about a difficult issue	0.06	-0.0044	0.06	0.07
S.E.	(0.32)	(0.07)	(0.11)	(0.12)
p-value	0.86	0.95	0.61	0.58
N		604		
keeps her from seeing friends	-0.09	-0.0042	-0.07**	0.06
S.E.	(0.20)	(0.02)	(0.03)	(0.05)
p-value	0.66	0.84	0.04	0.32
N		604		
restricts contact with family of birth	0.65***	-0.021	-0.01	0.03
S.E.	(0.14)	(0.02)	(0.04)	(0.04)
p-value	p<0.01	0.37	0.70	0.51
N		588		
insists on knowing where wife is at all times	-0.15	-0.053	-0.19**	0.15
S.E.	(0.21)	(0.02)	(0.07)	(0.08)
p-value	0.49	0.03	0.03	0.11
N		604		
wife to ask permission for own hltcare	0.21	-0.11	-0.13	0.23**
S.E.	(0.16)	(0.04)	(0.08)	(0.09)
p-value	0.21	0.02	0.15	0.03
N		604		
boasts girlfriends at home	-0.14	-0.006	-0.01	0.03
S.E.	(0.08)	(0.02)	(0.01)	(0.04)
p-value	0.13	0.82	0.59	0.39
N		586		
Has tried to evict her	0.32*	-0.058	-0.06	0.07**
S.E.	(0.17)	(0.02)	(0.02)	(0.03)
p-value	0.10	0.05	0.05	0.05
N		586		
she decides how to spend own money	1.19***	0.006	-0.03	0.06
S.E.	(0.15)	(0.05)	(0.05)	(0.06)
p-value	p<0.001	0.90	0.65	0.34
N		306		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

Overall trends suggest a reduction in husbands' controlling behaviour, i.e. in the negative form of 'power over' that limits women's sense of environmental mastery.

A key aspect of improvement in women's mastery is their ability to retain control over their money, which numerous contributions show as being instrumental to increasing independent autonomy (Goetz and Sen Gupta 1996; Kabeer 2001a; Kabeer 2001b) and, in Anderson and Eswaran's terms, is evidence in support of the separate-spheres threat point, and a sufficient condition for women's empowerment, in situations where divorce is not available or too costly, either socially and/or financially (Anderson and Eswaran 2009). In this study, though the direction of impact is toward greater control over how to spend one's own money, this result does not attain statistical significance. However, women seem more in control of their time and investment in their own health. This is also consistent with the hypothesis of separate-spheres equilibrium because, similarly to her own money, these are resources that pertain to her and that she is now in greater control of. Finally, the fact that the husbands reduce threats of eviction may be suggestive of the fact that he is aware of the fact that the wife's reservation utility has increased and her outside options improved, so that threatening to force her out of the relationship is not an effective means of controlling her time and resources. It is less likely that he does this because he benefits from her presence, given the absence of impact in the economic sphere as the next paragraph illustrates, and the fact that the woman's decision-making style has become more autonomous.

Economic Outcomes

The intervention does not seem to have impacted women's economic outcomes, as illustrated by the economic and financial indicators so far discussed. To further probe whether economic impact had in fact taken place, I additionally computed impact over a battery of indicators of shortages (Table 6.7) that measure whether the household had had to forgo basic needs such as food, clothing, and health care, and had to beg in the year prior to the follow-up interview. None of these indicators records significant impact, and the magnitude of impact is generally low, except for clothes and begging.

Table 6.7 Economic Outcomes: Shortages in the past year

Gone without the following due to money shortages:	control	treat (beta_1)	after (beta_2)	after*treat (beta_3)
Food	0.17	0.04	0.11	0.12
S.E.	(0.17)	(0.06)	(0.08)	(0.13)
p-value	0.38	0.54	0.21	0.40
N		1,456		
Clothes	0.16	-0.04	-0.01	0.19
S.E.	(0.16)	(0.10)	(0.15)	(0.17)
p-value	0.34	0.68	0.94	0.32
N		1,440		
School uniforms	0.63	-0.03	-0.03	0.10
S.E.	(0.13)	(0.12)	(0.21)	(0.23)
p-value	0.002	0.84	0.88	0.67
N		1,228		
School fees	0.56	-0.01	0.01	0.05
S.E.	(0.15)	(0.11)	(0.22)	(0.23)
p-value	0.007	0.93	0.95	0.83
N		1,232		
Fuel	0.08	0.03	0.19	0.09
S.E.	(0.14)	(0.06)	(0.12)	(0.180)
p-value	0.57	0.63	0.15	0.62
N		1,454		
Household items	0.24	0.03	0.17	0.12
S.E.	(0.13)	(0.05)	(0.13)	(0.18)
p-value	0.10	0.58	0.24	0.54
N		1,456		
Health care	0.54	0.008	0.21	0.08
S.E.	(0.16)	(0.11)	(0.19)	(0.20)
p-value	0.01	0.94	0.32	0.72
N		1,426		
Has begged in the past year	0.81	-0.005	-0.08	-0.16
S.E.	(0.19)	(0.06)	(0.06)	(0.13)
p-value	0.004	0.93	0.19	0.27
N		1,460		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction, which yields the listed coefficients, so that for every outcome y_i , $y_i = \beta_0 + \beta_1 \text{treat} + \beta_2 \text{after} + \beta_3 \text{treat} * \text{after} + \Gamma \mathbf{X} + \Lambda \mathbf{Z} + \varepsilon_i$, and \mathbf{X} is a vector of controls (age, parity, marital status, education, a measure of wealth, services and connectedness (number of networks a woman is member of)); and \mathbf{Z} a vector of village-pair fixed effects. Errors are clustered at the village level. Percent changes are based on comparison to women in the control group prior to treatment. Percent changes are based on comparison to women in the control group prior to treatment. 'Intervention' refers to women randomly selected to attend the programme that consisted of a set of ten discussion sessions plus access to microloans. 'Control' refers to women who did not attend the programme.

This suggests that IMAGE has had a negligible impact on economic outcomes overall, and that reduction in exposure to abuse is not accompanied by improved economic outcomes in the areas measured.

Discussion

Results suggest that the intervention has positively impacted recipients' overall meaningful relations with others and environmental mastery with, specifically, sizeable reductions in women's exposure to intimate partner violence (IPV); it has also shown consistent patterns of improvement across domains in *eudaimonic utility* dimension, though the impact is not always significant and the null of no effect cannot be rejected in many instances.

From a eudaimonic perspective, these results suggest that improvements in at least some domains of all EUD dimensions are accompanied by a reduction in exposure to IPV. Increases in independent forms of autonomy for the women, especially in the financial sphere, accompanied by greater control over her own time resources, and beliefs in more egalitarian gender norms are associated with reductions in IPV, even in the absence of appreciable changes in income and control over her monetary resources.

This provides support to theories of coercive control that focus on power imbalances and males' control over their partners' financial and time resources to explain IPV. The fact that a reduction in violence is accompanied by lack of appreciable change in income for the women participating in IMAGE, together with a reduction in male control over their time and health seeking, seem to suggest that the change in power dynamics brought about by greater control over their time and health is sufficient to increase women's autonomy in the financial decision-making sphere, and bring about a reduction in IPV.

This is consistent with the hypothesis posited by non-cooperative separate-spheres models of intra-household bargaining (Chen and Woolley 2001; Lundberg and Pollak 1993; Pollak 2005). The intervention seems to increase women's independent use of her time and reduce her exposure to IPV, consistent with recent findings from Mexico (Angelucci *et al.* 2015). Retaining control over her own time and reductions in the men's controlling behaviour seem sufficient to increase her autonomy and reduce her exposure to IPV, even if the outside option of divorce is not available to her.

These results seem to concur with those of Anderson and Eswaran (2009) in suggesting that in contexts where divorce may be a costly option a non-cooperative equilibrium within marriage is the relevant threat point; however it is not clear whether it is employment outside the household that allows IMAGE clients to attain increased bargaining power in decision making, including fertility choices and birth control (Dharmalingam and Morgan 1996). Notably, this is an equilibrium where the woman experiences a reduction in violence suggesting that, if she retains control over at least some of her resources and control is taken away from her husband, she experiences a reduction in IPV exposure even without leaving the marriage. Further, this is

consistent with theories of coercive control that see IPV as the tip of the iceberg of a pattern of controlling behaviours (Stark 2007) that do not necessarily have to do with spouses' income per se.

This internal threat-point of no-cooperation plays a similar role to divorce in cooperative models, These models predict increased empowerment for women who see an exogenous improvement in their 'outside option', i.e. the option of leaving the marriage and supporting themselves. Empirical tests of these hypotheses indeed suggest that positive shocks to the labour markets in sectors that employ women in Mexico and the USA have a positive impact on women's bargaining power in the household (Aizer 2010; Majlesi 2012). Within this same framework, qualitative evidence from Bangladesh suggests that women who gained access to earning opportunities increased their bargaining power in the household, household expenditure in areas they favour and may leave the household (Kabeer 1997).

However, results for IMAGE differ, in that its clients do not report a significant improvement in perceived control over their own monetary resources, so that the direct link between increased control over their own financial resources and financial decision-making is not as clear for IMAGE clients as it is for the Bangladeshi women in Anderson and Eswaran's contribution (2009).

Results further suggest the possibility that where women's bargaining power is originally low, and divorce not an effective option, IPV could also be reduced through the threat of a non-cooperative equilibrium with more advantageous terms for the woman, contrary to predictions from cooperative models (Heath 2014). This warrants further research into the association of changes in access to and control over resources with exposure to violence, and future work should endeavour to collect more exhaustive data on economic outcomes such as income, expenditure, possession of cards or current and savings accounts alongside abuse measures, to allow for more thorough testing of these associations, as well as improving links between RCT tests and economic models in this area of investigation, to examine mechanisms of impact more closely.

Moreover, IMAGE's lack of impact on economic outcomes contrasts with the impact the MF only services had on clients' economic outcomes in Kim *et al.*'s cross-sectional analysis of three randomly assigned groups (IMAGE treatment and control groups at 2-year follow-up, plus an MF only group of randomly selected villages two years into the programme) within the same organization: in this study, the MF only programme records a more consistent impact on economic outcomes, while the IMAGE intervention records a more consistent impact on empowerment outcomes (Kim *et al.* 2009). Though they did not find an improvement in food security, Kim *et al.*'s results were in line with early results for a microfinance only service in Bangladesh which recorded positive impacts on economic empowerment such as household consumption and

children's schooling (Pitt and Khandker 1998); however, Pitt and Khandker's results were later shown to be likely due to non-random differences between treated and control participants (Duvendack and Palmer-Jones 2011). In recent randomized evaluations, MF only services seem not to impact women's empowerment consistently (Attanasio *et al.* 2015; Banerjee *et al.* 2015; Crépon *et al.* 2015); Angelucci *et al.* in the same group of studies find an impact on women's decision-making authority, and no evidence of conflict in the household (Angelucci *et al.* 2015) despite no change in total household consumption, though the internal validity of this study is weaker compared to the other trials.

Finally, while statistically significant change is not achieved in every single autonomy, MRwO and EM domain, approximately 30% of the outcomes record significant improvement; the complete lack of significant change in any of the economic outcomes, and the often smaller magnitude in change, suggest that the intervention has been less successful in positively impacting the economic sphere. In turn, this suggests that the observed improvement in empowerment outcomes may chiefly be due to eudaimonic improvements, rather than increased availability of resources.

From a policy perspective, previous qualitative evidence suggested that credit-only interventions reduced exposure to violence, except when women challenged gender-biased social norms, or in conflicts over resources (Schuler *et al.* 1998). The evidence from IMAGE is in contrast with this, suggesting that an MF-plus package, when compared with no intervention, brings about improvements in two spheres of eudaimonic utility, including meaningful relations with others, bringing about a reduction in IPV exposure.

This analysis has a number of limitations. First, it provides no direct measurement of the concept of eudaimonic utility I use to interpret results. The IMAGE data was not designed to capture changes in psychological dimensions and therefore did not collect information on psychological outcomes. To provide an initial investigation of whether EUD could support the interpretation of policy impact I have therefore (i) computed the three eudaimonic factors as predicted by the relevant item loadings in the factor analysis, and tested impact on these with the main OLS D-i-D model; and (ii) relied on the groupings of indicators suggested by factor analysis (FA) in the previous chapter to report and discuss results for the specific items. This provides some insight on the wellbeing impact of the intervention, on the basis of the associations the FA highlighted between empowerment indicators and the underlying wellbeing concept. It is however by no means fully informative, given the lack of direct measurement of utility levels, besides the high degree of uniqueness the indicators displayed in the FA. In order to understand the links between EUD and empowerment indicators more clearly, future evaluations could consider collecting

information on indicators of autonomy, mastery and connectedness alongside mainstream empowerment indicators. Investigations on the impact of psychological training on autonomy and their repercussions on efforts toward saving and health investments have already been carried out in economics (Ghosal *et al.* 2013), and introducing the measurement of a measure of utility alongside interventions in different sectors would provide policy makers with a tool to compare the benefits from interventions across different sectors (Dolan and Kahneman 2008).

Second, its interpretation of results in light of economic models of intra-household resource allocation is only suggestive of how the patterns I find in the data support the separate-spheres bargaining models chiefly for two reasons. First, I do not offer a mathematical discussion of the models, so that my considerations are only suggestive of how the data fit the model. A more rigorous discussion of the models is beyond the scope of this work, but could inform further investigations in the application of non-cooperative bargaining models to the study of economic and psychological empowerment on IPV. My discussion contributes to existing evidence in support of the models *per se* (Anderson and Eswaran 2009), encouraging further empirical investigations that may test the implications of these models. Second, the IMAGE data, while rich, only collected information from the women, and therefore provides limited information for the characterisation of the equilibrium. However, the survey questions also provided information on men's behaviour, albeit via the women, so that the data does contain some information on men's behaviour. Specifically, indicators of men's controlling behaviour, for example, provide information on their control of women's time, in addition to her resources (Anderson and Eswaran 2009).

Finally, the original limitation in the IMAGE data to have emerged from this discussion is it de facto establishes a comparison between eligible women *who decide to take up* the intervention, and eligible women in control villages. This introduces a self-selection bias in the estimates, whose size and direction is unknown. It is probably determined by unobserved characteristics, such as ability and a sense of initiative, that cannot therefore be controlled for appropriately and are likely strongly associated with the probability of experiencing an increase in empowerment following exposure to the intervention.

To tackle this issue within the scope of currently available data, I first control for a number of baseline covariates, and also compute D-i-D estimates that are robust to the within-individuals fixed-effects underlying the self-selection mechanism (Johnston and DiNardo 1997, p. 397) that affects the data. This partially controls for the self-selection bias, but this could only have been eliminated by collecting data on a random sample of eligible women in treated villages, similarly to control villages, so that treated village averages would have been unbiased estimates of the true

average impact on treated villages. However, given data constraints, D-i-D estimates are robust to the omission of time-invariant unobservables and increase the likelihood that orthogonality between regressors and error terms is satisfied (Johnston and DiNardo 1997, p. 397). Estimates of impact of the IMAGE intervention based on this data, therefore, though robust to the inclusion of further controls and to differencing, should be interpreted with caution, and further analysis that corrects for this form of bias is warranted, to estimate the true impact of MF-plus packages on IPV.

Despite these limitations, however, the findings in this chapter suggest that the IMAGE intervention has improved EUD-related empowerment outcomes for women in environmental mastery and meaningful relations with others, and has had some impact in some autonomy domains. Specifically, it has increased women's independent decision-making in the financial sphere, reduced men's controlling behaviour, and induced more egalitarian beliefs regarding gender norms in women. These are accompanied by a 38% reduction in the prevalence of IPV. This evidence is consistent with a separate-spheres non-cooperative equilibrium as a threat point (Anderson and Eswaran 2009) and suggests that increased control over her time resources are sufficient to increase women's independent autonomy and reduce her exposure to IPV, despite the absence of changes in her economic wellbeing.

Conclusions

This chapter reported secondary analysis of the first randomised control trial of an intervention for the prevention of IPV in sub-Saharan Africa (Pronyk *et al.* 2006). It complements the original investigation by interpreting impact on empowerment and violence through the lens of eudaimonic utility proposed by this thesis, and relating it to sociological literature on IPV and economic intra-household allocation models that have also been applied to the investigation of IPV (Tauchen *et al.* 1991). It aimed to do three things. First, test the robustness of the original IMAGE impact estimates in view of the self-selection encountered in treated villages; second, provide an interpretation of impact within the eudaimonic utility framework; third, investigate whether the evidence from the IMAGE intervention provides support for non-cooperative models of the household that envisage separate-spheres bargaining as a threat option, given the intervention was offered in an area where divorce, though legally available, is not likely to be chosen by women.

A test of the robustness of original impact estimates (Johnston and DiNardo 1997, p. 397; Pronyk *et al.* 2006) suggests that estimates of impact are robust to controlling for self-selection.

An initial test of impact on the three aggregate dimensions of eudaimonia suggests an overall positive impact, that is however not statistically significant for autonomy. When tested against the

aggregate dimensions, the intervention is shown to be effective on areas it more directly intended to affect: social norms (associated to MRwOs) and abuse (associated to EM).

Looking also at individual indicators through the utilitarian framework of eudaimonia, and relating findings to sociological theories of control (Johnson and Ferraro 2000; Stark 2009) suggests that even in the absence of changes in income, an increased sense of mastery in the use of her own time resources, together with improved sense of relatedness as captured by beliefs in more egalitarian gender norms are associated with a reduction in exposure to IPV, even in the absence of effective changes in income. This seems consistent with theories of hegemonic masculinities (Morrell *et al.* 2013), suggesting that changing women's supportive models of femininity may be sufficient to reduce IPV, even in the absence to changes income or improved access to financial resources and decision-making.

Finally, this chapter has also discussed the evidence from the IMAGE intervention in relation to the predictions of non-cooperative models of intra-household resource allocation (Chen and Woolley 2001), and found that the data support the use of separate-spheres non-cooperative equilibria as the threat point in investigations of intervention impact on women's empowerment and IPV reduction, consistently with previous evidence from settings where traditional gender roles govern marriage (Anderson and Eswaran 2009). By suggesting that control over her own health and time resources is accompanied by a reduction in IPV, the IMAGE data provide further support for the theoretical relevance of internal threat-points of non-cooperation, as opposed to the external threat point of divorce for contexts where divorce may be too costly either in monetary or social terms, even when legally available. A separate-spheres non-cooperative equilibrium however implies suboptimal provision of the household public good – i.e. goods from which both husband and wife derive wellbeing – and a cooperative equilibrium in at least one of the goods may be preferable, increasing the utility of both. It is on these premises that the Burundi intervention encouraged couples to develop joint decision-making and dispute resolution skills (improve their skills in the area of relatedness – MRwO) so that costs attached to the joint provision of the household public good may diminish, and with these the recourse to violence. The next chapter discusses the evidence.

Chapter 7 Impact on Empowerment and Intimate Partner Violence: the VSLA Intervention in Burundi

Introduction

Programmes to reduce gender-based violence have taken place in a range of countries in Southern, Central, and Eastern Africa with varying degrees of success. In part this is because they have been largely divorced from theories on underlying causes of intimate partner violence, and often couched in an empowerment discourse that viewed the process of curbing IPV as a struggle for the liberation of women in opposition to men. The IMAGE intervention in the previous chapter is couched in this discourse. However, it constitutes a methodological breakthrough compared to previous interventions in the field (e.g., see Hashemi *et al.* 1996), evaluating impact by means of a CRT (Pronyk *et al.* 2006). Methodologically, the intervention in Burundi follows in IMAGE's footsteps by also randomizing allocation to treatment (Iyengar and Ferrari 2011). In addition, it shifts the discourse from women's liberation in opposition to men to co-operation between men and women, and negotiation of resource allocation decisions within the household.

Theories of the relationship between resources and violence are abundant in several disciplines including psychology (Johnson and Ferraro, 2009), sociology (Stark 2009) and economics (Kabeer 1999; Tauchen *et al.* 1991). Despite this, there is limited empirical evidence to distinguish between these models, and bring insights from these disciplines under one theoretical framework. The impact evaluation of the Burundi VSLA intervention contributes evidence to this debate with a discussion of programme impact on IPV, empowerment outcomes and emotional wellbeing. This chapter chiefly addresses the second research question of this work, namely whether MF-based prevention interventions can improve empowerment outcomes and thereby reduce IPV. It interprets results in light of the three dimensions of eudaimonic utility to which outcomes are assigned in the FA in Chapter 4 and to economic models of intra-household allocation (Chen and Woolley, 2001; Browning *et al.*, 2009) that can make predictions on the amount of violence women would be met with in different types of equilibria (Tauchen *et al.*, 1991).

Namely it tests whether, compared to controls, (i) female members of discussion sessions are more likely to be involved in increasing areas of household decision-making and more likely to apply negotiation skills during conflict to reduce the risk of arguments escalating to violence (i.e. exhibit improved autonomy); (ii) if members of the discussion groups would be more likely to think that abuse is never justified (suggesting improved MRwO), and develop a more women-friendly view of gender norms; and, (iii) if the programme reduces the prevalence of domestic violence among participants in discussion sessions (i.e. improves their EM). It interprets patterns of change in the specific domain; and refers to non-cooperative models of intra-household allocation to provide a

characterisation of equilibria household find themselves in pre and post intervention. It also looks at how indicators of affect (or emotional wellbeing) – Kahneman’s preferred measure of hedonic utility (Kahneman 2000) – differ between groups, and discusses how this pattern relates to outcomes and eudaimonic dimensions, to provide further insights into how the two measures may be associated with intervention impact. The discussion also includes qualitative information from the focus groups to contextualise and contribute to the interpretation of impact estimates.

Using a difference-in-difference-in-differences approach, I calculate OLS estimates of programme impact for each outcome of interest on female and male intervention recipients. The triple difference allows me to separately estimate programme impact on men and women, and disentangle stylised household dynamics. I report on thirty-two outcomes: thirteen decision-making measures – one decision-making and one conflict negotiation measure on each of seven⁶⁵ outcomes or domains; eight measures of attitudes to violence; five violence outcomes – the HITS tool plus a binary variable that is equal to one if the sum of all HITS scores is greater than five; and six mental health outcomes – three that measure emotional outcomes, and three different aspects of social coping; and two consumption outcomes.

I find that adding life-skills training to access to financial services improves outcomes for the treated in 19% of domains. Treated women are more likely to decide jointly with their husbands how to use their own money, and are less tolerant of violence as a consequence of their child-rearing choices, and when they argue, compared to control women at baseline. I also find that treated men report reduced tolerance of violence in general and a negative impact on their social coping skills, especially as regards their ability to concentrate, while experiencing an increase in consumption.

An increase in women’s relational autonomy as captured by their contribution to household goods, together with change in MRwO mostly explained by a lower tolerance of violence, are not accompanied by a reduction in violence, and potentially improved EM. Relatedly, men, who report no change in co-operation (i.e. unchanged relational autonomy) and increased consumption, and lower tolerance of violence in general terms (but not in the specific domains), also explicitly report worse social coping outcomes.

These results suggest that the household moves from an initial separate-spheres non-cooperative equilibrium governed by gender roles that envisage division of labour to a final resource pooling equilibrium, where women contribute monetary resources to the household. This suggests a small increase in the woman’s power, but yields no change in violence.

⁶⁵ There is no measure for conflict resolution on the decision regarding how many children to have.

The chapter is structured as follows: the next section presents the predictions economic models of intra-household allocation make for this intervention; the following section results from the econometric analysis of the RCT. Before concluding, I discuss the implications of observed results for current theories of domestic violence – supporting this with insights from the eudaimonic theory of motivations and economic models of intra-household allocation – as well as discussing the limitations of this study.

Models of Reference and Predictions

The Burundi intervention was designed to improve spouses' joint decision-making and conflict resolution skills. This is justified by the idea that the separate-spheres non-cooperative equilibrium observed in the case of IMAGE leads to non-Pareto efficient allocations and that therefore there are utility gains to be realised for both partners from achieving a cooperative equilibrium (Pollak, 2005). However, cooperation implies transaction costs – e.g., the cost of enforcing an agreement via communication and cooperative behaviour, rather than violence, in this case. In addition, the perceived value of co-operation *ex ante*, i.e. before a transaction occurs, may be low due to the existence of predefined gender roles that determine how an individual should behave, without the need to negotiate each decision. The Burundi intervention seeks to equip individuals with negotiation skills that would lower the transaction costs attached, e.g., to enforcing agreements via co-operation, and to change individuals' perception of the gains from co-operation so that, instead of choosing a non-cooperative equilibrium, spouses may choose to engage in bargaining and attain a Pareto-efficient equilibrium. Similarly to Tauchen *et al.* (1991), I assume that both individuals gain from the marriage, and violence serves the strategic purpose of making the woman comply with the husband's preferences; in sociological terms, this is akin to theories of control (Stark 2007), which posit that the husband controls the woman's use of time and consumption and prioritises his own needs for, say, consumption, education, a job, etc. over hers. The Burundi-VSLA sought to both reduce the transaction costs of communication relative to the use of violence by improving individuals' ability to negotiate, and change men's perception of the returns from collaborating with their wives in household management. It assumed – and found – low levels of cooperation, with the husband conferring all public goods, and spouses' choices directed by traditional gender roles, as suggested by FGDs transcripts: this evidence is consistent with an initial separate-spheres bargaining equilibrium where each spouse makes his or her choices, taking the other's as given. By providing negotiation skills training, it sought to shift the household from a separate-spheres bargaining equilibrium to one where spouses would at least partially pool resources (Browning *et al.*, 2009), moving toward a more efficient equilibrium, also possibly characterised by lower levels of violence. As with the IMAGE project, developing a complete model is beyond the scope of the current work, and an assessment of how results from this

experiment may support, or fail to support, the current models is offered as an initial exploration of how this type of data may speak to these models, and how models of intra-household allocation could further contribute to the understanding of interactions between individuals around IPV.

Estimation Results

The VSLA micro-financing programme coupled with the discussion sessions in Burundi was targeted at reducing male control over all household decision-making. Included in this was the goal of changed attitudes towards household violence. If successful in execution, both men and women who participated in the discussion sessions would develop a more nuanced understanding of domestic violence without an explicit discussion or consideration of violence. In particular, women who participated in the discussion sessions would be able to describe the elements that constitute the ‘cultural risk environment’ for domestic violence. ‘Cultural risk environment’ is defined as the set of criteria that identify acceptable behaviour for the woman in the household and at the same time underscore her subordinate position in role negotiation.

Impact estimates from the OLS difference-in-difference-in-differences models of the Burundi programme suggest that participation in the discussion groups is associated with no change in the areas of autonomy, environmental mastery and meaningful relations with others. Decisions on how women’s income is spent become more co-operative, suggesting women’s income is used for household goods; there is no substantial change in decisions on how men’s income is spent. In addition, women’s rejection of violence increases by up to 44%, and men’s by 81%, compared to control women at baseline. Changes in women’s attitudes are not reflected in substantial changes to violence exposure.

Verifying Randomization

Before considering the initial reported attitudes of VSLA participants on gender issues, I asked respondents detailed questions about their household, including information about displacement, education and wealth. This information is important from a methodological standpoint as it allows me to test that discussion session participating and control communities are similar across a range of background variables that might shape the outcomes of interest or impact the efficacy of the programme. In addition, the data offers a detailed picture of the VSLA participants – many of whom are recent returnees to post ethnic-conflict Burundi.

Members of the VSLA programme were not necessarily representative of all Burundians: about two-thirds of the participants and thus roughly as many respondents are female (69%). The average age of participants was 37.9, the youngest 16 and the oldest 80. On average, respondents had four children living at home. The maximum number of children living at home was twelve. Just short of two-thirds (61%) had young children (under five) in the household. Only 0.45% of respondents

reported never being displaced due to the ethnic conflict. More than half were displaced from their homes but remained within Burundi while 40% reported having to leave their homes *and* Burundi due to the ethnic conflict. The majority of participants owned land (56%), averaging two 0.5 hectares plots⁶⁶. Approximately 61% of respondents had attended some primary school but only 16% secondary school.

An important component in assessing the validity of an experiment is comparing the outcome variables of interest in the control and treatment groups to ensure that there are no systematic baseline differences. If randomization is successful, then on average there should be no statistically detectable difference between the control and treatment groups for baseline variables. Supporting this, I found that almost no outcome variable recorded a statistically significant baseline difference between average values recorded in the participants' and non-participants' groups respectively. Tables 7.1 and 7.2 show that groups do not differ in any statistically significant way on average and thus constitute good counterfactuals for one another.

The only statistically significant differences in characteristics prior to the discussion sessions were whether the husband decided how the money his wife earned was to be spent, whether the wife should give her money to her husband, and whether it is up to the husband only to decide on disagreement on having sex. The discussion session participants reported greater cooperation on the money management indicators, while control participants reported more cooperation on resolving disagreements on having sex. These differences in three pre-treatment outcome are not of concern given the large number of outcome variables tested. Statistically, there is a 5% chance that an outcome would appear significantly different, consistent with my baseline results.

⁶⁶ Poor people in Burundi have farms of 0.5 hectares on average (Global Agriculture and Food Security Program 2012, 8).

Table 7.1a Environmental Mastery and Violence Outcomes Baseline Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
<i>Environmental Mastery</i>	60	0.30	1.61	85	-0.16	1.76	0.46	1.63
Woman has been physically hurt	97	1.15	0.39	129	1.14	0.43	0.02	0.28
Woman has been insulted	97	1.76	1.01	129	1.67	0.98	0.10	0.72
Woman has been threatened	97	1.28	0.62	126	1.21	0.66	0.07	0.83
Woman has been screamed at	97	2.20	1.03	129	2.01	1.04	0.19	1.35
Total HITS Score	97	6.39	2.22	126	6.02	2.29	0.38	1.23
<i>Total HITS Score greater than 5</i>	97	0.33	0.47	126	0.22	0.42	0.11	1.77

Table 7.1b Autonomy, Decision Making and Conflict Negotiation Outcomes – Baseline Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Autonomy	18	-0.41	1.64	22	0.30	1.79	-0.71	-1.30
how money is spent spouse decides	158	2.38	1.22	193	2.12	1.26	0.26	1.96
spend money disagree: spouse changes	81	4.33	1.14	118	4.41	1.22	-0.07	-0.43
daily hh purchases spouse decides	148	2.24	1.01	183	2.36	1.06	-0.12	-1.09
daily hh purchases disagree: spouse changes	91	4.38	1.02	121	4.50	1.01	-0.12	-0.85
large hh purchases spouse decides	157	2.05	1.18	192	2.10	1.28	-0.05	-0.36
large hh purchases disagree: spouse changes	86	4.30	1.25	116	4.37	1.25	-0.07	-0.38
alcohol & cigarettes spouse decides	82	1.85	1.07	98	1.70	1.00	0.15	0.96
alcohol & cigarettes disagree: spouse changes	45	3.58	1.62	53	3.79	1.66	-0.21	-0.65
when to visit family & friends - spouse decides	145	2.56	1.19	178	2.71	1.30	-0.15	-1.12
when to visit family & friends disagree: spouse changes	78	4.35	1.05	104	4.50	1.11	-0.15	-0.95
when to visit spouse's family & friends - spouse decides	149	2.57	1.22	179	2.70	1.31	-0.13	-0.95
<i>when to visit spouse's fam & fr disagree: spouse changes</i>	<i>66</i>	<i>4.65</i>	<i>0.95</i>	<i>96</i>	<i>4.88</i>	<i>0.55</i>	<i>-0.22</i>	<i>-1.72</i>
how many kids spouse decides	52	2.73	1.46	86	2.57	1.44	0.16	0.63
have sex spouse decides	106	1.84	1.23	150	1.91	1.32	-0.07	-0.46
have sex disagree: spouse changes	52	4.17	1.31	72	4.69	0.82	-0.52	-2.54

Table 7.1c Meaningful Relations with Others and Gender Norms Outcomes – Baseline Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Meaningful Relations with Others	126	-0.04	2.13	166	-0.06	2.28	0.03	0.10
Women should do as Men Say	177	2.14	0.55	204	2.19	0.52	-0.06	-1.01
Wife should give money she earns to husband	177	2.60	0.50	203	2.49	0.56	0.11	2.06
Okay for husband to abandon wife if he wants	172	2.40	0.51	202	2.43	0.52	-0.04	-0.66
Woman's job to gather water, even if unsafe	177	2.45	0.53	200	2.49	0.53	-0.03	-0.60
Women cannot manage money	174	2.90	0.34	200	2.88	0.35	0.02	0.61
Women should have sex when husband wants	169	2.44	0.56	201	2.53	0.56	-0.09	-1.53
Women should have as many kids as husband wants	165	2.58	0.52	193	2.63	0.51	-0.06	-1.03

Table 7.1d Attitudes to Violence Outcomes – Baseline Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Okay to beat wife if goes out w/out telling husband	177	0.60	0.49	203	0.66	0.48	-0.06	-1.13
Okay to beat wife if neglects kids	176	0.49	0.50	203	0.46	0.50	0.03	0.59
Okay to beat wife if argues w/ husband	172	0.76	0.43	203	0.74	0.44	0.02	0.51
Okay to beat wife if refuses sex	167	0.75	0.43	200	0.73	0.45	0.02	0.53
Okay to beat wife if burns food	169	0.92	0.27	204	0.89	0.31	0.03	1.03
Okay to beat wife if does something annoying	177	0.89	0.32	203	0.85	0.36	0.04	1.14
<i>Okay to beat wife for any reason</i>	176	0.91	0.29	204	0.85	0.36	0.06	1.70
Never okay to beat wife	173	0.50	0.50	204	0.48	0.50	0.02	0.43

Table 7.2 Burundi Socio-Demographic Variables – Baseline Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Males	178	0.28	0.45	206	0.33	0.47	-0.06	-1.27
Age	178	37	12	205	39	12	-1.30	-1.05
Respondents' Level of schooling	107	1.82	0.94	126	1.58	0.83	0.24	2.07
Spouse's Level of Schooling	88	1.55	0.84	106	1.65	0.89	-0.11	-0.84
Displaced	175	0.99	0.08	204	1.00	0.07	0.00	-0.11
Displaced outside Burundi	165	0.42	0.50	190	0.40	0.49	0.02	0.46
Respondent Half Hectares	120	1.97	1.66	143	2.09	1.62	-0.12	-0.59
Spouse's Half Hectares	77	2.03	1.80	96	2.00	1.48	0.03	0.12
Use Others' Land	84	0.79	0.41	99	0.77	0.42	0.02	0.29
Respondent & Spouse Own Land Jointly	178	0.37	0.48	206	0.43	0.50	-0.07	-1.34

At follow up, standardized measure of environmental mastery is higher among treated individuals compared to controls, though the difference is just short of statistical significance (Table 7.1a1). The ten percentage point difference in exposure to violence is sizeable, and significant at the 10% level.

Table 7.1a1 Environmental Mastery and Violence Outcomes Follow Up Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Environmental Mastery	60	-0.10	2.04	85	-0.30	1.20	0.20	0.68
Woman has been physically hurt	97	1.04	0.41	129	1.01	0.09	0.03	0.80
Woman has been insulted	97	1.44	0.90	129	1.40	0.82	0.04	0.34
Woman has been threatened	97	1.29	0.83	126	1.15	0.52	0.14	1.43
Woman has been screamed at	97	1.63	0.98	129	1.55	0.89	0.08	0.62
Total HITS Score	97	5.40	2.60	126	5.10	1.77	0.30	0.97
Total HITS Score greater than 5	97	0.12	0.33	126	0.12	0.33	0.00	0.11

Raw means for the standardised measure of autonomy and the relevant empowerment domains suggest that there is no statistically significant difference between the two groups at follow up (Table 7.1b1). Within sample, the control group as a whole experiences higher levels of overall and domain-specific autonomy. The difference is however not distinguishable from zero. The only exceptions are decisions to visit family and friends, and when to have sex, regarding which the control group report more shared decision-making processes.

Table 7.1b1 Autonomy, Decision Making and Conflict Negotiation Outcomes – Follow Up Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Autonomy	18	-0.49	1.55	22	0.30	1.67	-0.80	-1.56
how money is spent spouse decides	158	2.57	1.24	193	2.75	1.28	-0.18	-1.35
spend money disagree: spouse changes	81	4.17	1.25	118	4.32	1.23	-0.15	-0.83
daily hh purchases spouse decides	148	2.39	0.98	183	2.56	1.08	-0.17	-1.46
daily hh purchases disagree: spouse changes	91	4.22	1.05	121	4.27	1.16	-0.05	-0.35
large hh purchases spouse decides	157	2.36	1.29	192	2.35	1.35	0.00	0.02
large hh purchases disagree: spouse changes	86	4.30	1.19	116	4.43	1.17	-0.13	-0.77
alcohol & cigarettes spouse decides	82	1.82	1.09	98	1.90	1.18	-0.08	-0.48
alcohol & cigarettes disagree: spouse changes	45	3.33	1.68	53	3.49	1.72	-0.16	-0.46
<i>when to visit family & friends - spouse decides</i>	<i>145</i>	<i>2.91</i>	<i>1.21</i>	<i>178</i>	<i>3.15</i>	<i>1.16</i>	<i>-0.24</i>	<i>-1.77</i>
when to visit family & friends disagree: spouse changes	78	4.46	0.98	104	4.60	0.98	-0.13	-0.92
when to visit spouse's family & friends - spouse decides	149	2.60	0.88	179	2.75	0.81	-0.15	-1.61
<i>when to visit spouse's fam & fr disagree: spouse changes</i>	<i>66</i>	<i>4.70</i>	<i>0.86</i>	<i>96</i>	<i>4.79</i>	<i>0.72</i>	<i>-0.09</i>	<i>-0.73</i>
how many kids spouse decides	52	2.71	1.47	86	3.07	1.33	-0.36	-1.44
have sex spouse decides	106	1.75	1.29	150	2.20	1.43	-0.45	-2.59
have sex disagree: spouse changes	52	2.23	1.10	72	2.31	1.13	-0.07	-0.37

Raw means for meaningful relations with others and related empowerment domains are very close between the two groups, almost never achieving statistical significance (Table 7.1c1). Only the acceptability of wife beating is lower in the control group, in some cases (Table 7.1d1).

Table 7.1c1 Meaningful Relations with Others and Gender Norms Outcomes – Follow Up Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Meaningful Relations with Others	126	0.01	2.12	166	0.08	1.93	-0.07	-0.29
Women should do as Men Say	177	2.47	0.72	204	2.48	0.65	-0.01	-0.08
Wife should give money she earns to husband	177	2.71	0.69	203	2.67	0.63	0.03	0.46
Okay for husband to abandon wife if he wants	172	2.66	0.65	202	2.60	0.69	0.05	0.77
Woman's job to gather water, even if unsafe	177	2.64	0.70	200	2.73	0.60	-0.08	-1.20
Women cannot manage money	174	1.87	0.56	200	1.90	0.52	-0.03	-0.49
Women should have sex when husband wants	169	2.80	0.78	201	2.76	0.64	0.04	0.50
Women should have as many kids as husband wants	165	2.85	0.68	193	2.82	0.61	0.02	0.36

Table 7.1d1 Attitudes to Violence Outcomes – Follow Up Values

Variable	Participants			Non Participants			Summary	
	Num	Mean	SD	Num	Mean	SD	Diff	t
Okay to beat wife if goes out w/out telling husband	177	0.77	0.42	203	0.83	0.37	-0.06	-1.43
Okay to beat wife if neglects kids	176	0.58	0.50	203	0.69	0.46	-0.11	-2.22
<i>Okay to beat wife if argues w/ husband</i>	172	0.84	0.37	203	0.90	0.31	-0.06	-1.67
Okay to beat wife if refuses sex	167	0.82	0.39	200	0.87	0.34	-0.05	-1.30
Okay to beat wife if burns food	169	0.93	0.26	204	0.94	0.24	-0.01	-0.28
Okay to beat wife if does something annoying	177	0.94	0.24	203	0.95	0.23	-0.01	-0.33
Okay to beat wife for any reason	176	0.93	0.25	204	0.93	0.26	0.01	0.20
Never okay to beat wife	173	0.46	0.50	204	0.45	0.50	0.01	0.20

The following five sections report results from the analysis of impact using the difference-in-differences estimator, and taking into account study design. I first present results on the autonomy, meaningful relations with others and environmental factors and the indicators they subsume. I then present results on mental health and consumption, before discussing results and a concluding synthesis.

Autonomy: Decision-Making Authority and Dispute Resolution

The first objective of the Burundi programme was to improve women's participation in decision-making. Women's participation in decision-making in the household is generally considered key to enhancing their autonomy. If she learns to take part in the management of household matters, and if her husband learns that it is useful to listen to her, this is interpreted to indicate a greater appreciation of the woman's input in the household and, in turn, to lead to a reduced likelihood that she is subjected to violence. The intervention aimed to improve decision-making dynamics in this direction, encouraging both men and women to take increasingly more decisions jointly, thereby encouraging a relational form of autonomy. Several areas critical to women's autonomy were measured: income/asset-related decision-making authority, fertility decision-making authority and the right to safety.⁶⁷

Based on this objective, I test whether female members of discussion sessions are more likely to cooperate in more areas of household decision-making; and whether men who participate in the discussion sessions are more likely than controls to believe that women are capable of making decisions in a broader set of areas.

Results from the regression of the autonomy factor suggest that the intervention had no statistically significant impact on this dimension (Table 7.3a). Within sample, women record an improvement in relational autonomy (0.62 standard deviations, (standard error (SE): 0.57) and men a reduction (-.94 standard deviations (SE: 0.92)), consistent with the hypothesis that women participate more in joint decision making and men yield some power. However, failure to achieve statistically significant change does not allow me to reject the null of no effect.

Results from the discrete indicators are broadly consistent with this finding, and show no statistically significant impact on decision-making (DM) areas (Table 7.3b), except for the husband's role in deciding how the wife's money is spent. According to this indicator, women report increased joint decision-making, with an increase of 0.14 points (on a scale from 1 to 4), which corresponds to a situation where women decide unilaterally (see Table 2.1).

⁶⁷ I also tested for property and political rights. No change was detected in these areas, and these results are not included here because there was insufficient data to conduct FA, and the indicator could not be assigned to a eudaimonic category.

Table 7.3a Autonomy Factor

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Autonomy	-0.62	-0.076	0.78	-0.40
S.E.	(0.50)	(0.83)	(0.55)	(0.89)
p-value	0.23	0.93	0.17	0.66
	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Autonomy	-0.83***	2.14***	0.62	-0.94
S.E.	(0.34)	(0.44)	(0.57)	(0.92)
p-value	0.02	<0.0001	0.29	0.32
N		163		

Table 7.3b Decision Making Outcomes – Managing Money – Baseline

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
How money you earn is spent, spouse decides	2.29***	0.019	-0.15	-0.34
S.E.	(0.14)	(0.23)	(0.17)	(0.33)
p-value	<0.0001	0.93	0.40	0.32
N		702		
Disagree w spouse on how money is spent, spouse knows better	4.29***	0.14	0.22	-0.39
S.E.	(0.14)	(0.27)	(0.15)	(0.35)
p-value	<0.0001	0.61	0.15	0.28
N		398		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.3b Decision Making Outcomes – Managing Money – Follow Up

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male intervention (beta_0)
How money you earn is spent, spouse decides	0.02	0.63**	0.41**	-0.066
S.E.	(0.14)	(0.29)	(0.18)	(0.44)
p-value	0.90	0.04	0.03	0.88
N		702		
Disagree w spouse on how money is spent, spouse knows better	-0.24	0.24	-0.045	0.26
S.E.	(0.23)	(0.41)	(0.22)	(0.48)
p-value	0.31	0.57	0.84	0.60
N		398		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Tables 7.3c to 7.3e report full results for the battery of decision-making indicators on financial and reproductive choices, and on women's freedom to visit family and friends at baseline and follow-up; they also include percentage change relative to baseline levels for each indicator. The results suggest that joint decision-making on purchases, be these large or small, or on non-necessary consumption (alcohol and cigarettes), does not record statistically significant change and I cannot reject the null of no effect (Table 7.3c). Moreover, where changes are large, even if statistically not significant, within-sample patterns for men are inconsistent with those of women, based on these results. For changes in decision-making regarding alcohol and cigarette consumption, women report an increase in cooperation, suggesting the intervention shifts participants from a situation where women decide unilaterally toward one where they decide on some things and men on others ($\beta_6=+0.29$ points (SE 0.29)); however, men record an increase in autonomy, with a shift toward a scenario where men decide ($\beta_7=-0.28$ (SE 0.63)). Similarly, for large purchases, women report a decrease in joint decision-making, recording a negative shift from a baseline scenario where women decide to a scenario where male spouses decide ($\beta_6=-0.17$ points (SE: 0.18)); while men record a positive shift from a baseline scenario where women decide to one where each decides on some things, but not others ($\beta_7=+0.24$ (SE 0.64)). Lack of statistical significance, however, suggests no measurable impact. No change is recorded in women's freedom to visit friends and family (Table 7.3d).

Table 7.3c Decision Making Outcomes – Purchases – Baseline

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Major hh purchases, spouse decides	2.17***	-0.10	0.05	-0.014
S.E.	(0.12)	(0.24)	(0.18)	(0.30)
p-value	<0.0001	0.67	0.80	0.96
N		424		
Disagree w spouse on major hh purchases, spouse knows better	4.31***	0.014	0.22	-0.42
S.E.	(0.17)	(0.27)	(0.20)	(0.43)
p-value	<0.0001	0.96	0.28	0.33
N		404		
Daily hh purchases, spouse decides	2.36***	-0.28	0.17	-0.064
S.E.	(0.11)	(0.17)	(0.11)	(0.27)
p-value	<0.0001	0.11	0.15	0.82
N		662		
Disagree w spouse on daily hh purchases, spouse knows better	4.41***	0.18	0.15	-0.27
S.E.	(0.12)	(0.21)	(0.13)	(0.31)
p-value	<0.0001	0.39	0.26	0.39
N		424		

Table 7.3c Decision Making Outcomes – Purchases – Baseline (cont)

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Purchases of alcohol/cigarettes, spouse decides	2.04***	-0.70***	-0.21	0.27
S.E.	(0.15)	(0.25)	(0.15)	(0.30)
p-value	<0.0001	0.01	0.18	0.38
N		360		
Disagree w spouse - purchases of alcohol/cigarettes, spouse knows better	3.97***	-1.14	0.28	0.045
S.E.	(0.26)	(0.68)	(0.28)	(0.79)
p-value	<0.0001	0.11	0.33	0.96
N		196		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.3c Decision Making Outcomes – Purchases – Follow Up

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Major hh purchases, spouse decides	0.17	0.49	-0.17	0.24
S.E.	(0.12)	(0.40)	(0.18)	(0.51)
p-value	0.14	0.23	0.33	0.64
N		424		
Disagree w spouse on major hh purchases, spouse knows better	-0.18	0.52	0.066	-0.062
S.E.	(0.15)	(0.35)	(0.19)	(0.54)
p-value	0.26	0.15	0.73	0.91
N		404		
Daily hh purchases, spouse decides	0.028	0.49	-0.0021	-0.0030
S.E.	(0.09)	(0.25)	(0.15)	(0.41)
p-value	0.76	0.06	0.99	0.99
N		662		
Disagree w spouse on daily hh purchases, spouse knows better	-0.27	0.39	-0.056	-0.14
S.E.	(0.10)	(0.29)	(0.15)	(0.44)
p-value	0.01	0.18	0.71	0.76
N		424		

Table 7.3c Decision Making Outcomes – Purchases – Follow Up (cont)

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Purchases of alcohol/cigarettes, spouse decides	-0.22	0.64	0.29	-0.28
S.E.	(0.18)	(0.48)	(0.27)	(0.56)
p-value	0.23	0.20	0.29	0.63
N			360	
Disagree w spouse - purchases alcohol/cigarettes, spouse knows better	-0.17	-0.20	-0.31	0.64
S.E.	(0.32)	(0.94)	(0.32)	(1.06)
p-value	0.59	0.83	0.35	0.55
N			196	

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.3d Decision Making Outcomes – Visiting Friends and Family – Baseline

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Visit your family or friends, spouse decides	2.47***	0.064	0.29***	-0.43
S.E.	(0.16)	(0.33)	(0.10)	(0.30)
p-value	<0.0001	0.85	0.01	0.17
N		646		
Disagree w spouse on visit your family or friends, spouse knows better	4.29***	0.006	0.22	-0.18
S.E.	(0.10)	(0.24)	(0.17)	(0.32)
p-value	<0.0001	0.98	0.19	0.58
N		364		
Visit your spouse's family or friends, spouse decides	2.44***	0.32	0.21*	-0.32
S.E.	(0.10)	(0.20)	(0.11)	(0.29)
p-value	<0.0001	0.13	0.06	0.29
N		656		
Disagree w spouse on visit your spouse's family or friends, spouse knows better	4.64***	-0.11	0.13	0.26
S.E.	(0.14)	(0.20)	(0.16)	(0.22)
p-value	<0.0001	0.60	0.43	0.24
N		324		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.3d Decision Making Outcomes – Visiting Friends and Family – Follow Up

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Visit your family or friends, spouse decides	0.25	0.42	-0.15	0.57
S.E.	(0.11)	(0.42)	(0.13)	(0.48)
p-value	0.03	0.33	0.24	0.25
N		646		
Disagree w spouse on visit your family or friends, spouse knows better	-0.057	0.54	0.072	-0.33
S.E.	(0.11)	(0.27)	(0.19)	(0.43)
p-value	0.63	0.06	0.71	0.45
N		364		
Visit your spouse's family or friends, spouse decides	0.12	-0.34	-0.05	0.27
S.E.	(0.11)	(0.23)	(0.16)	(0.37)
p-value	0.29	0.15	0.75	0.47
N		656		
Disagree w spouse on visit your spouse's family or friends, spouse knows better	-0.10	0.39	0.015	-0.39
S.E.	(0.20)	(0.29)	(0.23)	(0.29)
p-value	0.64	0.20	0.95	0.19
N		324		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

A sizeable and consistent trend is observed for reproductive decisions and sexuality, albeit again lacking statistical significance (Table 7.3e). For women, both indicators record an in-sample increase that is non-negligible in size ($\beta_6=0.46$ of 4 points (SE 0.35) for who decides how many children to have, and 0.30 of 4 points (SE 0.20) for who decides to have sex), with both however failing to achieve statistical significance. Changes for men are in the same direction, though smaller in magnitude. In this case, too, though changes for women are sizeable, I cannot reject the hypothesis of no intervention effect, as none of the effects is statistically significant.

When considering the full range of the decision-making indicators, the picture is generally mixed, and changes are at times very small, not warranting the conclusion that access to the life-skills training in addition to the VSLA service yielded an impact on women and men's ability to decide jointly on the use of household resources or reproductive choices. There is some weak indication that households may be pooling some of the resources to a greater extent than at baseline, while men retain control of others: women's reported increase in joint decision-making over their own money suggests they may be contributing more of their money for household use; and in-sample increased joint decision-making on non-necessary consumption, together with joint decisions on reproductive choices suggest that women perceive they play a greater role in decisions in these spheres, although this change is statistically not significant.

Table 7.3e Decision Making Outcomes – Reproductive Choices– Baseline

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
How many children to have, spouse decides	2.45***	0.15	0.15	-0.15
S.E.	(0.27)	(0.32)	(0.32)	(0.41)
p-value	<0.0001	0.65	0.65	0.71
N		276		
Having sex, spouse decides	1.70***	0.41	-0.011	0.09
S.E.	(0.21)	(0.29)	(0.16)	(0.40)
p-value	<0.0001	0.17	0.95	0.83
N		512		
Disagree on having sex, spouse knows better	4.46***	-0.39	0.45**	0.18
S.E.	(0.26)	(0.43)	(0.22)	(0.51)
p-value	<0.0001	0.37	0.05	0.72
N		248		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.3e Decision Making Outcomes – Reproductive Choices– Follow Up

	females control (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
How many children to have, spouse decides	-0.31	0.76**	0.46	0.012
S.E.	(0.23)	(0.34)	(0.35)	(0.45)
p-value	0.20	0.04	0.20	0.98
N			276	
Having sex, spouse decides	-0.23	0.48	0.30	0.10
S.E.	(0.15)	(0.39)	(0.20)	(0.45)
p-value	0.13	0.23	0.14	0.83
N			512	
Disagree on having sex, spouse knows better	-1.88***	-0.17	-0.37	-0.18
S.E.	(0.34)	(0.59)	(0.34)	(0.65)
p-value	<0.0001	0.77	0.29	0.78
N			248	

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

A greater degree of cooperation in the resolution of disputes is the ability to resolve disputes through negotiation, rather than violence. Results in Tables 7.3b and 7.3c also suggest that no statistically significant change has occurred in women or men's ability to resolve disputes jointly. Among women, there is an imprecisely estimated increase in joint decision making on alcohol purchases, and a decrease around disagreements on alcohol consumption, though men report increased joint discussions. In the FGDs, men and women speak of alcohol consumption as a high priority for men, and an area where their decisions are invariably and unquestionably unilateral. These changes, therefore, though small and not statistically significant, may signal greater awareness of these dynamics on the part of both.

Men in the treatment group report mixed results in their ability to negotiate, and estimates are never statistically significant, implying that the null of no effect cannot be rejected. However, men do report sizeable changes in some areas, and results are most pronounced in decision-making on spending the spouse's money ($\beta_7=+0.26$ points (SE 0.48)), and decisions purchases of alcohol and cigarettes ($\beta_7=+0.64$ points (SE 1.06)). Though in both cases imprecisely estimated, these within-sample shifts are consistent with in-sample patterns in the same areas of decision-making. Women report no change in their dispute resolution abilities, except for a non-significant but sizeable change in disagreements over non-necessary goods, where they report a shift toward a scenario where they tell their spouse and make the change, compared to control women at baseline ($\beta_7=-0.31$ points, (SE 0.35)). All other changes are negligible and not significant, suggesting that the hypothesis of no programme impact on dispute resolution skills is not rejected by the data.

These patterns in the data are also consistent with the evidence from the statistical analysis of qualitative data. Two themes emerged in the focus groups related to the economic sphere of access to, and management of, resources. One theme specifically describes the role of the woman in the management of the household. Typically the activities included were cleaning, making the bed, fetching water and wood, and preparing meals.⁶⁸ The role of women in this area was most often associated with an idea of responsibility or duty. Both the nature of the tasks associated with her, and the association with an idea of duty suggest low levels of autonomy are ascribed to women:

⁶⁸ Content words typical of the "household chores" theme and number of appearances in the theme (number of appearances in the theme in brackets; a plus sign next to the word indicates this is a root for a wider 'family of related words'): bed+(10), busy(6), clean+(5), fetch+(14), fire(11), meal(5), prepare+(9), servant+(6), task+(14), wash+(15), water(16), wood(11), work+(22), accomplish(4), cook+(9), duties(5), field+(9), fish+(7), clothe.(11), go.(22), responsibilit+(4), room(3), stay+(6), woman+(15), area+(3), caring(2), earn+(2), house+(6), ready(6), daily(3), dirty(2), glass(2), man(6), rest+(3), utensil+(2), leave.(4), deliver+(1), fact(3), look+(6), separate+(2), disobey+(1), sheets(1), grow.(1), night+(3), sick(1).

Sometimes you **come** from **fields around** 4 PM and he asks you **water** to **wash** his feet and then you **go** to **fetch** for it, after that you **go** to **look** for **fire wood**, and while you are **cooking** he **goes** to **rest** in bed.

(UCE: 82; Chi²: 117; woman, treatment group)

The low level of autonomy women experience in this realm is also noted at other moments in the discussion (not isolated by Alceste):

The kind of decision she can make without informing her husband is like cooking, fetching water, fetching fire wood, washing clothes. And when it is about decisions like selling household items to the market, she must inform her husband.

(man, treatment group)

The related theme for men contains a very rich description of all activities revolving around the market, and explicitly contains the idea of men in their role as fathers.⁶⁹ This is specifically in relation to the key role they seem to play in providing for their children's school purchases. The sentences characteristic of this theme seem to report the husband in a dominant position, as the one who is ultimately privileged to make decisions revolving around the acquisition of resources in the market, possibly because of his more direct access to money:

What I can say is that when a **child** needs a **notebook** or a **pen**, he **tells** his **father** and this one **buys** that **material** or he **gives** you **money** and you **buy** them.

(UCE 529; Chi²: 28; woman, control group)

The focus on women's duties in the household and their role in its management is associated with the discussion on the division of labour, and was largely concentrated among women in general. In contrast, the discussion on men's privileged access to the market was prevalent with both men and women who were not participants and participant men. These qualitative results are also consistent with an initial non-cooperative equilibrium with conformation to the household determined by these clear roles. Moreover, the lack of association between treated women and these themes is consistent with some initial effect of the treatment in fostering a more diverse set of perceptions and ideas around the role of men and the household's access to the market

⁶⁹ Content words typical of the market theme and number of appearances in the theme (number of appearances in the theme in brackets; a plus sign next to the word indicates this is a root for a wider 'family of related words'): buy.(123), sell.(56), harvest+(29), land+(21), material(16), money(116), piece(16), salt(30), decide+(36), food(34), market(20), oil(14), school(23), vegetable+(14), pay.(15), animal+(15), cassava(10), father+(9), cultivate+(13), discuss+(29), shopping(14), eat.(10), give.(35), spend.(24), agree+(38).

among treated women, suggesting some initial improvement; this is, however, insufficient to translate into effective change in decision-making and dispute resolution.

Meaningful Relations with Others (MRwO): Attitudes towards Gender Norms and Violence

A second objective of the Burundi programme was to change attitudes towards domestic violence and accepted gender norms by challenging traditional views of women, thereby improving their status in the household. The nature of the challenge was in the economic and decision-making sphere, but theory suggests that increased decision-making authority may enhance perceptions of capability and status and reduce tolerance and acceptance of violence (Bandura 2006; Heise 1998). The programme aimed to improve attitudes in this direction, by encouraging both men and women to consider why conflicts arise and why resolutions are achieved via violence rather than negotiation.

The MRwO factor collects all the indicators on gender norms and tolerance of violence to solve conflicts with one's wife. Results suggest that the intervention had no impact in this area on either men or women: while in both groups the impact recorded was positive, it fell short of statistical significance, so I cannot reject the null of no impact on MRwO (Table 7.4a).

Table 7.4a Meaningful Relations with Others Factor

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Meaningful Relations with Others	-0.63**	1.37***	-0.040	-0.35
S.E.	(0.24)	(0.35)	(0.27)	(0.40)
p-value	0.01	0.001	0.88	0.40
Follow up				
	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Meaningful Relations with Others	0.33	-1.02**	0.061	0.37
S.E.	(0.29)	(0.45)	(0.38)	(0.59)
p-value	0.26	0.03	0.87	0.54
N		584		

In particular, the questionnaire identified several areas in which violence might be more or less tolerated: mobility, fertility and household behaviour. Based on this objective, I also tested whether members of the discussion groups would be more likely to think that abuse is never justified in these specific areas (Table 7.4b).

The programme had a positive and statistically significant impact among women on the reduction of the tolerance of violence in two of the six areas measured (Table 7.4b): neglecting children and arguing. Women participants in discussion sessions are more likely to disagree that it is acceptable to beat one's wife in cases of child neglect ($\beta_6=+0.15$ (SE 0.07)) when compared to baseline females, versus no change in the rejection of violence on the part of discussion session participating men.

Female participants in discussion sessions are less likely to accept violence during arguments ($\beta_6=+0.14$ (SE 0.07)), recording an increase in disagreement with this practice compared to control women at baseline. They also record increased disagreement with the acceptability of beating one's wife in most other areas; however, unlike for child neglect and arguments, the change in these other dimensions is not statistically significant and is generally small with respect to levels of acceptance recorded by control females at baseline. Treated men agree more frequently with the statement that it is never ok to beat one's wife ($\beta_7=+0.30$ points (SE 0.12)). They also record increased rejection of this practice in most specific areas tested; however, these changes are generally small and imprecisely estimated, except in the case of arguments, where they report increased (albeit non-significant) acceptance of this practice ($\beta_7=-0.16$ (SE 0.14)).

Table 7.4b Attitudes to Violence – Baseline

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Okay to beat wife if out & not tell husband	0.43***	0.40***	<i>0.10*</i>	-0.20***
S.E.	(0.04)	(0.05)	(0.05)	(0.07)
p-value	<0.0001	<0.0001	0.07	0.01
N			760	
Okay to beat wife if neglects kids	0.35***	0.33***	-0.047	-0.016
S.E.	(0.05)	(0.08)	(0.05)	(0.08)
p-value	<0.0001	0.0002	0.33	0.84
N			758	
Okay to beat wife if argues	0.73***	0.091	-0.067	0.11
S.E.	(0.04)	(0.06)	(0.06)	(0.08)
p-value	<0.0001	0.15	0.29	0.20
N			750	
Okay to beat wife if refuses sex	0.66***	0.25***	-0.017	-0.075
S.E.	(0.04)	(0.04)	(0.05)	(0.05)
p-value	<0.0001	<0.0001	0.74	0.14
N			734	
Okay to beat wife if burns food	0.855***	0.103***	-0.028	-0.024
S.E.	(0.03)	(0.03)	(0.04)	(0.05)
p-value	<0.0001	0.002	0.53	0.66
N			746	

Table 7.4b Attitudes to Violence – Baseline (cont)

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Okay to beat wife if annoying	0.83***	0.13***	-0.024	-0.069
S.E.	(0.02)	(0.03)	(0.04)	(0.04)
p-value	<0.0001	0.001	0.53	0.12
N		760		
Okay to beat wife for any reason	0.89***	0.038	-0.055	-0.0092
S.E.	(0.03)	(0.04)	(0.04)	(0.06)
p-value	<0.0001	0.39	0.21	0.87
N		760		
Never ok to beat wife	0.37***	0.25***	0.017	-0.16
S.E.	(0.05)	(0.09)	(0.06)	(0.11)
p-value	<0.0001	0.01	0.79	0.2
N		754		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.4b Attitudes to Violence – Follow Up

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Okay to beat wife if out & not tell husband	0.25***	-0.27***	-0.02	0.11
S.E.	(0.06)	(0.09)	(0.08)	(0.12)
p-value	0.001	0.004	0.83	0.36
N		760		
Okay to beat wife if neglects kids	0.13**	-0.15*	0.15**	-0.0035
S.E.	(0.06)	(0.09)	(0.07)	(0.12)
p-value	0.03	<i>0.10</i>	0.03	0.98
N		758		
Okay to beat wife if argues	0.10	-0.10	0.14**	-0.16
S.E.	(0.05)	(0.08)	(0.07)	(0.10)
p-value	0.05	0.22	0.05	0.14
N		750		

Table 7.4b Attitudes to Violence – Follow Up (cont)

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Okay to beat wife if refuses sex	0.11	-0.15	0.060	0.070
S.E.	(0.04)	(0.05)	(0.05)	(0.08)
p-value	0.01	0.01	0.22	0.37
N		734		
Okay to beat wife if burns food	0.016	-0.038	0.035	0.015
S.E.	(0.04)	(0.05)	(0.05)	(0.07)
p-value	0.68	0.45	0.45	0.83
N		746		
Okay to beat wife if annoying	0.086	-0.13	0.026	0.087
S.E.	(0.04)	(0.05)	(0.06)	(0.07)
p-value	0.02	0.02	0.64	0.25
N		760		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

In transcripts, the theme that describes modes of violence was not associated with any group in particular, and participants seemed to indicate that while violence may not always be acceptable, there are instances – especially in connection to women's disobedience – when a husband is justified in beating his wife. Though the theme *per se* was not associated with any group, the sentences that justified violence following women not listening to men's 'advice' are generally associated with men from the control group. This suggests an overall view of women as subordinates who can be disciplined with the use of force:⁷⁰ in the web of relations that define their relational self, and in particular the dyad husband-wife, women play a subordinate role. Quantitative results seem to suggest a modest, though inconsistent shift away from this model, with some reduced tolerance for the acceptability of beating one's wife.

The quantitative data on gender norms record no statistically significant impact in almost all domains (Table 7.4c), so that the null of no effect cannot be rejected based on these results. The only exception is female participants' response to whether women should have sex when their husbands want, which shifts toward more conservative views ($\beta_{6} = -0.19$ SE(0.11), -8% on control women at baseline). In three out of seven cases, both treated women and men report more conservative views at follow-up, with both agreeing that it is ok for a husband to abandon his wife, but both also agreeing that women are entitled to keep the money they earn and should not fetch water if it is unsafe; all changes are, however, very small for women and somewhat more sizeable for men, but measured imprecisely.

In sum, the quantitative data suggest some success of the intervention in improving women's MRwO in the area of tolerance of violence. Women also record more conservative views on gender norms; in particular, they are more ready to accept that women should have sex when their husbands request this. The decrease in tolerance for violence *tout court* would suggest an initial shift of men's views toward more equitable gender attitudes; however, the overall lack of impact on the summary indicator, further supported by the lack of statistically significant impact on all other individual domains suggest that the intervention has not impacted men's attitude toward violence or gender norms.

⁷⁰ Poignantly, one male non-treated FGD participant brings to bear the example of children who are beaten, to justify the choice of beating a wife when she does something wrong.

Table 7.4c Gender Norms – Baseline

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Women should do what husbands say	2.16***	0.04	0.014	0.11
S.E.	(0.08)	(0.11)	(0.07)	(0.15)
p-value	<0.0001	0.73	0.85	0.47
N		762		
Women should have sex when husband wants	2.37***	0.22*	0.10*	-0.053
S.E.	(0.08)	(0.12)	(0.05)	(0.14)
p-value	<0.0001	0.07	0.09	0.70
N		740		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.4c Gender Norms – Baseline (ctd)

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Women should give money they earn to husbands	2.59***	0.018	-0.064*	-0.11
S.E.	(0.06)	(0.08)	(0.04)	(0.11)
p-value	<0.0001	0.83	0.10	0.30
N		760		
Ok for husband to abandon wife if he wants	2.33***	0.38***	0.025	-0.046
S.E.	(0.06)	(0.07)	(0.06)	(0.08)
p-value	<0.0001	<0.0001	0.68	0.59
N		748		
Women should fetch water, even if unsafe	2.32***	0.27**	0.034	-0.057
S.E.	(0.07)	(0.11)	(0.06)	(0.12)
p-value	<0.0001	0.02	0.58	0.65
N		754		

Table 7.4c Gender Norms – Baseline (ctd)

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Women cannot manage money	2.89***	-0.00079	-0.034	0.040
S.E.	(0.03)	(0.05)	(0.05)	(0.08)
p-value	<0.0001	0.99	0.52	0.61
N		748		
Women should have as many children as husband wants	2.50***	0.10	0.039	0.020
S.E.	(0.04)	(0.09)	(0.05)	(0.10)
p-value	<0.0001	0.29	0.43	0.85
N		716		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.4c Gender Norms – Follow Up

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Women should do what husbands say	0.33***	0.039	0.042	-0.28
S.E.	(0.09)	(0.15)	(0.12)	(0.19)
p-value	0.002	0.80	0.72	0.16
N		762		
Women should have sex when husband wants	0.40***	-0.15	-0.19*	0.21
S.E.	(0.09)	(0.16)	(0.11)	(0.21)
p-value	0.0001	0.38	0.09	0.33
N		740		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.4c Gender Norms – Follow Up (ctd)

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Women should give money they earn to husbands	0.12	-0.056	0.048	0.10
S.E.	(0.07)	(0.12)	(0.09)	(0.17)
p-value	0.13	0.63	0.59	0.53
N		760		
Ok for husband to abandon wife if he wants	0.35***	-0.31***	-0.016	-0.16
S.E.	(0.09)	(0.11)	(0.14)	(0.22)
p-value	0.001	0.008	0.91	0.49
N		748		
Women should fetch water, even if unsafe	0.20***	-0.012	0.034	0.044
S.E.	(0.08)	(0.13)	(0.10)	(0.16)
p-value	0.02	0.93	0.73	0.79
N		754		

Table 7.4c Gender Norms – Follow Up (ctd)

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Women cannot manage money	-1.04***	0.040	0.12	-0.20
S.E.	(0.07)	(0.10)	(0.11)	(0.13)
p-value	<0.0001	0.71	0.28	0.14
N		748		
Women should have as many children as husband wants	0.30***	-0.11	-0.11	0.11
S.E.	(0.07)	(0.11)	(0.09)	(0.16)
p-value	0.0004	0.36	0.25	0.50
N		716		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Environmental Mastery: Dispute Resolution and Exposure to Violence

The ultimate objective of the programme was to reduce women's exposure to violence. Rather than approach the norms that affect violence directly, the programme in Burundi was based on the theory that improving women's authority over household decisions could challenge the norms that enable violence, thus reducing violence. Based on this theory, I tested the hypothesis that the programme reduces the prevalence of domestic violence.

Results suggest that the intervention has not attained statistically significant impact on women's exposure to violence, as neither the summary EM indicator, nor the indicators for the individual domains of abuse record any statistically significant impact. Patterns in both the EM summary indicator and the individual domains indicate an in-sample increase in the amount of violence reported by men, and a small decrease in exposure reported by women, albeit never to a statistically significant degree.

The summary EM factor records a sizeable increase for men (1.35 standard deviations, SE (0.13)) (Table 7.5a). One explanation could be that treated men have developed an increased awareness of what constitutes violence. However, this change is also not statistically significant and cannot therefore be extrapolated beyond the sample.

Table 7.5b presents the impact of the programme on reported violence in the specific domains. Here, the largest decrease recorded by women is in being threatened ($\beta_{76} = -0.18$ SE (0.38)), though this is very imprecisely estimated; the largest increases in reported violence from men are in threatening their wives ($\beta_{77} = +0.31$ SE (0.31)) and screaming at them ($\beta_{78} = +0.43$ SE (0.33)), albeit here, too, impact is very imprecisely estimated and cannot be extrapolated beyond the sample.

Table 7.5a Environmental Mastery Factor

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Environmental Mastery	0.24	0.71*		-0.13
S.E.	(0.24)	(0.38)		(0.39)
p-value	0.33	0.07		0.73
				0.14
	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Environmental Mastery	0.31	-1.77***		-0.31
S.E.	(0.46)	(0.67)		(0.60)
p-value	0.50	0.01		0.61
N			290	

Table 7.5b Burundi Violence Outcomes – Baseline

	females control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Physically hurt	1.16***	0.12	0.01	-0.08
S.E.	(0.04)	(0.10)	(0.07)	(0.12)
p-value	<0.0001	0.23	0.86	0.51
N		452		
Insult	1.82***	0.00	-0.04	-0.15
S.E	(0.13)	(0.23)	(0.17)	(0.31)
p-value	<0.0001	0.99	0.79	0.63
N		452		
Threaten	1.26***	0.06	0.04	-0.29
S.E	(0.08)	(0.14)	(0.11)	(0.18)
p-value	<0.0001	0.67	0.71	0.11
N		446		

Table 7.5b Burundi Violence Outcomes – Baseline (cont)

	females control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Scream	2.03***	0.23	-0.16	-0.06
S.E.	(0.11)	(0.22)	(0.14)	(0.27)
p-value	<0.0001	0.30	0.28	0.82
N		452		
tohit>5	0.32***	0.03	-0.06	-0.12
S.E.	(0.05)	(0.10)	(0.07)	(0.11)
p-value	<0.0001	0.74	0.42	0.31
N		446		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Table 7.5b Burundi Violence Outcomes - Follow Up

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Physically hurt	-0.05	-0.19	-0.06	0.14
S.E.	(0.07)	(0.14)	(0.09)	(0.16)
p-value	0.48	0.18	0.48	0.39
N		452		
Insult	-0.21	-0.32	-0.02	0.22
S.E.	(0.17)	(0.30)	(0.27)	(0.46)
p-value	0.25	0.29	0.95	0.64
N		452		
Threaten	0.11	-0.29	-0.18	0.31
S.E.	(0.14)	(0.27)	(0.20)	(0.31)
p-value	0.44	0.29	0.38	0.32
N		446		
Scream	-0.37***	-0.58***	-0.03	0.43
S.E.	(0.15)	(0.21)	(0.21)	(0.33)
p-value	0.02	0.01	0.87	0.21
N		452		

Table 7.5b Burundi Violence Outcomes - Follow Up (cont.)

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
tohit>5	-0.16***	-0.14	0.04	0.17
S.E.	(0.07)	(0.12)	(0.12)	(0.16)
p-value	0.03	0.27	0.71	0.31
N		446		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

In the focus groups, treated men show a finer understanding of the issues around domestic violence:

Yes. You **know** there are two **reasons** for **beating** one's **wife**. It may be a **bad habit** from the husband, or it can be an occasional and unexpected **reason** due to the **wife's** attitude.

(UCE 1107; Chi²: 17; man, treatment group)

This statistically significant fragment is within a somewhat longer comment, where the same man continued saying:

Normally, a woman is not a child to receive orders and instructions every time. She is a spouse, and she has right to discuss with her husband until they agree. You know no one is blameless, but because men are powerful and strong, they think they can beat their wives."

This is in stark contrast with statistically significant sentences from men in the control group:

Why not? If **advice** has **failed**, **beating** her is not **bad**, even a child, when he/ she makes **mistakes**, you **punish** him/ her. So, in my opinion, **beating** her is that **case** is not **bad**.

(UCE: 1475; Chi²: 20; man, control group)

hence, the quantitative results may be interpreted as further corroborating the hypothesis that they have developed a clearer understanding of domestic violence.

The analysis reveals two themes of discussion related to household violence. The first may be labelled 'modes of violence', and contains words that refer to the type of violence inflicted on the women. This is mostly reported to be of a physical nature, with both psychological and physical effects on the victim. The main violent acts reported were beating, insulting and threatening. An important form of physical violence that differs from other areas is burning and scorching which both men and women report:

Yes, you can first of all beat her, [...] and from what we see, there are even some men who can burn their wives.

(man, control group)

Injuring her or burning her with hot water.

(woman, control group)

This seems to be consistent with conflict-related dynamics previously identified in the academic literature (Kishor *et al.* 2012; UNICEF 2000).

In general, the verbs characterizing this theme are verbs of active aggression: beat, fight, kill. The preposition 'against' is also typical of this theme, further indicating an

antagonistic interaction.⁷¹ The juxtaposition of the language of ‘psychological’ versus ‘physical’, suggests that violence is not only perceived as physical, and that there is an understanding of psychological violence.⁷²

When someone has been **insulted**, you can **physically** see it, he/ she **becomes angry** and you see she is in **bad mood**.

(UCE: 376 Chi²: 19; woman, treatment group)

Words that refer to violence associated with this theme are ‘threaten’ or ‘insult’ and ‘violence’, all associated with the word ‘wife’.

Though the focus group data illustrated an enhanced ability to identify and categorize antagonistic physical abuse, there is no particular association with any of the treatment groups. In the text, however, treated women are particularly precise in their descriptions of the instances when they should expect a beating:

When your husband comes home very angry, does not tell why, does not tell you what you have done wrong but instead ill-treats you and does not give what you ask him.

(woman, treatment group)

Beating his wife is a **kind of habit**; it does not mean the **wife** is necessarily **wrong**.

(UCE: 782 Chi²: 18; woman, treatment group)

This is consistent with a greater awareness of domestic violence, and in particular the ability to recognise it and describe its different facets, as well as the implications it has for its victims. This could contribute to explaining the sizeable in-sample increases in reported violence by men, as they begin to acknowledge their behaviour as violent.

In further support of this interpretation is the second issue identified in the focus groups, i.e. the acceptability of some forms of physical violence. Violence associated with men’s aggressive behaviour, and in particular, violence initiated because of changes in his mood,

⁷¹ Content words typical of the “modes of violence” theme and number of appearances in the theme: beat.(83), reason+(30), wrong+(23), ill(17), bad(18), quiet+(13), react(9), reaction+(13), situation+(20), times(16), wife(99), know.(48), learn.(10), aggressive(5), argument+(5), call+(6), case+(29), conflict+(9), disobedience(6), insult+(11), medical(10), method+(7), month+(9), mood(7), moral+(7), neighbor+(10), normal+(12), patient(7), physical+(13), planning(12), poverty(6), quarrelling(6), threaten+(5), trouble(5), try(15), week+(6), wife_+(12), become.(17), fight.(10), mistake.(8), abused(4), advis+(3), appropriate(3), ask+(45), bar+(13), better(10), cause+(7), daughter+(7), doctor+(3), easy(10), fail+(6), families+(8), habit(5), kill+(8), kind+(15), viol+(13), punish+(4), sad(5), son+(7), steal.(2), anger+(3), apologize(3), assistance(2), convince+(4), court(4), disturb+(2)

⁷² In the transcripts, the word ‘moral’ is used to qualify some types of violence that I think are psychological. It seems that ‘moral’ is an inaccurate translation from the French ‘moral’. In French this part of speech may be both a noun and an adjective, and the noun may be both masculine and feminine, each with slightly different meanings. In the masculine version it has the same meaning as the English ‘mood’. This sense seems to be the one meant by the interviewees in this context. It will thus be substituted here by ‘psychological’, as this adjective best captures the meaning interviewees gave it.

is considered distinct from violence instigated by the wife's behaviour or general social conditions. The nature of the violence is most often categorized as reasonable versus unreasonable rather than existing or not. Both treated and non-treated women, as well as treated men describe violence as a man's habit, rather than as a behaviour motivated by explicit actions on the part of the woman:

You know there are two **reasons** for **beating** one's **wife**. It may be a **bad habit** from the husband, or it can be an occasional and unexpected **reason** due to the **wife's** attitude.

(UCE: 1107, Chi² 17; man treatment group)

whereas non-treated men mostly explain it as a consequence of the women's not heeding the men's advice, as the following quote exemplifies:

Some husbands quickly get angry and start beating their wives without asking for any explanation from the wife or the child. Others, on the other hand, when they find that things have gone wrong at home, they get angry, but first ask what has happened, and then warn the wife or the child against repeating that.

(man, control group)

This suggests that all groups other than non-treated men can construe violence as the man's responsibility, rather than the woman's.

To the unreasonable and unpredictable nature of male violence is juxtaposed a language of powerlessness typically associated with the women, such as the use of the words ill(17) or patient(7):

For example, if you know that every time he comes home, he starts insulting you, you prepare food very quickly, you cannot even eat at ease, and you lose weight. If someone sees you he may think you are ill while you are not.

(woman, treatment group)

Since she is a woman like you, you can advise her about how she can try to be patient and respectful to her husband, but there are times this kind of advice may not work.

(woman, treatment group)

Consistent with this, attitudes described are aggressiveness on the part of the man, and submissiveness and politeness from the woman.

Mental Health

The questionnaire collected quantitative data on mental health to capture both individuals' mood and their social coping skills and observe how these outcomes relate to exposure to violence and other socio-economic outcomes.

Results show that, consistently with the greater ability to identify antagonistic physical abuse revealed in the focus groups and the within-sample increase in reported violence, treated men are the group to fare the worst in mental health states compared to control women at baseline (Table 7.6). In particular, they report a statistically significant lower ability to concentrate ($\beta_7 = -7.8\%$, $p < 0.01$).

They also report comparatively greater difficulties in social coping as captured by difficulties in carrying out day-to-day activities and not wishing to see others. A worse mental health state may be consistent with a heightened awareness of their having exerted some form of violence on their spouse, as also the very small increase in reported violence suggests.

Treated women do not show significant differences from control women at baseline, although the general trend is one of somewhat better mental health. Consistently with this, they report a small within-sample increase in the exposure to violence, which however is never significant.

Table 7.6 Mental Health Outcomes (Follow Up Only)

	female*after (alfa_0)	male*after (alfa_1)	female*after*treat (alfa_2)	male*after*treat (alfa_4)
Felt hopeless in the past 2 weeks	3.76***	0.17	0.02	0.38
S.E.	(0.15)	(0.28)	(0.21)	(0.30)
p-value	<0.0001	0.561	0.921	0.208
N		764		
Felt depressed in the past 2 weeks	4.01***	0.42*	0.05	0.09
S.E.	(0.16)	(0.22)	(0.14)	(0.22)
p-value	<0.0001	0.071	0.735	0.686
N		764		
Felt unable to concentrate in the past 2 weeks	4.05***	0.77***	0.08	-0.31*
S.E.	(0.14)	(0.13)	(0.16)	(0.18)
p-value	<0.0001	<0.0001	0.607	0.086
N		764		
Felt worthless in the past 2 weeks	4.36***	0.45**	-0.09	0.05
S.E.	(0.15)	(0.17)	(0.16)	(0.20)
p-value	<0.0001	0.011	0.570	0.815
N		736		

Table 7.6 Mental Health Outcomes (Follow Up Only) (cont.)

	female control (beta_0)	males control (beta_0)	females intervention (beta_0)	males intervention (beta_0)
Felt that did not wish to see anyone in the past 2 weeks	4.61***	0.20	0.02	-0.02
S.E.	(0.09)	(0.13)	(0.11)	(0.15)
p-value	<0.0001	0.128	0.837	0.915
N		766		
Found it more difficult to carry out day-to-day activities	3.28***	0.56***	0.07	-0.19
S.E.	(0.140)	(0.12)	(0.13)	(0.16)
p-value	<0.0001	<0.0001	0.599	0.249
N		638		

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Consumption

Treated men experience a sizeable and statistically significant increase in weekly expenditure and total weekly consumption on food and transport, compared to control women at baseline (Table 7.7). Treated women experience reductions which are not economically negligible (approximately 3,000 Burundian Francs) though this reduction is not statistically significant.

Table 7.7 Consumption Outcomes – Baseline

	female control (beta_0)	male control (beta_1)	female*treat (beta_2)	male*treat (beta_3)
Weekly Mkt Consumption	21,272.78	690.79	1,189.55	-1,580.43
S.E.	(3,260.39)	(2,057.28)	(1,124.94)	(2,053.25)
p-value	<0.0001	0.74	0.30	0.45
N		706		
Weekly Total Consumption	24,020.28	1,330.38	1,490.41	-100.98
S.E.	(3,716.67)	(2,461.82)	(1,209.82)	(2,320.20)
p-value	<0.0001	0.59	0.23	0.97
N		742		

Table 7.7 Consumption Outcomes Follow-up

	female*after (beta_4)	male*after (beta_5)	female*after*treat (beta_6)	male*after*treat (beta_7)
Consumption	3,418.45	-2,980.65	-3,305.63	9,499.78***
S.E.	(1,867.43)	(2,313.91)	(2,337.12)	(3,631.57)
p-value	0.08	0.21	0.17	0.01
N			706	
Weekly Total Consumption	155.80	-2,886.97	-3,014.73	6,667.82***
S.E.	(1,931.36)	(2,402.85)	(2,196.09)	(3,470.85)
p-value	0.94	0.24	0.18	0.07
N			742	

Notes: Robust standard errors clustered at the village level are reported in parentheses. Results that are significant at the 0.05 (0.10, 0.01) level are marked with a ** (*, ***). Each row presents the results from a separate OLS difference-in-differences regression for the dependent variables listed in each row. Explanatory variables include a treatment and a time dummy, plus their interaction. Each regression also controls for commune fixed effects, and clusters the errors at the VSLA level. Percent changes are based on comparison to females in the control group prior to treatment. Participants refer to individuals randomly selected to attend the programme that consisted of a set of six discussion sessions. Non-Participants refer to individuals who did not attend the programme.

Discussion

The Burundi VSLA intervention is one of the first socio-economic interventions in sub-Saharan Africa to couple micro-financial services and life-skills training to tackle IPV. It follows in the footsteps of the IMAGE intervention in South Africa, introducing some innovations to test competing hypotheses on the impact of greater access to financial resources, versus improved control over resources and negotiation skills.

It finds that coupling financial services and life-skills training does not yield impact in synthetic measures of autonomy, environmental mastery or meaningful relations with others. In fact, only five of the 35 empowerment domains (14%) over which the synthetic measures are computed record estimates of impact statistically significantly different from zero, i.e. such that they may be considered improbable, were the effect for the population from which the sample is drawn effectively zero. Failure to reach statistical significance may be due to study design and rarity of events, which would require very large numbers to detect an effect, rather than the underlying population parameter being *per se* equal to zero. This is, in fact, a particularly likely occurrence for small-N studies such as the Burundi-VSLA and IMAGE ones that, due to logistical and financial reasons, could not be conducted on larger groups of individuals. The relative paucity of observations generally does not carry enough variation to generate sufficiently narrow standard errors of the estimates (Sterne and Davey Smith 2001).

Three of the outcomes that were impacted reveal a reduction in the acceptability of wife beating, suggesting the intervention may have had some impact in reducing tolerance of violence among both women and men. Attitudes toward the tolerance of violence have previously been found to be associated with reductions in exposure to violence for women (Abramsky *et al.* 2011; Kim *et al.* 2007); however, lack of positive economic impact may have prevented men from fully enacting their reduced tolerance of violence (Gibbs *et al.* 2015).

Moreover, women's lower tolerance of violence for neglecting children suggests an improvement in women's perception of their own status in the household – i.e. in their MRwO, in that they are less accepting of a role where they may be beaten, even in connection with their conduct around a household resource as important as children. This finding is further supported by discussions in the focus groups, where treated women stated that women do not need permission from men to make decisions regarding children. This is consistent with the reported within-sample increase in relational autonomy around reproductive choices, and together these improvements suggest treated

women gained greater control over resource conferment and management within the household, suggesting limited improvement in areas relevant to MRwO and relational autonomy, although this is insufficient to yield a statistically significant impact on the synthetic measures.

This study also finds an increase in women's tendency to put their income into pooled family resources, suggestive of a limited increase in income pooling at the household level, given that no area of decision-making recorded a statistically significant shift toward greater co-operation. Lack of control over economic resources has been found to be associated with greater exposure to violence in South Africa (Jewkes *et al.* 2003) to the point of pushing many women into transactional sex and situations where they cannot control the terms of their relationships (Dunkle *et al.* 2004), a finding that has been found to hold in other settings, including India (Ghosal *et al.* 2013) and the US (Kalichman *et al.* 1998), and was one of the key drivers behind the coupling of MF interventions with life-skills programmes.

The data also suggest a large and statistically significant increase in consumption for men, and a small reduction for women, consistent with the fact that they confer more of their income to the common household resources. These limited improvements to household economic wellbeing are consistent with recent findings on microfinance only interventions in Morocco (Crépon *et al.* 2015) and India (Banerjee *et al.* 2015a), although another study in Mexico does find some impact on women's decision-making authority and no conflict in the household (Angelucci *et al.* 2015). The Burundi-VSLA study presented here differs from the studies in Morocco, India and Mexico, because it seeks to measure the incremental impact of adding life-skills training to access to financial services, rather than the impact of microfinance services only. In a similar study in Ethiopia, however, Desai and Tarozzi also find no impact on women's decisions on birth control methods (Desai and Tarozzi 2011), which could be consistent with the finding in this study that treated women develop somewhat more conservative views on sexuality.

Moreover, the increase in men's relative income could trigger an increase in violence at low levels of income (Tauchen *et al.* 1991). However, I find no statistically significant evidence of such an increase. Instead, the non-significant but sizeable increases in reported violence on the part of treated men, a worse mental health state than control women, and the finer understanding of violence men in the treatment group revealed in the FGDs could be explained by the fact that the heightened understanding of IPV revealed in the focus groups induces men to recognise, and hence report, higher abuse. In

turn, these two elements may be contributing to a worse mental health state. Specifically, their understanding of the different types of violence and their psychological implications, and of men's responsibility may all contribute to treated men's adverse mental health outcomes (Devries *et al.* 2013; Ludermir *et al.* 2008; Trevillion *et al.* 2012), despite the increase in consumption they report. However, increased awareness and critical appraisal of one's behaviour is an important predictor of behavioural change (Campbell 2003; Gibbs *et al.* 2015) so that in the longer term the negative mental health outcome and the increased levels of violence they report soon after the intervention might lead to a reduction in perpetration.

Moreover, the distal impact on mental health indicators related to mood (depressed, worthless), and the one that captured some measure of engagement (concentrate) accompanied by an increase in consumption would support the hypothesis that psychological measures capturing a sense of fulfilment, self-realisation or engagement may be more sensitive to change brought about by complex interventions which not only impact individuals' income levels, but also a number of empowerment outcomes, and better reflect the trade-off between these. These patterns lend support to the hypothesis that distinguishing between eudaimonic and hedonic utility may therefore contribute to better identifying the areas of utility that are impacted as a consequence of an intervention (Graetz 1991).

Finally, in terms of the bargaining models of intra-household allocation, the household experienced some limited shift from an initial female-biased separate-spheres equilibrium to a final resource-pooling equilibrium, where women make transfers toward purchase of the household common good, though the hypothesis of no impact on other joint decision-making processes cannot be rejected. This suggests a small increase in her power, but yields no change in violence. Moreover, women's private consumption decreases sizeably (though not significantly) and they report deciding jointly with their husbands how their (the women's) money is spent, so that it seems they yield more control of their money over to their husbands.

In sum, results suggest that a local resource pooling equilibrium may not be sufficient to reduce women's exposure to violence and may induce her to reduce her private consumption for the benefit of the household, consistent with evidence elsewhere (Duflo 2000; Strauss *et al.* 2000). It suggests that reducing transaction costs of cooperation and increasing people's appreciation of co-operation (Chen and Woolley 2001) does not suffice to reduce violence. Improvements in relational empowerment alone may not be

sufficient to bring about a reduction in violence though they do seem to bring the household toward a local income pooling equilibrium. It may be that women need greater access to resources and independent decision making, or men greater access to negotiation skills to improve on this status quo.

This analysis has limitations. The first is that I do not have indicators of psychological wellbeing to measure the psychological dimensions of autonomy, environmental mastery, and meaningful relations with others. Instead, I use proxies derived from a factor analysis of the available empowerment indicators. This implies that any impact found on the three proxies may be partial, as they cannot capture the nuances of psychological indicators *per se*.

Another limitation is inherent to the RCT design, which does not control for program placement, i.e. the tendency of microfinance NGOs to enter areas that may be more likely to yield positive results, or that are particularly in need of support. In this case, this translates in an intervention offered to displaced men and women from Burundi (see Table 2), who are a very specific population of individuals who face the socio-economic challenges of reintegration and have experienced expropriations in the past (Fagen 2011; Vorrath 2007). Therefore, while providing evidence on the impact of microfinance services in fragile (i.e. post-conflict) settings, and thus adding to the body of research on it, the results from this study should be interpreted with caution in relation to non-fragile settings.

Despite these limitations, this study brings an important piece of evidence to the debate on the impact of additional life-skills training on clients' empowerment and economic outcomes and, in particular on women's exposure to IPV. In addition, it also reports preliminary findings of the impact of such interventions on proxies of psychological wellbeing, contributing to emerging debates on the wellbeing impacts of interventions in developing countries (Haushofer and Shapiro 2013).

Conclusions

This chapter has contributed empirical evidence from a randomised controlled trial in Burundi to the debate on whether providing access to life-skills training in addition to financial services can empower women and reduce their exposure to IPV. It provides evidence relevant to debates in both the public health and development economics fields regarding the incremental effectiveness of microfinance add-ons in improving women's status in the household, and their participation in decisions around the allocation of resources within it, as well as their economic outcomes.

This is particularly relevant in societies where women may not have control over the resources they confer to the household, contrary to what is more likely to happen, for example, in the US, where it is more reasonable to assume that an exogenous increase in wages equips the woman with an outside option she did not previously have, as available evidence suggests (Aizer 2010).

It has found that an intervention that offered men and women access to life-skills training has had limited impact on empowerment indicators and economic outcomes. Furthermore, it has had no impact on the proxies of eudaimonic utility, and some limited negative impact on men's levels of psychological distress.

As recently shown for microfinance services only (Banerjee *et al.* 2015b), these results suggest that caution is also needed when interpreting the potential impact of add-on packages for microfinance services. The evidence presented here is similar to Desai and Tarozzi's study from Ethiopia on microfinance and reproductive health services (Desai and Tarozzi 2011), and reports similarly limited results. In this sense it is complementary to IMAGE, which looks at the total impact of microfinance plus life-skills programmes (Pronyk *et al.* 2006), as well as other recent studies that examine the impact of microfinance only with the use of RCTs (Banerjee *et al.* 2015a; Crépon *et al.* 2015; Tarozzi *et al.* 2015), and with further reviews of earlier evidence (Duvendack and Palmer-Jones 2011). It is also of specific relevance to fragile settings and thus complements the evidence offered by the IMAGE intervention, which was offered in a stable, if deprived (Pronyk *et al.* 2006) and violent (Seedat *et al.* 2009), context. The evidence from Burundi is also complementary to the evidence from IMAGE in terms of the economic model being tested (bargaining vs non-cooperative), providing evidence in relation to an income pooling equilibrium for the household, in support of which it provides limited evidence.

The limited evidence of impact would suggest a need to re-think similar intervention models and relevant impact evaluations, and assess whether (i) training men and women together is as effective as training them separately; (ii) whether fostering a non-cooperative model for household resource management is more effective than a bargaining model at reducing IPV; and (iii) which areas of wellbeing (both hedonic and eudaimonic) may be impacted by similar interventions, to capture intervention benefits in an appropriate utility framework.

The following chapter concludes with an overview of this work.

Conclusions

Lifetime exposure to intimate partner violence (IPV) among women 15 years or older is 30% worldwide [95% Confidence Interval (CI): (27.8%, 32.2%)], 29.67% [95% Confidence Interval (CI): (24.27, 35.04)] in sub-Saharan Africa (Devries *et al.* 2013b), and is a particularly common phenomenon in South Africa where police records reveal a staggering figure of 55,000 reported rapes in 2006 (Norman *et al.* 2010). The burden of disease associated with IPV is largely attributable to its severe psychological consequences (Devries *et al.* 2013a; Trevillion *et al.* 2012), and accounted for 50% of the 1.7 million healthy life years lost due to overall interpersonal violence for women in South Africa in 2000 (Norman *et al.* 2010); the intergenerational consequences of IPV in terms of adverse socio-economic outcomes for offspring of victims are also well documented (Abrahams and Jewkes 2005; Flach *et al.* 2011; Rico *et al.* 2011). Understanding which IPV prevention interventions work is therefore a key policy concern not only for the intrinsic value of guaranteeing women's freedom from violence and their right to safety, but also in reducing the global burden of disease directly attributable to IPV and fostering economic development (Aizer 2011; Rico *et al.* 2011).

This work was motivated by the aim of understanding how empowerment interventions may reduce the risk of IPV exposure for women by improving their agency and wellbeing. To this aim, it set out to do three things: (i) investigate how the wellbeing construct of the populations of interest to this work – i.e. sub-Saharan African women – may differ from those of individuals in Western and Far Eastern societies; (ii) define a plural measure of utility in terms eudaimonic utility (EUD) that closely reflects changes in agency to capture the wellbeing impact of policy interventions and (iiia) investigate, with exploratory factor analysis, how the dimensions of the plural utility function relate to widely used empowerment indicators of policy evaluation, in order to provide a psychologically informed utilitarian interpretation of impact of two empowerment interventions for the prevention of IPV in sub-Saharan Africa (Iyengar and Ferrari 2011; Pronyk *et al.* 2006); and (iii) test the frequent policy prescription of increasing women's independent agency (Goetz and Sen Gupta 1996; Ibrahim and Alkire 2007) versus the idea of fostering their relational agency to reduce their exposure to IPV and men's coercive control (Stark 2007) with data from the randomised trials of two empowerment interventions in Burundi and South Africa.

The remainder of the chapter lays out each research question in turn, summarises methods and findings, discusses limitations and concludes suggesting developments for further research.

This work investigated the construct of wellbeing among a group of poor Bantu women in a rural area of South Africa. It aimed to understand how these women's concepts of wellbeing may differ from the constructs found in Western – especially North American – societies, which have constituted much of the focus of wellbeing research in economics since its inception in the 1970s in the work of Easterlin. In a subsequent step, illustrated below, I then integrated findings from this investigation into the concept of a utility function for use in policy evaluation.

To extract women's concept of wellbeing, I analysed textual data from the transcripts of focus group where the women had discussed their perception of wellbeing and how this was associated with people, moments, actions and events in their lives.

Rural Pedi women's concept of wellbeing differs from predominant Western and Far-Eastern constructs as reported in trans-cultural psychology (Markus et al. 2006; Markus and Kitayama 1991). Both in terms of their emotions and motivations, their wellbeing construct is inherently structured around their relations with others, and not mapped onto an individualistic self-construct. This implies that women's wellbeing is influenced by their role-relationships – e.g., that they have to be a good daughter and marry the person their family has identified for them – and this generates a dip in wellbeing, as opposed to a spike, around the time of marriage, as is common in European countries (Lucas and Clark 2006). Similarly, the impact of crime on women's wellbeing is explicitly linked to their perceived failure to fulfil their role as mothers, and to the perceived threat to their social ties, in addition to fears of falling victim to crime as posited in other investigations on crime and wellbeing in South Africa (Powdthavee 2004). Finally, unlike findings from Western Europe (Layard 2005a, b), but similarly to Eastern Europe (Ferrer-i-Carbonell 2005) and South Asia (Fafchamps and Shilpi 2008), relative income does matter, even at low levels of absolute income.

This investigation has a number of limitations. I aimed to elicit the social construct of wellbeing, hence the focus group was an appropriate data collection tool. However, the group setting may have primed the relationality dimension for women. I addressed this by also analysing transcripts from a small number of individual interviews (not reported),

which seemed consistent with the data reported here. In addition, I was present during the focus groups. This may have modified some women's interactions in the group. However, it was also an opportunity to experience and reflect on how relational mechanisms integrate an outsider into the group. Finally, the data was analysed with one software programme only. I used Alceste, which carries out a cluster and correspondence analysis on text. I have plans to conduct further methodological work with colleagues to compare whether the results from the correspondence and cluster analysis may differ from a thematic analysis conducted, e.g., with NVivo.

Despite these limitations, these findings suggest that exploring the construct of wellbeing among other African populations (Wissing 2013a), and relational populations more generally, is an important endeavour to enhance the meaning of wellbeing research in these areas and milieux (White et al. 2014). They also suggest the need for a psychologically-substantiated utility function to reflect the dimensions of wellbeing that emerged from the analysis women's discussions: autonomy, relatedness, and mastery of the environment, or competence. Such a function might have the potential to better capture the wellbeing impact of policy interventions on individuals. This utility function and its relation to these dimensions is illustrated in the paragraphs below.

This work defined a psychologically substantiated plural utility function rooted in eudaimonic – or self-realisation – dimensions of wellbeing. It selected the three dimensions of eudaimonic utility – autonomy, meaningful relations with others and environmental mastery – from multidimensional indices of wellbeing to capture the wellbeing response to life domains associated with the social construct of wellbeing in the milieu of South African women eligible for the IMAGE (Intervention with Microfinance for AIDS and Gender Equity) intervention. It discussed psychological evidence that the three dimensions of autonomy, MRwO and EM are part of multidimensional measures of wellbeing that respond to life domains that define wellness (such as sociality and self-direction), and to basic psychological needs that seem to be universal (Chirkov et al. 2003; Ryan and Deci 2001) better than hedonic measures or synthetic measures of subjective wellbeing (Ryan and Deci 2000; Waterman et al. 2008). It discussed the mathematical and philosophical characteristics of eudaimonic utility following Kahneman (and colleagues) (2000; Kahneman et al. 1997) and Sen (1980-1981), and situated it in relation to (i) Kahneman's hedonic utility (HU) (Kahneman 2000; Kahneman and Krueger 2006) – of which EUD is the complement under the overall augmented experienced utility (AEU) function; (ii) the utility of wanting or choices

(Akerlof and Kranton 2010) – which it may contribute to explaining; and (iii) desire utility (Griffin 1988) – to which it is an alternative.

This function was derived by triangulating my findings on South African women's construct of wellbeing, presented in Chapters 3 and 4 of this thesis, with existing etic theories of wellbeing, and taking into account the nature and purpose of utility function for policy making. I found that the women's construct of wellbeing was best captured by multidimensional indices of psychological wellbeing (Ryff 1989; Ryff and Singer 1998), as opposed to subjective wellbeing (Argyle 1999; Goldberg 1972; Graetz 1991; Hankins 2008; Kilic *et al.* 1997; Martin and Newell 2005; Penninkilampi-Kerola *et al.* 2006; Sanchez-Lopez and Dresch 2008), despite the fact that one of the dimensions – the one related to competence – was also captured by SWB indices (Keyes *et al.* 2002). This is consistent with findings on the wellbeing construct of other South African populations, and may be further generalizable to peoples with predominantly, though not exclusively (Oyserman *et al.* 2002), relational self-constructs (Wissing 2013) – a hypothesis that this author is keen to further investigate in the future.

Specifically, Ryff's (1989) dimensions of autonomy (or the ability to act according to one's inner laws), meaningful relations with others (the ability to have and maintain relationships with other people that are conducive to one's development), and environmental mastery (the ability to successfully deal with the challenges of daily life) were the ones that most closely reflected the data on the structure of the women's worldviews on wellbeing. Moreover, they are plausible candidates as substantive psychological dimensions of utility because, unlike self-reflexive aspects of PWB, they are mapped on domains that are external to the individual: scoring her autonomy requires the individual to assess her decisions and actions, while scoring her self-acceptance would require her to assess her personality. This makes them more directly related to policy making than the self-reflexive dimensions of PWB, and therefore better candidates for the psychological dimensions of eudaimonic utility.

Further support in favour of these three dimensions of PWB as substrates of utility comes from the fact that they correspond to the power-related operationalisations of agency (Kabeer 1999b; Rowlands 1997) that pervasively inform the definition of empowerment outcomes (Ibrahim and Alkire 2007), with autonomy corresponding to 'power to', or the "ability to do" (Ibrahim and Alkire 2007); meaningful relations with others to 'power with', i.e. the power exercised with others; and 'power over', or control, generally attributed a negative connotation (Ibrahim and Alkire 2007; Kabeer 1999b; Rowlands

1997). In turn, this makes EUD a potential candidate to capture the wellbeing dimensions associated with Sen's concept of agency, which he himself assimilates to autonomy (Sen 1985). Agreeing with Ryan and Deci (2001), I argued that autonomy alone is not sufficient to capture the psychological ramifications of agency, and that environmental mastery and meaningful relations with others are also needed, in light of my data.

Finally, I considered how the EUD function relates to other concepts of utility, and its mathematical properties. I proposed that EUD be considered as a complementary set of dimensions alongside hedonic utility (HU) (Kahneman and Krueger 2006) and together they be termed augmented experienced utility (AEU). HU and EUD together constitute a complete utilitarian conceptualisation of the wellbeing concept, and make AEU a universal utility measure rooted in a psychological concept of wellbeing, more closely related to internal coherence and hedonic dimensions in individuated populations, and to role-relationships and competence in relational and collective populations (Chirkov *et al.* 2003; Suh *et al.* 1998). Moreover, as already noted, even in individuated populations, EUD is more closely related to activities that promote personal development and growth (Ryan and Deci 2001; Waterman *et al.* 2008). I also discussed the merits of EUD specifically in contrast to desire-utility (Griffin 1988) and the utility of motivation (Akerlof and Kranton 2010, p. 23) or wanting (Kahneman *et al.* 2004). Desire utility is subject to the same criticism as the choice-oriented paradigms of the utility of wanting. They commit the same logical fallacy of equating the statement 'I desire (choose), hence I value' to the statement 'I value, hence I desire (choose)' (Sen 1985; 1980-1981). Choices carry implicit information on constraints both material and psychological (Sen 1985), and are being revealed by behavioural economics to fail to satisfy rationality axioms (O'Donoghue and Rabin 2000); and desires are strongly connected to an internal state of mind, rather than the world (Sen 1980-1981), so that neither overcome the limitations of hedonic measures of wellbeing. Making the range of psychological dimensions related to choices more precise, EUD may contribute to providing further context for current efforts in behavioural economics aimed at understanding the mechanisms behind irrational choices (Akerlof and Kranton 2010).

Lastly, if gauged with moment-by-moment – i.e. instantaneous – measures, global utility along each EUD dimension may be computed as an integral of the instantaneous experiences over time. This global measure satisfies the monotonicity axioms stated by Kahneman, so that an experience whose global EUD in each dimension is larger in value than another will not be rated by individuals as inferior, i.e. EUD will not violate

dominance and will allow well-behaved ordering of utility profiles in each of its dimensions. I also discussed how, due to its multi-dimensionality, EUD (and AEU with it) may fail to establish a complete ordering of preferences because even if each dimension of EUD satisfies the above axioms, it may be the case that two events x and y may be valued equally along one dimension, while x may be preferred to y on one of the remaining two dimensions, and y to x along the other. In this situation, a complete ordering of events cannot be established, because the ranking of x and y based on the multidimensional utility function remains undetermined. However, Sen shows how this is a form of open incompleteness, i.e. one that can be overcome by the conceptual definition of weights for the aggregation of the three dimensions into one (Sen 1980-1981).

The investigations on the concept of wellbeing and subjective empowerment underlying EUD, and the concept of EUD present some limitations.

Generalisations from the empirical investigation on the perceptions of wellbeing and empowerment should be taken with caution in that I only investigated perceptions of the very specific milieu of intervention recipients, and the external validity of my conclusions may be limited by the fact that I only sampled one gender and one socio-economic group. While South African ethnicities have historically shown tendencies toward assimilation (Niehaus 2002), and inter-ethnic differences may not be as large as construed in the narrative of contemporary South Africa, it has also been shown that the different South African ethnicities are located at different points in the poverty-wellbeing plane (Neff 2007). The importance my FGD participants attributed to some dimensions may be different from the importance attached to them by other groups. However, findings among the Tswanas, a neighbouring poulaiton, corroborate my findings (Wissing *et al.* 2008). Further, my sample only consists of women, who have been shown to have different preferences from men in the area of relatedness, caring more for other members of the household, for example (Duflo 2000; Strauss *et al.* 2000). These limitations suggest that the investigations should be replicated more widely to ascertain whether findings are repeated among different milieus and how they vary.

However, my findings are consistent with contributions in various strands of literature on the importance of relatedness (Camfield *et al.* 2006), relational autonomy (Chirkov *et al.* 2003) and empirical and theoretical contributions that point to the existence of a relational self (Brewer and Chen 2007), and its presence in sub-Saharan Africa (Adams and Dzokoto 2003), as well as the relevance of Ryan and Deci's basic psychological needs of

autonomy, competence and relatedness – the principal domains or factors to influence wellbeing – to a large number of world populations (Chirkov *et al.* 2003; Ryan and Deci 2001). Further, it is possible that these findings apply to small communities and the materially poor; however, evidence on both men and women from India on the construct of Inner Wellbeing also suggest that dimensions of relatedness as well as competence and autonomy are central to wellbeing (White 2014). Further research in other Africa and South Indian populations to test whether similar constructs are found elsewhere is necessary to establish how their constructs differ from those in the West and the Far East.

The key limitations of the psychologically motivated utility function I propose are related to the phenomenon of adaptation (Burchardt 2005; Gilbert 2006; Layard 2005b; Oswald 2008), and to the extent to which wellbeing may be genetically determined (Gigantesco *et al.* 2011; Kendler *et al.* 2011; Keyes *et al.* 2010) and therefore not a valid candidate for policy interventions.

I discussed evidence of wellbeing adaptation – the phenomenon whereby individuals become accustomed to their socio-economic circumstances and regulate their level of WB accordingly (Clark 2009; Cummins 2000b), implying that better-off individuals would become less efficient wellbeing maximisers than the poor. Cross-country evidence has repeatedly shown that adaptation to income exists (Blanchflower and Oswald 2004; Easterlin 1995; Layard 2005a, b; Oswald 2008). It is also strong for states that are not necessarily always salient – as shown by paraplegics, who report similar levels of happiness as non-paraplegics (Gilbert 2006; Oswald 2008).

However, panel data suggest there may be an asymmetry in this relationship, with adaptation to increasing levels of income but not to decreasing (Burchardt 2005) and no adaptation to poverty (Clark *et al.* 2014). Moreover, other empirical contributions show that adaptation does not apply equally across domains and it may not be as strong in relation to other domains, such as having a family (Easterlin 2004), and access to health services (Clark 2009). Moreover, I have discussed how choices are equally as likely to reflect adaptation (and self-limiting aspirations) as self-reported measures of wellbeing (Qizilbash 1997; Sen 1985), and self-reported objective measures of functionings do not escape this same trap (Clark 2009; Qizilbash 1997). Eudaimonic utility may also be prone to adaptation. The specific dimensions of autonomy, meaningful relations and environmental mastery may be less sensitive to income adaptation, but may exhibit stronger adaptation to other socio-economic dimensions such as education, and further research is warranted in this direction. One limitation of this work is that it cannot test

such hypotheses directly, because it lacks the psychological data; however, measuring well-defined aspects of wellbeing may contribute to our limited understanding of adaptation (Burchardt 2005; Clark *et al.* 2014; Clark 2009).

The next research question this work addressed is whether the underlying eudaimonic dimensions explain some of the information contained in the empowerment indicators for policy evaluation to assess whether eudaimonic utility may be used to interpret policy impact and, if so, how. This question linked the concept of eudaimonic utility in Chapter 4 to the econometric analysis of impact of the two empowerment interventions in Chapters 5 and 6. I used exploratory factor analysis (EFA), to investigate how much of the covariation among the domain-specific empowerment indicators of impact was captured by the latent eudaimonic dimensions. Therefore, albeit not wanting to be a fully-fledged construct validity exercise, this investigation contributes to the debate in the capabilities approach (CA) literature on the links between functionings and specific aspects of wellbeing; specifically, it provides initial insights into links between empowerment domains and a general concept of WB.

In order to investigate links between the latent measure of wellbeing and the empowerment indicators from both the IMAGE and Burundi-VSLA interventions, I explored how much of the common variation between the empowerment indicators is explained by the latent factors. To do this, due to the large distance between domain-specific empowerment indicators and global EUD dimensions, I first made predictions on the associations between them on conceptual grounds, using Cummins' quality of life (QoL) domains that result from the synthesis of 1,500 scholarly contributions on QoL domains (Cummins) and are deemed among the most reliable QoL measures (Hagerty *et al.* 2001). Cummins' domains provide an intermediate step in the process of generalization from domain-specific empowerment indicators to the global wellbeing dimensions of higher order that constitute eudaimonic utility. With EFA I then verified whether the conceptual links I established were supported by the data. In the following two chapters, reporting impact evaluation, I grouped the indicators under each EUD dimension as suggested by the EFA and referred to EUD dimensions to interpret patterns of change in violence when testing the different socio-economic models of IPV.

Of the various methods used in CA empirical investigations, FA was the most suitable to identify the underlying factors explaining the variance shared by the selected empowerment indicators (Lelli, 2000; Balestrino and Scicolone, 2001). Its application aimed to determine whether the underlying common construct of EUD, articulated in its

three dimensions, explained the information contained in the empowerment indicators. I used factor rotation to improve interpretability of results while maintaining mathematical meaning.

The use of Cummins' QoL domains to attribute empowerment indicators to EUD dimensions suggested that autonomy best explained decision-making indicators; and meaningful relations with others social norms on gender roles, as well as the acceptability of violence against women. In both interventions, environmental mastery captures Cummins' domain of safety and control over personal circumstances. Violence outcomes were attributed to this factor, to reflect the idea that violence may be used strategically to control the woman and resources related to her – her time and leisure, as well as her consumption. Along the same lines, husbands' controlling behaviour was attributed to this factor.

Results from the EFA suggested that EUD explained some variation in empowerment indicators. In both datasets, indicators of gender norms and on the acceptability of certain social behaviours loaded on meaningful relations with others, consistent with the hypothesis that meaningful relations capture the roles individuals play in their social environment, as well as emotional ties with others (Abbott *et al.* 2010; Ryff 1989), possibly more consistent with an individuated concept of self. Decision-making items loaded on the autonomy factor, as did the corresponding dispute resolution outcomes, consistently with psychological measures (Abbott *et al.* 2010).

Finally, both datasets suggested that environmental mastery explained violence and, for IMAGE, controlling behaviour outcomes, consistent with the hypothesis that domestic abuse manifests as a pattern of continuous "coercive control", attained through both low-impact controlling behaviours, as well as sporadic episodes of explicit violence (Stark 2007). Both interventions, either by encouraging women to develop an independent decision-making and self-assertive style, or to improve their skills at cooperating, in fact, are acting on women's ability to contrast men's tendency to control them, and thereby also reduce violence.

The key limitation of this analysis was the lack of data on specific psychological domains between the domain-specific empowerment indicators and the global latent measures of wellbeing. Hence, I did not carry out a construct validity exercise and rather only investigated how the three latent EUD factors might explain common variation in the empowerment indicators, explaining the rationale behind the a-priori predictions with reference to QoL dimensions at an intermediate level of generalisation. Because of the

conceptual distance between the domain-specific empowerment indicators and the global EUD dimensions, I also expected the EUD dimensions to have limited explanatory power; this was borne out by the analysis that suggested that a considerable amount of variation in the data remained unique to each indicator and was not captured by the common factors. In future investigations, introducing specific psychological indicators alongside empowerment ones may help gain a clearer understanding of the correlations between psychological dimensions and empowerment domains.

Another limitation of this analysis is related to limited data availability, and applies especially to the Burundi dataset, where the patterns of missingness did not allow for a satisfactory sample size when I included in the analysis all the indicators I had selected with Cummins' domains. I tackled this challenge by first conducting the analysis on a smaller set of indicators to achieve a sample size closer to satisfactory levels (DeVellis 2003; MacCallum *et al.* 1999) and then repeated it on the sub-sets of indicators assigned to each dimension to verify whether they did constitute a single factor, which yielded an often much larger sample size, and on both subsamples of men and women. Though this analysis still suffers from limits of self-selection and small sample size, the fact that results are replicated across all tests between sites provides some support to the reliability of the associations.

With this investigation, it was also my intention to highlight these gaps, and provide the motivation for future research both to conduct similar analyses on larger datasets to test replicability, and include questions on specific psychological items alongside empowerment items to test how these are associated. Collecting both types of items systematically would also be more broadly relevant to research in the aetiology of poverty, which finds associations between psychological and 'objective' indicators of QoL to be stronger among the poor than others (Cummins 2000a). Specifically, because recent findings suggest that it is poverty that may cause poor psychological outcomes, rather than vice versa. This is in contrast to those social scientists who attribute to the poor a number of psychological limitations (Bertrand *et al.* 2004). The availability of both types of data would enable further exploration of the mechanisms that link poverty and illbeing: "[t]he poor [...] are less capable not because of inherent traits, but because the very context of poverty imposes load and impedes cognitive capacity [...]. But surely, other mechanisms might be operating. For example, poverty might influence cognitive load by changing people's affective state." (Mani *et al.* 2013, p.980). This is further supported by evidence of the positive impact of improved psychological outcomes on

investment and savings decisions among the relatively poor and marginalised (Ghosal *et al.* 2013).

This work also investigated the effectiveness of access to financial services and health and life-skills in preventing IPV with evidence from South Africa and Burundi.

The evidence from South Africa reported on the impact of a microfinance and life skills intervention compared to no access to services offered to women from the poorer economic strata near Burgersfort, a mining town in Limpopo Province, in the North East of the country.

I revisited the original IMAGE study estimates (Pronyk *et al.* 2006), conducting some robustness checks. I found that revised estimates provide limited support to Lundberg and Pollak's (1993) separate-spheres bargaining model of intra-household allocation: following the intervention women gain more control over their time, experience lower levels of violence, and reduced controlling behaviour on the part of their husbands. I provided a eudaimonic interpretation of these patterns, suggesting that women seemed to have experienced an improvement in the sphere of relatedness (MRwO), developing more egalitarian gender norms, and an increase in their sense of environmental mastery (EM) through suffering less controlling behaviour from their husbands. I have suggested that this is moderately consistent with theories of hegemonic masculinities, as women shift toward less sustaining forms of femininity and experience lower levels of IPV, even in the absence of measurable economic impact.

This work also made a the methodological contribution of in terms of the secondary data analysis for the IMAGE interventions, first reproducing the original estimates, and then showing that estimates on IPV reduction, while changing in magnitude, did not change in terms of directionality of impact as more controls for baseline imbalances were introduced, and then D-i-D estimates of impact computed.

The patterns that emerged seemed to support theories of hegemonic masculinity that can manifest in terms of coercive control, and focus on power imbalances and males' control over their partner's financial and time-use resources to explain IPV.

Specifically, the evidence I presented suggests that the intervention has increased women's reservation utility by introducing an exogenous shock to their *potential* earnings (Pollak 2005), thereby increasing their bargaining power relative to their partner in a scenario where separation is possible, even if costly. Moreover, the data suggest that the intervention shifts the household toward a non-cooperative equilibrium within marriage.

In this non-cooperative state women gain control over their time and health by shifting away from ideals of femininity supportive of negative male hegemony. This equilibrium yields higher utilities for both partners than a divorce (Lundberg and Pollak 1993) and is sufficient to reduce women's exposure to IPV.

The voluntary contribution equilibrium however can be improved upon by at least some degree of co-operation, as would happen in a local resource pooling

Equilibrium is one of the household public goods (Browning *et al.* 2010), increasing the utility of both husband and wife. It is on this premise that the Burundi intervention encouraged couples to develop joint decision-making.

The Burundi intervention aimed to improve spouses' joint decision making and conflict resolution skills. Cooperation via communication is costly, and it was thought that individuals refrained from cooperating because they found it less costly to act unilaterally than resort to violence to enforce their preferences in case of dispute. The intervention therefore sought to both (i) reduce transaction costs attached to, say, sitting at a table and discussing whether to make a purchase for the household, by improving individuals' ability to negotiate, and (ii) change men's perception on the returns from collaborating with their wives in household management (Browning *et al.* 2010) thereby improving household welfare by both increasing the production of household good and reducing the amount of violence women are administered.

Results suggested that the intervention had no impact on women's reported exposure to violence: though coefficients suggested an in-sample decrease, they were small and imprecisely estimated, while men's reports suggested non-statistically significant sizeable increases, which might be interpreted as an increase in awareness (Abramsky 2014), though not significant at conventional levels. Furthermore, none of the proxies of eudaimonic utility recorded an impact. Limited improvement in the specific empowerment domains suggest that these are not sufficient to achieve a reduction in exposure to IPV.

Results suggested that the addition of negotiation skills training may be insufficient to shift households toward a local resource pooling equilibrium and reduce women's exposure to violence. Limited improvements in the dimension of women's meaningful relations to others, accompanied by no overall increase in the autonomy dimension, despite a greater contribution to common household resources are not sufficient to reduce IPV. Reducing transaction costs of cooperation and increasing people's appreciation of

co-operation (Chen and Woolley 2001) did not seem to effectively reduce violence. Improvements in relational empowerment alone may not be sufficient to bring about a reduction in violence though they do seem to have a limited impact in bringing the household toward local income pooling equilibria. One possible explanation may be that women need greater access to resources and independent decision-making, as in IMAGE, or men greater access to negotiation skills to improve on this status quo. The consistent patterns with the sister intervention in Cote d'Ivoire further suggest that the null of no effect cannot be rejected for interventions that offer negotiation skills training alongside savings devices.

In general, the two studies captured impact at 2 years (IMAGE) and 1 year 8 months after baseline which, by current standards for trials microfinance interventions, is a reasonably long period: the most recent trials report at between 1.5 and 3.5 years (Banerjee *et al.* 2015). However, it would be interesting to re-interview trial participants in the longer term to investigate how the stated attitudes might have led to changed lives over time in e.g., women's ability to negotiate the allocation of resources in the household and, importantly, IPV outcomes.

More generally, this investigation contributes to the methodological debate on impact evaluation. The two interventions discussed in this work, similarly to other small-scale trials do present environmental dependence, and may only be locally valid. Results are therefore not generalizable beyond potential intervention recipients in both cases. In this sense, they are part of a wider set of interventions currently replicating similar studies in sub-Saharan Africa and in South Asia to further understanding of what works to prevent violence against women. This work contributed a robustness test of the IMAGE intervention and investigated how estimates of treatment effect changed when a difference-in-difference estimator was implemented. The Burundi intervention provides estimates of incremental effect of soft skills training in an experimental setting, which have only been recovered by Desai and Tarozzi (2013) in this area. However, the individual level randomisation, while tackling the self-selection bias, could not tackle non-random program placement, and it is possible that participants in this area of Burundi, who had for the most part been internally displaced were in great need of the services offered, and might not have had the sufficient ability to reap the benefits of this intervention (Mordoch 1999).

This work cannot speak to equilibrium effects (Heckman 1992), i.e. the impact these interventions would have if brought to scale, as changes in the quality of implementation,

probability of take up and other factors may change their effectiveness. However, perhaps unfortunately, interventions explicitly targeted at changing norms and structural drivers IPV are still implemented on a small scale, despite recent calls for their mainstreaming (Jewkes *et al.* 2015a)

This work has a number of limitations. Although I have not formally compared the two interventions, and only established some parallels, a number of differences between the two should be taken into account when discussing them jointly.

The first limitation is to do with the comparability of the data, and specifically the IPV measures. These differed in the time-span covered: year prior to the interview for the WHO measure IMAGE uses (García-Moreno *et al.* 2005); and two weeks prior for the HITS tool (Sherin *et al.* 1998). This means IMAGE's tool may be more prone to recall bias, and also that it may capture a larger number of episodes than the HITS tool. Moreover, the IMAGE questionnaire only measured insults in public, possibly underestimating the total exposure to insults that is instead recorded by the Burundi questionnaire. Further, the Burundi data did not include measures of controlling behaviour that may have shed more light on the power control dynamics and possibly also offered a richer characterisation of the local pooling equilibrium by providing greater information on women's control over their time and resources.

Another element that limits the validity of parallels between the two interventions is the fact that the populations they sample are different, so that parallels should be drawn with caution. Most importantly, the interventions are different. As I have clarified, the IMAGE intervention compares the full package with no intervention, while the Burundi intervention compares financial services plus training to financial services only. This implies that it was more likely that the IMAGE intervention would observe impact, as the comparator is no intervention at all, while Burundi tested the additional effect of life-skills training on individuals who had already self-selected into receiving financial services, so that the size of impact was likely to be smaller compared to IMAGE.

Finally, in referring to bargaining models of intra-household resource allocation, I do not develop a mathematical model, so that my observations in this regard can only be suggestive. I also do not have the necessary data to rigorously test the models (Browning and Chiappori 1998), which further limits the scope of my analysis: in the IMAGE sample I only observe women, while in the Burundi sample, though both men and women are present, they may not always be a married couple. Further, I lack direct data on consumption and household production, which are key elements in the analysis of intra-

household allocations. Future research that intends to test bargaining models to guide the interpretation of outcomes from IPV prevention intervention should consider collecting a larger amount of data on household consumption patterns. However, the indicators I have access to provide some initial insight into the management of resources and IPV impact as interpreted through the lens of bargaining models.

Finally, this work has sought to establish links with theoretical models of intra-household resource allocation (Banerjee *et al.* 2008), to further explain intervention impact, also linking this with the framework provided by eudaimonic utility. This link between empirical evidence, the logical framework of economic models and underlying wellbeing constructs has sought to investigate the links between identity as captured by proxies of relational EUD, and observed choices. Though limited in its effectiveness for the lack of psychological indicators, this analysis has suggested that improvements in measures of relationality and mastery that stem from increased control over one's resources (time and health investments) are accompanied by reductions in IPV. Conversely, lack of overall impact on proxies of EUD seems not to yield changes in exposure to IPV.

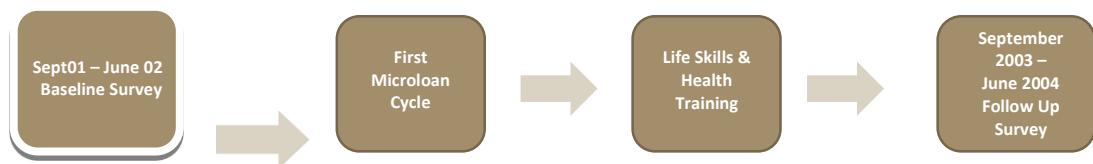
These results are only suggestive, and highlight the need for future research to collect data on psychological indicators of wellbeing, as well as more detailed data on consumption and other economic domains, in order to fully develop the implications of this work and further understand the mechanisms linking prevention interventions that tackle gender norms and gendered structural imbalances, EUD and the reduction of women's exposure to IPV.

Appendix 1: History and structure of evaluations and my involvement

IMAGE

The IMAGE intervention was designed by a team of researchers at the London School of Hygiene and Tropical Medicine and the University of Witwatersrand between 1998 and 2001. They produced the life-skills curriculum, and collaborated with the Small Enterprise Foundation (SEF), a local microfinance organisation based in Tzaneen, Limpopo, South Africa, on the delivery of the microfinance component. The IMAGE study, which generated the data I use in this thesis, evaluated the effectiveness of this combined microfinance plus life-skills intervention.

Pilot surveys to test the meaningfulness and acceptability of survey questions were carried out in early 2001; the first interviews of study participants took place toward the end of 2001, at the time of programme enrolment and before loan disbursement for intervention participants. The baseline data collection for the IMAGE study cohort used in this thesis (women who received the intervention) ended in June 2002, although the interviews of the remaining two cohorts (household co-residents and a random sample of community residents, all aged between 14 and 35, for a total of 2,937 additional individuals) were completed 15 months after the start of the data collection (Pronyk *et al.* 2006). The follow-up (endline) data collection for the women who received the intervention and are the subjects of this thesis was carried out two years after the baseline.



The IMAGE intervention compares four villages randomly assigned to a waitlist control group to matched villages randomly assigned to receiving the intervention immediately. The study's results were published in *The Lancet* on 1st December, 2006.

In March 2005, I was hired as a junior health economist on the project and tasked with an ex-post economic evaluation which led to the publication of a cost-effectiveness paper on the IMAGE intervention in *Health Policy* (Jan *et al.* 2011). This paper is not included in this thesis. For this paper, I was tasked with the collection of the ex-post data to cost the intervention and then its analysis under the guidance of Dr Stephen Jan, a health

economist then at the LSHTM and now at Sydney University. We adopted a micro-costing approach which required I spend extended time in the field to collect all necessary data. I carried out this fieldwork between March 2005 and September 2006, spending one full year in South Africa between September 2005 and September 2006, and five additional months between March and September 2005.

During this time, I also initiated and collaborated with the IMAGE team on a related study to investigate the incremental impact of the IMAGE life-skills curriculum over MF-only services, and of MF-only services over no services (control group). For this study, we used endline data from the two arms of the intervention and a randomly selected sample of villages that had been exposed to MF-only services for the same amount of time as IMAGE villages. Villages from the sampling framework of SEF villages were first matched to the original IMAGE study villages on size and distance from main roads as per the original IMAGE study criteria, and one per group was then randomly extracted. I designed the study and sampling design under the supervision of Dr James Hargreaves at the London School of Hygiene and Tropical Medicine. I also adapted the IMAGE survey instrument in collaboration with the IMAGE team, and managed the data collection, entry and database delivery (including consistency checking), supervising a team of three experienced local researchers. I delivered the final database in collaboration with the researchers and the IMAGE data manager in July 2006, at the end of the six-month period allocated to the study. I also contributed to designing the analysis and writing the related paper, published in the WHO bulletin (Kim *et al.* 2009). This paper is also not part of the present thesis.

In view of my involvement with the study, I was awarded access to the IMAGE data and allowed to carry out secondary analysis on the dataset of women microfinance clients and matched controls, to pursue my research question on intervention impact.

Finally, in my role as an employee of the IMAGE study, I collected qualitative data on local women's perception of wellbeing in three waves between May 2006 and August 2008 to pursue my research question on the structure of the women's wellbeing construct. I use these data in this thesis to first explore the women's wellbeing construct and then propose a general wellbeing construct integrating the findings from the qualitative data with socio-psychological theory and empirical research in economics. I use the structure of this construct, which I call eudaimonic utility, to (i) summarise the quantitative data on intervention impact into conceptually grounded indices, and (ii) for the interpretation of patterns.

Burundi

The Burundi VSLA surveys were carried out between January 2008 and April 2009, and were designed by Dr Iyengar and her collaborators from both Harvard University and the implementation partner, the International Rescue Committee (IRC). The baseline data collection was carried out in January 2008, prior to the intervention, and the final survey in April 2009, after clients had accessed the VSLA services and received the life-skills curriculum. As illustrated in the diagram below, an intermediate survey was also carried out between the end of the life-skills curriculum and the first time participants were allowed to use the savings they had accumulated and had received the interest on the money they had saved. This survey was used in initial analyses, but not in this thesis where the focus is on long-term impact, similar to IMAGE.

I was hired by Radha Iyengar to analyse the data from the Burundi VSLA trial in June



2009. My collaboration with Dr Iyengar on the analysis and interpretation of the data led to the publication of our joint NBER paper (Iyengar and Ferrari 2011). For this study, under the guidance of Dr Iyengar, I cleaned the data we received and prepared the databases for analysis; I conducted the econometric analysis of the data under Dr Iyengar's supervision, and composed the first draft of the NBER paper, based in part on an initial report Dr Iyengar had generated for the IRC. Dr Iyengar and I together revised all subsequent versions of the working paper toward its publication.

Further, in 2010, Dr Iyengar and I were awarded support from the British Academy Small Research Grants programme and from the Suntory and Toyota Centre for Research in Development (STICERD) at the London School of Economics on for a piece on impact diffusion through networks that we based on network analysis. I developed the concept, carried out the analysis and wrote the final reports, one for each institution, under the guidance of Dr Iyengar. This analysis does not feature in this thesis.

Chapters 5 and 6 in this thesis are based on the original NBER working paper, and some of the methods reported in Chapter 2 also draw on the NBER paper.

Appendix 2 Matching Estimates Methods

This appendix illustrates the matching methods I apply for the estimation of impact on the IMAGE data.

Introduction

I compute impact estimates with a matching estimator to provide an alternative correction for imperfect randomisation (Heckman *et al.* 1997; Smith and Todd 2005). Matching reduces the bias in the measurement of programme impact in the absence of a perfectly randomised control group, because it redefines the control group relevant for the comparison so each treated individual is compared to more suitable counterfactuals on the basis of observable characteristics (Heckman *et al.* 1997), as illustrated below. It generates adjusted estimates of treatment, similarly to a linear estimator with controls. Its advantage, however, is primarily in controlling for a far larger number of confounders than the former – which has been shown to reduce bias in the estimates in some cases (Heckman *et al.* 1997), though not in others (Duflo *et al.* 2007; Heckman *et al.* 1998).

It is particularly appropriate for IMAGE both conceptually and empirically. Conceptually, the sampling is based on a matched-pairs design (Hayes and Bennet 1999), where individuals from pair-matched intervention and control villages are matched on age. Matching individuals on a larger number of covariates therefore seems a natural extension of the same logic, interfering as little as possible with original sampling design. Empirically, the IMAGE dataset offers a very large number of covariates that can be included in the score, increasing the potential for bias reduction in the estimates (Diaz and Handa 2005; Heckman *et al.* 1997). Moreover, the data satisfy all four conditions necessary for the matching estimator to reduce estimation bias: the distribution of observables between treatment groups is very similar, compared to observational studies (See Tables 6.1 and 6.2, Chapter 6), individuals have been administered the same questionnaire, and they face the same economic environment (Heckman *et al.* 1997). A matching estimator on this dataset therefore has a reasonable likelihood of reducing bias and providing informative estimates of programme impact to consider alongside linear estimators that control for confounders.

The Concept of a Matching Estimator

Because for the treatment group I only observe individuals who decided to take up the programme, an alternative way of potentially reducing the bias in impact estimates is to model the joining choice as a function of the available socio-economic indicators, and

compare outcomes between individuals whose probability of joining is similar, conditional on their observed characteristics (Heckman *et al.* 1998, 1071). This yields matching estimates of impact averaged across subgroups of individuals that are similar in the probability of joining, conditional on the observed characteristics considered. Following Rosenbaum and Rubin in Heckman, (Heckman *et al.* 1998, 1024-1025), I assume that the conditional independence on the covariates in (1.6) still holds:

$$E[Y_i^C|X, T] - E[Y_i^C|X, C] = 0 \quad (\text{A.1})$$

where $X = (x_1, \dots, x_k)$ is the vector of k covariates I consider.

In addition to (A.1), Rosenbaum and Rubin impose the condition that only individuals whose socio-economic characteristics are similar be compared – a common support condition:

$$0 < Pr\{T|x\} < 1 \text{ for } x \in X \quad (\text{A.2})$$

Defining a ‘propensity score’ (p-score) that captures the probability of being treated, conditional on the set of relevant observables:

$$p(x) \equiv Pr\{T|X\} \quad (\text{A.3})$$

so that, per (A.2), the probability of either being treated or not is positive for everyone in the sample. It is conditioning on this score that in this context satisfies the conditional independence assumption: together, (A.1) and (A.2) imply that outcomes are independent of treatment, conditional on the propensity score⁷³:

$$E[Y_i^C|p(x), T] - E[Y_i^C|p(x), C] = 0 \quad (9)$$

This calculates treatment effect for the entire sample by calculating a weighted average of differences between averages for treated and control individuals that are more similar in terms of measurable characteristics as computed by the propensity score – i.e. are assigned by the matching estimator to the same bin or interval (Heckman *et al.* 1998).

Matching assumes that when the propensity score accurately captures the participation decision, selection bias can be reduced, though not eliminated (Heckman *et al.* 1998; Heckman 2008). By imposing the common support condition, matching further circumvents the problem of comparing non-comparable individuals, in contrast to OLS estimates (Heckman 2008; Kurth *et al.* 2006; Sianesi 2006). It also reduces the dimensionality problem generated by having to match individuals on a high number of

⁷³ The formula in (9) can also be written as: $Y_1, Y_0 \perp T|p(x)$

covariates to just having to match them on the propensity score. This is particularly advantageous in the case, where the sample size is relatively small. Finally, propensity score matching is semi-parametric, and assumes no specific functional form for the outcomes equations, compared to OLS estimates.

Computing the Estimator

I compute two matching estimators, in both cases on differenced data so as to account for within individuals fixed effects, similarly to OLS estimates. For simplicity, the next few paragraphs discuss one-period estimators. These formulas are immediately extended to differenced estimators (Sianesi 2006).

The first set of matching estimates is computed for a p-score based on observed baseline imbalances and on a measure of connectedness at baseline that may mediate intervention impact and is important in predicting the decision to join because access to mf services is conditional on having formed groups of five (Yunus 1999). The other is computed over all socio-economic and demographic variables available in the IMAGE database, on the grounds of previous evidence showing that increasing the number of variables included in the propensity score reduces estimates bias⁷⁴ (Diaz and Handa 2005; Heckman *et al.* 1997).

In both cases, I first compute the propensity score that captures the hypothesised self-selection mechanism. It is equal to the probability of being treated conditional on each respective vector of relevant socio-economic variables, and determines the weights for the comparisons between treated and control individuals for the matched estimates. In the Appendix 3 I report pre- and post-matching standardised percentage bias⁷⁵ for the variables included in the propensity score, to analyse how the similarity between intervention and control group changes on the common support, compared to the whole sample; as well as a test of differences in the outcome variables.

I refer to results from the socio-demographic estimator as the main analysis, because this is computed over the same vector of covariates as the OLS, and thus offers the relevant comparison. Estimates based on the agnostic index are also reported as a further robustness check. The next few paragraphs describe the general properties of the matching estimators.

⁷⁴ This estimator was originally suggested by Steve Pischke at the London School of Economics, who called it an agnostic matching estimator. I will use this label henceforth to refer to this estimator for brevity.

⁷⁵ This is equal to $100 * (\bar{x}_1 - \bar{x}_0) / \sqrt{((s_1^2 - s_0^2)/2)}$ i.e. it is the difference in means between treated and control individuals for each variable used to compute the propensity score, as a percentage of the variable's average standard deviation in the two groups (Rosenbaum and Rubin 1985).

The general formula for a matching estimator (Heckman *et al.* 1997) is:

$$\widehat{M}(X) = \sum_{i \in I_1} \omega_{N_0, N_1}(i) [Q_{1i} - \sum_{j \in I_0} W_{N_0, N_1}(i, j) Q_{0j}] \text{ for } x \in X \quad (\text{A.3})$$

Where Q_{1i} and Q_{0j} are treatment and control group outcomes for individuals i and j , respectively; N_1 is the number of treated individuals, N_0 the number of controls; and $W_{N_0, N_1}(i, j)$ the weight used to construct matching outcomes over the relevant group of controls for each participant, adding up to 1 over the entire set of relevant controls ($\sum_{j \in I_0} W_{N_0, N_1}(i, j) = 1$). As the equation illustrates, for each treated individual, the control outcomes of reference are computed as a weighted average of neighbouring controls. $\omega_{N_0, N_1}(i)$ is a heteroschedasticity and scale adjustment for i , and I_1 and I_0 are sets of indicator functions equal to 1 when the individual is in the intervention or control group, respectively. The estimator is calculated over the entire common support, X , and not elsewhere.

I compute estimates using a kernel matching estimator that determines the neighbourhood of X_i , $C(X_i)$, with the following weight:

$$W_{N_0, N_1}(i, j) = \frac{G_{ij}}{\sum_{k \in I_0} G_{ik}} \quad (\text{A.4})$$

Where G_{ik} is a kernel function of the form $G_{ik} = G((X_i - X_k)/a_{N_0})$. I fix the bandwidth a_{N_0} at $a_{N_0} = 0.01$. Because the kernel function weighs all individuals in the control group for each treated individual, with a weight that is inversely proportional to the distance between the score of each control and the score of treated individual i , it re-uses all controls for every treated, defining the set of neighbours as the entire control group:

$$A_i := \{j \in I_0 \mid X_j \in C(X_i)\} \equiv I_0 \quad (\text{A.5})$$

However, I also impose that controls be selected from the common support, so that A_i is a sub-set of the control group set when I use the socio-economic score. I choose the Kernel estimator because this is the closest to estimates derived from randomisation, which sets $W_{N_0, N_1}(i, j) = 1/N_0$ and $\omega_{N_0, N_1}(i) = 1/N_1$ and uses the entire control group for every treated individual to generate estimates. The Kernel estimator differs for attaching a weight to each control that is inversely proportional to the distance between its propensity score and the treated individual's score; I also discard individuals out of the common support, so as to compute estimates as close as possible to randomisation estimates, while reducing bias due to non-comparability of individuals. I also impose a small bandwidth,

which is likely to increase the variance between the estimated and the true density function, but reduces the bias of the estimates (Caliendo and Kopeinig 2008).

Conclusions

I compute matching estimates to further correct for the self-selection bias. In the matching estimators, I include observed socio-demographic variables that may have affected women's joining decision – e.g., access to sanitary services and electricity, prior paid employment, receipt of child benefit or pension, and a measure of connectedness. The latter is important in predicting the decision to join because access to mf services is conditional on having formed groups of five (Yunus 1999).

Matching estimators have a strong potential of reducing bias in this dataset because the IMAGE dataset is very rich and offers the possibility of including a large number of controls, increasing the potential for bias reduction in the estimates (Diaz and Handa 2005; Heckman *et al.* 1997). Further, as the baseline tables in Chapter 6 show (see Tables 6.1 and 6.2), the distribution of observables between treatment groups is very similar, compared to observational studies; individuals respond to the same questionnaire, and are in one economic context (Heckman *et al.* 1997).

However, matching estimates may still increase bias in comparisons over the covariates, even with such a good dataset as the IMAGE dataset is (Heckman *et al.* 1998), so that their success at improving comparability between the two groups is an empirical matter. Further, they rest on the assumption that outcomes are independent of treatment assignment conditional on observed co-variates, as per (A.1). However, the main concern in this case is that individuals may be different along unobservable characteristics, rather than observables, so that matching *per se* fails to tackle the main concern with these data.

For these reasons, I decided not to present these estimates with the main set of results, and instead report them in this appendix. They are suggestive of impact patterns, but fail to tackle the main limitation of the IMAGE data, generated by self-selection bias. This limitation could only be overcome with data on other eligible women in participating villages.

Appendix 3 Matching Estimates Results

In the following sections I employ matching estimators to mitigate the self-selection bias in IMAGE by establishing the comparison on groups of individuals that are similar in a large number of socio-economic characteristics. The assumption of matching estimators is that the self-selection bias is mitigated to the extent that the unobserved characteristics that determine the choice of take-up are explained by the socio-economic dimensions the matching controls for: specifically, bias should be on average eliminated over the subgroups of similar individuals defined by the estimator (Heckman *et al.* 1998). Though matching does not completely eliminate bias, studies have shown that the larger portion of bias in the estimates may derive mostly from observed, rather than unobserved differences (Heckman *et al.* 1998), and that bias decreases as the number of variables over which individuals are matched increases (Diaz and Handa 2005; Smith and Todd 2005).

Matching Results

This section reports the matching estimates of impact, computed over the agnostic and the socio-demographic scores. It discusses how modelling the selection process by means of the propensity score modifies OLS estimates above (Kurth *et al.* 2006). This comparison provides some insights into the impact of the self-selection bias in OLS estimates, insofar as this is accurately explained by the measured observables included in the computation of the propensity score that captures the self-selection process (Heckman *et al.* 1998).

Matching estimates largely confirm the patterns observed in OLS results, recording improvements in all three dimensions of eudaimonia, including a reduction in exposure to violence. In most cases, they suggest a greater improvement for treated women than suggested by OLS estimates. Impact on IPV is robust to matching estimates only over the agnostic index, in fact recording a slightly larger impact than OLS estimates (ATT -0.11; $p<0.05$). IPV exposure estimates based on the socio-economic index suggest a slightly larger reduction (ATT -0.29), but reduced statistical significance ($p<0.10$).

The next paragraphs discuss bias reduction in the comparison between treated and controls on outcomes and observed socio-demographics; report matching estimates, and compare these to OLS estimates to discuss how results change when treated individuals are compared only to controls that are sufficiently similar to them.

Matching Quality

Kernel estimates with small caliper radius ($r<0.1$) on the agnostic p-score record a reduction in average absolute standardised bias across covariates for every outcome, compared to unmatched groups. The chi-squared test records a reduction in differences between treated and control group in 97% of the variables, with 38% recording no statistically significant difference.

Matching on the socio-demographic score plus the connectedness measure yields similar results, with a reduction in the average standardised bias across covariates for 98% of outcomes. The p-value of the likelihood-ratio test for the restricted versus unrestricted model of selection into the treatment post-matching improves across all outcomes, recording no statistically significant difference in 73% of matched tests.

In general, both the agnostic and the socio-demographic-cum-connectedness score improve the balance across covariates for the majority of outcomes, smoothing the differences between treated and control individuals in the two groups by attributing a weight equal to the inverse of their distance to the nearest treated to each control individual. The estimates are further only computed on the common support (Heckman, 1998) to further ensure comparability, and will therefore illustrate the difference in a weighted average of impact between the two groups taking into account a measure of similarity, rather than the overall average difference between treated and controls.

The next section compares estimates of impact computed with both the agnostic and socio-economic scores.

Agnostic and Socio-demographic Propensity Score

Both sets of matching results further support OLS findings (Tables 1 and 2), recording improvements in all areas of eudaimonic utility. Meaningful relations with others records sizeable and statistically significant improvements in almost all dimensions of gender norms and sexuality across both sets of estimates. Autonomy records improvements in a few domains of independent DM, with visits to the family of birth and large purchases for the household the most consistent results; and large, and statistically significant improvements in all domains of relational autonomy, consistently across both sets of estimates. Environmental Mastery records the fewest statistically significant improvements, and patterns indicate a marked reduction in the size of impact across all domains. IPV estimates record a slightly larger impact than OLS estimates for the total score, and a lower level of precision ($p<0.10$) for the estimates based on the socio-demographic index of controls that differ at baseline. The following paragraphs discuss

results from matching estimates based on the socio-demographic index, which is more comparable with the OLS D-i-D estimates with baseline controls.

MRwO records improvements in all domains (mostly $p<0.01$), except for tolerance of husband's girlfriends and refusing to engage in sex for fear he has AIDS. Impacts vary between 0.11 ($p<0.05$) for the rejection of the idea that a wife who asks to use a condom is disrespectful to 0.31 ($p<0.01$) for disagreement with the idea that women should do all household chores. Moreover, these improvements are retained when the matching on the agnostic p-score is restricted to the nearest neighbour in both sets of estimates. The independent domain of MRwO records only minor improvements, with the HIV-related domains measuring women's awareness of their risk, and the strategies they put in place to minimise this, recording improvements that are imprecisely estimated though somewhat larger than OLS estimates (Table 1).

Autonomy records improvements across all independent DM indicators – bar taking one's child to the hospital, and visiting friends –consistent in magnitude across both OLS and matching estimates for 8 out of 13 variables. Improvements in women's ability to visit their family of birth are statistically significant in both matching estimates ($p<0.01$), and the socio-demographic index also records the ability to autonomously decide on large purchases for the household (ATT 0.16; $P<0.10$). The relational indicators of autonomy, namely contributions in kind to the household, the woman's confidence in the household's ability to survive a crisis and her ability to feed household members, all record larger and statistically significant improvements compared to OLS, suggesting that between more similar individuals relational autonomy may have strengthened to a greater degree .

Environmental mastery records the most mixed set of results, with only two out of nine controlling behaviour indicators, and only total violence recording statistically significant change, among violence outcomes. Estimates generally suggest larger impact on matched individuals, compared to OLS estimates. In particular, knowing the woman's whereabouts and controlling her access to healthcare record a larger and more precisely estimated impact compared to OLS estimates. Other impacts are generally similar or larger, but less precisely estimated. Treated women record improvements in environmental mastery via violence reduction in all domains. Impacts attain statistical significance for total violence only (ATT -0.29, $p<0.10$). Matching on the socio-demographic index, however, while providing further supporting evidence for a reduction in exposure across the board, yields non-significant estimates in the specific domains.

The binary indicator, the flagship IMAGE outcome, now records a much smaller and non-significant reduction (-0.010). In general, matching estimates support OLS results, often reporting larger magnitudes of impact and higher significance levels. In some cases, however, matching estimates suggest the data provides weak evidence against the null of no effect. This is particularly the case for violence outcomes, which record much lower p-values across all matching estimates, compared to OLS, despite larger impacts when treated women are compared to more similar controls. The patterns in the matching estimates seem to suggest that improvements chiefly confined to autonomy, and limited change in MRwO are associated with some reduction in controlling behaviour, but not with reductions in violence. This suggest that when empowerment is modest in other areas – autonomy and MRwO – changes in EM are limited to controlling behaviour, and do not extend to violence outcomes.

Table A3.1 Matching estimate Agnostic index (Kernel matching estimator)

	Average Treatment on the Treated	(bootstrap) Standard Error	t-stat	N
Meaningful Relations with Others				
women should do all hh chores	0.29***	(0.076)	p<.001	696
if paid lobola, wife must obey	0.27***	(0.071)	p<.001	696
wife asks condom, is disrespectful	0.14*	(0.060)	p<.10	674
wife asks condom, sleeps around	0.13**	(0.041)	p<.05	673
man has g-friends, must tolerate	0.01	(0.052)	p=0.75	695
wife must not divorce	0.28**	(0.070)	p<.05	693
ok to refuse sex if not want	-0.21***	(0.079)	p<.01	692
ok to refuse sex if no condom	-0.24**	(0.087)	p<.05	683
ok to refuse sex if angry for other g-friends	-0.19*	(0.070)	p<.10	694
ok to refuse sex if worried about aids	-0.06	(0.075)	p=0.50	691
hers is main monetary contribution to the hh	0.00	(0.070)	p=0.351	344
is aware of own HIV risk	0.52	(0.469)	p=0.60	495
has wanted to do something about it	0.12	(0.081)	p=0.54	493
has tried to do something about it	0.12	(0.078)	p=0.56	493
Autonomy				
small purchases self, ask partner	0.17	(0.111)	p=0.13	273
take children to hospital, ask partner	0.07	(0.115)	p=0.82	269
large purchases self, ask partner	0.07	(0.124)	p=0.92	273
small purchases hh, ask partner	-0.01	(0.099)	p=0.59	273
medium purchases hh, ask partner	0.20*	(0.121)	p<.10	271
large purchases hh, ask partner	0.18***	(0.103)	p<.01	273
visit family of birth, ask partner	0.32***	(0.137)	p<.01	271
visit friends in the village, ask partner	-0.05	(0.132)	p=0.56	272
visit family or friends outside vlg, ask partner	0.24**	(0.124)	p<0.05	272
join credit association, ask partner	0.09	(0.071)	p=0.19	273
hers is main non-monetary contribution to the hh	0.14***	(0.046)	p<.01	698
confident she can feed her family alone in face of crisis	-0.33***	(0.142)	p<.01	695
confident hh would survive financial shock	-0.40***	(0.129)	p<.01	695
Environmental Mastery				
partner encourages participation in activities out of hh	-0.01	(0.107)	p=0.57	287
partner asks for advice	-0.12	(0.125)	p=0.731	287
partner keeps from friends	0.05	(0.065)	p=0.81	287
partner restricts contact w\family	-0.03	(0.067)	p=0.511	279
partner insists on knowing where she is	0.14	(0.081)	p=0.432	287
partner controls access to health care	0.30***	(0.097)	p<.001	287
partner boasts g-friends	-0.02	(0.038)	p=0.80	278
partner threatened eviction	0.14	(0.064)	p=0.15	278
how to spend own money, decides alone	0.05	(0.122)	p=0.18	141
insulted by partner - past year experience	0.04	(0.063)	p=0.15	287
pushed by partner - past year experience	-0.06	(0.050)	p=0.11	290

partner hit w\fist - past year experience	-0.07	(0.039)	p=0.07	290
had forced sex w\partner - past year experience	-0.06	(0.054)	p=0.06	290
had sex for fear of what would happen - past year exp	-0.03	(0.053)	p=0.72	290
total violence	-0.11**	(0.055)	p<0.05	290
violence binary	-0.066	(0.095)	p=0.484	290

Table A3.2 Matching estimate OLS controls (Kernel matching estimator)

	ATT	(bootstrap) Standard Error	t-stat	N
Meaningful Relations with Others				
women should do all hh chores	0.31***	(0.075)	p<.01	564
if paid lobola, wife must obey	0.27**	(0.083)	p<0.05	564
wife asks condom, is disrespectful	0.11**	(0.059)	p<0.05	552
wife asks condom, sleeps around	0.10**	(0.048)	p<0.05	553
man has g-friends, must tolerate	0.02	(0.070)	p=0.891	563
wife must not divorce	0.13*	(0.090)	p<0.10	561
ok to refuse sex if not want	-0.19*	(0.094)	p<0.10	562
ok to refuse sex if no condom	-0.12	(0.087)	p=0.10	555
ok to refuse sex if angry for other g-friends	-0.12**	(0.079)	p<0.05	562
ok to refuse sex if worried about aids	-0.13	(0.093)	p=0.26	562
hers is main monetary contribution to the hh	0.11	(0.095)	p=0.161	298
is aware of own HIV risk	0.10	(0.112)	p=0.182	499
has wanted to do something about it	0.02	(0.096)	p=0.43	414
has tried to do something about it	0.01	(0.105)	p=0.654	414
Autonomy				
small purchases self, ask partner	0.23	(0.12)	p=0.212	237
take children to hospital, ask partner	-0.09	(0.150)	p=0.65	235
large purchases self, ask partner	0.05	(0.135)	p=0.19	237
small purchases hh, ask partner	0.06	(0.107)	p=0.836	237
medium purchases hh, ask partner	0.21	(0.159)	p=0.278	236
large purchases hh, ask partner	0.15*	(0.095)	p<0.10	237
visit family of birth, ask partner	0.33**	(0.126)	p<0.05	235
visit friends in the village, ask partner	-0.01	(0.133)	p=0.99	236
visit family or friends outside vlg, ask partner	0.24	(0.130)	p=0.45	236
join credit association, ask partner	0.04	(0.090)	p=0.11	237
hers is main non-monetary contribution to the hh	0.15**	(0.053)	p<0.05	566
confident she can feed her family alone in crisis	-0.40***	(0.175)	p<0.001	564
confident hh would survive financial shock	-0.49***	(0.189)	p<0.001	562

Table A3.2 Matching estimate OLS controls (Kernel matching estimator) (ctd)

	ATT	(bootstrap) Standard Error	t-stat	N
Environmental Mastery				
partner encourages participation out of hh	-0.12	(0.130)	p=0.35	246
partner asks for advice	0.07	(0.142)	p=0.86	246
partner keeps from friends	0.14	(0.094)	p=0.82	246
partner restricts contact w\family	0.09	(0.064)	p=0.72	242
partner insists on knowing where she is	0.28**	(0.121)	p<0.05	246
partner controls access to health care	0.42***	(0.107)	p<0.01	246
partner boasts g-friends	0.11	(0.067)	p=0.5	241
partner threatened eviction	0.13	(0.082)	p=0.57	241
how to spend own money, decides alone	0.03	(0.123)	p=0.212	128
insulted by partner - past year experience	0.14	(0.065)	p=0.244	246
pushed by partner - past year experience	-0.08	(0.098)	p=0.602	249
partner hit w\fist - past year experience	-0.10	(0.075)	p=0.28	249
had forced sex w\partner - past year experience	-0.11	(0.077)	p=0.326	249
had sex for fear - past year exp	-0.03	(0.047)	p=0.64	249
total violence	-0.29*	(0.217)	p<0.10	305
violence binary	-.010	(0.096)	p=0.915	249

Appendix 4 Summary Table of Empirical Studies Cited in Chapter 1

Table A4.1 List of empirical studies in Chapter 1

Gupta et al. 2013	
Date	2010 -2012
Place	North and North Western rural Côte d'Ivoire
Type of study	Public health study; experimental
Methods (correlational vs RCT)	Two-armed, non-blinded group randomised control trial (RCT)
IPV definition	Physical or sexual violence in the past 12 months. This is measured with factual questions, extracted from the WHO questionnaire (have you been pushed or shoved? Has your partner hit you? Have you been forced to have sexual intercourse against your will?)
Measures:	
• IPV	Self-reported past-year physical and/or sexual intimate partner violence. The authors use the WHO IPV measure from the Multi-Country study on women's health and domestic violence.
• Economic	past year economic abuse from intimate partner
• Gender norms	Women's opinion on whether husbands were justified in beating their wives in various scenarios (e.g., if she disobeys him, or gossips with the neighbours instead of taking care of children, or does not prepare the meals on time, or refuses to have sex with him, or does not complete her housework to his satisfaction, or neglects the children, or argues with him)
• Empowerment	None
• Mental Health	None
Results	The authors find small and not statistically significant reduction in exposure to IPV for women who were randomised to dialogue groups, compared to participants in group savings only. However, they did find a statistically significant reduction in economic abuse and acceptability of violence in treated individuals compared to controls
Jewkes et al. 2008	
Date	2003
Place	70 village or township clusters (corresponding to nearly 3,000 individuals) in the south-east of South Africa, near the town of Mthatha, in nowadays' Eastern Province
Type of study	Public health study; experimental
Methods (correlational vs RCT)	Cluster-randomised control trial (CRT)
IPV definition	Physical or sexual violence in the past 12 months. This is measured with factual questions, extracted from the WHO questionnaire (have you been pushed or shoved? Has your partner hit you? Have you been forced to have sexual intercourse against your will?)
Measures:	
• IPV	More than one episode of physical or sexual intimate partner violence since last interview

• Economic	Transactional sex with casual partner since last interview. This is sex chiefly motivated by material exchanges (e.g., provision of food, cosmetics, clothes, transportation, items for children or family, school fees, somewhere to sleep, or cash). Men were asked if they had given any such in exchange for sex, and females if they had received.
• Gender norms	None
• Empowerment	None
• Mental Health	Primary: incidence of HIV. Secondary: incidence of HSV-2, unwanted pregnancy, reported sexual practices, depression, and substance misuse.
Results	Jewkes et al. found that the Stepping Stones intervention reduced the odds of exposure to IPV in the treatment group compared to the control group at 12 months post-baseline, and that this effect was larger at 24 months (odds ratio at 24 months: 0.62, 95% confidence interval: 0.38 to 1.01, p-value=0.05). Overall, this intervention did not have significant effects in the other areas it sought to tackle, so its impact was considered interesting but limited.

Pulerwitz et al. 2014

Date	2008
Place	Gulele, Kirkos and Bole, three low-income sub-cities of Addis Ababa, Ethiopia
Type of study	Public health, quasi-experimental
Methods (correlational vs RCT)	Quasi-experimental three-arm evaluation to test the effectiveness of gender norms curricula on young men's gender attitudes and IPV perpetration. Programme placement was not random, but similar communities were randomly allocated to different programmes.
IPV definition	
Measures:	
• IPV	Self-reported physical and/or sexual intimate partner violence during the 6 months preceding the interview; and any type of violence (physical, sexual, or psychological). The authors use the WHO IPV measure from the Multi-Country study on women's health and domestic violence. Another primary outcome is the Gender-Equitable Men (GEM) Scale. The GEM measures men's views on gender norms, including on the tolerance of wife beating, reproductive health, sexuality.
• Economic	None
• Gender norms	Women's opinion on whether husbands were justified in beating their wives in various scenarios (e.g., if she disobeys him, or gossips with the neighbours instead of taking care of children, or does not prepare the meals on time, or refuses to have sex with him, or does not complete her housework to his satisfaction, or neglects the children, or argues with him)
• Empowerment	None
• Mental Health	None
Results	The authors find that in the communities assigned to either treatment group, young men's attitudes became more equitable, compared to the waitlist control group; this effect was stronger and statistically significant in communities that had the combined small-group and community intervention. IPV also decreased in both treatment arms, compared to the control. However, only the community-wide intervention reported a statistically significant decrease compared to the control group, with young men 65% less likely to perpetrate any kind of violence against their partner (p=0.06).

Abramsky et al. 2014

Date	2007-2012
Place	Eight communities in Kampala, Uganda
Type of study	Public health, experimental

Methods (correlational vs RCT)	Pair-matched CRT
IPV definition	
Measures:	
• IPV	Self-reported past-year intimate partner violence, both physical and sexual, as separate measures. The authors use the WHO IPV measure from the Multi-Country study on women's health and domestic violence.
• Economic	None
• Gender norms	All interviewees were asked about the acceptability of physical IPV (OK to beat wife if she disobeys, he is angry with her, she answers back, etc.), and of a woman's right to refuse to have sex (acceptable for a woman to refuse sex to her husband if she does not feel like it)
• Empowerment	None
• Mental Health	None
Results	The authors report significantly lower acceptance of IPV among women in intervention communities, as well as men, though this was not significant at conventional levels. Both men and women found it more acceptable that women refuse sex, and women's exposure to IPV, both physical and sexual was reduced, though this was measured imprecisely. Finally, men had fewer concurrent partners in intervention, compared to control communities.
Schuler et al. 1997	
Date	Ethnographic data: 1990-1994; survey: 1992
Place	Bangladesh
Type of study	Population study
Methods (correlational vs RCT)	Ethnography: Key informants, participant observation, and in-depth interviews carried out following domestic violence incidents. Census data. Quantitative study: multistage cluster sampling of participants and non-participants in both Grameen Bank and BRAC villages, and comparison group from villages with no credit programmes. Logistic regression of contraceptive use on programme membership, plus socio-economic characteristics to test programme effect.
IPV definition	None
Measures:	
• IPV	None
• Economic	Single indicator from measures of Economic security (owns home), and contribution to the household
• Gender norms	none
• Empowerment	Women's self-reported (i) mobility (ever gone to market, etc.); (ii) ability to make purchases (small and large); (iii) involvement in major household decisions (e.g., house renovations); (iv) freedom from family control (e.g., whether anyone had taken money from women against their will); (v) political or legal awareness (knowing names of local officials or more prominent politicians), or (vi) political campaigning
• Mental Health	None
Results	The authors find that the increase in contraceptive use among non-clients in MF villages, observed by Schuler et al. in a previous paper (1996), may be the consequence of changes in norms triggered by the presence of the programmes.
Pitt and Kandkher 1998	
Date	1991-1992

Place	87 rural Bangladeshi villages
Type of study	Development economics
Methods (correlational vs RCT)	Cross-sectional survey of MF participants. Quasi-experimental: authors use eligibility criteria for participation in microfinance programme to determine treatment assignment.
IPV definition	none
Measures:	
• IPV	none
• Economic	Women's self-employment profits
• Gender norms	none
• Empowerment	none
• Mental Health	none
Results	The authors find that, compared to relevant controls, households of female borrowers benefit more than men's in terms of consumption, girls' schooling to some extent, and non-land assets; women borrowers also increase labour supply, while men decrease it. However, their estimates of programme effect are biased because the eligibility criterion used to assign participants to treatment is likely to be correlated to the outcomes they measure. Moreover, the eligibility criterion was not always adhered to, causing the programme to suffer from misstargeting (McKernan 2002; Morduch 1999; Duvendack and Palmer-Jones 2011)

McKernan 2002

Date	1991-1992
Place	87 rural Bangladeshi villages
Type of study	Development economics
Methods (correlational vs RCT)	Cross-sectional survey of MF participants. Structural: builds an economic model that describes both intervention impact on household profits, and decision to join the programme, and tests it on Pitt and Kandkher's data.
IPV definition	none
Measures:	
• IPV	none
• Economic	Women's self-employment profits
• Gender norms	none
• Empowerment	None
• Mental Health	None
Results	McKernan shows that the self-selection bias affecting the data can account for up to 200 percentage points difference in the impact estimates of women's profits. Including non-random programme placement increases this to 300 percentage points (McKernan 2002). She finds that both access to MF services and non-credit related participation, which she obtains by conditioning on client's capital and conceptualises as joint liability, sharing of information and social development programmes, have a positive effect on self-employment profits.

Duvendack and Palmer-Jones 2011

Date	1991-1992
Place	87 rural Bangladeshi villages

Type of study	Development economics
Methods (correlational vs RCT)	Cross-sectional survey of MF participants. Propensity score matching to tackle self-selection bias in Pitt and Khandker.
IPV definition	
Measures:	
• IPV	None
• Economic	Per-capita expenditure (log); women's assets (non-landed); 16-59 year old women's labour supply; 16-59 year old men's labour supply; 5-17 year-old girls' school enrolment; 5-17 year-old boys' school enrolment
• Gender norms	None
• Empowerment	None
• Mental Health	None
Results	The authors show that the effects reported by Pitt and Khandker (2011) are not robust to PSM. MF impact is essentially indistinguishable from the effects of other financial services clients have access to, and effect cannot be exclusively ascribed to MF participation. Moreover, their sensitivity analysis suggests that small changes in unmeasured (unobserved) characteristics that both increase the likelihood of participation and of positive outcomes are sufficient to explain the estimated impact. This suggests that impact may also be explained by these unobservable characteristics, such as how entrepreneurial women are, rather than being an unbiased estimate of programme impact, casting further doubt on the reliability of original estimates
Copestake et al. 2001	
Date	2010 -2012
Place	North and North Western rural Côte d'Ivoire
Type of study	Development economics; before/after and with/without
Methods (correlational vs RCT)	Cross-sectional survey, with information on current and previous year profits. Before/after and with/without comparison. and also gather qualitative data from focus groups and interviews with key informants to investigate the impact of a microfinance intervention run by CARE Zambia in Lusaka, on participants' business performance and wellbeing.
IPV definition	None
Measures:	
• IPV	None
• Economic	business performance and wellbeing
• Gender norms	None
• Empowerment	None
• Mental Health	None
Results	Estimation suggests that access to credit increases business profits, and that this effect seems attributable to the second loan. The authors find a similar result for household income, with household income growing more for treated individuals than for controls following the second loan. However, they also reported that 52% of clients left the organisation between the 1st and 2nd loan, which would suggest self-selection among the older clients, and therefore, biased estimates. Finally, they also found that clients spent less than non-clients on "house improvement" and on durable goods, and interpret this as a shift in the allocation of capital from the house to the business. There were no

	<p>effects on savings or labour supply. Qualitative evidence suggests the MF organisation did not adequately take advantage of the benefits of screening, reciprocal monitoring and mentoring such groups could afford.</p> <p>The analysis suffers from potential recall bias, as respondents were asked about profits for the previous year, and results may not be generalizable to non-MF clients, as even controls had already agreed to take up the service in the following month.</p>
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Tarozzi et al. 2015

Date	2003-2006
Place	Ethiopia
Type of study	Development economics; experimental
Methods (correlational vs RCT)	Cluster-randomised control trial to test the effect of access to MF on economic outcomes, compared to a control group who currently receive no service, and will receive access to MF after the end of the study.
IPV definition	
Measures:	
• IPV	None
• Economic	Borrowing; livestock value and sale; business revenues, investments and expenses
• Gender norms	None
• Empowerment	None
• Mental Health	None
Results	The MF intervention effected an increase in borrowing in the treated communities (almost completely due to the NGOs involved in the study), but no statistically significant effect on almost any of the socio-economic dimensions measured. Magnitudes of in-sample effects are large, and lack of statistical significance could be due to low power. The authors conclude that MF does not have “transformative power” on its recipients, concurring with Morduch (1999) that microfinance’s potential as a solution for poverty may be limited.

Crépon et al. 2015

Date	2006 -2007
Place	rural Morocco
Type of study	Development economics; experimental
Methods (correlational vs RCT)	pair-matched CRT of a microfinance intervention.
IPV definition	
Measures:	
• IPV	None
• Economic	Borrowing and outstanding (not repaid in full) loans; self-employment activities; assets (e.g., livestock); profits;
• Gender norms	None
• Empowerment	Number of children in school, women’s independence (e.g., measures of decision making authority and freedom of movement), share of households with women-run businesses, number of self-employment activities run by women
• Mental Health	None

Results	Access to MF does not have an impact, either on villagers that are highly likely to take up MF products, nor on the villages as a whole. For likely clients, increase in profit from self-employment offset by a decrease in employment income; resulting net increase in income is small and not statistically different from zero. Microfinance changes the balance of work activities, but does not lead to an overall increase in income. Results on the patterns of hours worked inside and outside the household further support this finding. Consumption is overall not affected by access to credit; however, the authors note a shift away from consumption of non-necessary items, consistent with other findings (Banerjee et al. 2015a). The authors also find no impact on female empowerment. They conclude that access to microfinance services supports the expansion of existing self-employment activities. It does not result in an overall increase in economic wellbeing, nor in women's empowerment. Microfinance may not be a suitable tool for eradicating poverty, although it does help entrepreneurs reallocate their resources for production.
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Banerjee et al. 2015a

Date	2005-2010
Place	Poor neighbourhoods in Hyderabad, India
Type of study	Development economics; experimental
Methods (correlational vs RCT)	Two-armed, cluster-randomised waitlist control trial (CRT); longitudinal data on 90% of households (baseline and one follow-up)
IPV definition	None
Measures:	
• IPV	None
• Economic	Consumption (durables vs “unnecessary”, such as tobacco); labour supply; number of new businesses; female-owned businesses; business profits
• Gender norms	None
• Empowerment	Number of children in school; women's independence (e.g., measures of decision making authority on goods and investments); share of households with women-run businesses; number of self-employment activities run by women; women's labour supply (hours worked by women)
• Mental Health	None
Results	No change in overall consumption. Consumption shifts toward durable goods, as the result of reducing unnecessary expenditure and increasing labour supply. More new female-owned businesses in intervention villages, compared to controls. The new businesses are generally less profitable and smaller than average businesses in the area. They are also less likely to have employees than businesses in control areas. However, treated villages record an increase in the size of pre-existing businesses. Women tend to invest more in durable goods for their businesses. The increase in profits is driven by the 5% most profitable businesses at first follow-up (15-18 months from baseline), and by the top 15% pre-existing businesses at the second follow-up, at four to four and a half years after baseline, and two from first follow up. No statistically significant impact on human development or women's empowerment: no change in the probability of children being enrolled in school, nor in the number of hours women worked. No change is recorded in the index of women's empowerment, capturing decision-making authority on a range of goods and investment.

Angelucci et al. 2015

Date	2010 -2011
Place	Sonora state, Mexico (near US border)
Type of study	Development economics; experimental

Methods (correlational vs RCT)	cluster-randomised controlled trial
IPV definition	None
Measures:	
• IPV	None
• Economic	Formal and informal borrowing; number of businesses; new business (opened in previous 12 months); business; business profits; household income from business, household income from other sources; labour supply; child labour supply; family members employed in business; consumption of durable goods; consumption of non-durable goods (includes food as separate category); consumption of temptation goods; assets purchases.
• Gender norms	None
• Empowerment	women's participation in household financial decisions; number of household issues women have a say on; number of household issues on which conflict arises; trust in institutions; trust in people; membership in informal savings groups
• Mental Health	Depression; satisfaction with (i) life, (ii) economic situation, and (iii) health; job stress; locus of control
Results	<p>Treatment assignment predicts higher borrowing levels. Also measures informal borrowing (e.g., from family members). In treated areas, businesses expand but profits do not change. No statistically significant effect on household labour supply or income, nor on consumption. Consumption of temptation goods declines as found in Banerjee et al. (2015a) and Tarozzi et al. (2015). Purchases of assets also decline. Angelucci et al. also find effects on women's decision-making authority on intra-household allocation of resources, and no evidence of intra-household conflict. Similarly to Banerjee et al. (2015a), they find larger effects on revenues, profits and household decision-making for women in the highest percentiles only; they report no evidence of adverse effects from participation for women. Trust in others (family, neighbours, etc.) increases by 0.049 standard deviations but, as the authors note, this could be a product of participation in the programme. Treated areas record reductions in the measure of depression, but no other indicator of wellbeing records a sizeable or statistically significant effect, and no clear pattern of impact is found.</p> <p>There are serious limitations to the study's internal validity. It does not have complete baseline data – which implies that authors cannot establish calibration across arms; and its endline survey straddles 18 months. The fact that the two sub-waves are collinear with the two sub-groups of data, the one with a baseline and the one without, increases these concerns, as the areas where researchers failed to get baseline data may be inherently different from those where they did obtain them. This may have also affected programme roll-out and results.</p>
Attanasio et al. 2015	
Date	2008 -2009 (18 months)
Place	Rural Mongolia
Type of study	Public health study; experimental (cluster-randomised controlled trial)
Methods (correlational vs RCT)	Two-armed, non-blinded group randomised control trial (RCT)
IPV definition	None
Measures:	
• IPV	None
• Economic	Formal and informal borrowing; transfers with friends/family; number of businesses; new business (opened in previous 12 months); business; business profits; household income from business, household income from other sources; labour supply; child labour supply; family members

	employed in business; consumption of durable goods; consumption of non-durable goods (includes food as separate category); consumption of temptation goods; savings; household assets (assets index).
• Gender norms	None
• Empowerment	Number of children in school
• Mental Health	None
Results	<p>The authors find that, at follow-up, more women in the treatment arm have taken out microloans than in the control arm. However, significantly fewer women in the treatment arm have loans from other banks or MFIs. In addition, they receive and provide fewer loans to family members and friends compared to the control group, though this is estimated imprecisely. Attanasio et al. also record a higher probability that both the household and the women recipients own a business in the treatment arm although, consistent with Banerjee et al.'s findings, profits for the women's business are lower than for the control group. Attanasio et al. also find larger food consumption in the treatment areas, but no difference in other forms of consumption, nor in income levels. They infer that greater production may explain some of the larger food consumption, though women do buy some of the foodstuffs.</p> <p>Finally, Attanasio et al. find no evidence of effect on average schooling for children, nor on child labour supply, though there is a suggestion in their sub-group analysis that poorer households shift younger children's labour away from external business to the female entrepreneur's, and that more educated households are more likely to send their teenagers to school.</p>
Dupas and Robinson 2009	
Date	2006 -2009
Place	Rural Kenya
Type of study	Development economics; experimental
Methods (correlational vs RCT)	Two-armed, non-blinded individual randomised control trial (RCT)
IPV definition	
Measures:	
• IPV	None
• Economic	Savings; labour supply; investment in the business; business revenues; expenditure on food and private expenditure (luxury goods and temptation goods); transfers between spouses
• Gender norms	None
• Empowerment	None
• Mental Health	None
Results	<p>The authors find that women who owned market stalls used the savings accounts when these were made available to them, and increased the amount they saved. Contrary to the findings in Attanasio et al. and Banerjee et al., Dupas and Robinson find that the women in their study did not reduce other kinds of savings. The authors also find that labour input does not change and investment in the business increases substantially. This finding is only marginally statistically significant, but is supported by qualitative interviews with recipients. Revenues, though increased, are lower than investments, which would suggest reduced profits for women. Finally, treated women recorded higher expenditures than control women, on both food and private expenditure (luxury goods and temptation goods); they record no statistically significant change in the net transfers to their spouses (Dupas and Robinson 2009).</p>

	The higher impact of this intervention, compared to the five previous studies reported in this table, is attributed to the larger take up of the basic savings service in this study: this is at 87%, almost 50% higher than the highest MF take up rates reported in the previous studies.
Desai and Tarozzi 2011	
Date	2003-2006
Place	Ethiopia
Type of study	Development economics; experimental
Methods (correlational vs RCT)	Cluster randomised, 4-arm, control trial to test the impact of microfinance and family planning awareness-raising campaigns, either combined or in isolation, on recipients' <i>use of contraceptive pills or condoms for birth control</i> , compared to a control group who have no access to either service. Knowledge of contraceptive use, number of desired children and number of children in the past 3 years are also measured.
IPV definition	
Measures:	
• IPV	None
• Economic	None (only socio-demographic control variables)
• Gender norms	None
• Empowerment	None
• Mental Health	None
Results	<p>The authors find no effect on any of the treatment groups. They are unable to reject the null hypothesis of no effect both in their intention to treat estimates, which measure the effect of the opportunity to access the programme, and in the instrumental variable estimates, which capture the effect of the women taking up the programme, conditional on random assignment of access to the programme. They attribute these results to the women's preference for injectable birth control methods, which were being made more widely available at the same time by the government in the same areas.</p> <p>One explanation for this preference, which the authors cannot test due to lack of data, may be gender norms on contraception and lack of women's decision making authority on fertility issues: injectable forms of contraception are easily concealed from the husband (all women in the main analysis were married), while the use of the pill would have been more difficult to conceal and the condom requires open negotiation.</p>
Kim et al. 2009	
Date	2004 -2006
Place	Rural and peri-urban villages in Limpopo, South Africa
Type of study	Public health study; quasi-experimental
Methods (correlational vs RCT)	Cross section of three groups, one exposed to microfinance and life-skills (IMAGE treatment group at follow up, i.e. after two years of exposure to MF-plus); one to no intervention (IMAGE control group at follow up), and one exposed to MF only for two years (a group of randomly sampled villages from the ones the IMAGE NGO partner had offered the MF only programme to. Village triplets were matched on salient village characteristics (size; distance to the main road).
IPV definition	Physical or sexual violence in the past 12 months. This is measured with factual questions, extracted from the WHO questionnaire (have you been pushed or shoved? Has your partner hit you? Have you been forced to have sexual intercourse against your will?)
Measures:	

• IPV	Self-reported past-year physical and/or sexual intimate partner violence. The authors use the WHO IPV measure from the Multi-Country study on women's health and domestic violence.
• Economic	food security, household assets value and ability to pay back debt
• Gender norms	none
• Empowerment	self- and financial confidence, perceived contribution to the household, decision-making autonomy, and HIV-related risk behaviour
• Mental Health	None
Results	The authors find that women in MF-only groups experience larger positive economic impacts compared to controls than IMAGE women compared to controls; these estimates are precisely estimated in most cases. However, when comparing IMAGE to MF-only over the economic outcomes, no clear pattern is identifiable, and no effect is found. For the empowerment outcomes, IMAGE records larger positive impact than the control group, compared to the MF-only group; it also records larger positive impacts than the MF-only in the direct comparison, albeit imprecisely estimated. It also records large reduction in exposure to intimate partner violence compared to both controls and MF-only; however, only the former is precisely estimated.

Appendix 5 Summary Table of Empirical Studies Cited in Chapters 5 and 6

Table A5.1 List of empirical studies in Chapters 5 & 6

Trevillion <i>et al.</i> 2012	
Date	1988-2011
Place	New Zealand, USA, China, South Africa, UK, Pakistan, Vietnam, Ethiopia, Australia, France, Canada, Turkey, Mexico, Colombia, Finland
Type of study	Epidemiological; systematic review
Methods (correlational vs RCT)	Meta-analysis. Associations between mental health disorders and exposure to violence
IPV definition	“Any incident of threatening behaviour, violence or abuse (psychological, physical, sexual, financial or emotional) between adults who are or have been intimate partners or family members regardless of gender or sexuality”
Measures:	
• IPV	Conflict Tactics Scale (CTS or CTS2); Women Experience with Battering (WEB); Psychological Maltreatment of Women Scale, Spouse-Specific Fear Measure; Traumatic Life Events Questionnaire; WHO violence against women questionnaire; Composite Abuse Scale (CAS); Women’s Psychosocial History; for some studies, authors report “Domestic violence assessed during interview using DSM-IV PTSD questions”; PTSD section of CIDI; Domestic violence assessed during interviews as a traumatic event which was consistent with Criterion A of the CAPS; physical, sexual, or threatened, both past year and lifetime exposure are measured
• Economic	
• Gender norm	
• Empowerment	
• Mental Health	Anxiety, depression, PTSD disorders, using validated measures (DSM-III psychiatric disorders assessed during diagnostic interview using CIDI; DSM-IV psychiatric disorders assessed during diagnostic interview using SCID; DSM-IV psychiatric disorders assessed during diagnostic interview using AUDADIS-IV; ICD-10 psychiatric disorders assessed during diagnostic interview using Mini International Neuropsychiatric Interview; DSM-III-R and DIB-R psychiatric disorders assessed during diagnostic interview using SCID; DSM-III psychiatric disorder assessed during diagnostic interview using DIS ; DSM-IV psychiatric disorders assessed during diagnostic interview using CAPS; DSM-IV psychiatric disorders assessed during diagnostic interview using UM-CIDI; DSM-III psychiatric disorder assessed during diagnostic interview using DIS)
Results	Women with depressive, anxiety, and posttraumatic stress disorders more likely to experience adult lifetime IPV, compared with women without disorders. Causality cannot be determined due to lack of longitudinal studies.

Devries <i>et al.</i> 2013	
Date	1991-2009
Place	US, Australia Sweden, India, Nicaragua, South Africa
Type of study	Epidemiological; systematic review
Methods (correlational vs RCT)	correlational: presents original associations reported in original studies, as well as, for those studies where results can be expressed in comparable metrics, pooled measures of effect derived from random effects meta-analysis. the pooled measures of effect are based on one estimate only per data source, where this estimate is deemed the least biased of those presented in the data source.
IPV definition	No formal concept reported; any concept reported in the studies that pass the quality screening is deemed valid. Studies measure physical, verbal and sexual IPV
Measures:	
• IPV	Conflict Tactics Scale (CTS); WHO violence against women questionnaire (adapted); . SWAWS (Severity of Violence Against Women Scales); Abuse Assessment Screen (AAS); IPV is measured as either past year exposure or lifetime exposure
• Economic	
• Gender norm	
• Empowerment	
• Mental Health	Measures of depression (CES-D, CES-D 10, CIDI-SF, SRQ-20, Beck depression inventory (BDI), BSI; DSM III diagnosis from DICA-R-A, MINI, Kendler's 4 point scale, CIS-R (Revised Clinical Interview Schedule), using ICD-10 criteria to diagnose depressive disorder, Scale from Kandel and Davies); self- reports of ever having been diagnosed with depression; suicide attempts
Results	For women: association between IPV and incident depressive symptoms (12 of 13 studies find a positive association; pooled OR from 6 eligible studies = 1.97 (95% CI 1.56, 2.48); and positive association between depressive symptoms and incident IPV (pooled OR from 4 available studies = 1.93 (95% CI 1.51, 2.48)). In women, IPV also associated with incident suicide attempts. For men, only association is between IPV and incident depressive symptoms.

Ludermir <i>et al.</i> 2008	
Date	1999-2001
Place	Brazil, urban (Sao Paulo, Zona da Mata of Pernambuco) and rural (Zona da Mata of Pernambuco)
Type of study	Epidemiological; population study
Methods (correlational vs RCT)	Correlational. Presents association between mental health disorders and exposure to physical, sexual and psychological IPV, either alone or in combination with one another.
IPV definition	The paper reports no formal theoretical definition, and states it means IPV to mean "violence committed against women by their intimate partners, defined by psychologically, physically and sexually abusive acts"
Measures:	
• IPV	WHO multi country study questions
• Economic	
• Gender norm	
• Empowerment	
• Mental Health	Somatoform disorders, depression and anxiety with symptoms of insomnia, fatigue, irritability, poor memory/concentration and somatic complaints such as headaches, trembling or indigestion, captured with the SRQ-20.
Results	All forms of violence, except sexual violence alone or sexual plus physical or psychological violence, show an association with mental disorders

UNICEF 2000	
Date	Not specified, seems to refer to times contemporary to the report writing
Place	India Pakistan
Type of study	Epidemiological
Methods (correlational vs RCT)	
IPV definition	1993 UN Declaration on the Elimination of VAW
Measures:	
• IPV	WHO questions from the multi-country study
• Economic	
• Gender norm	
• Empowerment	
• Mental Health	
Results	Burning is common in India and Pakistan: at least 5,000 femicides are committed yearly in “accidental” kitchen fires at the hands of husbands or in-laws, due to dowry-related or domestic disputes.

Kishor <i>et al.</i> 2012	
Date	2008 (Ghana) 2006 (Uganda)
Place	Ghana and Uganda
Type of study	Epidemiological
Methods (correlational vs RCT)	descriptive, univariate analysis
IPV definition	
Measures:	
• IPV	Has your partner ever choked or burned you on purpose?
• Economic	
• Gender norm	
• Empowerment	
• Mental Health	
Results	Burning (and other severe violence) very rare in Ghana. No exposure differences between men and women. Slightly more common in Uganda: women twice more likely than men to report having been choked or burned.

Bandura 2006						
Date	N/A					
Place	N/A					
Type of study	Conceptual; reports results from several empirical studies					
Methods (correlational vs RCT)						
IPV definition						
Measures:						
• IPV						
• Economic						
• Gender norm						
• Empowerment						
• Mental Health						
Results	Efficacy beliefs key for personal change: depending on whether beliefs are positive or negative, individuals will act in either self-enhancing or self-debilitating ways.					

Aizer 2010	
Date	1990-2003
Place	California, United States
Type of study	Quasi-experimental study in applied labour economics. Makes use of an intra-household bargaining model to explain impact.
Methods (correlational vs RCT)	Quasi-experimental methods. Aizer exploits exogenous variation in wages in women-dominated industries to test the hypothesis that increases in relative potential earnings reduce women's exposure to violence.
IPV definition	Not explicitly mentioned in the text. Judging on the measure Aizer uses, it is reasonable to deduce that she interprets violence as (serious) assault.
Measures:	
• IPV	Female hospitalisations for assault. The author argues (with no evidence reported, nor references cited) that this measure is superior to survey data because (i) they do not necessarily rely on self-reports; (ii) are consistently collected over time, (iii) include the whole universe of women in the state of interest (California). There are, however, severe limitations to this measure that the author does not mention. First, only severe cases of violence would be reported to hospitals. Second, these cases would only be of physical (and/or sexual) violence, and therefore only a sub-set of the phenomenon of domestic violence. Third, hospitalisation is also affected by self-reporting, because (i) women may avoid hospitalising themselves, and (ii) at point of registration into the hospital they may lie about the cause of the injuries, and therefore under-report like in any other survey. Further, if her data exclusively relies on medical reports "of assault based on physician classification of injury", there is a severe risk of underreporting here, too. Studies in the UK show medical personnel and medical doctors are unable to diagnose exposure or perpetration of domestic violence (1,000 women study) HERMES findings; this is not only bound to under-report, but also introduce bias in reporting, as failing to report will depend on both patient and medical personnel characteristics. It is also unclear how the patient would be completely excluded from this classification process. Fourth, point (iii) in the author's argument is irrelevant when samples are properly designed, or when the population of interest is not the general population of a given state.
• Economic	Gender wage gap in the local labour market. This is computed by taking into account wage levels in sectors traditionally dominated by women (e.g., services) separately from men (e.g., construction). These local sex-specific wages, based on the local industrial structure, are sensitive to changes in the state-wide wage changes and thus capture change in relative potential earnings.
• Gender norm	
• Empowerment	
• Mental Health	
Results	Reductions in the gender wage gap explain 9% of the decline in domestic violence between 1990 and 2003. This result is consistent with models of intra-household bargaining models that include violence. Aizer holds it is inconsistent with "backlash" models of violence, because these hold that if women's wages increase, men administer more violence because they see their dominant role threatened. Aizer further holds that the findings do not support exposure models either. These models hold that violence increases as the time spouses spend together increase. Her findings that reductions in violence take place during exposure hours does not support this hypothesis.
Mayoux 1999	
Date	1990s
Place	Cameroon, Zimbabwe, Zambia, South Africa, Kenya, Uganda, Sudan, Chad, Ethiopia
Type of study	Qualitative. Literature review
Methods (correlational vs RCT)	Qualitative assessment of published studies and reports

IPV definition	N/A the paper discusses empowerment. Highlights the centrality of women's aspirations and needs; their participation in decision making, and the importance of groups in supporting the women. It also mentions women in difficult relationships. None of these is defined precisely
Measures:	
• IPV	N/A
• Economic	No measure of income. Economic outcomes considered are revenues from small businesses, access to resources and ability to participate in the decision making around their allocation, and access to land.
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	Studies that assess impact of micro-finance are of limited validity, due to either non-representative samples, or limited investigations into the dimensions that MF may affect, both positively and negatively. While microfinance may offer access to income to women who previously had none, it is not clear whether all women benefit (there is some evidence that poorer women are excluded, and that group dynamics may be exploitative of the weaker), nor whether microfinance is effective at enlarging women's social networks in African countries. Increase in the size of the women's social networks was a key dimension of impact in South Asia, but African women tend to already be socialised in local networks, and to be more independent of their partners to start with. Rotating savings associations abound in Africa, and men tend to have multiple households, so that women tend to keep greater control over their resources to start with. There is some evidence that women in microfinance groups attempt at changing social norms in the communities where they live, but further evidence is needed in support of this hypothesis. Mayoux therefore argues for a more explicit gender empowerment component in microfinance programmes, if women's empowerment (rather than financial sustainability) is to be achieved.

Pronyk <i>et al.</i> 2006						
Date	2001-2005					
Place	Sekhukhuneland, Limpopo Province, South Africa					
Type of study	Public health study; experimental (cluster-randomised controlled trial)					
Methods (correlational vs RCT)	Cluster-randomised controlled trial					
IPV definition	Physical or sexual violence in the past 12 months. This is measured with factual questions, extracted from the WHO questionnaire (have you been pushed or shoved? Has your partner hit you? Have you been forced to have sexual intercourse against your will?)					
Measures:						
• IPV	Experience of IPV (physical or sexual) in past 12 months					
• Economic	None. Some measures of economic wellbeing, such as whether the household fares better than the previous year, or whether the interviewee has had to beg for food or basic necessities					
• Gender norm						
• Empowerment						
• Mental Health	N/A					
Results	Combining microfinance and gender training can reduce exposure to intimate partner violence by 55%					

Taft <i>et al.</i> 2009	
Date	2006/2007
Place	Melbourne, Australia. The sample also includes Vietnamese mothers
Type of study	Medical. Mental health. Quantitative
Methods (correlational vs RCT)	Baseline study; cross-sectional.
IPV definition	"Any behaviour in an intimate relationship that causes physical, psychological, or sexual harm". Examples are listed as: (i) physical aggression (e.g.: hitting, kicking); psychological violence (e.g.: intimidation or constant humiliation); forced intercourse; controlling behaviours (e.g.: isolation from family and friends, monitoring movements)
Measures:	
• IPV	Composite Abuse Scale (CAS) (Hegarty <i>et al.</i> , 1999 and 2005). CAS is a measure comprising 30 factual questions on abusive behaviours a person may have experienced from someone else. Behaviours range from physical (pushed, grabbed or shoved me) to emotional (told me that no-one would ever want me) and sexual (raped me)
• Economic	weekly household income
• Gender norm	
• Empowerment	
• Mental Health	General health status measured with the Short Form 36 (SF36) questionnaire; depression was measured with the Edinburgh Postnatal Depression Scale (EPDS); mother-child relationship using the Parenting Stress Index (PSI) short form
Results	The analysis reveals high prevalence of abuse and clinical depression in both arms of the trial.

Tauchen <i>et al.</i> 1991	
Date	1982/1983
Place	Santa Barbara County, California
Type of study	Economics. Posits a model non-cooperative intra-household allocation model, where violence is introduced as a means to distribute welfare between husband and wife. This model is tested with data from interviews with battered women.
Methods (correlational vs RCT)	Cross sectional data collected explicitly to test the model. Sample is not representative of the whole adult population in California or the US, nor random, because it is constituted of (a) only drawn from battered women; and (b) only made up of women recruited by shelter personnel, researchers' contacts, counsellors, lawyers, religious organisations or via snowball sampling techniques. In the authors' view, the non-randomness is compensated by the highly detailed data in their possession, which allows them to estimate the model they posit, controlling for all variables they deem relevant.
IPV definition	Violent incidents
Measures:	
• IPV	Number of violent incidents in the six months prior to the event that led to the interview
• Economic	Male's and female's weekly income, excluding subsidies. The database also contains data on the fraction of the year each member of the couple was employed, and the weekly subsidies they receive.
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	Low income couples: increases in the perpetrator's income increase violence; increases in victim's income reduce violence (albeit to a statistically non-significant degree). High income couples: if perpetrator is main breadwinner, increases in either spouse's income decrease violence; if, however, the victim is the breadwinner, increases in her income increase violence.

Vyas and Watts 2009	
Date	1992/2005
Place	Egypt, Lesotho, Nigeria, South Africa, Tanzania, Uganda, Zambia, Bangladesh, Cambodia, India, Iran, Philippines, Thailand, Columbia, Dominican Republic, Haiti, Mexico, Nicaragua, Peru, Albania, Turkey, Ukraine
Type of study	Systematic review
Methods (correlational vs RCT)	Review of cross-sectional studies investigating the association between economic empowerment and violence
IPV definition	Physical or sexual violence, in some cases in the past year, in others over the course of the lifetime. Some studies also encompassed threat.
Measures:	
• IPV	Conflict tactics scale (CTS) in some papers (this is a well established measure of violence exposure, albeit one that is criticised for only capturing violence motivated by conflict of interest, rather than coercion more broadly; for not capturing emotional violence, nor duration and intensity (Hegarty et al., 2005); some papers used only one generic question on physical violence, and others used the WHO questions that measure physical, sexual and emotional violence.
• Economic	The paper looks at economic empowerment as measured by income generating activities (employment or membership in credit programmes) or ownership of land or property, control over her resources, decision making power, or contribution to household expenses
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	The association between the measures of economic empowerment considered and IPV varies by context: (i) being paid in cash, versus not working, was negatively associated with (lifetime) violence in Egypt, but positively in India for physical violence; it was positive in Colombia, Dominican Republic and Nicaragua for physical and/or sexual violence; (ii) regular full employment (versus being unemployed) was negatively associated with violence in India. However, housewives were less likely to have been exposed to violence in Turkey, compared to women who worked. Moreover, in a number of contexts, earning an income showed no association with violence (Haiti, the Philippines, India, Zambia, Cambodia); in Lesotho and Ukraine employment status showed no association. Independent access to money was associated with lower physical, but not sexual, violence in Haiti. Membership in a credit programme and exposure to violence is mixed: in South Africa, the IMAGE study reported 55% reductions for women who received microfinance and life-skills training, compared to waiting list controls ; in Bangladesh, two of seven sites reported negative associations, two positive and the remaining three none. Joint decision making around household resources was associated with lower violence in India. Greater control of resources or income by women was associated with higher violence in India, Haiti and Peru, as was higher autonomy in Bangladesh. Dowry payment was associated with higher levels of violence, while ownership of a house and/or land was associated with lower levels of violence. In sum, these studies seem to suggest that the association is unclear between violence and earning an income, being employed and being member of a credit organisation; owning land and/or a house seem to be the only consistently protective elements, although this may depend on the fact that only one study (in India) investigated this association. However, the protective association found for measures of poverty and socio-economic status in studies from different settings that the authors also report seem to corroborate the hypothesis that land and/or house ownership may be a protective factor against violence.

Koenig <i>et al.</i> 2003a	
Date	1993
Place	Bangladesh, north-central (Sirajgonj) and southwestern (Jessore).
Type of study	Population study
Methods (correlational vs RCT)	Cross-sectional, correlational study. The paper employs a multilevel logit model with two levels of structure (individual and community). Estimates are adjusted for intra-cluster correlation and model random effects at the community level. Interaction effects between individual and community level variables are also tested to explore whether individual level attributes may be modified by community level characteristics.
IPV definition	Physical violence from husband OR a member of his family
Measures:	
• IPV	The authors do not measure income, but include a measure of landholding; it is not entirely clear whether these are the women's landholding, though some of the wording in the paper would suggest this to be the case. They also include membership in credit associations, and a measure of women's autonomy computed with latent class analysis from a set of observable characteristics (wife's freedom to speak with men outside the household, bring a sick child outside the village for medical care, wife's inputs on her own medical care, and direct possession of any cash). The authors also measure community level "norms" through an index that includes (i) the percentage of married women with at least some education, (ii) the percentage of married women with a membership in a credit group, and (iii) community level score on the autonomy index described above.
• Economic	The paper looks at economic empowerment as measured by income generating activities (employment or membership in credit programmes) or ownership of land or property, control over her resources, decision making power, or contribution to household expenses
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	Larger landholdings are negatively associated with violence. Once membership in credit organisations and autonomy are included in the model, the former show no association with violence, while the latter shows a positive association, with more autonomy associated with more violence; however, higher participation in credit associations and autonomy at the community level are both protective against violence. Overall, the data seem to suggest that more progressive communities (as defined by women's overall greater access to credit and autonomy) may be key enabling factors toward a reduction in women's exposure to violence.

Koenig <i>et al.</i> 2003b	
Date	March 2000-February 2001
Place	Rakai district, Uganda
Type of study	Cross-sectional community level survey. Data is from the community HIV epidemiological research (CHER) survey, round 2.
Methods (correlational vs RCT)	Correlational study
IPV definition	No formal concept reported. The questions are however reported in a box in the paper, and indicate that the authors measured verbal and physical violence, and threats of physical violence from the current intimate partner. They did not measure sexual nor emotional violence
Measures:	
• IPV	Self-reported exposure to intimate partner violence, in the form of verbal abuse (e.g. shouted at), physical threats (e.g.: threatening gestures), and physical abuse (e.g.: pushed, punched)
• Economic	None. Only socio-demographic variables are considered for the woman. Her education level is included as an ordinal variable, which distinguishes between no education, 1-7 years and 8 or more years (it is not clear whether this misses women who received between 7 and 8 years of education). Health-related variables such as perceived HIV status of the male partner and alcohol consumption (associated with bad health outcomes, when excessive) are instead considered in the model.
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	Socio-demographic characteristics did not show association with exposure to violence. Women's higher levels of education (secondary or higher) are protective against violence. Indicators of risk behaviour were instead associated with violence exposure. Alcohol consumption was positively associated with exposure to violence against women for both men (perpetrators) and women (victims). The authors consider that alcohol may be a mediating factor for violence exposure. Perceived risk of HIV infection in the male partner is also positively associated with violence exposure for women. The authors hypothesise this may be explained by the fact that women who perceive their partner to be at risk are more likely to refuse intercourse. This would in turn make it more likely for the partner to impose violence or coerce the woman into sex. The data in their sample provides some support for this hypothesis, showing that women who perceive their partner to be at high HIV risk are more than four times as likely to refuse intercourse as women whose partners are perceived to be at low risk.

Schuler <i>et al.</i> 1998	
Date	1990-1996
Place	Bangladesh.
Type of study	Mostly ethnographic: participant observation and in-depth interviews to record change in women's roles and status as well as the operations of a microfinance intervention. However, the study may be considered mixed-methods, as the motivation for the ethnographic investigation is provided in terms of findings from quantitative surveys conducted as part of a wide study the researchers were part of.
Methods (correlational vs RCT)	Interviews conducted following incidents of domestic violence that became known to researchers during their stay in the communities. Interviews were conducted with villagers and members of the local microfinance organisation present in the villages and whose programme the researchers were involved in evaluation
IPV definition	No formal definition provided, but the paper only discusses physical violence in the form of beating
Measures:	
• IPV	No well-defined measure, but quotes report beating. The only quantitative question reported asks about being beaten by one's husband.
• Economic	The paper is concerned with violence in connection with women's access to microfinance services. No measure of income is defined, but the role of access to household resources, decision making power over these and mere access to credit services are discussed in situations of domestic violence
• Gender norm	
• Empowerment	
• Mental Health	
Results	Access to microfinance can be harmful for women, especially when it leads to them challenging gender norms. If used appropriately, alongside awareness raising interventions, it may provide a space of reflection around IPV and possibly contribute to reducing it.

Goetz and Sen Gupta 1996	
Date	1990-1992 (some prior, possibly 1986)
Place	Bangladesh
Type of study	Chiefly qualitative. Derives both qualitative and quantitative data on loan use from qualitative studies of 275 loans. Discursive. Investigates the political economy of the household
Methods (correlational vs RCT)	Two-hundred seventy-five qualitative interviews to elicit whether women retained control over the use of their loans. Control over loans was preferred as a measure of impact over profitability of the loan, because collecting reliable data on loan profitability was deemed too difficult. Researchers compiled loan use histories through interviews with borrowers from all four microcredit organisations present in the study villages. They made sure the sample captured a representative range of loan membership duration and loan size.
IPV definition	None. This is not the focus of the paper, which is instead centred on women's empowerment resulting from access to credit. Empowerment is measured as retention of control over loan use. Women's exposure to violence is mentioned as the possible consequence of failure to obtain a loan or pressure to repay the instalments.
Measures:	
• IPV	None. Reported use of violence is recorded only as "violence", with no further elaboration.
• Economic	Researchers focus on loan control, rather than income or, rather, profit in this case. They attempted to ascertain whether women control over the production process the loan was allocated to. Therefore, they asked a number of detailed factual questions regarding the activities the loan was invested in, the provenance of inputs and productive assets, their cost, etc. Level of loan control is assigned to one of 5 categories, from "full" to "no involvement"
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	Interventions' effectiveness at empowering women in terms of their ability to maintain control over the loans they take out may be enhanced by improving women's skills at retaining and managing loans. In particular, situations of tensions and potential exposure to violence may be averted if women were equipped with better skills to manage their investments. Programmes should expand their focus beyond granting access to credit for women to enabling improvements in gender relations within the household. Key areas of action are, increasing women's productivity, their access to markets, increasing the certainty of their property rights over assets, improving their managerial skills and increasing the size of the enterprises women are generally part of.

Kabeer 1997	
Date	1988/89
Place	Dhaka, Bangladesh
Type of study	Socio-economic. Provides a critique of both sociological and economic studies
Methods (correlational vs RCT)	In-depth interviews with 60 women from 12 factories, plus information from members of their families and from 30 male workers at the same factories.
IPV definition	N/A the key outcome measure for the paper is intra-household gender relations.
Measures:	
• IPV	N/A
• Economic	Income is measured through wages. Kabeer only interviews working women who earn a wage and looks at their "allocative power" in relation to household resources. This is distinct from management, because the latter may be simply imply the implementation of decisions taken by the male partner.
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	The search for individuated autonomy as a measure of successful impact in Bangladeshi household is bound to disappoint. Individuals perceive themselves as part of webs of relations, so that it is very difficult to distinguish self- and other-oriented choices. Kabeer notes that the very fact that they have a job outside the household means that a change in their status within the household has occurred, and they are perceived differently, as contributing members of the household. This does change men's attitudes toward them, at least in some cases. Women do make choices that are aligned with their preferences. However, when their preferences are not aligned to those of their husbands, they resort to secrecy or deception to satisfy them. This indicates they do not achieve transformatory agency, i.e. a form of agency that would change the gendered balance of power within the household. Despite this limited progress in the household, Kabeer concludes that waged labour has favoured significant structural changes, such as changes in marriage practices (no dowry required for wives-to-be who work) and household arrangements (multiple, working-women dwellings). In general, even if failing to challenge traditional gender norms, women were able to use the money to get closer to their own or goals shared by the household as a whole, and Kabeer interprets this as a form of change.

Kabeer 2001	
Date	
Place	
Type of study	Economic. Qualitative. It analyses original data from Dakha, and reports a detailed critical synthesis of previous contributions on this subject (among these, the papers by Goetz and Sen Gupta, Schuler and co-authors, and Hashemi and co-authors in this table)
Methods (correlational vs RCT)	In-depth interviews with 50 female and 20 male loanees on loan impact, plus 700 questionnaire-based household interviews. Surveys used to record descriptive statistics on loanees' SES status, and on measures reported in the other studies discussed in the paper, for comparison purposes. Loanees' testimonies used to contextualise findings from other studies and to draw methodological insights on how women's understanding of loan impact may inform future research aiming to unpack credit's impact on women's transformative agency, i.e. agency with the potential to reduce gender-based inequalities that are key in keeping women in a subordinate role such as, for example, decision-making authority.
IPV definition	No formal definition. All references made (both in quotes and main text) are to physical forms of violence, especially beating. An interesting distinction is made between extreme and non-extreme (?) forms of violence. Extreme violence is ascribed to the husband's character, while non-extreme forms are associated to financial stressors
Measures:	
• IPV	None
• Economic	Because the focus is on agency, the author measures whether the use of loan income (profit) is decided upon independently by the woman, jointly by her and her husband, or by others. The author also looks at savings patterns split by gender, as well as modes of access to land ownership (e.g.: purchase or inheritance)
• Gender norm	
• Empowerment	
• Mental Health	N/A
Results	An increase in joint decision making and increased investment in daughters' education are seen as positive impacts of the intervention Kabeer evaluates. However, her key findings are of a more general nature. She concludes that it is important to understand what impacts matter to recipients, in order to understand where to look for impact and how to interpret results from impact assessments. Contradictory results in previous literature are chiefly to be explained by methodological differences between evaluations, namely in terms of the questions asked and instruments used (e.g. exclusive focus on individual factors for those who only looked at decision making roles, or structural factors for those who exclusively focused on norms). The narrow focus, determined a-priori, may have prevented these evaluations from capturing the full extent of interventions' impact. Kabeer's study highlights the nature of <i>unequal interdependence</i> that characterises intra-household decision making in the Bangladeshi households she examines. This explains why, in her interpretation, women may look to reduce inequality in decision making, rather than seek independence outright. Measuring independent decision making only to assess impact would fail to capture meaningful change.

Schuler <i>et al.</i> 1996	
Date	Ethnographic data: 1990-1994; survey: 1992
Place	Bangladesh
Type of study	Population study
Methods (correlational vs RCT)	Ethnography: Key informants, participant observation, and in-depth interviews carried out following domestic violence incidents. Census data. Quantitative study: multistage cluster sampling of participants and non-participants in both Grameen Bank and BRAC villages, and comparison group from villages with no credit programmes. Logistic regression of IPV on programme membership, plus socio-economic characteristics.
IPV definition	Physical violence from husband in the form of beatings
Measures:	
• IPV	Equal to 1 if the woman had been beaten by her husband in the year prior to the interview.
• Economic	Contribution to family support; exposure to credit programs; education.
• Gender norm	No formal measures of gender norms. Proxies: age and marriage status, and having a surviving son, all positively correlated with high status.
• Empowerment	
• Mental Health	N/A
Results	Membership in credit programmes is protective. However, non-members in villages that receive micro-finance also report lower levels of violence. Study suffers from program placement and clients' self-selection bias.

Hashemi <i>et al.</i> 1996.	
Date	Ethnographic data: 1991-1994; survey: 1992
Place	Bangladesh
Type of study	Mixed methods: the paper is based on a mixture of ethnographic and survey data
Methods (correlational vs RCT)	Ethnography: participant observation; plus in-depth interviews of individuals from 120 households. Quantitative study: multistage cluster sampling of participants and non-participants in both Grameen Bank and BRAC villages, plus comparison group from villages with no credit programmes. Multivariable analysis using logistic regression models. Regresses empowerment on membership in microfinance programmes, holding measured socio-demographic characteristics constant.
IPV definition	n/a
Measures:	
• IPV	n/a
• Economic	Economic contribution to family support; Exposure to credit programs.
• Gender norm	n/a
• Empowerment	Composite empowerment indicator is one if interviewee scored one in at least five of eight domains: freedom of movement; economic security; ability to make small purchase, or large purchases – at least in part with own money; involvement in major household decisions; relative freedom from control by the family; political and legal awareness; participation in public protests and political campaigning.
• Mental Health	N/A
Results	Membership duration in credit programmes positively associated with empowerment and woman's contribution to the household. Conclusions not warranted by evidence presented. See Chapter 1 for further details.

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