COLLECTIVE   BARGAINING,   INCOMES  POLICY  AND   RELATIVE   WAGE

FLEXIBILITY IN GREEK MANUFACTURING, 1966-1988.


BY

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## Abstract

Based on the assumption that industrial relations influence labour market outcomes, the thesis examines first, the characteristics and the evolution of bargaining structures and procedures in the Greek system of industrial relations, second, the governmental policies aimed at wage and employment regulation, and third, the extent to which, in the context of developments in industrial relations as well as in the context of incomes policy, there was room for relative wage flexibility in the Greek manufacturing sector.

The main conclusion of the thesis is that, despite the extensive and continuous regulation of wage determination procedures by successive governments, changes in industrial relations which occurred after 1975 and were marked by decentralised, fragmented and informal collective bargaining, were accompanied by flexibility in relative wages.

The sources of this flexibility, which is largely non-competitive, are related to industry-specific productivity gains as well as to industry-specific rates of strike activity. Moreover, the rise of decentralised, fragmented and informal collective bargaining influenced the effectiveness of the norm-based and the indexation incomes policies as far as variation in the inter-industry wage structure in the Greek manufacturing sector is concerned.

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# List of Abbreviations

ACAC  : Australian Conciliation and Arbitration Committee.

ACAS  : Advisory Conciliation and Arbitration Services.

CBI   : Confederation of British Industry.

GSEE  : Greek General Confederation of Labour.

GSEVE : Greek General Confederation of Handicraft and Small-scale
        Industry Employers.

ILO   : International Labour Organisation.

OAE   : Organisation for Companies Rehabilitation.

OECD  : Organisation for Economic Co-operation and Development.

SEV   : Confederation of Greek Industry.

TUC   : Trade-Unions Congress.

NSSG  : National Statistical Service of Greece.

# CHAPTER 1. INTRODUCTION AND SUMMARY

The system of industrial relations in Greece is regulated as far as procedural (collective bargaining units and levels) and substantial (wages and employment adjustment) aspects are concerned. The purpose of the thesis is to examine the extent of this regulation, its consequences regarding the evolution of bargaining structures and procedures, and the extent to which, in the context of regulation and changing industrial relations, there has been any room for relative wage flexibility. In the same context, another purpose is to evaluate governmental incomes policies with regard to flexibility in the labour market.

It is a running theme of this thesis that developments in industrial relations have played a central role in relative wage flexibility in Greek manufacturing. More specifically, by developments in industrial relations we mean the changes towards decentralised and fragmented bargaining at the company and plant level through bargaining procedures evolving out of the formal system of industrial relations.

As in every industrialised market economy, in Greece too, wage setting is not just an economic process. Institutional arrangements and developments in industrial relations do matter as far as the workings of the labour market are concerned. Recently there has been an increasing interest on bargaining

structures, industrial relations systems and their relationship with economic performance and structural adjustment.

Considered in a comparative perspective, bargaining structures have been brought at the forefront of the research and debate regarding macroeconomic performance and its association with labour market characteristics. What comes out of this literature in various versions, as summarised by Calmfors and Driffil (1988), is that the speed of response or adjustment of collective bargaining to new economic conditions depends on the degree of centralisation at the collective bargaining structures. The underlying rationale is that large and centralised unions which bargain at the national level can, and do, take into account the macroeconomic consequences of their behaviour and in a sense become partners in macroeconomic policy- making so as to minimise the costs of inflation and unemployment.

However, Calmfors and Driffil (1988) challenged the literature which asserts that the more corporatist is an economy the better is its economic performance. And they argued that both extremes, namely the highly centralised and the highly decentralised systems of wage setting work best as far as the macroeconomic performance is concerned. The rationale underlying this argument is that in highly centralised systems of wage setting trade-unions enjoying relatively extensive market power, consider the macroeconomic consequences of their bargaining behaviour, while in highly decentralised systems of wage setting unions have a relatively limited market power and thus they cannot delay the

necessary adjustments in the labour market.

A study by OECD (1987) discussed and emphasised the importance of bargaining structures for economic performance and labour market flexibility. After a period, in the late 1970s and early 1980s, of widespread treating of trade-unions as scapegoats, the study by OECD (1987: 140) proposed a more balanced view and recognised that "in no OECD country have labour markets functioned outside the framework of a socially structured system of industrial relations" and that "it may be taken as a premise that collective bargaining will remain at the centre of labour market in OECD countries". From this point of view the policy implication is that "a durable improvement in the wage setting process hinges on the evolution of labour market institutions and in particular of collective bargaining" (OECD 1987:41).

In the literature on industrial relations and economic performance, Greece is a case hardly examined. This is largely due to problems regarding data availability. However, this does not mean that questions regarding the Greek system of industrial relations have not been raised by the parties concerned and policy-makers. Currently three questions are debated: compulsory arbitration for dispute resolution in collective bargaining, incomes policy and the system of automatic indexation, and employment regulation and protection and the legislation on collective dismissals. The criticism on these labour market issues has been growing during the last two decades.

With regard to arbitration since the mid-1970s, the system of

compulsory arbitration has been the frequent target of criticism mainly by the labour side. Political parties have repeatedly promised to reform this system. During the 1980s, throughout the course of Socialist governments, successive Ministers of Labour announced its reform, which never occurred. Currently new legislation regarding the system of arbitration is to be discussed in the Greek parliament. Despite the criticism, the system of collective bargaining in Greece, and especially compulsory arbitration, have not been sufficiently studied. Not even the criteria for the evaluation of its performance have been spelled out. This is one reason for why the will for reforms is not followed by clear ideas concerning the system which should be adopted.

Formal incomes policies were first adopted in 1975. During the 1960s, the Greek economy enjoyed low rates of inflation, with the annual average of the 1960-70 period being below 2.0 per cent. Inflation became an apparent and severe problem during the mid-1970s, and, since then has been fluctuating at double-digit levels. Those persistently high levels of inflation obliged successive governments to undertake formal incomes policies for controlling cost-push and demand-led inflationary pressures. Since 1975 there has been no period without formal incomes policy in force.

Apart from being a matter of political debate, incomes policy has been the target of systematic criticism in the literature. It is noteworthy that the first major and systematic criticism of incomes policy in Greece referred to its distributional aspects

and effects. Pavlopoulos (1987) criticised incomes policy adopted over the decade 1975-85 because they caused an increased labour share in national income and led real wages to grow faster than productivity. He concluded that the conditions under which the dramatic increase of the labour share in the national income occurred, indicate that trade-unions, under the proper institutional arrangements, can increase the labour share in national income. But, he argued, such an increase was not consistent with and was detrimental to economic growth. However, Pavlopoulos did not discuss the institutional arrangements regarding trade-unions, under which the increase occurred.

Kioulafas (1987) addressed another aspect of incomes policies, namely their effects upon wage differentials among individuals and concluded that the incomes policy adopted during the decade 1975-85 narrowed the wage differentials between individuals of different skills, education, and experience and led, contrary to the varying human capital characteristics of the labour force, to a very egalitarian wage structure.

Since the early 1980s, but mainly since the 1985-87 stabilisation programme, the Greek labour market has been the frequent target of criticism for its lack of flexibility. Two main policy issues concerning wage determination and employment adjustment are central in the debate. Both are related to the key aspects of labour market flexibility. First, there is the issue of indexation in wage determination. Second, there is the issue of controls upon collective dismissals. However, the flexibility

debate has not been properly and explicitly set up upon either evidence or, at least, coherent normative approaches of the Greek labour market. It has been, more or less, for both pro- and anti-flexibility sides, set in rather ideological terms. Flexibility has been proposed as a panacea, without being quite clear how it is linked with the workings of the labour market in the Greek economy.

The socialist governments of the period 1982-88 always avoided being explicit on the flexibility issue and, indeed, during the 1985-87 economic stabilisation programme, backed off from a labour market flexibility drive because it was considered too costly in political terms. The opposition parties of the 1982-88 period, have not been clear enough on their views about flexibility in the labour market. In fact, the Conservative party has adopted the phraseology of the flexibility drive as proposed and implemented in Western industrialised market economies, mainly the U.K. version. The Communist party has been opposing altogether any policy towards labour market flexibility. Unions too have opposed any flexibility measures as an offensive against themselves and employees.

With regard to flexibility in the labour market there are two main questions. First has there been any flexibility in relative wages in the Greek manufacturing sector and, in turn, has this flexibility, or the lack of it, been a solution for problems arising from wage determination developments, or flexibility has been part of the problems. Second, there is the choice concerning the policy mix for moderation in wage determination on the one

hand, and job security on the other. Both the partial indexation and the employment regulation policies seem to provide to the typical employee a certain degree of income and job security. The policy issue is whether the menu should be modified, for instance, either radically towards de-indexation and more flexible legislation for collective dismissals, or in a rather corporatist way towards the use of job security as a quid pro quo for moderate wage determination.

In other words, the question of the relationship between industrial relations and economic performance, wage flexibility in particular, has been raised on different occasions by academics, politicians, trade-unions and employers associations. Furthermore, in the late 1980s policies and measures for de-regulation of the capital, products and labour market have been initiated. But, the reform of the Greek labour market and the national system of industrial relations has neither been at the top of the agenda nor implemented, despite the accumulating and intensifying criticism regarding their long-lasting characteristics and wage and employment policies persistently used by successive governments.

To put the varying views on labour market and industrial relations issues, as well as the developments in Greek manufacturing over the last two decades, in an international and comparative industrial relations perspective, the distinction proposed by OECD (1987) between two quite different approaches to collective bargaining, namely the highly centralised and the

highly decentralised, provides a fruitful starting point.

The OECD (1987:41) study concluded that both highly decentralised bargaining, as in the U.S. and in Japan, and highly centralised bargaining, as in Austria, Sweden, Norway and Germany, have proved reasonably successful in obtaining "sensible wage outcomes" while labour market outcomes have been consistently poorer in those countries where collective bargaining structures fall between these extremes, as in the U.K., France, Italy and Belgium. Calmfors and Driffil (1988) arrived at the same conclusion.

On the basis of the policy orientation towards more flexibility in labour markets, the OECD study suggested that a greater degree of decentralisation of collective bargaining to the enterprise level would be the preferable policy stance for countries aiming at flexibility and structural adjustment. To secure that decentralised bargaining would not aggravate inflationary pressures and would not be accompanied by widespread industrial conflicts, the OECD study spelled out some preconditions regarding the legal framework and employers solidarity in the bargaining process.

Given these definitions and policy prescriptions, the Greek system of industrial relations cannot be easily classified into one of the three above mentioned categories. Is the structure of collective bargaining in Greece centralised, decentralised or does it fall between these two extremes?

Prima facie, it could be classified into the group centralised

collective bargaining. But developments in manufacturing industrial relations after 1975 indicate a trend towards decentralisation of collective bargaining to the company and plant level. Therefore, the Greek experience provides a basis for examining, in the context of governmental regulation of the labour market and changing institutions and processes of collective bargaining, the question of relative wage flexibility in manufacturing. This thesis examines exactly these questions.

The thesis consists of five main chapters. Chapters 2 and 3 examine procedural and institutional issues. Chapter 2 discusses the main characteristics of collective bargaining procedures and structures in Greece and examines the evolution of the formal bargaining structure. Chapter 3 discusses the role of compulsory arbitration and strike activity in the Greek system of industrial relations, examines the compatibility of compulsory arbitration with collective bargaining and analyses institutional developments associated with the strike behaviour of salary and wage earners.

Chapter 4 discusses the governmental involvement in wage determination and employment regulation. It analyses the rationales and the mechanics of incomes policies adopted in Greece since 1975 and examines the variability in the wage structure in Greek manufacturing. It also presents the existing legislation and the mechanics for employment regulation and examines the evolution of employment in the Greek manufacturing

sector.

Chapter 5 examines the extent to which the Greek manufacturing wage structure has been responsive either to competitive influences or to industry-specific conditions. Moreover, as these two different types of flexibility may exert opposite influence upon labour allocation and employment growth, this chapter discusses the extent to which such responsiveness, if any, has been employment enhancing or not. The examination of flexibility in relative wages is performed at the disaggregated level of two-digit industrial branches in manufacturing.

Chapter 6 examines the level and the direction of influence exerted by the norm-based and the indexation-based incomes policy upon the inter-industry wage structure in the Greek manufacturing sector over the period 1975-88 as well as the influence of aggregate inflation, unemployment and variation in strike activity. The inter-industry wage structure in Greek manufacturing is described by the coefficient of variation of average hourly pay of male workers across twenty two-digit branches. This analysis can offer an account of the wage-inflation process at the disaggregated level and its association with the rise of the informal collective bargaining in the Greek manufacturing sector.

Chapter 7 summarises the findings of the thesis, draws the conclusions and discusses the policy implications. The main findings of the thesis are the following.

With regard to bargaining structures and procedures the main

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findings of the thesis suggest that within the formal system of collective bargaining, despite the extensive legalistic control exerted by successive governments via the Ministry of Labour, there were tendencies towards more decentralised bargaining. These tendencies were noticeable even in the Greek manufacturing sector where collective bargaining at the company and the plant level is not permitted.

As far as the role of compulsory arbitration is concerned it is argued that arbitration has been incompatible with collective bargaining not because of its compulsory character but because of its lack of independence from the Ministry of Labour, which used the machinery of compulsory arbitration for implementing the governmental incomes policy. Moreover, arbitration is found unsuccessful in controlling industrial conflicts, the rise of which, especially in manufacturing, led to the creation of an informal system of collective bargaining at the plant level. Therefore, decentralisation and fragmentation of collective bargaining has been a dominant feature of manufacturing industrial relations after 1975.

The rise in strike activity and the set up of the informal system of collective bargaining after 1975, and throughout the period 1975-88, coincided with the use of formal incomes policies largely aimed to compress the wage structure. Especially the egalitarian indexation policy of the period 1982-88 was clearly designed to narrow wage differentials. However, variability in manufacturing wages was observed throughout the period 1966-88.

In the same period, contrary to what happened in the majority of industrialised market economies, employment in Greek manufacturing has been expanding, faster in 1967-74 and slower since then.

In the context of substantial and procedural regulation of the Greek labour market, it is found that this regulation permitted only episodes of competitive flexibility in relative wages, while the observed variability was mainly associated with non-competitive flexibility caused by industry-specific factors such as changes in productivity and strike activity. The decentralised and informal collective bargaining is considered as the main institutional precondition favouring non-competitive flexibility in relative wages. Furthermore, egalitarian incomes policies, as they insulated wage formation in branches with below-average changes in productivity from their relative productivity performance, caused inter-industry asymmetries between changes in wages and changes in productivity which, over the period 1977-88, were employment hindering.

The examination of the influence exerted by the norm-based and the indexation incomes policies leads to the conclusion that since 1975, in the Greek manufacturing sector and in the context of collective bargaining, incomes policies dominated the variation in the inter-industry wage structure. However, the influence of the informal system of collective bargaining is noticeable, as it caused the business cycle variables, i.e. inflation and unemployment, to affect the wage structure in an unconventional way, by making them to work in favour of the high-

wage and high-bargaining power industrial branches. The influence exerted by strike activity was not homogeneous as not every strike is successful and strike-proneness does not always indicate bargaining power.

Overall, in the context of a regulated system of industrial relations and given the continuous use of incomes policy, in the Greek manufacturing sector, the move towards decentralised and fragmented collective bargaining, observed after 1975, caused a certain degree of flexibility in relative wages which was associated with industry-specific characteristics. Bargaining structures and relative wages have not been as rigid and ossified as an overview of the governmental policies for procedural and substantial regulation may imply.

However, the prevailing decentralisation and the observed flexibility were not part of a solution similar to that proposed by the OECD study. They rather were part of a twofold problem regarding first, the harmonisation of the formal system of collective bargaining with the real bargaining structures and procedures and second, the need for moving from permanent incomes policies to wage determination based more upon voluntary collective bargaining institutions and processes.

# CHAPTER 2: COLLECTIVE BARGAINING: INSTITUTIONS AND PROCESSES.

## 2.1. INTRODUCTION AND SUMMARY.

The post-war system of industrial relations in Greece, as far as collective bargaining is concerned, has been based upon Law 3239 introduced in 1955. Excessive legalistic regulation of collective bargaining is one of its main features. Legalistic regulation applies to bargaining levels and units, to the coverage of collective agreements and to the qualification of trade-unions for collective bargaining.

The practical consequences of this legalistic regulation upon collective bargaining institutions and processes in Greece have not been sufficiently studied. Not even the criteria for such an examination have been spelled out. This is one reason for why the will for reforms is not followed by clear ideas concerning the system which should be adopted. Conflicting interests between the parties to the bargaining process are expected but it is important for the national system of industrial relations whether the bargaining structures, through which conflicting aspirations as far as wage and employment regulation are concerned, remain stable or not.

This chapter discusses collective bargaining procedures and structures and examines institutional developments associated with the bargaining behaviour of salary and wage earners. The analysis first, deals in general with the dynamics of the formal

system of collective bargaining set up by Law 3239 and, then, focuses upon developments in the manufacturing bargaining structure.

Section 2.2 discusses theoretical and methodological questions about bargaining structures and behaviour. Section 2.3 analyses the Greek formal system of collective bargaining with reference to trade-unions developments and to the characteristics and the evolution of the formal bargaining structure. Section 2.4 discusses the bargaining structure and the formal bargaining procedures in the manufacturing sector. Section 2.5 summarises the findings and presents the conclusions of this chapter.

Our analysis suggests that in the Greek system of industrial relations the formal structure of collective bargaining and the legalistic regulation of formal bargaining procedures have created rather ossified bargaining structures which exclude, especially in manufacturing, collective bargaining at the company or plant level. Nevertheless, during the 1975-81 period, even within the formal system of collective bargaining, pressures and tendencies towards decentralised and fragmented bargaining at the company and plant level occurred.

## 2.2. COLLECTIVE BARGAINING AND BARGAINING STRUCTURES

### 2.2.1. Bargaining Structures: Levels and Units.

Collective bargaining is one mode of wage and job regulation. Apart from it, as Flanders (1970:94) pointed out, five other modes can be identified: unilateral regulation by either employers or employees, tripartite regulation, state and social regulation. In the industrialised market economies there has been a long tradition of collective bargaining. At least during the last three decades, collective bargaining has been the dominant mode of wage and job regulation.

Historically, wage earners initiated collective action and organisation and, in most cases, employers begun to form their own collective organisations largely as reaction to growing levels of unionisation and trade-unions activity. As Sisson (1987:11) observed, in most of the industrialised countries, employers came to an accommodation with trade-unions mainly during the first half of this century, with the exceptions of the U.K. and Japan which came to an accommodation earlier and later respectively.

Analytically, bargaining structures and bargaining behaviour consist the two main aspects of collective bargaining. The development of collective bargaining has been mainly based upon the formation of bargaining structures through which trade-unions and employers regulate the employment relationship. While the

parties' behaviour has largely influenced the shape of national bargaining structures, legislation has in many cases played a key role in establishing bargaining structures as central elements of national systems of industrial relations. According to Cordova (1987:308) that was made possible by the incorporation of collective agreements, as a new source of rules and regulation in the field of labour, in the legal system of various countries.

In the literature there is no commonly agreed benchmark for distinguishing and articulating structural and behavioural aspects of collective bargaining, probably because the interactive relationship between them runs in both directions. A recent OECD (1987) study discussed structural aspects as the breadth of bargaining and the depth of collective agreements, as well as behavioural aspects as the constraints upon, and the societal role of, organisations involved in collective bargaining. The OECD study adopted the methodology proposed by Clegg (1976) who had argued that differences in the level at which collective bargaining takes place explain largely international variations in unions membership and structure, strikes, unions government and workplace organisation.

Even when, for methodological reasons, the distinction between bargaining structures and behaviour is made clear, there is no commonly agreed definition either of the concept of bargaining structure or of its elements or dimensions. The emphasis has been put upon varying aspects and dimensions. From this point of view, Windmuller (1987:82) proposed the use of the concept of

collective bargaining structure with reference to bargaining levels and bargaining units. The concept of bargaining levels refers to hierarchical and horizontal layers at which negotiations take place and which, in a sense, form the scaffolding of any bargaining structure. The concept of the bargaining unit comprehends the groupings of employees and employers represented in collective negotiations and subjected to terms embodied in agreements.

Windmuller (1987:81-119), in his comparative assessment of bargaining structures in the industrialised market economies, concluded, first, that great diversity in national bargaining structures is observed, and second, that their basic features, once put in place tend to persist. Nevertheless, the relative stability in bargaining structures does not imply that they do escape pressures for change. Such changes may be initiated by either of the parties to the bargaining process. If these changes become widespread and synchronised, then the national bargaining structure as a whole may become under severe pressures for change towards relative decentralisation or centralisation. Successive waves of such pressures may have long-lasting effects upon the coherence of bargaining structures.


## 2.2.2. Decentralisation in Bargaining Structures.

Chamberlain (1961:5) suggested that to understand the formation and evolution of bargaining units, beyond their formal and legal sense, especially as far as the workers contribution is

concerned, it is necessary to take into account that "a collective bargaining unit and the power structure within it are products of efforts by workers to achieve their aspirations which frequently collide as well as coincide with each other". In the same line of argument, Weber (1967:20) offered a more technical approach to the parties behaviour towards the bargaining structure. In the context of decision making on the basis of cost-benefit analysis "each party will seek to devise a structure that will maximise its capacity for inflicting real or expected costs on the other party in the course of the bargaining process".

From this point of view and with regard to the relative stability of the bargaining structure in the U.S., where bargaining units are certified by national or state labour relations agencies, Chamberlain (1961:9) argued that it is important to analyse collective bargaining structures in broader terms by taking into account the "interplay between the administratively determined and "appropriate" bargaining unit ... and the informal shifting and usually underground combinations of employees within the unit". Such informal shifting along with the administratively determined levels and units consist what we could designate as the real bargaining structure.

Relative long-run stability in many European and the U.S. bargaining structures is observed for most of the post-war period, and sometimes beyond, back in their formative periods. However, according to Clarke (1987:50), over the post-war period, even in the context of long-run relative stability, the levels at

which bargaining is conducted have tended to change in most European countries mainly towards bargaining at the level of the enterprise or plant. Apart from this slow process, there were also periods during which bargaining structures became under severe and systematic pressures which resulted in their further fragmentation.

In the late 1960s and early 1970s in Europe, where bargaining structures have been relatively more centralised than in the U.S., decentralisation became a strong tendency initiated by the shop-floor militancy of the workforce. It was associated with the strike activity at the plant level and characterised by the challenges to the managerial prerogatives (Dubois, 1978). Decentralisation of bargaining structures offered the means for opposing macroeconomic policies of wage restraint and microeconomic policies for rationalisation of industrial relations at the plant level (Soskice, 1978). The French May in 1968 and the Italian Hot Autumn in 1969 were tips of the iceberg, analysed in Crouch and Pizzorno (1978), which created major disturbances in French and Italian bargaining structures.

By contrast to the labour initiated widespread move towards decentralisation of bargaining structures, observed in Europe in the late 1960s and early 1970s, in the 1980s bargaining structures became also under pressure but the tendency from country to country as well as within countries was not homogeneous. Both moves towards decentralisation and centralisation were observed. Decentralisation of the bargaining

structure has again entered the agenda of industrial relations as part of the flexibility drive which has been initiated by employers and governments. An ILO (1984) review of developments in collective bargaining noticed the employers' interest in lowering the level of bargaining but concluded that this could hardly be generalised to all European countries. In a more recent overview Baglioni (1989) concluded that in Europe, while collective regulation of industrial relations remains central, there has been a general trend towards decentralisation of collective bargaining which often reflects employers decisions and initiatives.

The role of governments regarding changes in bargaining structures varies according to their policies. Incomes policies, to increase their chance for success, require centralised collective bargaining structures. Deregulation policies aimed at increased flexibility in the labour market favour decentralised bargaining structures. Therefore, the variety of policies adopted by governments have not contributed to the move towards a single pattern of bargaining structures.

However, the OECD (1987) study, even after concluding that decentralised bargaining provides a setting in which the conditions and prospects of individual enterprises bear on wage outcomes and that decentralisation would contribute to smoother adjustment to changing patterns of labour demand, remains sceptical about the possible benefits of decentralised bargaining as it recognised that both theoretical analysis and the post-war history of industrial relations do not support the inference that

more decentralised systems always function better in the sense of what OECD perceives as "economically sensible wage outcomes".


## 2.2.3. Fragmentation and Coherence in Bargaining Structures.

Bargaining structures, considered in a comparative perspective, have been brought at the forefront of the research and debate regarding macroeconomic performance and labour market characteristics in industrialised market economies. The alleged relatively better unemployment performance of the corporatist mode of wage and job regulation has been the theme of both normative and positive approaches. This literature has unfolded on the basis of the concept of corporatism which is mainly developed in the context of the political theory and sociology. The common denominator of all definitions of corporatism is the concept of centralised bargaining structure. Indeed, in the comparative research on industrial relations and macroeconomic performance, centralisation in the wage setting is the corner-stone of the corporatist model.

Calmfors and Driffil (1988) summarised varying definitions of corporatism as well as the variations in the specification of centralisation in wage setting. For instance, Schmitter (1981) emphasised centralisation of the trade-unions structure. Blyth (1979) focused upon centralisation with regard to levels of bargaining and the existence of join central bodies to which employers and unions participate. Cameron (1984) emphasised the centralisation of trade-unionism along with the unionisation

density in the economy. Bruno and Sachs (1985) emphasised centralisation in bargaining structures and the existence of consensus between labour and employers. But in all cases the ranking of countries, according to their degree of corporatism, was very similar.

To these specifications Calmfors and Driffil added their own emphasising the extent of inter-union and inter-employer co-operation in wage bargaining. They preferred to focus upon the behavioural rather than the formal context of wage setting. Their specification of centralisation and corporatism is similar to that proposed by Lash (1985), and used by Newell and Symons (1987), which emphasised both the tripartite character of the corporatist institutions as well as their policy purposes for high levels of employment through co-ordination and moderation in wage demands. Tarantelli (1984) also proposed an analogous specification of centralised industrial relations.

Calmfors and Driffil (1988) on the basis of their conceptualisation of corporatism, challenged the literature which asserts that the more corporatist is an economy the better is its economic performance and criticised the thesis that centralisation at the bargaining structure is that component of corporatism which may explain the relation between corporatism and economic performance. They argued that both highly centralised and highly decentralised systems of wage setting work best as far as the macroeconomic performance is concerned.

A similar argument was made in the OECD (1987:119-151) study

which adopted an approach to industrial relations in OECD countries beyond the dichotomy of corporatist and non-corporatist systems and took into account both structural and behavioural aspects of collective bargaining. That study concluded that it is not simply the degree of centralisation but rather the degree of coherence of bargaining structures, i.e. the lack of multi-union bargaining and overlapping bargaining structures, that has a major influence on how labour markets adjust.

## 2.2.4. Summary.

To summarise, in the industrialised market economies collective bargaining has been a dominant mode of wage and job regulation. Bargaining structures, consisting of various levels and units, provide the basis for collective bargaining activities. However, the behaviour of both parties to the bargaining process may transform bargaining structures. A tendency towards more decentralised bargaining has been observed in European industrial relations. Beyond the dichotomy between centralised and decentralised bargaining structures, their stability or change are important regarding whether or not they lead to further coherence or fragmentation. Coherence or fragmentation may be observed in both corporatist and highly decentralised bargaining structures.

## 2.3. COLLECTIVE BARGAINING AND THE FORMAL BARGAINING STRUCTURE IN GREECE.

### 2.3.1. Procedures, Levels and Units of Collective Bargaining.

Greece belongs to those countries where legislation plays a central role in the regulation of industrial relations. Progressive legislation was introduced in the early decades of the century and when in 1948 the ILO studied the Greek labour law observed that legislation prior to the dictatorship period (1936-40) compared quite favourably with that of most other countries (ILO, 1949:16,221). However, it is not only the presence of legislation and its content but, indeed, its application for the regulation of procedural and/or substantial issues in industrial relations which determines whether it is satisfactory or not.

In post-war Greece, new labour legislation has been introduced which reassured and strengthened the legalistic character of the system of industrial relations. Since 1955 industrial relations have been dominated by Law 3239 which set up the institutional framework for collective bargaining. In fact, the system of collective bargaining implemented by Law 3239 was not completely new. It was rather similar to that introduced in 1954 by Law 3086. Law 3239 is still in force and, indeed, consists a form of strong state regulation of collective bargaining procedures. On the basis of the definitions proposed by Flanders (1970:94)

regarding the modes of wage and job regulation, the Greek formal system seems to be an hybrid form of collective bargaining subject to direct state regulation.

According to Law 3239, collective agreements should be in written form and must be signed by representatives of the bargaining parties concerned. Then, to be ratified and to be given lawful enforcement, collective agreements are required to pass through formal processes which involve the Ministry of Labour. They should be submitted to, and registered in, the Ministry of Labour in order to be published in the Government Gazette (article 2.2). Collective agreements take effect on publication unless stated otherwise in them (art.2.3).

The parties to collective bargaining entitled to conclude collective agreements are confined to trade-unions and employers' associations which already have acquired legal status as entities representing strictly professional interests of sections of employees and employers respectively (art.1.2). There are also restrictions concerning the number of trade-unions which may qualify for collective bargaining (art.23.1). In 1969 the Legislative Decree 186 (art.1), clearly influenced by the French labour law, introduced the notion of the most representative and the simply representative union. In each sector of employment, broadly defined in terms of industry, occupation and/or region, there could be only two representative trade-unions entitled to bargain and to contract collective agreements. Any other trade-unions active in the same jurisdiction are not entitled to bargain and to conclude agreements.

With respect to the coverage of collective agreements, according to Law 3239, there are two regimes. Collective agreements can be either rulings binding solely the members of the parties involved in the bargaining process or binding rulings across the board for the industry, occupation or region concerned. In principle, and in most cases, collective agreements apply to, and are legally binding for, members of the signatories trade-unions and employers' associations (art.5.1). However, there can be cases of collective agreements with extended coverage.

First, when a collective agreement is concluded and signed under the auspices, and in the presence, of the Minister of Labour or his/her representative, its coverage is extended to every employee and employer in the sector, branch, occupation or region concerned (art.5.3). Second, a collective agreement contracted by the most representative trade-union covers also the simply representative union, i.e. the second trade-union entitled to bargain and to contract collective agreements in the jurisdiction concerned, if the second union did not let be known its disagreement with the collective agreement contracted by the most representative trade-union (Legislative Decree 186/1969, art.4.1). Third, the Minister of Labour can extend the coverage of a collective agreement to the entire number of employers of a region, if in the region concerned the employers' association which contracted it employs more than 60 per cent of the sectoral workforce (art.5.2).

The minimum and typical duration of collective agreements is

fixed to one year. Before the introduction of the Legislative Decree 186 in 1969 the minimum period was six months. But the typical duration has always been one year. After the one year period, collective agreements are terminated as one of the contracting parties, normally the trade-union, notifies the other of its intention to terminate the existing agreement and to negotiate a new one (art.4.2). This implies that a new bargaining round starts. Collective agreements are often signed months after expiration of the contract and are applied retrospectively if it is so agreed.

However, it is possible for a collective agreement to be terminated before its normal duration and new bargaining processes to be opened if there have been substantial changes in the conditions under which it was concluded. Arbitration courts are empowered to decide whether such changes occurred and new bargaining process should be allowed (art.15.2). Thus, the life of collective agreements may be shortened. But it can also be prolonged. The Minister of Labour is entitled to extend the validity of a collective agreement, for a maximum period of twelve months, even when one of the contracting parties or both of them have notified their intention to terminate it (art.4.3).

Law 3239 (art.7.1) has also defined clearly the levels and units of collective bargaining. Collective bargaining cannot take place at any level and/or between any unit of employers and employees. There can be four categories of annually signed collective agreements. It is noteworthy that these four

categories, and the relevant bargaining levels and procedures, can be traced back to the provisions of the Legislation Act 1367 introduced in 1938, which, after a turbulent mid-war period, aimed, for the first time ever in Greece, to institutionalise collective bargaining and industrial relations.

The four categories of annually signed collective agreements are the following:

i) The National General Collective Agreement which establishes minimum wages for men, women and apprentices at national level (art.7.2). It is concluded and signed by the General Confederation of Labour (GSEE) and the employers' Confederations (SEV and GSEVE are the principal ones representing large-scale manufacturing and handicraft employers respectively). In Greece, as in many other European countries, there is legal extension of the terms of the National General Collective Agreement to non-union firms.

ii) The National Collective Agreements by Occupation which cover specific occupational groups at national level. They are concluded and signed by the occupational Federations of employees and the relevant employers' Federations (art.7.3).

iii) The Local Collective Agreements by Occupation which cover specific occupational groups at local or regional level, when these groups are not covered by National Occupational Collective Agreements. They are concluded and signed by the regional occupational Federations and the relevant employers' Federations or local representatives of national Federations of employers (art.7.4).

iv) The Special Collective Agreements which cover employees of one single company. According to Law 3239 single employers and their employees, or part of them, have no right to bargain and to reach collective agreements at the company or the plant level. Collective agreements, in order to be lawful, need as a prerequisite at least two employers, i.e. an association of them. The Special Collective Agreements are an exception. They are permitted only for clearly stated organisations, usually not covered by other categories of collective agreements, such as banks, local government, public utilities and corporations which belong, in a wide sense, to the public sector, and employ labour under private employment contracts (art.7.5).

These four categories of collective agreements are not of equal importance. By custom, every other collective agreement is concluded and signed after the National General. The National General Collective Agreement operates as the guideline for the agreements contracted at lower levels of the bargaining hierarchy. This is partly a symptom of the relatively centralised structure of the formal system of collective bargaining.

In addition to this extensive regulation of procedural aspects of collective bargaining, to protect the national interest, the Ministry of Co-ordination and the Ministry of Labour were given the right to examine, ratify, amend or reject collective agreements reached voluntarily by trade-unions and employers (and compulsory arbitration awards) so as to secure that they

remain in line with the governmental economic and social policy (art.20.2).

The rationale for this additional control over substantial aspects of collective bargaining was based upon the view that under the then prevailing economic conditions (for more than a decade wages and salaries did not catch up with the rising cost of living and the gap between prices and wages was increasing geometrically), the lack of any control of collective bargaining procedures would have been detrimental for wage and salary earners. These controls were designed, as argued in the introductory report of Law 3239, first, so as to protect salary and wage earners and second, so that living standards and the political regime be maintained without social policy affecting the economic development.

This right to amend and reject collective agreements (and compulsory arbitration awards) was slightly modified in 1957 by Law 3755 (art.8). From then on they had not the right to amend and reject collective agreements concerning increases in nominal wages not exceeding the annual rate of 3 per cent. This, it was argued in the introductory report of Law 3755 , was due to "the general conditions of the national economy" which would not permit a higher limit. The 3 per cent limit was considered as a good start for relaxing the controls when economic development would enable the government to drop altogether the right to control collective agreements and compulsory arbitration awards.

In fact, this right was dropped in 1974 by the Legislative Decree

73 (art.2.1). But this did not mean that the Ministry of Labour was deprived by the right to control procedural and legal aspects of collective agreements. The same decree (art.2.2) ruled that the Minister of Labour maintained the right to control the legality of collective agreements and compulsory arbitration awards as well as to ask the parties to the bargaining process or the arbitration court to re-examine the agreement or award concerned.


## 2.3.2. Bargaining Structure and Trade-Unions.

The legalistic institutionalisation of collective bargaining, by fixing the bargaining levels and the bargaining units designated to contract collective agreements, has probably influenced the structure of trade-unionism in Greece. This is because employees intending to remain law-abiding and to undertake lawful collective activity, have had to conform themselves to bargaining levels, units, forms and procedures defined by the legislation. This is not to say that legislation is the ultimate determinant of both the bargaining and the trade-unions structure. But, at least, it has set up limits to the structure through which employees have been allowed to undertake collective activities concerning wage determination and regulation of industrial relations.

By prohibiting bargaining at the company and the plant level, the legislation has enhanced the rather centralised collective bargaining of the occupation-based and industry-based unionism.

This type of bargaining, especially the occupation-based, had been a preeminent tradition in Greek industrial relations over the first half of the century (Seferis, 1976). The bargaining structure and the trade-union structure favoured by these legal provisions can be represented as a pyramid-shaped one, which consists of three separate levels, as shown in Figure 2.3.1. The nearest to the basis of the pyramid, the more heterogeneous becomes the structure of trade-unionism in Greece. However, the formal bargaining structure appears less complex and more coherent than the trade-union structure, as the right to bargain is restricted to certain levels of the hierarchy.

The primary level contains sectional, craft, company and general unions. None of them is entitled to bargain and to contract collective agreements. The secondary level contains both Federations, based upon occupational or industrial divisions of the labour force, and Labour Centres which are organised according to the administrative division of the country and include primary unions of a certain region. Nevertheless, and this is important for the shape of both the bargaining structure and the trade-unions structure, only Federations are entitled to bargain and to contract collective agreements. In other words, within the formal system of wage determination, Federations have been given a central role in the function of the bargaining structure. The tertiary level contains the General Confederation of Labour (GSEE) which is recognised by the Law 3239 (art.7.2) as the sole representative organisation entitled to bargain and to conclude the annual National General Collective Agreement.

Figure 2.3.1

BARGAINING STRUCTURE AND
STRUCTURE OF TRADE-UNIONISM IN GREECE

```
                              *
                            *   *
                           *     *
                          *       *
                         *         *
                        *           *
Tertiary               *    GSEE     *        General
Level                 *               *    Confederation
                     *                 *      of Labour
                    *                   *
                   *                     *
                  ***********************
                 *                       *
                *        Federations       *
               *                           *        Occupational
              *      1975:45                 *       Federations
Secondary    *                               *
Level       *                                 *
           *      Labour   Centres             *        Local
          *                                     *       Labour
         *     1975:77                           *      Centres
        *                         1984:65         *
       ***************************************************
Primary  *                                           *
Level   *      Sectional, Company, General and Craft  *
       *                    Unions                     *
      *                                                 *
     *      1975:3350                    1984:3011       *
    *                                                     *
   ***********************************************************
```
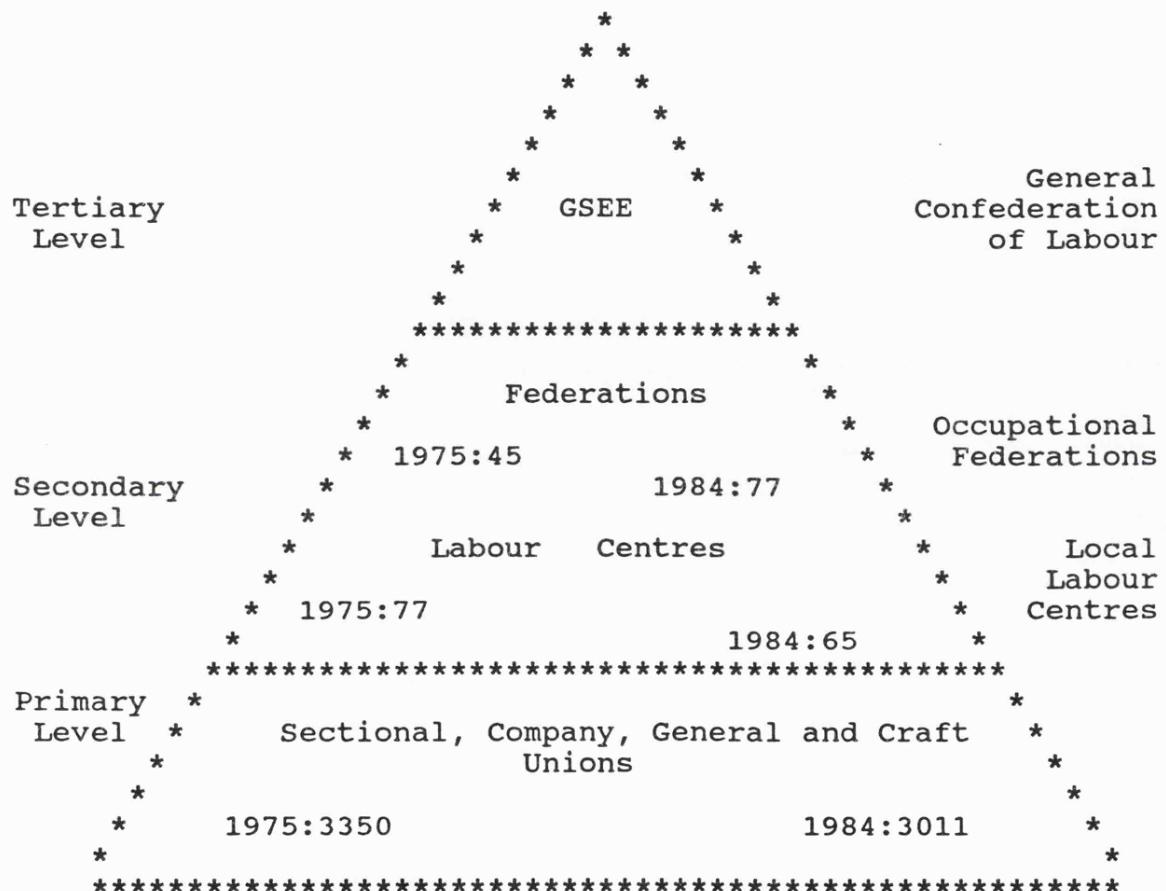
Note  : Number of Unions, Federations and
        Labour Centres affiliated to GSEE.

Source: GSEE

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What this representation means to do is to provide a basis for drawing the limits of the legislated formal system of collective bargaining. These limits refer first, to the formal bargaining structure, that is the certified levels and units of collective bargaining, and second, to the structure of trade-unions with regard to the formal bargaining levels. While every union has a place in the pyramid-shaped structure, not all of them consist entities recognised as bargaining units. The great majority of primary level unions are not considered by the law as authorised bargaining units. Consequently, any bargaining processes evolving out of the national, federal or specific company levels, are considered neither as part of the formal bargaining structure nor as lawful.

Apart from the exclusion of primary level unions from the formal system of collective bargaining, within the formal system itself chronic problems have been encountered regarding the recognition of trade-unions which can qualify and be entitled to contract collective agreements. First, this chronic perplexity has to do with the definition of the most representative and the simply representative trade-unions for each jurisdiction. When there is only one union alleging representation and coverage of a certain industrial branch or occupation at the national or regional level, no question is raised on whether or not it is representative. But, in many cases during the post-war period, there have been more than two trade-unions claiming representation of the same section of the labour force.

Second, the structure of representation of the trade-unions in Figure 2.3.1 does not mean that each primary union belongs to one Federation, or that each Federation is a member of the General Confederation of Labour. Such a coherence is not observed. Indeed, trade-unions, and especially Federations, are not organised strictly according to industrial and occupational divisions of the labour force. There are cases of Federations which are rather general and include primary unions from various industrial branches and occupations. The Federation of Manufacturing Enterprise Unions (OVES), founded in 1979, is a recent and typical case of inter-industry Federation.

In this context, inter-union and intra-union disputes over recognition rights have been a permanent feature of trade-union developments. As many scholars of Greek trade-unions have pointed out organisational problems (exclusions, misrepresentations, cancellations etc.) have always plagued trade-unionism in Greece (Jechinis, 1967, Fakiolas, 1978, Katsanevas, 1984). Most trade-unions have been run with important political interference (Katsanevas, 1984:227-248). Behind these organisational problems, which have been reflected in the bargaining structure, lies the fact that the Greek system of industrial relations has been dominated by a strong adversarial tradition directly linked to political developments, divisions and rivalries (Fakiolas, 1978:340-392, Ioannou, 1989:54-68).

To understand how political divisions have been interwoven with trade-union developments we must take into account that, over the

post-war period in Greece, the official trade-unionism has been dominated by pro-governmental officers appointed, directly or not, via judicial arrangements, by the Ministry of Labour. Katsanevas (1984:216-218) described this phenomenon, observed not only at the top level of the General Confederation of Labour (GSEE) but also at lower levels of the trade-unions structure and hierarchy, as "paternalistic unionism".

As Koukoules (1988) has shown, on the basis of the article 69 of the Civil Code adopted in the late 1940s, the judiciary has had the right to, and the task of, appointing new executives at the General Confederation of Labour as well as at every Federation, whenever representatives of a single trade-union claimed that the executive committee of the General Confederation of Labour, or of the Federation in question, is not representative of the rank and file and applied for the appointment of a new executive committee. During the post-war period successive governments, by using this legislation and machinery, and via the referrals of internal trade-union conflicts by pro-governmental trade-unions to the judiciary, have been appointing executives of their own political persuasion.

In 1967-74 there was a shake-out in trade-unionism and only the then pro-governmental trade-union officers were left unimpaired to perform the role of representing the workforce. The same happened, to a lesser extent, in 1975-81. But even then, the majority of leaderships in trade-unions entitled to bargain, to conclude collective agreements and to invoke the compulsory arbitration, remained pro-governmental, or at least not

affiliated to any of the left-wing opposition parties. For instance in the 18th Congress of GSEE in 1976 only 29 per cent of the representatives (167 out of 569) were affiliated to the socialist or the communist parties and held 31 per cent of seats (11 out of 35) in the then elected executive committee (Fakiolas, 1978:343-344, Katsanevas, 1984:232).

The same pattern of relations between trade-unions and governments persisted in the period 1982-88, although the tradition of appointing pro-governmental trade-union leaderships was limited to the top level of the trade-union hierarchy, i.e. the General Confederation of Labour. When, after the imposition of the 1985-87 stabilisation program, the ruling party lost the majority in the General Confederation of Labour (GSEE), pro-governmental officers were appointed. Until early in 1989, the General Confederation of Labour was led by pro-governmental trade-unionists who, in line with the long national tradition, were appointees.

Behind these synchronised changes in politics and trade-union leaderships and the persisting pattern of political affiliation of trade-union leaderships to the party in power, lies the fact that the official trade-unionism has been always related to, and depended on, the Ministry of Labour in a relationship dominated by two factors. First, the prevailing role of the judiciary in regulating the internal affairs of Greek trade-unions and second, the financial dependence of most trade-unions on rather discretionary funding by the Ministry of Labour. Greek trade-

unions are not financially independent. In practice they do not rely upon the contributions of their members but are financed by a Ministry of Labour dependent fund (Fakiolas, 1978:180-190, Katsanevas, 1984: 199-215, Koukoules, 1984).

Federations were acting as parties to the bargaining process led by largely appointed leaders and officers financially dependent on the Ministry of Labour. And when questions regarding inter-union conflicts about coverage were raised there was the Legislative Decree 186 (art.2-3), introduced in 1969, which empowered ever since the arbitration court to determine the representative trade-unions in each jurisdiction. In 1974 the Legislative Decree 73, by adopting the membership as the single major criterion, clarified the standards for determining the most representative and the simply representative trade-unions. But even their membership claims were not a sound base for selecting the representative unions. In many cases electoral malpractices dominated internal democracy of trade-unions. (Katsanevas, 1984:194-198).

The provisions of Law 3239 which have given the government a central role in collective bargaining, and more than thirty years of experience, indicate that collective bargaining in Greece is different from collective bargaining in the U.S., the U.K. and other industrialised market economies. The difference is both of degree and of kind. First, of degree because of the persistently low union density which only in the early 1980s peaked near 30 per cent (Ioannou, 1988:83). Of course, a union density of 30 per cent is higher than that in the U.S. but its not the level of

union density which makes the difference. It is also the limited coverage of collective bargaining arrangements, let alone that of the annual National General Collective Agreements which establish the national minimum wage. Second, of kind because of the type of relationship between trade-unions, employers and the state, with direct state interventionism in Greek industrial relations being predominant. Surprising as it may seem, trade-union officers largely appointed and, indeed, primarily financed by the Ministry of Labour, have been supposed to be the main actors within the legalistic system of collective bargaining, which also has been thoroughly regulated by the Ministry of Labour and the judiciary.

## 2.3.3. The Formal Bargaining Structure: Stability or Change?

The legalistic regulation of collective bargaining and the restrictions imposed upon trade-unions create the impression of a rather ossified bargaining structure. However, even in this context there can be some possibility for changes in the formal bargaining structure. Such changes can be caused, at least, by structural changes in the economy and in the relevant composition of the labour force as well as by changes in the political environment within which labour undertakes collective activities. During the post-war period, and mainly during the 1960s and the 1970s, impressive changes occurred in all these three areas setting the scene of Greek industrial relations (Fakiolas, 1978:133-148, Ioannou, 1989:49-53).

To examine whether the formal bargaining structure has been ossified and to discern any changes we analyse the scant information available at the Ministry of Labour for the period since the implementation of the present system of collective bargaining. Table 2.3.1 describes the number of both collective agreements and compulsory arbitration awards registered in the Ministry of Labour. This number depicts the quantity of bargaining units existing within the formal system of collective bargaining across all sectors of the economy. In Table 2.3.1 the density of bargaining units in the labour force, i.e. the number of bargaining units per 100000 employees in employment, is also estimated.

On average, at each side of the bargaining process, there were recorded less than 300 bargaining units, i.e. less than 20 bargaining units per 100000 salary and wage earners. This quantity of bargaining units does not imply an equal number of trade-unions and employers associations. The comparison with the number of trade-unions entitled to contract collective agreements, shown in Figure 2.3.1, indicates a large incongruity between these two sources of information regarding the number of actors in the formal bargaining structure. This incongruity is due to the fact that, for two reasons, there is not a one-to-one relationship between trade-unions and employers associations on the one hand and bargaining units on the other.

First, every trade-union, or Federation in particular, does not contract only one annual collective agreement. It can contract

more than one according to its membership and its coverage of distinct jurisdictions in the labour market. Second, in every jurisdiction there can be two representative trade-unions contracting, at least, two different collective agreements, different as far as their content and coverage is concerned. Therefore, there is not direct relationship between the number of bargaining units and the number of trade-unions involved in collective bargaining. The same asymmetry applies to the employers side too.

Despite the annual fluctuation observed over the period 1955-88, from Table 2.3.1 becomes clear that in the 1970s there was a strong increasing trend in the number of bargaining units acting within the formal bargaining structure. Indeed, during the period 1975-81 the number of bargaining units increased dramatically both in absolute and relative terms. From 1974 with 155 registered bargaining units and a 10.49 density, to 1981 the increase is impressive as there were 563 registered bargaining units, i.e. 33 bargaining units per 100000 salary and wage earners. It is noteworthy that during the period of the military regime, in 1967-74, in comparison with the earlier period 1964-66, the density of bargaining units in the labour market decreased. Then, in 1975-81 the density more than doubled and in 1982-88 decreased again.

The wide annual fluctuations observed in the 1980s are mainly due to, and are explained by, the type of incomes policies adopted during the period 1982-88. The mandatory incomes policies of 1983 and 1986-87 caused formal collective bargaining processes to

freeze. The imposition of a "wage freeze" by decree in 1983 made redundant and unlawful the great majority of annually contracted collective agreements, as well as the annual settlement of disputes through arbitration. In 1983 only 137 collective agreements and awards were registered, while in 1982 the relevant number was 516. Therefore the density of bargaining units decreased from 30 in 1982 to 8 in 1983. For the same reason in 1984 the number of agreements and awards, and consequently the number of bargaining units acting within the formal system of collective bargaining, rose again at its 1982 level. Similar decrease is observed in 1986-87 because of the tight and mandatory incomes policy which was part of the 1985-87 stabilisation program.

The impressive increase in the number of bargaining units during the 1975-81 period indicates, to a certain extent, the growth of collective bargaining procedures in the Greek system of industrial relations. But this is indicated only to a certain extent for two reasons. First, because these estimates include those bargaining units either succeeding or failing to reach collective agreements voluntarily. The disputes of the latter are settled by arbitration courts. Therefore, the resulting increase in bargaining units only in a wide sense can be considered as indicator of collective bargaining growth, i.e. in the sense that arbitration is also part of the bargaining process. Second, because statistics referring to the number of agreements and awards may be misleading if used to hint the extent of employees covered by collective bargaining arrangements. A few industry-

wide or national agreements may carry more weight that a relatively high number of regional or special agreements.

To analyse the composition of the formal bargaining structure, Table 2.3.2 presents the breakdown of the total number of bargaining units by bargaining level and category. This analysis suggests that the formal bargaining structure, as far as the number of bargaining units is concerned, is composed by two major categories, first those units acting at the national industry-wide or occupation-wide level and second, those acting at the special organisation and company level. This percentage composition does not imply any analogy with regard to the coverage of the labour force by collective agreements and arbitration awards of the relevant levels.

The distribution of bargaining units in different levels of the formal bargaining structure indicates the occurrence of changes towards decentralisation and fragmentation in 1975-81 and towards centralisation in 1982-88. Compared with the period 1973-74, the 1975-81 average share of bargaining units acting at the national level for industry-wide or occupation-wide bargaining decreased from 45.63 to 31.53 per cent. Analogous decrease is observed in the average share of bargaining units at the local or regional level. The average share of units acting at the lowest level of collective bargaining from 37.79 in 1973-74, soared at 55.42 per cent in 1975-81. These changes indicate decentralisation in the formal bargaining structure.

But the tendency towards decentralisation and fragmentation was

reversed in 1982-88. Then a move towards centralisation is observed as the average share of bargaining units at the lowest level of the bargaining structure decreased and the average shares of national and regional bargaining increased. This reversed tendency can be explained by the fact that after 1982, under the socialist government, in the context of what it was perceived as democratisation of the Greek trade-union movement, the opposition of the 1975-81 official trade-unionism, which as opposition was mainly active out of the formal system of collective bargaining at the company and plant level, took over the control of the official trade-union structure and tried to re-establish the dominant role of national industry-wide or occupation-based collective bargaining. The incomes policy of the period was also favourable to more centralised collective bargaining.

To discern the sectoral distribution of the increasing number of bargaining units at the special company level, Table 2.3.3 estimates the share of broad sectors of the economy in the total number of special collective agreements (the relevant arbitration awards are not available) registered with the Ministry of Labour in 1974, 1975, 1982 and 1988. We selected these years as they coincide with peaks and troughs in the rapid expansion of special collective agreements. From 1974 to 1975 the number of special collective agreements more than doubled. It doubled again from 1975 to 1982, and then from 1982 to 1988 their number nearly halved.

From Table 2.3.3 we draw the conclusion that special collective agreements and the relevant bargaining units were primarily concentrated in the area of public sector institutions, organisations, corporations and companies employing labour on the basis of private contracts. Only a small percentage of special collective agreements refers to manufacturing industries, and this happens for companies mainly operating under state ownership. Bargaining units at the special organisation or company level are confined by the law to clearly stated sectors of the economy so that formal bargaining at the company level has little to do with manufacturing industries in the private sector.

The composition of the total number of collective agreements in the mid-1970s, as described in Table 2.3.3, indicates the existence of fragmented bargaining even at the level of state-owned organisations and corporations. Its evolution suggests that changes occurred in both directions, i.e. towards further fragmentation or more coherence. From 1975 to 1982 in transport, communications, electricity and water industries the tendency was towards more centralisation and coherence in collective bargaining, while the labour employed under private contracts by Ministries and dependent institutions moved towards more decentralised and fragmented bargaining. However, from 1982 to 1988 in transport and communications a tendency for more fragmented bargaining is observed.

To summarise, in the formal system of industrial relations during the period 1975-81 collective bargaining expanded in terms of multiplied bargaining units. The changing composition of the

formal bargaining structure suggests that the expansion of collective bargaining in the 1970s was primarily caused by the surge of special collective agreements and compulsory arbitration awards bearing on collective bargaining at the company level. In other words, in 1975-81 within the formal system of collective bargaining the significance of industry-wide or occupation-wide bargaining declined. This development indicates a trend towards decentralisation and further fragmentation of the formal bargaining structure. However, in 1982-88 this trend was reversed towards centralisation. The relatively lower density in bargaining units in 1982-88 reflects the influence of two factors, first, the move towards national bargaining and second, the strict incomes policies and the "freeze" imposed upon collective bargaining in 1983 and 1986-87.

## 2.4. THE FORMAL BARGAINING STRUCTURE IN MANUFACTURING.

### .4.1. Restrictions and Evolution.

In the formal bargaining structure across all sectors changes towards more decentralised bargaining occurred in 1975-81, and the significance of industry-wide or occupation-based bargaining at the national level declined. But prima facie this decline does not refer to manufacturing, as within the formal system these types of bargaining are defined by the law as the main levels at which manufacturing collective bargaining can take place. The legal restrictions imposed upon collective bargaining are stronger in the manufacturing sector because the limitation on bargaining levels and units applies mainly in manufacturing and special collective agreements are not normally allowed. From this point of view, the legal restrictions imposed upon collective bargaining may imply a far more ossified bargaining structure in manufacturing than in others sectors of the economy.

Nevertheless, in manufacturing there were more reasons for the bargaining structure to change. While changes in political relations influence equally all sectors across the board, structural changes in the economy and the resulting change in employment structures may have exerted stronger influences upon the manufacturing bargaining structure than in other sectors of the economy because, over the period under consideration, along with the rapid expansion in manufacturing employment, its further

concentration occurred. The number of manufacturing establishments employing more than 100 employees increased from 436 in 1969 to 701 in 1978 and their share in large-scale manufacturing employment (i.e. establishments employing more than 10 employees) increased from 48.1 to 54.2 per cent.

To examine the characteristics and the evolution of the formal bargaining structure in the Greek manufacturing sector we analyse the number of agreements and awards registered with the Ministry of Labour over the period 1954-1983. Unfortunately the records from where we draw these series of information have been discontinued since 1984.

Table 2.4.1 shows the number of manufacturing bargaining units registered within the formal system of collective bargaining and estimates their density in the manufacturing labour force. On average 67 bargaining units were registered over the period 1954-83 and there were 26 bargaining units per 100000 wage and salary earners employed in large scale manufacturing industry. Its evolution over time does not indicate any systematic pattern and trend. In comparison to 1955-60 the density of bargaining units nearly doubled in 1961-66. In 1967-74 decreased and since then remained stable at levels similar to those prevailing in early 1960s. This trajectory can be indication either of decline in the significance of manufacturing collective bargaining or of rapid centralisation in the manufacturing bargaining structure. But the evolution in the composition of the formal manufacturing bargaining structure suggests that the relatively low density of bargaining units in 1975-81, compared to 1961-66, is mainly due

to the further centralisation of the bargaining structure.

The composition of the total number of bargaining units by level over the period 1954-83, presented in Table 2.4.1, shows that the main bulk of manufacturing collective agreements and awards registered with the Ministry of Labour refers to national industry-wide or occupation-based collective agreements. It also indicates the existence of a clear pattern of change in the formal bargaining structure from local and regional collective bargaining to national bargaining. The share of manufacturing bargaining units acting at the national level increased from 22.18 in 1955-60 to 72.58 per cent in 1975-81. By contrast, the share of manufacturing bargaining units acting at the local or regional level decreased from 69.95 in 1955-60 to 11.84 per cent in 1975-81. This trade-off clearly indicates a tendency towards more centralised bargaining. The share of bargaining units at the special company level had also an increasing tendency but remained at low levels.


2.4.2. Regulation of the Formal Bargaining Structure in Manufacturing.

Table 2.4.2 provides a breakdown of the total number of manufacturing bargaining units involved in collective agreements and compulsory arbitration awards according to the seven different procedures of regulation of formal collective bargaining available according to Law 3239. These are i) the voluntarily reached collective agreements, ii) collective

agreements made compulsory for non-members of the signatory parties, iii) compulsory arbitration awards, iv) agreements and awards amended by the Ministry of Labour, v) agreements and awards corrected by the Ministry of Labour, vi) agreements and awards rejected by the Ministry of Labour and vii) agreements and awards of which the duration was extended unilaterally by the Ministry of Labour.

These procedures indicate the degree of voluntarism and compulsion in manufacturing bargaining procedures. The share of collective agreements voluntarily reached and of those with extended coverage represent the area of voluntary collective bargaining while the rest represent the regulated area of the formal system of collective bargaining. Over the period 1955-83 the majority of bargaining units falls into the category of regulated collective bargaining. In 1955-60, i.e. during the period of the implementation of the system, 73.20 per cent of the manufacturing bargaining units were under the direct regulation of the Ministry of Labour. This regulation diminishes in the following periods but remains at levels above 50 per cent.

Certain methods of regulation were used in some periods and abandoned completely in others. In general the use of direct methods of regulation, i.e. amending, correcting, rejecting and extending the duration of collective agreements and awards, decreased from period to period and was replaced by arbitration i.e. the indirect method of collective bargaining regulation.

For instance, column 7 in Table 2.4.2 indicates that the

provisions permitting the extension of collective agreements for one more year was mainly used in the 1960s and till the early 1970s, i.e. over a period of low inflation -if any at all. The same procedure was also used extensively in 1976, probably without much success as in the following years it completely vanished. This practice of extending the duration of collective agreements may be compatible and consistent with periods of low inflation as then there is no strong need new agreements to be contracted for keeping up with inflation. The abandonment of this procedure can be attributed to the rise and persistence of price inflation which made necessary, for wages to keep up, annual bargaining rounds and new collective agreements.

The period of implementation of the formal system of collective bargaining was also the golden era of direct governmental intervention in manufacturing collective bargaining. Column 8 in Table 2.4.2 indicates that in 1955-60 27 per cent of agreements and awards were amended by the Ministry of Labour, and, as already mentioned, 73.20 per cent fall in the category of one way or another regulated settlements. In 1967-74 the degree of intervention for amendment of collective agreements was relatively lower, but the degree of intervention for extending the duration of agreements and awards had its highest share of all periods. In 1967-74 while the total degree of regulation was near the all periods average, if we take into account the political conditions under the military regime, it seems reasonable to infer that the degree of interventionism was quite high. However, in 1975-81 under conditions of parliamentary

democracy and more liberal industrial relations compulsory arbitration became the predominant method for regulation of collective bargaining in manufacturing.

The composition of the voluntary and regulated areas of the formal bargaining structure in manufacturing by category indicates that regulation was mainly exerted at the national level and the local level and not at the level of special collective agreements. Table 2.4.3 provides a breakdown of the voluntary and the regulated areas of the formal bargaining structure by bargaining level. The regulated area refers mainly to national collective bargaining. Regulation of bargaining units active at the company level remained all over the period low while regulation of national collective bargaining in manufacturing was steadily increasing from 18 per cent in 1955-60 to 82 per cent in 1975-81. In fact the focus of regulation moved from local collective bargaining in 1955-66, to national collective bargaining in 1975-83. However, in the voluntary area of the formal manufacturing bargaining structure the share of collective bargaining at the company level is characterised by a steadily increasing trend.


2.4.3. Formal Pressures Towards Decentralisation.

This asymmetry between the voluntary and the regulated areas of the formal bargaining structure in manufacturing is more clearly indicated by Table 2.4.4 where only collective agreements and compulsory arbitration awards are analysed by bargaining level.

Both their average shares and their trends suggest that in the voluntary area occurred relatively more decentralised bargaining and a tendency towards further decentralisation while in the regulated area centralised bargaining dominated and the tendency was towards further centralisation. Consider first the share of compulsory arbitration awards at the national level of bargaining. It increased from 18 per cent in 1955-60 to 83 per cent in 1975-81. The share of collective agreements at the national level increased too, but never exceeded 53 per cent. Consider now the share of voluntarily reached collective agreements at the special company level. It increased from 13 per cent in 1955-60 to 31 per cent in 1975-81 while the relevant share of compulsory arbitration awards was always at levels below 10 per cent and decreasing.

The increasing presence of bargaining units acting at the company level, in the voluntary area of the bargaining structure and contracting special collective agreements reflects the fact that the Ministry of Labour had, in face of the changing structure of manufacturing, to ease the restrictions upon collective bargaining at the plant level in order to reconcile the restrictive legislation on collective bargaining and its machinery with the changing employment structure in manufacturing as well as pressures exerted upon the bargaining structure. The Legislative Decree 186 (art.9) adopted in May 1969 ruled that disputes which have not the typical characteristics of the formal dispute (i.e. level, unit and scope of bargaining) so that to be settled through the formal procedures of collective bargaining or

compulsory arbitration, but concern the employment relationship, could be settled by a committee through a procedure of tripartite collaboration. Members of the committee are the Labour Inspector, the union representative and the employers representative. In the event of settlement, a written statement is signed which, nevertheless, is not binding for the parties involved and their members.

However, later in the mid 1970s the Ministry of Labour had in many cases, following trade-union requests and pressures, to grant to many tripartite collaboration agreements the status of special collective agreements so that to make them binding for the signatory parties. These exceptions mainly applied to some of the largest, in term of employment, companies and plants in Greek manufacturing. Of course, the national industry-wide or occupation-based bargaining remained dominant in the formal bargaining structure in manufacturing but these developments indicate that in 1975-81 even in the context of the formal manufacturing bargaining structure its voluntary area was characterised by a trend towards decentralisation.

To summarise, the formal manufacturing bargaining structure was relatively more ossified than bargaining structure in other parts of the economy because of the restrictions regarding collective bargaining at the company level. Therefore, it mainly consisted of bargaining units acting at the national or regional level and the tendency was from local and regional to national collective bargaining. Indeed, bargaining procedures were excessively

regulated via both direct and indirect procedures. After 1975 direct regulation or collective bargaining by the Ministry of Labour (i.e. amending, correcting, rejecting and extending agreements and awards) gave way to indirect methods of regulation, namely compulsory arbitration. Regulation and especially compulsory arbitration applied to manufacturing collective bargaining at the national level. However, in the voluntary area of the formal bargaining structure in manufacturing a tendency towards decentralised bargaining at the company and plant level occurred after 1975. After all, even in the over-regulated and restricted formal bargaining structure in manufacturing pressures towards decentralisation were observed.

## 2.4. CONCLUSIONS

Collective bargaining has a long tradition in industrialised market economies where bargaining structures have been changing towards more decentralisation. Contrary to this tradition, in Greece there has been no long tradition of wage setting through collective bargaining. Indeed, both procedural and substantial issues of wage and job regulation are subject to strong governmental intervention as within the formal system of collective bargaining the government maintains the right to intervene on numerous aspects and occasions. Therefore, the system of industrial relations is over-regulated by the existing legislation.

Collective bargaining is restricted to certain levels of the bargaining structure. The formal system of collective bargaining excludes company and plant level collective agreements. These restrictions and the regulation of trade-unions create a rather ossified bargaining structure. Nevertheless, in 1975-81, even within the formal bargaining structure strong tendencies towards decentralised collective bargaining, i.e. at the company level, occurred through the increase of special collective agreements. The procedural arrangements provided by the formal system of collective bargaining, which favours centralised bargaining and excludes decentralised bargaining at the company and plant level, contributed to the fragmentation of the real bargaining structure, especially in the Greek

manufacturing sector.

In the context of the formal system of collective bargaining, wage formation has never been a process independent of direct and indirect state intervention. The legal right of the Ministry of Labour to reject and modify any collective agreement or compulsory arbitration award if considered as not being in line with the governmental policy, dominated wage determination processes, throughout the post-war period.

**Table 2.3.1**

**BARGAINING UNITS IN THE FORMAL BARGAINING STRUCTURE, ALL SECTORS**
1955-1988

| Year | Number of Bargaining Units[a] | | | Density of Bargaining Units[b] | | |
|---|---|---|---|---|---|---|
| | Agreements | Awards | Both | Agreements | Awards | Both |
| 1955: | 42 | n.a | n.a | 3.76 | n.a | n.a |
| 1956: | 69 | n.a | n.a | 6.09 | n.a | n.a |
| 1957: | 51 | n.a | n.a | 4.43 | n.a | n.a |
| 1958: | 40 | n.a | n.a | 3.43 | n.a | n.a |
| 1959: | 46 | n.a | n.a | 3.88 | n.a | n.a |
| 1960: | 58 | n.a | n.a | 4.82 | n.a | n.a |
| 1961: | 64 | n.a | n.a | 5.25 | n.a | n.a |
| 1962: | 72 | n.a | n.a | 5.83 | n.a | n.a |
| 1963: | 58 | n.a | n.a | 4.64 | n.a | n.a |
| 1964: | 97 | 93 | 190 | 7.67 | 7.35 | 15.02 |
| 1965: | 121 | 93 | 214 | 9.45 | 7.27 | 16.72 |
| 1966: | 105 | 82 | 187 | 8.11 | 6.33 | 14.44 |
| 1967: | 63 | 79 | 142 | 4.81 | 6.03 | 10.84 |
| 1968: | 63 | 93 | 156 | 4.76 | 7.02 | 11.77 |
| 1969: | 50 | 100 | 150 | 3.73 | 7.46 | 11.20 |
| 1970: | 53 | 67 | 120 | 3.91 | 4.95 | 8.86 |
| 1971: | 46 | 43 | 89 | 3.36 | 3.14 | 6.50 |
| 1972: | 88 | 38 | 126 | 6.26 | 2.70 | 8.96 |
| 1973: | 88 | 60 | 148 | 10.96 | 4.16 | 15.12 |
| 1974: | 70 | 85 | 155 | 4.74 | 5.75 | 10.49 |
| 1975: | 131 | 143 | 274 | 8.65 | 9.45 | 18.10 |
| 1976: | 144 | 120 | 264 | 9.29 | 7.74 | 17.03 |
| 1977: | 146 | 179 | 325 | 9.20 | 11.29 | 20.49 |
| 1978: | 166 | 214 | 380 | 10.23 | 13.19 | 23.43 |
| 1979: | 173 | 247 | 420 | 10.43 | 14.90 | 25.33 |
| 1980: | 220 | 299 | 519 | 12.99 | 17.65 | 30.63 |
| 1981: | 233 | 330 | 563 | 13.47 | 19.07 | 32.54 |
| 1982: | 284 | 232 | 516 | 16.57 | 13.53 | 30.10 |
| 1983: | 57 | 80 | 137 | 3.36 | 4.71 | 8.07 |
| 1984: | 252 | 264 | 516 | 14.67 | 15.37 | 30.03 |
| 1985: | 175 | 167 | 342 | 9.89 | 9.44 | 19.32 |
| 1986: | 44 | 82 | 126 | 2.48 | 4.62 | 7.10 |
| 1987: | 76 | 84 | 160 | 4.24 | 4.68 | 8.92 |
| 1988: | 210 | 83 | 293 | 11.64 | 4.60 | 16.24 |
| Average | | | | | | |
| 1955-60: | 51 | n.a | n.a | 4.40 | n.a | n.a |
| 1961-66: | 86 | 89[c] | 197[c] | 6.83 | 6.98[c] | 15.39[c] |
| 1967-74: | 65 | 71 | 136 | 5.32 | 5.15 | 10.47 |
| 1975-81: | 173 | 219 | 392 | 10.61 | 13.33 | 23.94 |
| 1982-88: | 157 | 142 | 299 | 8.98 | 8.14 | 17.12 |

Notes:  a. The number of bargaining units refers to both
collective agreements and compulsory arbitration awards.
b. Density of Bargaining Units = Number of Units per
100000 employees in employment.
c. Average of the period 1964-66.
Source: Ministry of Labour.

**Table 2.3.2**

**BARGAINING UNITS BY BARGAINING LEVEL**
1973-1988

| Level | General | Occupational | | Special | Total |
|---|---|---|---|---|---|
| | | National | Local | | |
| Year | % | % | % | % | |
| 1973: | 0.00 | 49.32 | 15.75 | 34.93 | 146 |
| 1974: | 0.00 | 41.94 | 17.42 | 40.65 | 155 |
| 1975: | 1.09 | 32.48 | 17.88 | 48.54 | 274 |
| 1976: | 0.38 | 31.06 | 19.32 | 49.24 | 264 |
| 1977: | 0.31 | 33.54 | 13.54 | 52.62 | 325 |
| 1978: | 0.26 | 26.84 | 8.16 | 64.74 | 380 |
| 1979: | 0.48 | 32.14 | 9.76 | 57.62 | 420 |
| 1980: | 0.19 | 31.98 | 10.02 | 57.80 | 519 |
| 1981: | 0.00 | 32.68 | 9.95 | 57.37 | 563 |
| 1982: | 0.19 | 40.89 | 15.50 | 43.41 | 516 |
| 1983: | 0.00 | 40.15 | 12.41 | 47.45 | 137 |
| 1984: | 0.19 | 42.05 | 7.17 | 50.58 | 516 |
| 1985: | 0.29 | 45.03 | 14.04 | 40.64 | 342 |
| 1986: | 0.79 | 48.41 | 23.81 | 26.98 | 126 |
| 1987: | 0.63 | 38.75 | 21.25 | 39.38 | 160 |
| 1988: | 0.34 | 43.00 | 17.06 | 39.59 | 293 |
| Average | | | | | |
| 1973-74: | 0.00 | 45.63 | 16.59 | 37.79 | 301 |
| 1975-81: | 0.39 | 31.53 | 12.66 | 55.42 | 392 |
| 1982-88: | 0.35 | 42.61 | 15.89 | 41.15 | 299 |

Source: Ministry of Labour.

## Table 2.3.3

## SPECIAL COLLECTIVE AGREEMENTS BY ECONOMIC SECTOR
### Selected Years

| Year | 1974 | 1975 | 1982 | 1988 |
|---|---|---|---|---|
| Sector | % | % | % | % |
| Manufacturing | 11.8 | 4.7 | 6.4 | 7.1 |
| Electricity and Water | 8.8 | 8.2 | 4.1 | 4.1 |
| Transport and Communications | 55.9 | 42.3 | 23.8 | 44.9 |
| Banks and Insurances | 2.9 | 7.1 | 4.7 | 6.1 |
| Ministries | 5.9 | 10.6 | 19.1 | 12.3 |
| Local Government | - | 10.6 | 2.9 | 2.0 |
| Health and Social Security | - | - | 2.3 | 2.0 |
| Army, Navy and Air Force | - | 4.7 | 17.5 | 4.1 |
| Education and Research | 2.9 | 5.9 | 10.5 | 7.1 |
| Miscellaneous | 11.8 | 5.9 | 8.7 | 10.3 |
| Total Number of Special Collective Agreements | 34 | 85 | 172 | 98 |

Note: Data refer to the number of annual collective agreements concluded during the year in question.

Source: Ministry of Labour

## Table 2.4.1

**EVOLUTION AND COMPOSITION OF THE FORMAL BARGAINING STRUCTURE IN MANUFACTURING**
**1954-1983**

| Level<br>Year | National<br>% | Local<br>% | Special<br>% | All<br>% | | Density[a] |
|---|---|---|---|---|---|---|
| 1954 | 25.00 | 62.50 | 12.50 | 100 | 16 | .[b] |
| 1955 | 30.30 | 54.55 | 15.15 | 100 | 33 | . |
| 1956 | 18.92 | 78.38 | 2.70 | 100 | 37 | . |
| 1957 | n.a | n.a | n.a | n.a | n.a | . |
| 1958 | 18.60 | 81.40 | 0.00 | 100 | 43 | . |
| 1959 | 19.15 | 70.21 | 10.64 | 100 | 47 | 23.38 |
| 1960 | 23.91 | 65.22 | 10.87 | 100 | 46 | 23.58 |
| 1961 | 35.71 | 51.43 | 12.86 | 100 | 70 | 35.48 |
| 1962 | 35.21 | 53.52 | 11.27 | 100 | 71 | 35.60 |
| 1963 | 36.49 | 58.11 | 5.41 | 100 | 74 | 36.71 |
| 1964 | 47.27 | 41.82 | 10.91 | 100 | 110 | 53.22 |
| 1965 | 31.73 | 54.81 | 13.46 | 100 | 104 | 47.50 |
| 1966 | 40.59 | 52.48 | 6.93 | 100 | 101 | 44.46 |
| 1967 | 55.71 | 35.71 | 8.57 | 100 | 70 | 31.26 |
| 1968 | 58.62 | 31.03 | 10.34 | 100 | 58 | 26.42 |
| 1969 | 50.79 | 41.27 | 7.94 | 100 | 63 | 28.11 |
| 1970 | 64.71 | 25.49 | 9.80 | 100 | 51 | 20.49 |
| 1971 | 70.21 | 12.77 | 17.02 | 100 | 47 | 17.72 |
| 1972 | 70.59 | 20.59 | 8.82 | 100 | 68 | 24.37 |
| 1973 | 51.92 | 25.00 | 23.08 | 100 | 52 | 17.31 |
| 1974 | 61.29 | 20.97 | 17.74 | 100 | 62 | 18.68 |
| 1975 | 71.88 | 14.06 | 14.06 | 100 | 64 | 19.06 |
| 1976 | 59.48 | 17.24 | 23.28 | 100 | 116 | 33.97 |
| 1977 | 76.83 | 6.10 | 17.07 | 100 | 82 | 23.49 |
| 1978 | 77.11 | 8.43 | 14.46 | 100 | 83 | 23.61 |
| 1979 | 71.25 | 10.00 | 18.75 | 100 | 80 | 22.71 |
| 1980 | 68.42 | 15.79 | 15.79 | 100 | 95 | 27.29 |
| 1981 | 83.10 | 11.27 | 5.63 | 100 | 71 | 21.23 |
| 1982 | 78.26 | 14.13 | 7.61 | 100 | 92 | 27.34 |
| 1983 | 67.86 | 10.71 | 21.43 | 100 | 28 | 7.62 |
| Average | | | | | | |
| 1955-60 | 22.18 | 69.95 | 7.87 | | 41 | 23.48[c] |
| 1961-66 | 37.83 | 52.03 | 10.14 | | 88 | 42.16 |
| 1967-74 | 60.48 | 26.60 | 12.92 | | 59 | 23.05 |
| 1975-81 | 72.58 | 11.84 | 15.58 | | 84 | 24.48 |
| 1982-83 | 73.06 | 12.42 | 14.52 | | 60 | 17.48 |

Note: a. Number of bargaining units per 100000 salary and wage earners in large-scale manufacturing industries (i.e. establishments employing more than 10 employees).
b. There are no data on manufacturing employment for 1954-58.
c. Average of the 1959-60 period.

Source: Ministry of Labour

**Table 2.4.2**

PROCEDURES OF REGULATION OF COLLECTIVE AGREEMENTS AND AWARDS
IN THE FORMAL SYSTEM OF COLLECTIVE BARGAINING IN MANUFACTURING
1954-1983

| Procedure Year | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
|---|---|---|---|---|---|---|---|---|
| 1954 | 81.25 | 0.00 | 18.75 | 0.00 | 0.00 | 0.00 | 0.00 | 18.75 |
| 1955 | 6.06 | 0.00 | 87.88 | 6.06 | 0.00 | 0.00 | 0.00 | 93.94 |
| 1956 | 43.24 | 0.00 | 16.22 | 35.14 | 5.41 | 0.00 | 0.00 | 56.76 |
| 1958 | 12.12 | 3.03 | 24.24 | 36.36 | 0.00 | 0.00 | 24.24 | 84.85 |
| 1959 | 28.26 | 8.70 | 26.09 | 26.09 | 0.00 | 2.17 | 8.70 | 63.04 |
| 1960 | 23.91 | 8.70 | 15.22 | 30.43 | 4.35 | 2.17 | 15.22 | 67.39 |
| 1961 | 62.86 | 8.57 | 4.29 | 20.00 | 0.00 | 2.86 | 1.43 | 28.57 |
| 1962 | 35.21 | 5.63 | 15.49 | 12.68 | 1.41 | 1.41 | 28.17 | 59.15 |
| 1963 | 32.43 | 8.11 | 22.97 | 12.16 | 2.70 | 0.00 | 21.62 | 59.46 |
| 1964 | 46.36 | 9.09 | 18.18 | 4.55 | 0.91 | 0.00 | 20.91 | 44.55 |
| 1965 | 44.23 | 9.62 | 15.38 | 7.69 | 0.00 | 1.92 | 21.15 | 46.15 |
| 1966 | 29.70 | 2.97 | 21.78 | 10.89 | 0.00 | 0.00 | 34.65 | 67.33 |
| 1967 | 54.29 | 2.86 | 15.71 | 10.00 | 0.00 | 0.00 | 17.14 | 42.86 |
| 1968 | 32.76 | 5.17 | 15.52 | 13.79 | 0.00 | 0.00 | 32.76 | 62.07 |
| 1969 | 36.51 | 3.17 | 22.22 | 1.59 | 0.00 | 0.00 | 36.51 | 60.32 |
| 1970 | 47.06 | 3.92 | 9.80 | 11.76 | 0.00 | 0.00 | 27.45 | 49.02 |
| 1971 | 38.30 | 8.51 | 10.64 | 6.38 | 0.00 | 0.00 | 36.17 | 53.19 |
| 1972 | 39.71 | 8.82 | 14.71 | 7.35 | 1.47 | 0.00 | 27.94 | 51.47 |
| 1973 | 51.92 | 1.92 | 25.00 | 7.69 | 0.00 | 3.85 | 9.62 | 46.15 |
| 1974 | 50.00 | 8.06 | 27.42 | 9.68 | 1.61 | 0.00 | 3.23 | 41.94 |
| 1975 | 46.88 | 6.25 | 35.94 | 1.56 | 0.00 | 0.00 | 9.38 | 46.88 |
| 1976 | 37.07 | 13.79 | 31.03 | 0.86 | 0.86 | 0.00 | 16.38 | 49.14 |
| 1977 | 25.61 | 13.41 | 48.78 | 0.00 | 0.00 | 1.22 | 10.98 | 60.98 |
| 1978 | 31.33 | 20.48 | 45.78 | 0.00 | 0.00 | 0.00 | 2.41 | 48.19 |
| 1979 | 30.00 | 15.00 | 52.50 | 0.00 | 0.00 | 0.00 | 2.50 | 55.00 |
| 1980 | 32.63 | 25.26 | 42.11 | 0.00 | 0.00 | 0.00 | 0.00 | 42.11 |
| 1981 | 32.39 | 23.94 | 42.25 | 1.41 | 0.00 | 0.00 | 0.00 | 43.66 |
| 1982 | 27.17 | 23.91 | 46.74 | 2.17 | 0.00 | 0.00 | 0.00 | 48.91 |
| 1983 | 28.57 | 7.14 | 60.71 | 0.00 | 0.00 | 0.00 | 3.57 | 64.29 |
| Average | | | | | | | | |
| 1955-60 | 22.72 | 4.08 | 33.93 | 26.82 | 1.95 | 0.87 | 9.63 | 73.20 |
| 1961-66 | 41.80 | 7.33 | 16.35 | 11.33 | 0.84 | 1.03 | 21.32 | 50.87 |
| 1967-74 | 43.82 | 5.31 | 17.63 | 8.53 | 0.39 | 0.48 | 23.85 | 50.88 |
| 1975-81 | 33.70 | 16.88 | 42.63 | 0.55 | 0.12 | 0.17 | 5.95 | 49.42 |
| 1982-83 | 27.87 | 15.53 | 53.73 | 1.09 | 0.00 | 0.00 | 1.79 | 56.60 |

Notes: [1] Collective Agreements
[2] Collective Agreements made compulsory for non-members
[3] Compulsory Arbitration Awards.
[4] Agreements and Awards Amended by the Ministry of Labour.
[5] Agreements and Awards Rejected
[6] Agreements and Awards Corrected.
[7] Agreements and Awards of which the Ministry of Labour extended the duration.
[8] Share of Regulated settlements: Sum of 3,4,5,6,7.
Source: Ministry of Labour

## Table 2.4.3

## VOLUNTARY AND REGULATED COLLECTIVE BARGAINING IN MANUFACTURING BY LEVEL
### 1954-1983

| Level Year | Voluntary[a] | | | Regulated[b] | | |
|---|---|---|---|---|---|---|
| | National | Local | Special | National | Local | Special |
| 1954 | 30.77 | 53.85 | 15.38 | 0.00 | 100.00 | 0.00 |
| 1955 | 50.00 | 0.00 | 50.00 | 29.03 | 58.06 | 12.90 |
| 1956 | 25.00 | 75.00 | 0.00 | 14.29 | 80.95 | 4.76 |
| 1957 | n.a | n.a | n.a | n.a | n.a | n.a |
| 1958 | 40.00 | 60.00 | 0.00 | 15.79 | 84.21 | 0.00 |
| 1959 | 35.29 | 58.82 | 5.88 | 10.00 | 76.67 | 13.33 |
| 1960 | 33.33 | 60.00 | 6.67 | 19.35 | 67.74 | 12.90 |
| 1961 | 34.00 | 52.00 | 14.00 | 40.00 | 50.00 | 10.00 |
| 1962 | 34.48 | 58.62 | 6.90 | 35.71 | 50.00 | 14.29 |
| 1963 | 33.33 | 60.00 | 6.67 | 38.64 | 56.82 | 4.55 |
| 1964 | 42.62 | 42.62 | 14.75 | 53.06 | 40.82 | 6.12 |
| 1965 | 32.14 | 55.36 | 12.50 | 31.25 | 54.17 | 14.58 |
| 1966 | 48.48 | 39.39 | 12.12 | 36.76 | 58.82 | 4.41 |
| 1967 | 47.50 | 42.50 | 10.00 | 66.67 | 26.67 | 6.67 |
| 1968 | 50.00 | 45.45 | 4.55 | 63.89 | 22.22 | 13.89 |
| 1969 | 36.00 | 52.00 | 12.00 | 60.53 | 34.21 | 5.26 |
| 1970 | 73.08 | 15.38 | 11.54 | 56.00 | 36.00 | 8.00 |
| 1971 | 72.73 | 13.64 | 13.64 | 68.00 | 12.00 | 20.00 |
| 1972 | 72.73 | 15.15 | 12.12 | 68.57 | 25.71 | 5.71 |
| 1973 | 50.00 | 25.00 | 25.00 | 54.17 | 25.00 | 20.83 |
| 1974 | 50.00 | 27.78 | 22.22 | 76.92 | 11.54 | 11.54 |
| 1975 | 64.71 | 17.65 | 17.65 | 80.00 | 10.00 | 10.00 |
| 1976 | 59.32 | 22.03 | 18.64 | 59.65 | 12.28 | 28.07 |
| 1977 | 59.38 | 12.50 | 28.13 | 88.00 | 2.00 | 10.00 |
| 1978 | 65.12 | 11.63 | 23.26 | 90.00 | 5.00 | 5.00 |
| 1979 | 58.33 | 11.11 | 30.56 | 81.82 | 9.09 | 9.09 |
| 1980 | 54.55 | 21.82 | 23.64 | 87.50 | 7.50 | 5.00 |
| 1981 | 82.50 | 10.00 | 7.50 | 83.87 | 12.90 | 3.23 |
| 1982 | 70.21 | 17.02 | 12.77 | 86.67 | 11.11 | 2.22 |
| 1983 | 50.00 | 10.00 | 40.00 | 77.78 | 11.11 | 11.11 |
| **Average** | | | | | | |
| 1955-60 | 36.73 | 50.76 | 12.51 | 17.69 | 73.53 | 8.78 |
| 1961-66 | 37.51 | 51.33 | 11.16 | 39.24 | 51.77 | 8.99 |
| 1967-74 | 56.50 | 29.61 | 13.88 | 64.34 | 24.17 | 11.49 |
| 1975-81 | 63.41 | 15.25 | 21.34 | 81.55 | 8.40 | 10.06 |
| 1982-83 | 60.11 | 13.51 | 26.38 | 82.22 | 11.11 | 6.67 |

Notes:  a. The Voluntary area includes columns 1 and 2 from Table 5.2.2.
        b. The Regulated area includes columns 3, 4, 5, 6 and 7 from Table 5.2.2.

**Table 2.4.4**

**COLLECTIVE AGREEMENTS AND COMPULSORY ARBITRATION AWARDS
IN MANUFACTURING BY LEVEL
1955-83**

| Level<br>Year | National<br>A<br>% | C<br>% | Local<br>A<br>% | C<br>% | Special<br>A<br>% | C<br>% | Total<br>A | C |
|---|---|---|---|---|---|---|---|---|
| 1955 | 50.00 | 24.14 | 0.00 | 62.07 | 50.00 | 13.79 | 2 | 29 |
| 1956 | 25.00 | 16.67 | 75.00 | 83.33 | 0.00 | 0.00 | 16 | 6 |
| 1957 | n.a | n.a | n.a | n.a | n.a | n.a | n.a | n.a |
| 1958 | 25.00 | 25.00 | 75.00 | 75.00 | 0.00 | 0.00 | 4 | 8 |
| 1959 | 30.77 | 7.69 | 61.54 | 69.23 | 7.69 | 23.08 | 13 | 13 |
| 1960 | 27.27 | 8.00 | 63.64 | 71.43 | 9.09 | 14.29 | 11 | 7 |
| 1961 | 27.27 | 0.00 | 56.82 | 100.00 | 15.91 | 0.00 | 44 | 3 |
| 1962 | 28.00 | 18.18 | 64.00 | 54.55 | 8.00 | 27.27 | 25 | 11 |
| 1963 | 33.33 | 41.18 | 58.33 | 52.94 | 8.33 | 5.88 | 24 | 17 |
| 1964 | 35.29 | 55.00 | 47.06 | 40.00 | 17.65 | 5.00 | 51 | 20 |
| 1965 | 28.26 | 43.75 | 56.52 | 50.00 | 15.22 | 6.25 | 46 | 16 |
| 1966 | 46.67 | 45.45 | 40.00 | 54.55 | 13.33 | 0.00 | 30 | 22 |
| 1967 | 44.74 | 90.91 | 44.74 | 9.09 | 10.53 | 0.00 | 38 | 11 |
| 1968 | 42.11 | 77.78 | 52.63 | 11.11 | 5.26 | 11.11 | 19 | 9 |
| 1969 | 39.13 | 71.43 | 47.83 | 28.57 | 13.04 | 0.00 | 23 | 14 |
| 1970 | 70.83 | 80.00 | 16.67 | 20.00 | 12.50 | 0.00 | 24 | 5 |
| 1971 | 66.67 | 80.00 | 16.67 | 0.00 | 16.67 | 20.00 | 18 | 5 |
| 1972 | 66.67 | 70.00 | 18.52 | 20.00 | 14.81 | 10.00 | 27 | 10 |
| 1973 | 51.85 | 61.54 | 22.22 | 15.38 | 25.93 | 23.08 | 27 | 13 |
| 1974 | 48.39 | 88.24 | 25.81 | 11.76 | 25.81 | 0.00 | 31 | 17 |
| 1975 | 60.00 | 82.61 | 20.00 | 4.35 | 20.00 | 13.04 | 30 | 23 |
| 1976 | 51.16 | 55.56 | 23.26 | 19.44 | 25.58 | 25.00 | 43 | 36 |
| 1977 | 42.86 | 92.50 | 14.29 | 0.00 | 42.86 | 7.50 | 21 | 40 |
| 1978 | 53.85 | 92.11 | 11.54 | 5.26 | 34.62 | 2.63 | 26 | 38 |
| 1979 | 45.83 | 85.71 | 8.33 | 9.52 | 45.83 | 4.76 | 24 | 42 |
| 1980 | 38.71 | 87.50 | 25.81 | 7.50 | 35.48 | 5.00 | 31 | 40 |
| 1981 | 73.91 | 86.67 | 13.04 | 10.00 | 13.04 | 3.33 | 23 | 30 |
| 1982 | 56.00 | 90.70 | 20.00 | 9.30 | 24.00 | 0.00 | 25 | 43 |
| 1983 | 50.00 | 76.47 | 0.00 | 11.76 | 50.00 | 11.76 | 8 | 17 |
| Average | | | | | | | | |
| 1955-60 | 31.61 | 17.56 | 55.03 | 72.21 | 13.36 | 10.23 | | |
| 1961-66 | 33.14 | 33.93 | 53.79 | 58.67 | 13.07 | 7.40 | | |
| 1967-74 | 53.80 | 77.49 | 30.63 | 14.49 | 15.57 | 8.02 | | |
| 1975-81 | 52.33 | 83.24 | 16.61 | 8.01 | 31.06 | 8.75 | | |
| 1982-83 | 53.00 | 83..58 | 10.00 | 10.53 | 37.00 | 5.88 | | |

Notes:  A = Collective Agreements.
        C = Compulsory Arbitration Awards.

Source: Ministry of Labour.

# CHAPTER 3. THIRD PARTY INTERVENTION AND COMPULSORY ARBITRATION.

## 3.1. INTRODUCTION AND SUMMARY

Compulsory arbitration is another main feature of the post-war system of industrial relations in Greece which has been based upon Law 3239 introduced in 1955. Arbitration is an additional way of regulation of collective bargaining evolving within the formal system. Its main aim has been to control industrial conflicts arising during formal collective bargaining. Its compulsory character has been the target of frequent criticism during the last two decades. But is the problem just the compulsory character of arbitration?

This chapter discusses the role of compulsory arbitration in theory and in practice and examines the extent to which arbitration has been used and the institutional developments associated with the bargaining behaviour of salary and wage earners. Strike activity is used as the major indicator of their bargaining behaviour. The analysis focuses upon developments in the manufacturing bargaining structure.

Section 3.2 discusses theoretical and methodological questions about the compatibility of arbitration with collective bargaining. Section 3.3 presents and evaluates the Greek system of compulsory arbitration in use since 1955. Section 3.4. presents the strike activity record in Greece and discusses its significance regarding the bargaining structure and wage setting

procedures in the manufacturing sector. Section 3.5. summarises the findings and presents the conclusions of this chapter.

Our analysis suggests that the problem in the Greek system of industrial relations is not simply one concerning the operation of arbitration as it incorporates both the formal structure of collective bargaining and the characteristics of compulsory arbitration. In Greece arbitration is not compatible with collective bargaining, not because of its compulsory element but because of the lack of the essential characteristics that an efficient arbitration system should maintain. It is not independent from the Ministry of Labour and is dominated by incomes policies.

The combination of regulation of both procedural and substantial aspects of collective bargaining has been associated with increasing trends in strike activity dominating Greek industrial relations since 1975. Especially in the manufacturing sector in 1975-81 strike activity at the company and plant level extended the system of collective bargaining from the formal secondary and tertiary levels towards the primary level of the trade-unions structure creating thus an informal system of collective bargaining. Its characteristics and its frequency make strike activity the more relevant industrial relations variable for the analysis of developments as far as wage determination in the Greek manufacturing sector is concerned.

## 3.2. ARBITRATION AND COLLECTIVE BARGAINING.

### 3.2.1. Third Party Intervention and Arbitration.

In wage setting under collective bargaining cases of impasse arise between unions and employers. Such an impasse is caused if, as Hunter (1983) analysed, the initial positions and the bargaining concessions of the parties to the bargaining process do not lead to the creation of a contract zone within which settlements may be reached. Strike activity and lock-outs provide to both parties the means for imposing disagreement costs upon the other party so as to promote the creation of a contract zone and lead to a settlement of the dispute.

As strikes impose costs on both parties, and in the case of essential services imply costs to the public, governments become involved in policies aiming to affect the behaviour of employees and employers in cases of impasse in collective bargaining. Long-lasting institutional policies regarding third party intervention can be considered as governmental involvement in the procedural aspects of wage determination. Such policies, undertaken for facilitating the creation of contract zones in cases of impasse in collective bargaining, are aimed also at promoting stability in the system of industrial relations by minimising the number of industrial disputes and the intensity of conflict.

Third-party intervention policies aimed at the behaviour of

employees and employers involved in collective bargaining take various forms. Conciliation and mediation are weaker forms of third party intervention. As Webb (1986:249) pointed out, "conciliation is usually described in terms of the third party acting as a "go-between" without making a substantive contribution to negotiations" while "mediation is described as a more influential, substantive role where the third party may employ techniques ... directed at discovering negotiated solutions to the dispute".

Arbitration is a stronger form of intermediation as arbitral bodies have usually the authority to suggest or even dictate a certain dispute resolution. Arbitration can take different forms. It can be voluntary or compulsory, binding or not, conventional or pendulum, i.e. based on final offers by the parties involved in the dispute. Strike activity and arbitration are considered as alternative impasse resolution procedures. As Ashenfelter (1985:29) put it "the purpose of arbitration systems is to produce the settlement of disputes in a way that is less costly than the alternatives".

According to ILO (1980) systems of arbitration have been used in some 22 countries and are the principal mode of labour dispute resolution in a further 14 countries. From those systems three main models of arbitration can be discerned, namely those used in the U.S. the U.K. and Australia. In the U.S. binding arbitration is mainly used in the public sector and is provided by independent professional arbitrators. In the U.K. arbitration is

a voluntary process and arbitration services are provided by ACAS, an independent institution. In Australia compulsory arbitration dominates the national system of industrial relations. ACAC an independent and autonomous committee of industrial relations experts plays the central role in the federal and state system of compulsory arbitration. The basic characteristics of these systems are discussed in Appendix 1.


3.2.2. The Behaviour of Arbitrators.

From a theoretical standpoint the main question about arbitration is whether or not it is compatible with collective bargaining. This question can be discussed at two levels. First at a micro level concerning unions and employers behaviour given the availability of independent arbitration procedures. This type of approach to third party intervention as conflict resolution device has been criticised as being based on "an instrumental individualistic model of social relations" and as ignoring "the social control aspect of third parties function". (Webb,1986). Second, at the macro level with regard to the influence, formal or informal, that governments may exert upon arbitration procedures and outcomes. In both cases, arbitrators behaviour towards employers, unions and governments is central for determining whether or not arbitration is compatible with collective bargaining.

For those considering arbitration incompatible with collective bargaining, arbitration has a "freezing" or "chilling" effect

upon collective bargaining because, so the argument runs, favours the persistent failure of the bargaining parties to create a contract zone and bargain within this voluntarily created zone. In the broad literature on arbitration, the discussion on the "freezing" or "chilling" effect depends on the assumption made with regard to arbitrators behaviour.

Stevens (1966), for instance, argued that conventional arbitration tends to discourage serious bargaining because conventional arbitrators are perceived by bargainers to split the difference between the parties to the bargaining process. However, Stevens (1966:49-50) argued that a strong compulsory arbitration system, i.e. a system of final-offer-arbitration, may be compatible with collective bargaining as the availability to the parties of an arbitration strategy, regarding one party's offer vis-a-vis the other party's expected offer, under this type of arbitration "would serve some of the functions usually associated with a strike strategy".

Farber and Katz (1979) formalised Stevens' analysis and examined the conditions under which such a "chilling" effect may be caused. According to them, a contract zone may be generated either by the costs of arbitration or, by at least one bargainer having overly pessimistic expectations about the arbitrator's award. Conversely, a contract zone will tend to be small or non-existent when at least one bargainer has overly optimistic expectations about an arbitrators award.

In other theoretical attempts to examine the compatibility of

arbitration with collective bargaining, Bloom (1981) argued that even if the parties have no uncertainty about the arbitration award they will still have an incentive to negotiate as long as their expected costs of arbitration exceed their expected costs of negotiation. Farber (1980) analysed theoretically the system of final-offer-arbitration and one of his conclusions was the recognition of the stochastic nature, i.e. the unpredictability, of arbitrators decisions. Thus, in theory, arbitration can be, under certain circumstances, compatible with collective bargaining.

In the U.S. literature it has been argued that arbitration does not cause any "freezing" or "chilling" effect upon collective bargaining. Ashenfelter (1985), in a survey of the results of quantitative analyses of interest arbitration systems operating in the U.S., concluded that arbitrators do not behave in the way assumed by the "chilling" effect literature. In other words, their behaviour is not dominated by a "splitting the differences" attitude, regardless the type of systems under which they operate, and they independently arrive to a reasonable award based on the facts and on a unique assessment of each individual case. "The chilling effect disappears so long as arbitrators introduce exogenous information into their decisions in a way that is to some extent unpredictable by the parties" (Ashenfelter 1985:7). The recognition of the stochastic nature of arbitrators decisions was also stressed in Ashenfelter (1987).

### 3.2.3. Arbitration and Incomes Policy.

The second aspect on whether or not arbitration is compatible with collective bargaining has to do with the question whether and to what extent, autonomous arbitration can, in practice, remain independent from governmental incomes policies. Governments are concerned not only with the procedural aspects of collective bargaining, which are dealt with long-lasting policies on third-party intervention for conflict resolution, but, indeed, with the substantial issues of the wage setting process. Over the post-war period, incomes policy has been a widely used macroeconomic tool (Flanagan et al, 1983). As arbitration requires freedom of scope, which is denied by the prescriptions of any incomes policy, a contradiction is created between arbitration and incomes policy.

Hunter (1983) discussed those problems posed by arbitration during periods of incomes policy and pointed out that "whatever the form of incomes policy, the intention must be to affect the outcome of bargaining, and hence by implication, the process of bargaining itself. The establishment of a pay limit or norm, for example, may influence the starting point for bargaining on one or both sides, or the rate of convergence to a contract range". Furthermore, in conditions of an independent arbitration service the government may need, and therefore legislate, the right to overrule awards directly, when it considers the outcome of the arbitration process as damaging to its incomes policy. But, then, arbitration awards are neither independent nor of stochastic

nature, i.e. not predictable by the parties of the dispute.

According to Clarke (1987b:398) in many countries state arbitration services have been faced with friction and problems as their independent even-handed attitude has been questioned by either side of collective bargaining when dealing with cases in which governments have been interested on the outcome. The obvious solution to these problems has been the separation of state arbitration services from direct governmental administration, as it happened in the U.K. with the creation of the autonomous ACAS in 1975 which assumed the arbitration functions earlier carried out by the Department of Employment.

Arbitration with defined criteria is an alternative to the right to overrule awards. In the context of an independent and autonomous arbitral body, as Hunter (1983:74) put it "one response to the charge that arbitration does not take into account the national interest as expressed in governmental policy is the suggestion that the national interest should be explicitly represented in arbitration". In this case, the autonomous arbitral body becomes another independent actor of key importance for the implementation of incomes policy.

The extent to which autonomous arbitration services maintain their independence or become part of the governmental machinery for incomes policy implementation is a matter of empirical evidence. In the context of the U.K. and the Australian systems of industrial relations where more extensive use of arbitration machinery is observed and where successive incomes policies have

been at work, the question of compatibility of arbitration with collective bargaining becomes more complicate.

Nevertheless, the voluntary character of arbitration in the U.K. seems to be rather compatible with collective bargaining. Indeed, according to Hunter (1983:72), in the U.K. "arbitrators have generally taken the view that arbitration should take incomes policy into account, but should not allow the policy to be the overriding consideration governing the award". Recent developments such as the refusal of the government, which acts both as employer and third-party, to refer the ambulance drivers' pay dispute to arbitration indicates that arbitration may well be independent from governmental policies and, from this point of view, can be considered as compatible with collective bargaining.

As far as the Australian system of compulsory arbitration is concerned it appears that it is rather compatible with collective bargaining too. Bamber and Lansbury (1987:11) observed that "there is relatively little "compulsion" in practice and the arbitration tribunals rely mainly on advice and persuasion". Braun (1975) on whether or not compulsory arbitration in Australia served as a form of incomes policy, had criticised the attempts by the Government, employers and economists "to convert the Commission into a recognised instrument for achieving a non-inflationary development of wages" because they "were distorting a valuable institution which should have been used within the broader framework of an incomes policy instead of being virtually the sole instrument of such a policy".

However, Lansbury and Davis (1987:102) noticed that the lack of power to act in industrial relations, particularly in regard to pay policy, has frustrated Australian governments of all political persuasion. The Fraser government (1975-83), for instance, had strong exchanges with the Commission which responded that they were not an arm of Governmental economic policy but "an independent body required to act according to equity, good conscience and the substantive merits of each case".

Yet, the distinct pattern of short strike activity observed in Australia is, to a certain extent, associated with the system of compulsory arbitration. First it consists of tactical strikes designed to soften up employers or to pressurise the tribunal, and second, it consists of the grievance and protest strikes which reflect frustration with the inability of local industrial relations machinery to resolve local disputes. According to Mulvey (1986:21) this strike pattern is not linked only to the workings of the arbitration system but is also associated with the malfunction of poorly developed arrangements for industrial relations at plant level. But, as Creigh (1986) concluded, there is no evidence that the existence of the arbitration system as opposed to those based on collective bargaining has significantly affected stoppage incidence over the period 1962-81.


### 3.2.4. Summary

To summarise, third party intervention, and arbitration in particular, is used as an alternative to strike activity for

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resolving impasse situations in the bargaining process. Both in
theory and in practice compulsory arbitration can be compatible
with collective bargaining if the arbitral bodies are autonomous,
remain independent from governmental policies and do not become
part of the governmental machinery for incomes policy
implementation. Otherwise, if arbitral bodies do not maintain
such characteristics, "chilling" or "freezing" effects upon
collective bargaining can be caused. In any case, the
relationship between arbitration and incomes policy is, at least,
a permanent source of friction. Finally, as the Australian
experience suggests, compulsory arbitration may influence the
pattern of strike activity.

## 3.3. THIRD PARTY INTERVENTION IN GREECE: COMPULSORY-NOT-QUITE-ARBITRATION.

### 3.3.1. Provisions, Evolution and Origins.

In the event that unions and employers are unable to reach voluntarily a collective agreement, Law 3239 (art.9.1) offers a mechanism for referring the dispute to the jurisdiction of compulsory arbitration. Reference can be made unilaterally, or jointly, or may be derived from statutory authority. In other words, either parties to the dispute have the right to invoke the arbitration procedure. Indeed, the Ministry of Labour has too the right to activate arbitration proceedings (art.17.1).

Arbitration in Greece is clearly a compulsory process. In addition to the compulsory features of reference of a dispute to arbitration, during the arbitration process there is no right to strike (art.18.2). Consequently, any industrial action in progress should be abandoned after the referral of the dispute to the arbitration court. Sanctions are imposed when a party does not comply with the compulsory arbitration award (art.18.3). Arbitration awards are legally binding rulings as collective agreements (art.19.2). However, an arbitrated award can be challenged at an arbitration court of higher level, the award of which is final and cannot be challenged (art.12).

Under compulsory arbitration, disputes are settled by an arbitral body, the compulsory arbitration court, which is composed of four

members: i) one judge as president of the court, ii) one official of the Ministry of Labour, iii) one trade-union representative appointed by the trade-union involved or the General Confederation of Labour and iv) one representative of the employers Association involved in the dispute (art.10.1). The composition of the compulsory arbitration court, according to the introductory report of Law 3239, was designed so as to secure impartiality and ability to take into account all the aspects of any dispute referred to. For this reason the judge and the Ministry of Labour official became rather permanent members of the arbitral body.

The system of compulsory arbitration was introduced along with the formal system of collective bargaining in 1955 by Law 3239. The system of compulsory arbitration was the relatively new element provided by Law 3239. In the earlier legislation the procedure of dispute resolution through arbitration was not homogeneous as far as the bodies dealing with dispute resolution are concerned. According to Law 3086 labour disputes were referred to arbitral bodies of two different types, one rather legal and the other administrative, not because of the varied character of the disputes (distinguishing for instance between interest and rights disputes), but according to their location, i.e. the place where the parties involved in the dispute were based.

In addition to institutional homogeneity, another reason given for that reform was that in the case of disputes settled by

judges the industrial relations affairs were dealt as being strictly of juridical nature and the outcome was wholly depended on the judge. Moreover, as the introductory report of the Law 3239 stressed, the earlier system was not accepted by both parties because serious questions on lack of impartiality of the arbitral bodies were raised.

The Greek system of compulsory arbitration has many similarities with arbitration systems used in other countries. Similarities exist with the systems used in Australia and in New Zealand, the compulsory arbitration machinery used in the U.K. during the second world-war period, and the machinery for wage controls enacted during the Korea war in the U.S. Probably, the comparative labour law was used in designing the Greek system of compulsory arbitration. Of course, there is also the Greek tradition, mainly the fascist-corporatist model of collective bargaining established by, and used during, the Metaxas dictatorship (1936-1940). However, our comparative analysis suggests that the British system of war-period arbitration was used as the main model for the design of the Greek system of compulsory arbitration.

The resemblance between the Greek system and the National Arbitration Tribunal constituted in August 1940 under the Emergency Powers (Defence) Act for settling trade disputes during the war period in the U.K. (Turner-Samuels, 1951) is impressive. In that system a dispute is reported by either party to the Minister, who after considering mediation and conciliation, is empowered to refer the dispute to the National Arbitration

Tribunal. The National Arbitration Order forbids strike action unless the dispute is reported to the Minister and is not referred by him for settlement. Till the Tribunal make its award and during the period of reference, lock-outs and strikes are prohibited. An award is possible to be made retrospective to the date on which the issue of the dispute arose. The terms of the award become incorporated on the existing agreement. Questions of revision are to be dealt with in the same way as every other dispute. Rates of wage and conditions of employment are to be regarded as minima. The tribunal consists of five members appointed by the Minister of Labour: three independent members and two members chosen to represent employers and unions. Panels of the latter have to be constituted by the Minister after consultation with CBI and TUC.

The Greek system of compulsory arbitration has also some similarities with the system of arbitration proposed by Meade (1982:108-110) for the U.K. He called it "not-quite-compulsory-arbitration" and it has some similarities with the system of final-offer-arbitration. Its four major features, as summarised by Dolton and Treble (1985), have to do first, with the arbitrators preferences (the statutory duty of the arbitral body to lay stress on the promotion of employment in the sector under review), second, the right to activate the arbitral procedure (it would operate only if at least one of the parties to the dispute or the government itself wished to), third, the provision for a cooling-off period (during which the parties would be free to negotiate for an agreed settlement) and fourth, the effect of

arbitral decisions upon strikes and lock-outs (it would not be unlawful for either side in the dispute to take industrial action, but if this is in opposition to the terms of an award the party should penalised).

The conditions under which all the above mentioned systems were introduced or proposed indicate that nearly all systems of compulsory arbitration are introduced during periods of social crisis and tension in industrial relations. The Australian and the New Zealand systems were both introduced and implemented after a period of strikes, strife, unemployment and severe confrontations between unions and employers (Holt, 1986, Plowman, 1989). The British war-period system was clearly related to emergency conditions while the Meade proposal was made in the aftermath of a period of major crisis in British industrial relations and in the context of stagflation.

In Greece the formal system of collective bargaining, and especially the system of compulsory arbitration, was introduced after a period of civil-war, which made ILO (1949:19) to observe, with reference to industrial relations, that "nothing in Greece is understandable except against the background of political insecurity and economic difficulties which are the factors dominating Greek life today". The expressed aim of Law 3239 was two-fold. Apart from the regulation of labour disputes, it aimed at the development of tripartite collaboration and, therefore, provided for the constitution, with tripartite participation, of the National Council for Social Policy which was designed to

study and advise on living conditions, standards of living and social policy (art.28-33). That initiative was in line with the recommendations of the ILO examination committee, which visited Greece in 1948, as well as with the suggestions of the American Mission in Greece. The tripartite body was supposed to contribute in programming with regard to social policy.

However, that institution never played an important role in the national system of industrial relations. The institution of similar tripartite bodies at the national level has been a recurring phenomenon but, not surprisingly, they did not prosper in the environment of excessive state regulation in industrial relations. Similar institutional arrangements such as the Committee of Prices and Incomes, established by the military government in May 1972, with a view to supervise price and income developments, or the institution of a Prices and Incomes Committee under the chairmanship of the Minister of Co-ordination and Planning in August 1974 produced little change in the statutory regulation of wages and industrial relations.

As analysed in section 3.2, the governmental intervention even in the organisational issues of trade-unionism created the tradition of an always pro-governmental leadership in the General Confederation of Labour. Under conditions of continuous governmental intervention to the internal organisational issues of the Greek trade-unions, and with the trade-unions side being the one having, literary, its leadership reshuffled according to political changes, any tripartite collaboration at the national level cannot be meaningful, effective and efficient and cannot

incorporate the trade-unions rank-and-file. Thirty years of experience indicate that the recipe of tripartite collaboration is called up every time that less popular policies are to be imposed as far as wage determination is concerned.

It is noteworthy that, in spite of the socialist promises since 1981 for a radical change in the area of trade-unionism and industrial relations, those constants of the Greek national system of industrial relations were in full work during the 1980s. Developments during the second term of the socialist government, in the period 1985-89, are indicative for the treatment of tripartite collaboration in Greek industrial relations. After the June 1985 election was won a stabilisation programme was being designed. At the same time, the National Council for Planning and Development was established, in which representatives of government, business and labour were to participate. That was supposed to be the highest tripartite advisory body for economic policy. But the government was also prepared to follow, and did follow, the tradition. When, after the imposition of the stabilisation program, the ruling party lost the majority in the General Confederation of Labour (GSEE), pro-governmental leadership was appointed. Until early in 1989, the General Confederation of Greek Workers was led by pro-governmental trade-unionists who, in line with the deep seated national tradition, were appointees.

## 3.3.2. Compulsion versus Arbitration: A Corporatist Model?

The similarities between the Greek system of compulsory arbitration and systems either used elsewhere or consisting normative approaches to industrial relations indicate that apart from the universal problems arising in the context of collective bargaining, comparativism, as far as labour legislation is concerned, has been a major influence upon policy-making in industrial relations. However, as Kahn-Freund (1974:27) stressed "the use of the comparative method requires a knowledge not only of the foreign law, but also of its social and above all its political context".

In Greece the framework of rather centralised collective bargaining, the availability of compulsory arbitration and the set up, from time to time, of institutions aiming at the tripartite collaboration may create the impression of a corporatist model. The formal system of collective bargaining and the trade-unions structure may appear as its corner-stone. In fact, due to the Civil War (1946-49) and its repercussions, the Greek post-war corporatism, if any, is completely different from the "voluntarist" or "bargained" north European corporatism analysed by Crouch (1977), Schmitter and Lembruch (1979). In the mixture of coercion and voluntarism, as Alivizatos (1983) has shown, coercion maintained, at least until 1974, the predominant role.

Apart from the context of regulated collective bargaining,

another important aspect which distinguishes the system of compulsory arbitration used in Greece from those in the U.S., the U.K. and Australia has to do with the behaviour of the third party which is supposed to perform the role of arbitrator by considering the parties' offers along with external information in order to arrive to the final award. In the Greek system arbitrator is neither the independent individual professional arbitrator as in the U.S., nor the independent arbitral body appointed by autonomous institutions as the ACAS and the ACAC in the U.K. and in Australia respectively. It is the judge and the civil servant of the Ministry of Labour.

In fact, Law 3239 stipulates that arbitral bodies should consider disputes without any influence and as independent agents (art. 11.2-3). It also defines the general criteria upon which awards should be based (art. 15.3). In practice, as it was recognised by high rank Ministry of Labour civil servants with large experience in arbitration proceedings, it is the Ministry of Labour representative who influences and even dictates the outcome of the arbitration process. Judges are mainly responsible for the procedural part of the compulsory arbitration process. The Ministry of Labour representative plays the key role in settling the substantial issues of the dispute (Committee of Review on Incomes Policy, 1976:115). Thus, the Ministry of Labour itself is the arbitrator and, therefore, there is complete identity between the Government and the third party which is supposed to arbitrate.

Under these circumstances, the third parties of the arbitral body

are far from independent. The criticism of the judiciary for lack of autonomy has been a permanent feature in the Greek political and social life. As Alivizatos (1983) and Pollis (1987) have shown, successive governments have manipulated both the law and the judiciary to promote their policies regardless of constitutional and legal restrictions. Moreover, as judges lack any special knowledge on industrial relations and labour market issues, and given the presence of the Ministry of Labour representative, there is no much room for judges to remain, during the arbitration procedure, autonomous and independent from the policy of the Ministry of Labour. Judges simply agree with the theses supported by the Ministry of Labour representatives (Committee of Review on Incomes Policy, 1976:115).

The Ministry of Labour has preferences originating from the, explicit or implicit, governmental incomes policy. Its representatives, not surprisingly, have to follow the instructions of the political leadership of the Ministry, the Minister himself (up to the present there has never been a woman minister), and his advisers. In this context arbitrators not only have had to take account of the incomes policy but they have been supposed to implement it. This is due not only to the character of the civil service as part of the governmental machinery, but, indeed, to the functional relationship between the Ministry of Co-ordination (currently Ministry of National Economy) and the Ministry of Labour.

In practice, the Ministry of Labour is assigned the role to

implement and to handle the incomes policy adopted by the Government and supervised by the Ministry of National Economy. Using the categorisation proposed by Meade (1982:98), we can say that the Ministry of National Economy acts as a "centralised wage-guidance institution" while the Ministry of Labour acts as a "centralised wage-fixing institution". In many cases, when a dispute became of political importance, the Minister was involved in person in mediation and arbitration procedures. His advisers are often involved, informally, in arbitration processes. But usually, when the dispute takes place at low levels of the bargaining structure the job is left to the Ministry of Labour civil servants acting as members of the arbitral body.

Recently, in 1988, there have been episodes of deviant behaviour of the Ministry of Labour regarding the implementation of the incomes policy, as the then Minister of Labour (Mr. Genimatas) vetoed the policy of the Minister of National Economy (Mr. Simitis), with regard to the level of automatic indexation. Such episodes, which were the tip of the iceberg of socialists' intra-party and intra-governmental conflict, are the exceptions verifying the existence of this working relationship between these two ministries. After all, this relationship affects directly, if not decisively, the arbitrators behaviour.

Usually, in conditions of an independent arbitration service, governments adopting incomes policies may need the right to overrule arbitration awards where they see the outcome of the arbitration process as damaging to their policies. When the arbitral body is largely a governmental body, as it is in the

case of the Greek system of compulsory arbitration, such a right might be considered redundant.   However, since 1955  in Greece, Law 3239 (art.20.2) provided for the governmental right to amend or to reject collective agreements and compulsory arbitration awards (in the outcome of which the government itself plays the central role)   when considered as not in line with the governmental wage  policy. This right was dropped in 1974, in a move towards a more liberal system of collective bargaining.

Arbitration with defined criteria and representation of the national interest, as expressed by the governmental policy, in the arbitral body are usually considered as alternatives to the right to overrule awards.   In the Greek system of compulsory arbitration, Law 3239 (art.15.3) defines the criteria upon which the arbitral bodies  should base their awards.   Indeed, it provides that the Ministry of Labour has the right to deal with the substantial issues settled by compulsory arbitration court, where also the Ministry of Labour civil servant represents the national interest as perceived and expressed by the government in office. Thus, the Ministry of Labour is clearly and directly represented in the arbitration process. The governmental, as well as the national interest, is therefore over-represented in compulsory arbitration proceedings, before and after them. This unique over-representation completes a system of strong legalistic and bureaucratic regulation upon wage determination.

From an economic point of view and in the context of incomes policy, the right to amend and to reject collective agreements

and compulsory arbitration awards has some similarity with the tax-based incomes policy proposed by Layard (1982). The rejection of collective agreements or compulsory arbitration awards considered not in accordance with the governmental policy can be understood as sort of the Layard incomes policy with the tax multiplier of the excess increase in wages being indefinite. Furthermore, some similarities, regarding the key role of judges and Ministry of Labour representatives in the arbitration processes, exist between the Greek system of compulsory arbitration and the rationale of the incomes policy proposed by Meade (1982:83-118).

In this environment there is not much uncertainty regarding the impartiality of arbitrators and concerning arbitration outcomes. Therefore, there is not room for considering the arbitrators behaviour as one of stochastic nature. While in the U.K. and in Australia arbitrators may well take the view that incomes policy should be taken into account but not as the factor governing the award, in Greece, as the arbitrator is a Ministry of Labour civil servant and as the Ministry of Labour is assigned with the implementation of incomes policy, we cannot expect the third party to simply take into account the incomes policy. As the Committee of Review on Incomes Policy (1976:114-115) concluded, in arbitration procedures the governmental incomes policy is the overriding consideration.

Probably this difference in arbitrator behaviour lies behind the fact that in the U.K., for instance, there have been cases where governments opposed the referral of a dispute to

arbitration because of running the risk of contravention of their policy. In Greece, however, successive governments keen to implement their incomes policy had no hesitations about the arbitration outcome and, thus, they used the compulsory arbitration procedure systematically and extensively. The formal system of collective bargaining and especially the compulsory arbitration machinery was designed to be, and was used, as an instrument of national incomes policy.


### 3.3.3. The Centrality of Compulsory Arbitration.

Compulsory arbitration has dominated the formal system of wage determination. Table 3.3.1 presents the number of both collective agreements and compulsory arbitration awards registered with the Ministry of Labour and indicates the extent to which compulsory arbitration has been used. Since 1964, nearly half of the disputes evolving within the formal system of collective bargaining have been settled by compulsory arbitration courts. Data referring to the number of employees covered by compulsory arbitration awards would be more precise in measuring its coverage in the Greek labour market. Unfortunately, neither the Ministry of Labour ever recorded such information, nor data on the membership of trade-unions involved in compulsory arbitration processes are available. Only data on the number of disputes settled by compulsory arbitration are available.

Through the years the number of disputes resolved by arbitration increased not only in absolute terms but percentage-

wise as well. The average share of arbitration increased from 45.42 in 1964-66 to 54.87 per cent in 1975-81. During the period 1982-88 it was lower, namely 49.89 per cent, but this slight decrease is due to the fact that in 1988 the share of compulsory arbitration awards in dispute settlement was only 28.33 per cent, i.e. the lowest ever recorded. In 1988, after the end of the 1985-87 stabilisation program, the government, to show its determination to promote collective bargaining and to reform the system of compulsory arbitration, decided to minimise the use of compulsory arbitration. Therefore, the 1988 developments influence the image of the whole period 1982-88. But the average share of arbitrated settlements in 1982-87 is much the same as in 1975-81. Despite these changes between periods the overall comparison between the number of collective agreements reached voluntarily and the number of disputes settled through compulsory arbitration reinforces the line of argument that compulsory arbitration played a dominant role.

Compulsory arbitration played a dominant role at every level of the formal bargaining structure. Table 3.3.2 presents the shares by level of compulsory arbitration awards in the total number of both collective agreements and compulsory arbitration awards registered over the period 1973-88. The role of compulsory arbitration is more predominant in settling disputes at the level of the National General and the National Occupational collective bargaining. It is noteworthy that while the recourse to arbitration for the settlement of disputes at the national level of industry-wide or occupation-wide bargaining increased through

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the periods 1973-74, 1975-81 and 1982-88, the reverse trend is observed with regard to disputes evolving at the special company level. For every ten disputes evolving at the national level seven of them are normally settled by arbitration courts. However, for every ten disputes evolving at the lowest level of the formal bargaining structure in 1975-81 five of them, and in 1982-88 only three of them, are settled by arbitration. In other words, within the formal bargaining structure the move towards decentralised and fragmented bargaining is followed by relatively less use of arbitration procedures.

Tables 3.3.1 and 3.3.2 suggest that within the formal system of collective bargaining, compulsory arbitration was the preeminent method of wage and job regulation. It was not predominant only in the 1960s but throughout the 1970s and the 1980s. After 1975 in particular, primarily for dispute resolution at the national and the regional level of collective bargaining, arbitration was resorted to extensively. Given that the parties had probably to bargain repeatedly in the face of the same fixed rules, the question is what was their behaviour towards arbitration, and especially which side invoked the arbitration procedure and to what extent.

Trade-unions and employers can exert some discretion on whether or not to refer a dispute to arbitration but this is where their discretion ends as they cannot oppose referrals and do not have the right to select arbitrators either. As during the award-making process third parties are not really autonomous there is

no point for such a selection. However, the parties behaviour would be rather stable unless important changes occurred in arbitrators behaviour and would be associated with what they expect from arbitration. Even though both parties participate, not always directly, to the arbitral body, third parties alone can determine the arbitration outcome as the award is decided by majority vote and in the event that two members are in favour and two against it is the judge' s vote which determines the outcome (art.11.4). In other words, third parties play the central and dominant role.

Third parties have preferences, arising from incomes policy considerations, and the intention to affect the outcome. The two parties of the dispute have their own preferences and normally are not equally in favour of, or in opposition to incomes policy. While one side may be reluctant to refer the dispute to arbitration the other may be keen to do so. The knowledge that this "preferential" arbitration is always available reduces the efforts of the party feeling more familiar with the governmental incomes policy to reach an agreement voluntarily during the negotiations phase. Moreover, the knowledge of the arbitration' s preferences makes the optimistic party to maintain a rigid bargaining position.

As in most cases over the period 1967-88 the employers' side was more supportive for the governmental incomes policy and its offers were closer to the favoured award (with the exception of the incomes policy adopted in 1982 by the newly elected Socialist government), the trade-union side should have been keen to avoid

the referral of disputes to arbitration. Instead, it should have sought better settlements through strike activity and collective bargaining. Consequently, trade-unions should have been the more unwilling party for referral of disputes to arbitration.

Systematic data on which side initiated arbitration proceedings are not available. But successive Ministers and Ministry of Labour civil servants in interviews and public statements said that the majority of compulsory arbitration processes was invoked and initiated by trade-unions. Surprising as it may seem, according to Ministers and civil servants responsible for arbitration proceedings, more than 70 per cent of the compulsory arbitration processes were initiated by the trade-union side. There is no further way to certify it by using statistical information, but both Ministers and civil servants repeatedly made similar statements and nobody argued against. Trade-union officers interviewed agreed with those statements.

Is this a paradox? Yes, it is given first, the role of compulsory arbitration in the implementation of successive incomes policies, and second the above described rationale on why the trade-union side should have been the less optimistic side as far as the arbitration outcome is concerned. However, it seems that trade-union leaders were more familiar with referring disputes to compulsory arbitration, than the theoretical overview of the system suggests. Indeed, as shown in Tables 3.3.1 and 3.3.2, the increasing share of arbitration awards indicates that the parties' dependence upon compulsory arbitration, especially

of those involved in industry-wide or occupation-wide collective bargaining at the national level, increased over time. It appears that trade-unions had the initiative towards this increasing dependence. How can this trade-union behaviour be explained?

An explanation put forward by some trade-unionists focuses upon the lack of independence of trade-union leaders of a certain category of unions active within the formal system of collective bargaining. Trade-union officers have been largely, directly or not, appointed by the Ministry of Labour. Therefore, they, so the argument runs, simply do properly their job as "agents" of the Ministry of Labour within the trade-union movement by providing the Ministry of Labour with the chance to regulate collective agreements. Although there is lot of truth in this argument, a more complete explanation should take into account that trade-unions of low bargaining power, if any at all, might have had to make compromises and settle for the compulsory arbitration award. Therefore, they had to take the initiative and refer disputes to compulsory arbitration in order to get awards effective from the date of reference. The earliest the dispute is referred to arbitration the more retrospective is the arbitration award.

In this context arbitration procedures may well operate as a "face-saving" process for trade-union leaderships. "Heroic" claims cost nothing and provide the trade-union leaders with credentials of militancy, quite necessary to maintain control over their rank-and-file. For the referral of the dispute to arbitration the employers' rigid bargaining position is blamed.

For the outcome the blame goes to arbitrators and the Ministry of Labour. However, high wage claims which remain persistently unfulfilled could reinforce trade-unions' weakness as members may end up considering the unions not effective in getting their wage demands and therefore being reluctant to join them. Such a development is consistent with the increasing financial dependence of trade-unions by the Ministry of Labour fund.

To explain further this type of behaviour of union leaders there is another dimension which concerns the reproduction of the trade-union structure. As Sabethai (1986:4) observed "it has been pointed out repeatedly in the past that compulsory arbitration (apart from limiting the free exercise of the right to collective bargaining) has permitted the survival of unions without any real representativity, merely on the strength of their formal right to be parties to a collective dispute and thus initiate arbitration proceedings". From this point of view one of the causes, as well as effects, of the union initiated referrals of disputes to arbitration have been the conservation and perpetuation of the existing trade-union structure.

To this respect, arbitration procedures sustained the conservation of the formal bargaining structure as well. Compulsory arbitration courts played a central role by granting legal recognition to trade-unions of low bargaining power and seriously questioned representativity. Therefore, it is not surprising that, as indicated in Table 3.3.2, the share of arbitrated settlements bearing at industry-wide or occupation-

wide bargaining at the national level was persistently high and slightly increasing after 1973. It is in this area of the formal bargaining structure that most trade-unions lacking representativity and bargaining power can be traced. An observation made by Braun (1975:206) regarding the Australian system of compulsory arbitration is quite relevant to this category of Greek trade-unions, as she referred to "the existence of close and continuous personal contacts, on an almost day-to-day basis, between relatively few individuals with considerable authority in the employers' organisations, unions and government departments" which "are obviously easier to achieve in a small than in a large economy".

The existence of similar relations between a large category of trade-union officers and the governmental apparatus carrying out industrial relations policies, and their behaviour regarding compulsory arbitration lead to the conclusion that in Greece the system of arbitration has operated as the vehicle of a mutual exchange between governments and trade-union leaders and officers. On the one hand, governments exert a degree of control upon trade-union developments and, thus, facilitate the implementation of their policies. On the other, trade-union officers maintain their positions and status. At the same time, the formal bargaining structure is preserved as much as possible.

Compulsory arbitration plays the central role in all these processes. Therefore, its centrality in the formal system of collective bargaining arises not only from its extensive and increasing use, but, indeed, concerns its crucial role for the

survival and reproduction of bargaining units and trade-unions acting within the formal system. In such conditions of compulsory-not-quite-arbitration, as the Committee of Review on Incomes Policies (1976:114-115) observed, the parties' offers during the bargaining process, as well as their claims presented to arbitration proceedings, are designed more as "face-saving" than as credible tactical bargaining positions. This is more plausible for the trade-unions side. This behaviour indicates a "chilling" or "freezing" effect upon collective bargaining. But, it is not arbitration per se which bears the responsibility. It is the predominance of compulsion and the lack of independence and autonomy of the arbitral bodies versus the Ministry of Labour and the governmental incomes policy.

## 3.4. STRIKE ACTIVITY AND DECENTRALISATION OF THE MANUFACTURING BARGAINING STRUCTURE.

### 3.4.1. Compulsory Arbitration and Strike Activity.

Arbitration is considered and used as an impasse resolution procedure alternative to strike activity. If arbitration is successful, other things being equal, there should be a negative association between the use of strike activity and the use of arbitration procedures. Normally, as Feuille (1979) pointed out, strikes and arbitration are negatively correlated. From this point of view, strike activity provides a major criterion for evaluating the effectiveness of arbitration systems.

The Greek system of compulsory arbitration initiated by Law 3239 aimed exactly at the regulation of labour disputes. Compulsory arbitration was adopted as a means for minimising industrial conflicts and their costs. During the arbitration process the right to strike is suspended and consequently, any industrial action in progress should be abandoned after the referral of the dispute to the arbitration court. And strikes challenging arbitration awards are consider unlawful. On this basis the system of compulsory arbitration aimed also at the promotion of a tripartite collaboration through the tripartite character of the arbitral bodies as well as through the establishment of a tripartite committee at the national level to study and advise on living conditions, standards of living and social policy.

Ashenfelter (1985:30) argued that "whether arbitration will grow in popularity depends on whether it is a less costly system than the alternatives and on whether the parties are able to obtain the information and experience necessary for determining whether it is less costly". On this micro dimension of conflict resolution through arbitration depends its growth and its performance in a national system of industrial relations. However, as argued in section 3.3 the Greek system can not be considered as a system of independent arbitration because of the dependence of the arbitral body from the Ministry of Labour. In other words, it really is a compulsory system but it is not a system of arbitration because of the arbitrators behaviour which no way can be considered as of stochastic nature. The popularity of the Greek system of compulsory arbitration may not depend only on whether it is more or less costly than strike activity. It may also depend on its character as part of the governmental machinery for incomes policy implementation.

Surprising enough, over most of the post-war period this system of compulsory-not-quite-arbitration has been popular among trade-union leaders acting within the formal system of collective bargaining. This popularity might suggest that, despite its idiosynchratic characteristics, trade-unions prefer dispute resolution through arbitration rather than through strike activity. The questions regarding union leaders' independence from the Ministry of Labour may imply that arbitration has not been equally popular to the unions rank-and-file and among

salary and wage earners in general. In the case of the Greek
system of compulsory arbitration the distinction between trade-
unions leadership and rank-and-file, proposed by Ashenfelter and
Johnson (1969), is particularly appropriate. According to
Ashenfelter and Johnson there are three parties in the bargaining
process and not two, namely management, union leaders and union
rank-and-file.

In the model of Ashenfelter and Johnson, strikes occur during
the bargaining process as the rank-and-file has high expectations
about the wage setting. Leaders are more realistic but agree to
take strike action for political reasons, i.e. to avoid the
political cost of concluding an agreement at lower levels than
their rank-and-file expects. Obviously, in the Greek system of
compulsory arbitration trade-union leaders do not seem to behave
this way as they themselves prefer to refer disputes to
arbitration rather than to undertake strike activity. But has
arbitration been popular among their rank-and-file too? Have
they followed the same behaviour?

Strike activity provides the best available criterion for
evaluating compulsory arbitration from the industrial relations
point of view because industrial action reflects the attitudes
and the behaviour of unions rank-and-file. The formal bargaining
structure, the labour initiated extensive use of arbitration and
the structure of the official trade-unionism may create the
impression of a corporatist and efficiently operating system of
industrial relations. But to evaluate the performance and
effectiveness of the Greek system of compulsory arbitration we

examine the strike activity record over the long period compulsory arbitration has been in use.

Three indices on strike activity, given in Table 3.4.1, denote that, in Greece, since the institution of the formal system of collective bargaining in the mid-50s, there has been a steadily increasing trend which had its peak in the period 1979-80 and then remained at high levels. This trend in strike activity over the past three decades indicates that the formal system of collective bargaining and the mechanism of compulsory arbitration were not effective in resolving labour disputes and controlling strike activity. Table 3.4.1 makes clear that from the period 1953-62 to the period 1976-81 the strikers' density increased eight times, the relative days lost increased ten times and the frequency of strikes increased three times. The period 1976-81 is the one with the highest strike activity ever recorded in Greece. In the period 1982-88 strike activity remained at similar high levels. The period 1967-74 is omitted because under the military regime the right to strike was suspended and trade-unions freedom curtailed.

To discern any relationship between compulsory arbitration and strike activity we examine the bivariate correlation between a set of variables indicating the use of arbitration and strike performance. Methodologicaly it is not easy to discern and quantify the influence of compulsory arbitration upon strike activity because strike activity is determined by both institutional and economic factors ( Kennan, 1986, Paldam, 1983,

Paldam and Pedersen, 1984). Yet, the results provided in Table 3.4.2 suggest the existence of a positive relationship between the use of arbitration and the recourse to strike activity. As the data on arbitration refer to the number of disputes settled by arbitration courts, the strikes frequency variable is the most relevant to be associated with the number of disputes settled by arbitration. Correlation coefficients for this variable as well as for relative days lost are found positive and significant.

This simple correlation analysis suggests the lack of the hypothesised in the literature negative correlation between strike activity and arbitration and provides only a rough indication of their relationship as other sources of influence upon strike activity are not controlled for. Can the positive correlation between arbitration and strike activity be considered as indicative of smooth  operation of the Greek system of compulsory arbitration?  This might be the case if strikes precede arbitration procedures and, therefore, strike activity causes and  explains the use of arbitration. But it is rather the case of a causal relationship running the other way round.  We base this inference  not only on the fact that arbitration proceedings were mainly invoked by trade-union leaders, but indeed, upon the observation that a high percentage of strikes did not take place within the formal system of collective bargaining.

Strike activity did not cause the extensive use of arbitration because it largely evolved out of both the tertiary and the secondary level of the bargaining structure, i.e. the bargaining

levels at which disputes can be referred to compulsory arbitration. Over the period 1976-80, for which analytical data are available in the Ministry of Labour, less than 10 per cent of the total number of strikes took place within the secondary and the tertiary level of the formal system. These findings are presented in Table 3.4.3. The number of strikes undertaken within and above the secondary level of the trade-union structure, indicates that over the period 1976-81 not every secondary level organisation, which was entitled to contract formal collective agreements or to invoke arbitration proceedings, resorted to industrial action during the annual bargaining rounds. In other words most of the conflicts recorded by strike activity statistics were not part of formal bargaining processes.

As Paldam (1989:63-64) observed "the number of industrial conflicts always works better in economic models than the variables referring to the number of workers involved (the size of conflicts) and days lost, as these two series are heavily influenced by a few large conflicts between the organisations, while the sheer number of conflicts is a grass-roots measure of labour market tensions". Furthermore, Paldam reported that "the series of number of conflicts for different countries have different, and often dramatic, long-run trends, which are causally related to institutional factors, notably to the relative size and degree of centralisation of the trade-unions in the country".

Of course, even if strike activity and arbitration are normally considered as alternative impasse resolution procedures, arbitration is not a perfect form of no-strike insurance. It does not protect from "wildcat" strikes or stoppages over issues and at levels outside the scope and the structure of the formal system of collective bargaining. But the existence in 1976-81 of such a great number of industrial conflicts at the lowest level of the bargaining structure along with its positive correlation with the use of arbitration cannot be considered as a simple imperfection of the system of compulsory arbitration.

Allowing for statistical errors in recording strike activity, we can say that, since the higher the organisational level of industrial action the easier to record it, the defects of strike statistics may underestimate strike activity undertaken and especially industrial conflicts occurring, at the plant level. From this point of view the number of strikes indicating the number of open conflicts suggests the existence of more bargaining units in the bargaining structure than those officially registered through formal collective agreements and arbitration awards. These bargaining units were probably active out of the formal system of collective bargaining and associated with the trend towards decentralisation observed even within the formal bargaining structure.

This deviant behaviour on behalf of salary and wage earners suggests that in analysing the Greek system of industrial relations the distinction between leaders and rank-and-file should be taken into account as a crucial factor of developments

in industrial relations. As trade-union leaders acting within the formal system were less dependent on their rank-and-file and the latter became, especially in 1975-81, rather strike-prone, the system of industrial relations ended up in a vicious circle of fragmented bargaining and lack confidence between governments, employers, union leaders and union rank-and-file.

The failure of compulsory arbitration incorporates and intensifies the lack of confidence of the participants, or at least of the substantial part of them, which is essential for a system of arbitration to be effective. Given that the arbitration was never independent and autonomous the main obstacle to its effectiveness, i.e. the influence exerted by by the Ministry of Labour, has been long-lasting. This has affected industrial relations in general as the attitudes of the parties, and especially those of salary and wage earners, are crucial for the function not only of a system of arbitration but for the system of industrial relations as a whole. Strike activity did not simply try to pressurise arbitral bodies. To the extent that it was neither part of formal bargaining processes nor of compulsory arbitration, it consisted the only way available for setting up new bargaining relationships out of the formal system of collective bargaining and its bargaining structure.

To summarise, the strike activity record in Greece over the post-war period indicates that compulsory arbitration has been unsuccessful in controlling labour disputes. This is consistent with the idiosynchratic character of the system of arbitration

which has been mainly used as machinery for incomes policy implementation. Compulsory arbitration has been popular among trade-union leaders but not among their rank-and-file. Strike activity should not be simply considered as indicating the malfunction of the system of compulsory arbitration but indeed, as a mean for the creation of bargaining units out of the formal system of collective bargaining. It seems that this growth of collective bargaining out of the formal system occurred far from any collaboration and consensus, but on the basis of inter-union and intra-union conflicts.

### 3.4.2. Strike Activity and Informal Collective Bargaining in Manufacturing.

Strike activity in Greek manufacturing, according to the indices presented in Table 3.4.4, follows the trend observed at the aggregate level of analysis. It had its peak during the 1975-81 period and then remained at similar high levels. Moreover, strike activity in manufacturing is strongly and positively associated with the use of compulsory arbitration as well as the use of other procedures of regulation of collective bargaining provided by Law 3239.

Table 3.4.5 provides the estimated correlation coefficients relating sets of variables for arbitration and regulation of bargaining, within the formal system, with three variables for strike activity undertaken by wage and salary earners in manufacturing. Nearly all the specifications on the use of

compulsory arbitration and other methods of regulation are found with positive, significant and, indeed, strong correlation coefficients. These results suggest that the use of compulsory arbitration and other methods of regulation failed to minimise industrial conflict in manufacturing.

As the number of conflicts exceeds overwhelmingly the number of formal bargaining units registered in manufacturing it seems reasonable to infer that it is not strike activity which precedes the use of arbitration and regulation, but, mainly arbitration and regulation of collective bargaining are followed by strike activity. This means that largely strikes are not part of the arbitration process but they rather are protest strikes, at least, or strikes attempting to set up new bargaining relationships out of the formal system which is regulated by the Ministry of Labour directly or indirectly via the arbitration machinery.

The index for strikes frequency in manufacturing, presented in Table 3.4.4, compared to that referring to all sectors, presented in Table 3.4.1, indicates a higher than average frequency of strikes in manufacturing. In other words, more strikes per 100000 employees occur in manufacturing than in the rest of the economy, and therefore it seems that conflicts in manufacturing are relatively more decentralised.

The high frequency of industrial conflicts in manufacturing is the main feature of the period 1975-81 as far as strike activity is concerned. In 1976, in particular, the number of industrial

conflicts was the highest ever recorded in Greece. The record number of 184 strikes per every 100000 salary and wage earners in manufacturing were recorded. In 1975 the relevant number may have been high as well but the available strike activity statistics cover only the period from September to December of that year. In 1976, the then Conservative government adopted new legislation, namely Law 330, aiming to control "wildcat" and "informal" strikes at the company level which dominated manufacturing industrial relations after the fall of the military regime in July 1974. Presumably between the adoption of Law 330 and the high frequency of strikes at plant level in 1976 there is a causal relationship running both directions as the new legislation faced a wave of strikes expressing the employees disagreement and discontent.

In the literature varying definitions of informal aspects of industrial relations have been discussed. As far as strike activity is concerned Clarke (1987b:394), for instance, distinguished "wildcat" strikes, as those taking place contrary to procedure agreements for dispute resolution, from the "unofficial" strikes i.e. those taking place outside the rules of their own union. According to Clegg (1976:82) "plant bargaining leads to a relatively large number of official strikes, and industry or regional bargaining to a smaller number of larger official strikes. ... The number of strikes (most of them small and where the distinctions are relevant also unofficial and unconstitutional) is likely to be high where disputes procedures are absent or defective, and where the

distinctions between unofficial and official strikes and/or unconstitutional and constitutional strikes are blurred or non existent".

In Greek manufacturing after 1975, strike activity evolving at the primary level of the bargaining structure and the trade-unions structure was dominant. In 1975-77 most manufacturing disputes were combined struggles for the right to organise at the company level and for higher pay. The early enterprise unions were often involved in clashes with state agencies and employers who tried to suppress them. Typically the full recognition of union rights came in 1982. Over the period 1975-81 along with the plant level strike activity, the structure of unionism underwent substantial changes. Employees got rid of the occupation-based unionism and created a factory unionism which organised the labour force at the plant level regardless of the occupational and technical division of labour (Kasimatis, 1978, Manicas, 1984, Ioannou, 1986).

Table 3.4.6 examines the extent to which industrial conflicts expanded at the plant level during the 1975-81 period and favours the argument about decentralisation as the ratio of strikes per 100 establishment more than doubled in 1976-81 compared to 1962-66. Furthermore, its dispersion over the period 1976-81 is narrower than in 1962-66 and this implies that in 1976-81 the expansion of strike activity at the plant level was less asymmetric than in 1962-66. This observation reinforces the argument regarding the decentralisation of the bargaining process through plant level strike activity. Indeed, in 1976-81 the ratio

of strikes per 100 establishments is higher than in 1962-66 despite the fact that more labour force was concentrated in large-scale industries.

The ratio of strikes per 100 establishments in each two-digit manufacturing industrial branch, presented in Table 3.4.7, indicates the existence of large asymmetries among them, which are mainly associated with the varying number and size of establishments in each branch. In heavily concentrated industries as in branch 34: Basic Metal Industries, in 1976-81 occurred on average four strikes at every ten establishments, while in branch 29: Leather Manufacturing, which is dominated by handicraft plants occurred less than two strikes per 100 establishments. However, the test on stability of the dispersion of industrial conflicts across the twenty two-digit industrial branches, presented in Table 3.4.6, denotes the existence of stability over time, which is probably related to structural characteristics of manufacturing production and employment and behavioural characteristics of the labour force in each branch.

During the period 1976-81, the plant level strike activity was not equally developed across the manufacturing sector. The index of strikers density, which describes the number of strikers per 1000 employees, indicates that employees in certain industrial branches were more strike-prone and active from average. The set of active industrial branches in terms of strikers density over the period 1976-81 include the following: i) 34: Basic Metal Industries, ii) 27: Paper Industry iii) 37: Electrical Machinery

iv) 28: Printing and Publishing v) 38: Transport Equipment (Ioannou, 1988:106). The ranking in descending order of the same data-set on strikers density across the twenty two-digit industrial branches, presented in Table 3.4.8, has a 0.55 coefficient of concordance. This coefficient denotes a rather unstable hierarchy in terms of strike-prone industrial branches in the Greek manufacturing sector over the period 1976-81. Data unavailability on the number of strikers by industrial branch does not allow us to calculate the same coefficient for the whole period 1975-88.

An alternative set of data, the index of days lost per 1000 employees, is used instead. The ranking in descending order of the twenty industrial branches according to the index of days lost per 1000 employees, which is presented in Table 3.4.9 has a 0.25 coefficient of concordance. This value implies that, over the period 1975-88, the hierarchy of industrial branches as far as strike activity is concerned is quite unstable. Statistic evidence on the inter-industry variation in strike activity is summarised in Table 3.4.10. It appears that, during the period 1975-88 in the Greek manufacturing sector, there were no clearly distinguished industrial branches which were leading the plant level strike activity and branches either following the leaders or remaining away of strike activity at the plant level.

The evidence on the expansion and the dispersion of the plant level strike activity indicates the bargaining aggressiveness and the militancy of employees across the manufacturing sector. But by no means should it be perceived as indicator of their

effectiveness. There are no data recorded on the effectiveness of the plant level strike activity. The only evidence available refers to the total number of strikes and strikers over the period 1976-81. This evidence suggests that only 20 per cent of the total number of strikes were reported as being of full or partial success, and only 6 per cent of the total number of strikers were reported as being fully or partially successful (Ioannou, 1988:102).

The difference of percentages between successful strikes and successful strikers may suggest that strikes undertaken at the lower level of the bargaining and trade-unions structure, by relatively small groups of employees, were more successful as far as their objectives are concerned. But, in fact, the effectiveness of the strike activity cannot be properly recorded directly by the strike statistics. Moreover, strike activity is not a good indicator of bargaining power. Groups of employees and whole industrial branches without any significant bargaining power may go out to strike and may be strike-prone.

In any case the plant level unionism aimed at ad hoc single employer arrangements concerning wage determination and job regulation, thus, initiating an informal system of collective bargaining. Such bargaining processes may imply the weakening of the centralised formal system of collective bargaining. Both the formal and the informal system can be considered as parts of a dual system via which primary unions and informal groups of employees tried to "beat" the formal annual collective agreements

and compulsory arbitration awards. As compulsory arbitration has been used to implement incomes policies, it seems that its extensive use caused the rise of informal bargaining procedures by those who disagree with both procedural and substantial aspects of the governmental policies.

To summarise, despite the restrictions imposed upon wage determination through collective bargaining at the plant level, after 1975, successive waves of strike activity developed at the plant level in manufacturing industries This strike activity evolved out of the formal system of collective bargaining as well as out of, and in conflict with, the official structure of the Greek trade-unionism. It resulted in the creation of an informal system of wage determination and created rather erratic wage rounds in the Greek manufacturing sector. Thus, despite the long lasting characteristics of undeveloped and over-regulated institutions and processes of formal collective bargaining, plant level strike activity and informal collective bargaining led to decentralisation and fragmentation of the manufacturing bargaining structure and can be considered as a potential source of influence with regard to wage developments in the Greek manufacturing sector.

## 3.5. CONCLUSIONS.

Third party intervention, as expressed in systems of arbitration, can be compatible with collective bargaining if arbitrators are and remain independent and, therefore, arbitration procedures work as less costly procedures, than strike activity, for impasse resolution in collective bargaining.

The system of arbitration is a unique aspect of the Greek system of industrial relations. Implemented in 1955 along with the formal system of collective bargaining, as part of it, and dominated by the Ministry of Labour, it rather consists a part of the governmental machinery for incomes policy implementation, rather than an independent arbitration service. By granting legal recognition to unions lacking representativity, compulsory arbitration became the "raison d' etre" of a certain category of trade-union leaders and thus it has been also a machinery for the preservation of the formal bargaining structure.    Not surprisingly, it has been used extensively, especially after 1975 when, in the context of the new parliamentary democracy in Greece, collective bargaining was re-established and direct methods of regulation of collective bargaining were abandoned.

Within the formal system of collective bargaining, over the period 1955-88, the parties' dependence upon compulsory arbitration increased over time. This indicates a "freezing" or "chilling" effect upon collective bargaining caused by compulsory

arbitration. It seems that the main source of this effect is neither the compulsory aspect of arbitration nor arbitration per se. It is the combination of its compulsory character with the lack of the essential characteristics of arbitration procedures, i.e. independent and autonomous arbitral bodies. In other words, the Greek system of compulsory arbitration is found incompatible with collective bargaining not because it is compulsory but because it is not a system of arbitration.

However, salary and wage earners developed, especially in 1975-81, strike activity at record levels. Strike activity, which is found positively correlated to the use of compulsory arbitration, indicates the failure of the system of compulsory arbitration in controlling industrial conflicts. Moreover, as strike activity developed largely out of the formal bargaining levels and units, reflects initiatives of bargaining units located out of the formal bargaining structure for decentralised collective bargaining. This development is mainly associated with collective bargaining in manufacturing industries where legislation excludes plant level collective agreements. In 1975-81 strike activity at the plant level initiated an informal system of decentralised collective bargaining, parallel to the formal industry-wide or occupation-based bargaining at the national level. Thus, a dual structure of manufacturing wage determination became at work.

The rise of strike activity and the creation of the informal system of collective bargaining indicate that since 1975, mainly in manufacturing, there was a switch to an alternative route of wage determination initiated by strike activity at the plant

level. This can be mainly attributed to the legalistic character
of the formal system of collective bargaining as well as to the
ossified bargaining structure imposed upon salary and wage
earners.

Of course, strike activity is influenced by substantial issues
regarding wage formation. And these very substantial issues
have been directly affected by the settlements imposed through
compulsory arbitration. But, as already argued in Chapter 2, the
procedural arrangements provided by the formal system of
collective bargaining, which favours centralised bargaining and
excludes decentralised bargaining at the company and plant level,
contributed to the fragmentation of the real bargaining
structure, especially in the Greek manufacturing sector.

**Table 3.3.1**

**COLLECTIVE AGREEMENTS AND COMPULSORY ARBITRATION AWARDS**
**ALL SECTORS**
1964-1988

| Year | Number of Bargaining Units[a] A[c] | C[d] | Both | C/Both % | Density of Bargaining Units[b] A | C | Both |
|------|------|------|------|------|------|------|------|
| 1964: | 97 | 93 | 190 | 48.95 | 7.67 | 7.35 | 15.02 |
| 1965: | 121 | 93 | 214 | 43.46 | 9.45 | 7.27 | 16.72 |
| 1966: | 105 | 82 | 187 | 43.85 | 8.11 | 6.33 | 14.44 |
| 1967: | 63 | 79 | 142 | 55.63 | 4.81 | 6.03 | 10.84 |
| 1968: | 63 | 93 | 156 | 59.62 | 4.76 | 7.02 | 11.77 |
| 1969: | 50 | 100 | 150 | 66.67 | 3.73 | 7.46 | 11.20 |
| 1970: | 53 | 67 | 120 | 55.83 | 3.91 | 4.95 | 8.86 |
| 1971: | 46 | 43 | 89 | 48.31 | 3.36 | 3.14 | 6.50 |
| 1972: | 88 | 38 | 126 | 30.16 | 6.26 | 2.70 | 8.96 |
| 1973: | 88 | 60 | 148 | 40.54 | 10.96 | 4.16 | 15.12 |
| 1974: | 70 | 85 | 155 | 54.84 | 4.74 | 5.75 | 10.49 |
| 1975: | 131 | 143 | 274 | 52.19 | 8.65 | 9.45 | 18.10 |
| 1976: | 144 | 120 | 264 | 45.45 | 9.29 | 7.74 | 17.03 |
| 1977: | 146 | 179 | 325 | 55.08 | 9.20 | 11.29 | 20.49 |
| 1978: | 166 | 214 | 380 | 56.32 | 10.23 | 13.19 | 23.43 |
| 1979: | 173 | 247 | 420 | 58.81 | 10.43 | 14.90 | 25.33 |
| 1980: | 220 | 299 | 519 | 57.61 | 12.99 | 17.65 | 30.63 |
| 1981: | 233 | 330 | 563 | 58.61 | 13.47 | 19.07 | 32.54 |
| 1982: | 284 | 232 | 516 | 44.97 | 16.57 | 13.53 | 30.10 |
| 1983: | 57 | 80 | 137 | 58.39 | 3.36 | 4.71 | 8.07 |
| 1984: | 252 | 264 | 516 | 51.16 | 14.67 | 15.37 | 30.03 |
| 1985: | 175 | 167 | 342 | 48.83 | 9.89 | 9.44 | 19.32 |
| 1986: | 44 | 82 | 126 | 65.08 | 2.48 | 4.62 | 7.10 |
| 1987: | 76 | 84 | 160 | 52.50 | 4.24 | 4.68 | 8.92 |
| 1988: | 210 | 83 | 293 | 28.33 | 11.64 | 4.60 | 16.24 |
| Average | | | | | | | |
| 1964-66: | 108 | 89 | 197 | 45.42 | 8.41 | 6.98 | 15.39 |
| 1967-74: | 65 | 71 | 136 | 51.45 | 5.32 | 5.15 | 10.47 |
| 1975-81: | 173 | 219 | 392 | 54.87 | 10.61 | 13.33 | 23.94 |
| 1982-88: | 157 | 142 | 299 | 49.89 | 8.98 | 8.14 | 17.12 |

Notes:   a.  The number of bargaining units refers to both
           collective agreements and compulsory arbitration
           awards.
         b.  Density of Bargaining Units = Number of Units per
           100000 employees in employment.
         c.  Collective agreements.
         d.  Compulsory arbitration awards.
         e.  Share of compulsory arbitration awards in the total
           number of both agreements and awards.

Source: Ministry of Labour.

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## Table 3.3.2

### COMPULSORY ARBITRATION AWARDS
### AS PERCENTAGE OF BOTH AGREEMENTS AND AWARDS BY LEVEL
### ALL SECTORS
### 1973-1988

| Level | General National | Occupational | Local | Special | All |
|-------|---------|--------------|-------|---------|-----|
| Year | % | % | % | % | % |
| 1973 | – | 34.72 | 21.74 | 54.90 | 40.54 |
| 1974 | – | 67.69 | 44.44 | 46.03 | 54.84 |
| 1975 | 0.00 | 66.29 | 73.47 | 36.09 | 52.19 |
| 1976 | 100.00 | 63.41 | 52.94 | 30.77 | 45.45 |
| 1977 | 0.00 | 73.39 | 65.91 | 40.94 | 55.08 |
| 1978 | 100.00 | 63.73 | 54.84 | 53.25 | 56.32 |
| 1979 | 100.00 | 69.63 | 60.98 | 52.07 | 58.81 |
| 1980 | 100.00 | 67.47 | 51.92 | 53.00 | 57.61 |
| 1981 | – | 70.65 | 53.57 | 52.63 | 58.61 |
| 1982 | 100.00 | 66.82 | 47.50 | 23.21 | 44.96 |
| 1983 | – | 83.64 | 52.94 | 38.46 | 58.39 |
| 1984 | 0.00 | 78.34 | 40.54 | 30.27 | 51.16 |
| 1985 | 0.00 | 66.88 | 39.58 | 32.37 | 48.83 |
| 1986 | 0.00 | 70.49 | 76.67 | 47.06 | 65.08 |
| 1987 | 100.00 | 66.13 | 67.65 | 30.16 | 52.50 |
| 1988 | 0.00 | 34.13 | 44.00 | 15.52 | 28.33 |
| Average |  |  |  |  |  |
| 1973-74 | – | 51.21 | 33.09 | 52.72 | 47.69 |
| 1975-81 | – | 67.78 | 59.09 | 45.54 | 54.87 |
| 1982-88 | – | 66.63 | 52.70 | 31.01 | 49.89 |
| 1982-87 | – | 72.05 | 54.15 | 33.59 | 53.49 |

Source: Ministry of Labour

**Table 3.4.1**

**STRIKERS DENSITY, FREQUENCY OF STRIKES AND RELATIVE DAYS LOST IN GREECE, ALL SECTORS**
**1953-1988**

| Index Year | Density[a] | Frequency[b] | Days Lost[c] |
|---|---|---|---|
| 1953 | 79 | 18 | 108 |
| 1954 | 45 | 16 | 36 |
| 1955 | 45 | 19 | 62 |
| 1956 | n.a | n.a | n.a |
| 1957 | 100 | 15 | 124 |
| 1958 | 78 | 10 | 94 |
| 1959 | 35 | 8 | 50 |
| 1960 | 46 | 11 | 68 |
| 1961 | 43 | 9 | 72 |
| 1962 | 46 | 15 | 104 |
| 1963 | 80 | 18 | 265 |
| 1964 | 130 | 32 | 274 |
| 1965 | 200 | 34 | 355 |
| 1966 | 269 | 47 | 550 |
| 1967[d] | 69 | 7 | 87 |
| 1975[e] | 31 | 9 | 145 |
| 1976 | 196 | 62 | 501 |
| 1977 | 357 | 36 | 769 |
| 1978 | 295 | 38 | 579 |
| 1979 | 773 | 36 | 938 |
| 1980 | 845 | 44 | 1571 |
| 1981 | 236 | 27 | 419 |
| 1982 | 204 | 52 | 672 |
| 1983 | 132 | 40 | 286 |
| 1984 | 90 | 27 | 244 |
| 1985 | 613 | 41 | 621 |
| 1986 | 861 | 19 | 715 |
| 1987 | 1213 | 21 | 1308 |
| 1988 | 249 | 30 | 462 |
| Average | | | |
| 1953-62 | 57 | 13 | 80 |
| 1963-66 | 170 | 33 | 361 |
| 1976-81 | 450 | 40 | 796 |
| 1982-88 | 480 | 33 | 615 |

Notes: a. Number of Strikers per 1000 employees.
b. Number of Strikes per 100000 employees.
c. Number of Working Days Lost per 1000 employees.
d. From January to April.
e. From September to December.

Source: Ministry of Labour.

## Table 3.4.2

**BIVARIATE CORRELATION COEFFICIENTS RELATING COMPULSORY ARBITRATION AND STRIKE ACTIVITY IN GREECE ALL SECTORS 1953-1988**

| Variables | Strike Activity | | |
|---|---|---|---|
| Compulsory Arbitration | Density[d] | Frequency[e] | Days Lost[f] |
| Number of Awards[a] | 0.30639[g]<br>0.1363[h]<br>25[i] | 0.49074<br>0.0127<br>25 | 0.51885<br>0.0079<br>25 |
| Degree of Intervention[b] | 0.22957<br>0.2696<br>25 | -0.10737<br>0.6095<br>25 | 0.14279<br>0.4959<br>25 |
| Density of Awards[c] | 0.24542<br>0.2370<br>25 | 0.47537<br>0.0163<br>25 | 0.47533<br>0.0163<br>25 |

Notes: a. Number of Compulsory Arbitration Awards.
   b. Percentage of Awards in both Agreements and Awards.
   c. Number of Awards per 100000 employees.
   d. Number of Strikers per 1000 employees.
   e. Number of Strikes per 100000 employees.
   f. Number of Working Days Lost per 1000 employees.
   g. Correlation Coefficients
   h. Probability of |R| under Ho: Rho=0
   i. Number of Observations

**Table 3.4.3**

**NUMBER OF STRIKES ACCORDING TO ORGANISATIONAL LEVEL**
**1976-1981**

| Year | Federations | Above the Level of Federations | Total Number of Strikes | Total Number of Bargaining Units |
|------|-------------|-------------------------------|------------------------|----------------------------------|
| 1976 | 19 | 2 | 947 | 264 |
| 1977 | 21[a] | 1 | 563 | 325 |
| 1978 | 30 | 13 | 616 | 380 |
| 1979 | 41 | 13 | 588 | 420 |
| 1980 | 55 | 17 | 726 | 519 |
| 1981 | n.a | 3 | 466 | 563 |

Note: a. From March to December 1977.

Source: Ministry of Labour.

## Table 3.4.4

**STRIKERS DENSITY, FREQUENCY OF STRIKES AND RELATIVE DAYS LOST IN GREEK MANUFACTURING**
### 1959-1988

| Index Year | Density[a] | Frequency[b] | Days Lost[c] |
|---|---|---|---|
| 1959 | 25 | 69 | 152 |
| 1960 | 34 | 78 | 212 |
| 1961 | 30 | 68 | 100 |
| 1962 | 40 | 76 | 337 |
| 1963 | 118 | 52 | 393 |
| 1964 | 250 | 110 | 680 |
| 1965 | 264 | 81 | 806 |
| 1966 | 254 | 86 | 738 |
| 1967[d] | 13 | 9 | 34 |
| 1975[e] | 54 | 26 | 325 |
| 1976 | 283 | 184 | 964 |
| 1977 | 371 | 107 | 1355 |
| 1978 | 134 | 89 | 594 |
| 1979 | 226 | 102 | 744 |
| 1980 | 187 | 124 | 699 |
| 1981 | 185 | 81 | 764 |
| 1982 | 452 | 205 | 1640 |
| 1983 | n.a | n.a | 1554 |
| 1984 | n.a | n.a | 886 |
| 1985 | n.a | n.a | 530 |
| 1986 | 171 | 27 | 188 |
| 1987 | n.a | n.a | 286 |
| 1988 | n.a | n.a | 839 |
| Average | | | |
| 1959-60 | 30 | 74 | 182 |
| 1961-66 | 159 | 79 | 509 |
| 1976-81 | 231 | 115 | 853 |
| 1982-88 | n.a | n.a | 846 |

Notes: a. Number of Strikers per 1000 employees.
b. Number of Strikes per 100000 employees.
c. Number of Working Days Lost per 1000 employees.
d. From January to April.
e. From September to December.
n.a = Not available.

Source: Ministry of Labour.

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## Table 3.4.5

**BIVARIATE CORRELATION COEFFICIENTS RELATING BARGAINING REGULATION WITH STRIKE ACTIVITY IN MANUFACTURING**
### 1959-1983

| Variables | Strikes | | |
| --- | --- | --- | --- |
| Regulation | Density[g] | Frequency[h] | Days Lost[i] |
| Number of Awards[a] | 0.79124[j] 0.0001[k] 24[l] | 0.71842 0.0001 24 | 0.72261 0.0001 25 |
| Degree of Intervention[b] | 0.61855 0.0013 24 | 0.57058 0.0036 24 | 0.73660 0.0001 25 |
| Density of Awards[c] | 0.85801 0.0001 20 | 0.88579 0.0001 20 | 0.68836 0.0006 21 |
| Number of Regulated Settlements[d] | 0.83732 0.0001 24 | 0.83609 0.0001 24 | 0.68861 0.0001 25 |
| Degree of Regulation[e] | 0.29255 0.1654 24 | 0.36748 0.0773 24 | 0.47712 0.0159 25 |
| Density of Regulated Settlements[f] | 0.81155 0.0001 20 | 0.76725 0.0001 20 | 0.52276 0.0150 21 |

Notes:
a. Number of Compulsory Arbitration Awards.
b. Compulsory Arbitration Awards as percentage of both Agreements and Awards.
c. Number of Compulsory Arbitration Awards per 100000 employees in large-scale Manufacturing.
d. Arbitration Awards and Agreements Amended, Corrected, Rejected and Extended by the Ministry of Labour.
e. Regulated Agreements and Awards as percentage of voluntary Collective Agreements.
f. Number of Regulated Agreements and Awards per 100000 employees in large-scale Manufacturing.
g. Number of Strikers per 1000 employees.
h. Number of Strikes per 100000 employees.
i. Number of Working Days Lost per 1000 employees.
g. Correlation Coefficients
k. Probability |R| under Ho: Rho=0
l. Number of Observations

## Table 3.4.6

### STRIKES PER 100 MANUFACTURING ESTABLISHMENTS:
### FREQUENCY DISPERSION AND STABILITY
### 1962-1981

| Year | Strikes per 100 establishments[a] | Coefficient of Variation[b] | R-square[c] | |
|------|------|------|------|------|
| 1962 | 1.41 | 293.76 | 1.000 | |
| 1963 | 1.87 | 255.74 | .839 | |
| 1964 | 1.96 | 139.23 | .746 | |
| 1965 | 2.97 | 177.42 | .776 | |
| 1966 | 3.18 | 155.73 | .822 | |
| 1967[d] | .33 | 248.28 | .917 | |
| 1975[e] | 1.12 | 245.11 | .969 | .892 |
| 1976 | 7.68 | 117.12 | .839 | 1.000 |
| 1977 | 4.52 | 216.20 | .948 | .884 |
| 1978 | 3.74 | 111.26 | .692 | .695 |
| 1979 | 4.26 | 214.66 | .959 | .910 |
| 1980 | 5.03 | 124.54 | .719 | .783 |
| 1981 | 3.16 | 133.32 | .759 | .782 |
| | | | | |
| Average | | | | |
| 1962-66 | 2.28 | 196.87 | 1.000 | |
| 1976-81 | 4.73 | 151.44 | .878 | |

Notes:   a. Average of 20 two-digit industrial branches.
   b. Variability across twenty two-digit industrial branches.
   c. Coefficient of stability is measured by correlating relative strike performance of industries among pairs of years, one of which is the base year.  N=20 (two-digit manufacturing industrial branches).
   d. From January to April.
   e. From September to December.

## Table 3.4.7

**STRIKES PER 100 MANUFACTURING ESTABLISHMENTS BY BRANCH, 1962-1981**

| Year<br>Branch | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | Average<br>1962-66 |
|---|---|---|---|---|---|---|---|
| 20 | 1.70 | 2.52 | 1.78 | 2.77 | 3.01 | 0.75 | 2.36 |
| 21 | 0.82 | 0.00 | 0.87 | 0.85 | 0.00 | 0.00 | 0.51 |
| 22 | 1.74 | 1.26 | 8.54 | 7.04 | 7.19 | 0.00 | 5.16 |
| 23 | 1.57 | 1.30 | 2.74 | 2.34 | 3.41 | 0.47 | 2.27 |
| 24 | 1.14 | 0.90 | 1.03 | 1.97 | 2.05 | 0.15 | 1.42 |
| 25 | 0.34 | 0.00 | 1.33 | 2.21 | 2.49 | 0.30 | 1.27 |
| 26 | 0.00 | 0.50 | 0.00 | 1.79 | 0.44 | 0.00 | 0.55 |
| 27 | 5.28 | 1.96 | 3.85 | 4.76 | 6.36 | 0.00 | 4.44 |
| 28 | 0.89 | 2.97 | 1.66 | 3.29 | 4.82 | 0.00 | 2.73 |
| 29 | 4.02 | 1.92 | 1.44 | 0.94 | 1.33 | 0.00 | 1.93 |
| 30 | 0.00 | 0.00 | 1.97 | 1.88 | 1.18 | 0.00 | 1.01 |
| 31 | 3.15 | 8.43 | 3.53 | 12.44 | 9.74 | 0.97 | 7.46 |
| 32 | 0.00 | 25.00 | 8.82 | 22.22 | 15.79 | 0.00 | 14.37 |
| 33 | 0.93 | 2.91 | 1.37 | 2.39 | 1.95 | 0.16 | 1.91 |
| 34 | 43.75 | 64.29 | 20.00 | 47.37 | 40.00 | 4.76 | 43.08 |
| 35 | 0.29 | 1.08 | 1.96 | 4.31 | 6.05 | 0.47 | 2.74 |
| 36 | 0.00 | 0.68 | 0.83 | 0.96 | 0.62 | 0.00 | 0.62 |
| 37 | 0.00 | 0.00 | 2.39 | 2.67 | 1.59 | 0.51 | 1.33 |
| 38 | 0.00 | 0.44 | 1.06 | 1.23 | 2.06 | 0.00 | 0.96 |
| 39 | 0.00 | 0.00 | 0.60 | 0.00 | 4.26 | 0.00 | 0.97 |
| All | 1.41 | 1.87 | 1.96 | 2.97 | 3.18 | 0.33 | 2.28 |

| Year<br>Branch | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | Average<br>1976-81 |
|---|---|---|---|---|---|---|---|---|
| 20 | 0.34 | 3.14 | 1.82 | 1.67 | 1.51 | 1.61 | 0.76 | 1.75 |
| 21 | 1.09 | 4.26 | 5.82 | 11.90 | 3.54 | 15.35 | 9.05 | 8.32 |
| 22 | 2.15 | 14.29 | 4.35 | 0.00 | 7.20 | 5.06 | 8.75 | 6.61 |
| 23 | 0.89 | 10.37 | 2.93 | 3.36 | 2.80 | 7.47 | 4.98 | 5.32 |
| 24 | 0.48 | 2.93 | 2.46 | 1.55 | 1.07 | 1.44 | 2.09 | 1.92 |
| 25 | 0.91 | 2.42 | 5.74 | 3.40 | 2.21 | 4.19 | 1.31 | 3.21 |
| 26 | 0.00 | 4.46 | 1.96 | 1.35 | 0.52 | 0.75 | 0.00 | 1.50 |
| 27 | 4.76 | 20.61 | 17.42 | 11.57 | 8.64 | 4.80 | 4.00 | 11.17 |
| 28 | 3.58 | 12.50 | 7.83 | 4.25 | 7.39 | 8.04 | 2.47 | 7.08 |
| 29 | 0.88 | 0.83 | 0.00 | 0.40 | 0.00 | 0.00 | 0.75 | 0.33 |
| 30 | 1.28 | 10.06 | 1.81 | 3.86 | 6.15 | 2.31 | 10.20 | 5.73 |
| 31 | 1.07 | 12.37 | 5.21 | 6.99 | 7.04 | 6.46 | 1.24 | 6.55 |
| 32 | 0.00 | 17.95 | 0.00 | 2.40 | 6.62 | 14.29 | 3.92 | 7.53 |
| 33 | 0.66 | 11.80 | 3.25 | 6.41 | 6.48 | 5.46 | 2.34 | 5.96 |
| 34 | 30.77 | 65.00 | 92.50 | 25.78 | 90.44 | 43.75 | 29.41 | 57.81 |
| 35 | 1.02 | 9.67 | 4.60 | 2.50 | 6.25 | 5.65 | 3.21 | 5.31 |
| 36 | 0.24 | 3.30 | 2.80 | 6.18 | 4.35 | 4.91 | 2.66 | 4.03 |
| 37 | 2.77 | 13.17 | 10.78 | 5.88 | 7.23 | 5.11 | 4.78 | 7.82 |
| 38 | 1.89 | 12.53 | 13.37 | 6.38 | 8.31 | 16.63 | 5.41 | 10.44 |
| 39 | 0.00 | 2.98 | 1.19 | 0.00 | 2.64 | 2.10 | 0.00 | 1.48 |
| All | 1.12 | 7.68 | 4.52 | 3.74 | 4.26 | 5.03 | 3.16 | 4.73 |

Note: Index calculated as [(number of strikes in branch i / number of establishments in branch i)*100].

## Table 3.4.8

**RANKING OF INDUSTRIAL BRANCHES ACCORDING TO STRIKERS DENSITY**
(descending order)
1976-1981

Industrial
Branch

| Year | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|------|----|----|------|------|------|------|------|----|----|------|
| 1976 | 16 | 18 | 8.5 | 8.5 | 15.0 | 14.0 | 13.0 | 1 | 6 | 20.0 |
| 1977 | 12 | 11 | 16.0 | 8.0 | 3.0 | 6.0 | 15.0 | 2 | 4 | 19.5 |
| 1978 | 10 | 7 | 19.5 | 14.0 | 9.0 | 3.0 | 15.0 | 2 | 6 | 17.0 |
| 1979 | 18 | 16 | 5.0 | 10.0 | 13.0 | 11.0 | 19.0 | 6 | 8 | 20.0 |
| 1980 | 18 | 11 | 13.0 | 6.0 | 16.0 | 2.0 | 19.0 | 14 | 4 | 20.0 |
| 1981 | 18 | 6 | 12.0 | 8.0 | 3.5 | 3.5 | 19.5 | 5 | 16 | 13.5 |

Industrial
Branch

| Year | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
|------|----|----|------|------|----|----|------|----|----|------|
| 1976 | 5 | 11 | 17.0 | 10.0 | 2 | 7 | 12.0 | 3 | 4 | 19.0 |
| 1977 | 18 | 10 | 19.5 | 9.0 | 1 | 13 | 17.0 | 5 | 7 | 14.0 |
| 1978 | 13 | 8 | 18.0 | 4.0 | 1 | 16 | 12.0 | 5 | 11 | 19.5 |
| 1979 | 4 | 12 | 17.0 | 2.0 | 1 | 15 | 7.0 | 3 | 14 | 9.0 |
| 1980 | 15 | 7 | 8.0 | 9.0 | 1 | 5 | 17.0 | 10 | 3 | 12.0 |
| 1981 | 2 | 17 | 10.0 | 9.0 | 1 | 15 | 13.5 | 7 | 11 | 19.5 |

# Table 3.4.9

## RANKING OF INDUSTRIAL BRANCHES
## ACCORDING TO RELATIVE DAYS LOST IN STRIKES
### (descending order)
### 1975-1988

| Industrial Branch Year | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | 16.0 | 8 | 14.0 | 12 | 13 | 6 | 19.0 | 1 | 7 | 2.0 |
| 1976 | 12.0 | 19 | 17.0 | 10 | 13 | 14 | 7.0 | 1 | 4 | 20.0 |
| 1977 | 14.0 | 10 | 13.0 | 12 | 7 | 5 | 6.0 | 1 | 2 | 19.5 |
| 1978 | 12.0 | 3 | 19.5 | 13 | 8 | 2 | 14.0 | 1 | 4 | 17.0 |
| 1979 | 13.0 | 11 | 5.0 | 14 | 17 | 18 | 16.0 | 12 | 3 | 20.0 |
| 1980 | 18.0 | 15 | 14.0 | 1 | 17 | 16 | 19.0 | 12 | 4 | 20.0 |
| 1981 | 17.0 | 3 | 10.0 | 2 | 6 | 5 | 19.5 | 1 | 13 | 18.0 |
| 1982 | 10.0 | 14 | 16.0 | 6 | 9 | 4 | 12.0 | 1 | 17 | 19.0 |
| 1983 | 9.0 | 12 | 5.0 | 11 | 4 | 20 | 17.0 | 2 | 7 | 18.0 |
| 1984 | 11.0 | 3 | 10.0 | 4 | 15 | 17 | 12.0 | 9 | 19 | 14.0 |
| 1985 | 16.5 | 2 | 10.0 | 9 | 6 | 1 | 20.0 | 15 | 19 | 8.0 |
| 1986 | 11.0 | 2 | 6.0 | 12 | 14 | 20 | 13.0 | 16 | 9 | 17.0 |
| 1987 | 12.0 | 1 | 2.0 | 14 | 19 | 17 | 16.0 | 10 | 13 | 18.0 |
| 1988 | 15.0 | 3 | 4.0 | 7 | 8 | 12 | 19.0 | 11 | 17 | 13.0 |

| Industrial Branch Year | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | 4 | 15 | 19.0 | 9 | 5 | 11 | 17 | 3 | 10.0 | 19.0 |
| 1976 | 6 | 9 | 16.0 | 11 | 2 | 5 | 15 | 3 | 8.0 | 18.0 |
| 1977 | 16 | 11 | 19.5 | 8 | 3 | 15 | 17 | 4 | 9.0 | 18.0 |
| 1978 | 9 | 11 | 18.0 | 5 | 7 | 16 | 15 | 6 | 10.0 | 19.5 |
| 1979 | 4 | 7 | 19.0 | 9 | 2 | 15 | 6 | 1 | 10.0 | 8.0 |
| 1980 | 13 | 10 | 9.0 | 6 | 5 | 7 | 8 | 11 | 3.0 | 2.0 |
| 1981 | 7 | 12 | 16.0 | 14 | 4 | 11 | 8 | 9 | 15.0 | 19.5 |
| 1982 | 15 | 11 | 18.0 | 5 | 2 | 8 | 3 | 7 | 13.0 | 20.0 |
| 1983 | 16 | 3 | 6.0 | 10 | 8 | 15 | 1 | 13 | 14.0 | 19.0 |
| 1984 | 18 | 13 | 1.0 | 16 | 8 | 2 | 7 | 6 | 5.0 | 20.0 |
| 1985 | 7 | 12 | 5.0 | 11 | 4 | 3 | 18 | 14 | 16.5 | 13.0 |
| 1986 | 5 | 18 | 7.0 | 8 | 1 | 4 | 10 | 15 | 19.0 | 3.0 |
| 1987 | 5 | 6 | 4.0 | 9 | 7 | 11 | 15 | 3 | 8.0 | 20.0 |
| 1988 | 14 | 16 | 2.0 | 10 | 1 | 6 | 18 | 9 | 5.0 | 20.0 |

**Table 3.4.10**

**INTER-INDUSTRY VARIATION IN STRIKE ACTIVITY**
**1975-1988**
------------------------------------------------------------

Coefficient of Variation in:

| Year | Strikers Density | Relative Days Lost |
|------|------------------|--------------------|
| 1975 | n.a | 267.98 |
| 1976 | 115.6 | 159.98 |
| 1977 | 164.6 | 175.10 |
| 1978 | 106.0 | 140.81 |
| 1979 | 118.1 | 130.19 |
| 1980 | 100.7 | 104.93 |
| 1981 | 136.5 | 215.75 |
| 1982 | n.a | 122.20 |
| 1983 | n.a | 85.65 |
| 1984 | n.a | 175.01 |
| 1985 | n.a | 96.95 |
| 1986 | n.a | 155.78 |
| 1987 | n.a | 194.91 |
| 1988 | n.a | 141.09 |

| Coefficient of Concordance | 0.55 | 0.25 |
|------|------|------|

Notes:
Coefficient of Variation = Standard deviation / mean, n=20.

Coefficient of Concordance = Variance of rank sums / maximum possible variance of rank sums. Called also Kendall's W statistic. By definition cannot be negative and its maximum value is 1. For further information see Hays, W. L. 1973: Statistics for Social Sciences, Holt, Rinehart and Winston Inc., New York, pp. 801-803.

# CHAPTER 4. WAGE AND EMPLOYMENT REGULATION IN GREECE.

## 4.1 INTRODUCTION AND SUMMARY.

In the context of the formal system of collective bargaining, wage formation has never been a process independent of direct and indirect state intervention. The extensively used mechanism of compulsory arbitration, along with the legal right of the Ministry of Labour to reject and modify any collective agreement or compulsory arbitration award if considered as not being in line with the governmental policy, dominated wage determination processes, throughout the post-war period.

This chapter examines the types, the characteristics and the rationales of policies pursued on the basis of the extensive procedural regulation of industrial relations in Greece. These policies, which consist the substantial regulation of the Greek labour market, refer to wage setting as well as to employment adjustment, and thus set the scene for flexibilities or rigidities in the Greek manufacturing sector.

Section 4.2 discusses both the rationales and the mechanics of policies adopted in Greece over the period under examination. Section 4.3 examines wage developments and the variability in the Greek manufacturing wage structure and discusses it in the context of the question of flexibility in relative wages. Section 4.4 presents the existing legislation and the mechanics for employment regulation and examines the evolution of employment in

the Greek manufacturing sector.

Our analysis suggests that after 1975 wage determination was under the influence of two types of incomes policy. First, in 1975-81 there was the norm-based incomes policy and then, in 1982-88, indexation policies followed. Indexation policies involved relatively more compulsion. In this context of wage regulation, the wage structure, although stable as far as the distinction between high-wage and low-wage industries is concerned, became wider in 1975-81 and narrowed again in 1982-88 and, overall, variability in relative wages is observed throughout the period 1965-88.

Variability in relative wages is coupled with noticeable changes in manufacturing employment. Throughout the period 1965-88 employment in Greek manufacturing was expanding, with the most rapid expansion observed in 1967-74. But employment adjustments were regulated by the Ministry of Labour on the basis of the legislation setting limits on collective dismissals. Despite wage and employment regulation, variability in relative wages and expansion in manufacturing employment set a scene in which contradictory forces conducive either to flexibility or rigidity operated.

## 4.2. INCOMES POLICY IN GREECE.

### 4.2.1.Types and Characteristics of Incomes Policy.

In the literature, in Braun (1986) and Artis (1981) for instance, incomes policy is normally defined in terms of anti-inflation measures aiming to improve the trade-off between inflation and unemployment. Measures concerned with income distribution, i.e. inequality, protection of low paid, reduction of poverty, are not comprehended by the term. But in practice such measures are often adopted as part of incomes policies. As Blackaby, quoted in Braun (1986:4), noticed "one of the general comments on the experience of incomes policy in Western Europe is that it has been impossible to evade the distributional aspect of even the simplest kind of incomes policy". In another occasion he pointed out that incomes policies "inevitably have effects on the distribution of incomes; they affect the broad distribution between employment and profit incomes, and more narrowly, the differentials between pay in different occupations and industries" (Blackaby, 1971:34).

Incomes policies vary considerably in design, sophistication, objectives and rigour. Various classifications have been proposed, but wage freezes, guidelines or norms and indexation are the types of policy most frequently used. However, even within these categories, specifications vary too. The reviews on incomes policies implemented in industrialised market economies

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suggest that norms and guidelines were mostly used in the late 1950s and early 1960s, while indexation was widely used in the late 1960s and the 1970s. But, in the late 1970s, there was a general shift away from incomes policies (Blackaby, 1971, Brown, 1986, Flanagan et al, 1983).

Suzuki (1980) examined the extent of use of wage indexation in the industrialised market economies and divided the relevant cases in four categories, that is those with widespread use of indexation (Belgium, Denmark, Israel, Italy, Ireland, Netherlands, Luxemburg), those where it applied to a part of the labour force (Canada, France, Switzerland, U.S.), those where has been practically non-existent (Austria, West Germany, Japan, Sweden) and those where it was introduced and abandoned (Finland, Norway, France, Australia, U.K. Netherlands, Ireland). In a more recent work Chan-Lee et al (1987) after observing that prices and incomes policies played a comparatively minor role in the 1980s, argued that "the single most important institutional change in many European countries in the 1980s has been the weakening of explicit or implicit indexation provisions". Exception to this trend have been France and Spain, where incomes policies were adopted within a framework of ex ante indexation based on inflation targets.

In Greece, governmental involvement in wage determination has been the rule over the whole post-war period. But formal incomes policy was adopted only after 1975. Incomes policies undertaken since then fall into two categories. First, were the norm-based policy of the 1975-81 period. Second, was the policy based

on partial indexation which was in operation throughout the period 1982-88. In other words, Greece too followed the exceptional pattern of adopting indexation policy in the 1980s as in France and Spain. Presumably, there must be some association with the fact that over that period Socialist parties were in power in these countries.

To classify the rationale of successive incomes policies the distinction between nominal and real policies, as proposed by Flanagan, Soskice and Ulman (1983:22), is a fruitful starting point. As nominal policies are perceived those designed to reduce the rate of inflation without restraining real wages or affecting unemployment, by attempting, for instance, to alter expectations directly. Real incomes policies are considered those which aim to restrain real wages, to bolster profitability, to improve international competitiveness or to enable unemployment to be reduced. While there is no real dichotomy between nominal and real incomes policies, their explicit or implicit objectives, as well as the criteria they are based on, suffice to classify them in one category or the other.

From this point of view, since 1975 in Greece there has been a sequence of nominal incomes policies interrupted by real ones which, in the event of severe deteriorations of the balance of payments, were aiming to create breathing space for the economy. Both schemes of policy, the norm-based and the partial indexation, were at first conceived, designed and implemented so that to reduce the rate of inflation without restraining real

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wages. But both had to be radically changed to restrain real wages as well.

As far as the wage structure is concerned, the nominal policies which were pursued through the norm-based scheme were not especially concerned with the wage structure and pay relativities. Even when the governmental concern about the low paid was being announced, it was not clearly shown in incomes policy making. But, real incomes policies pursued through either the norm or the partial indexation were clearly tuned to compress the wage structure. Indeed, the partial indexation policy, even during its nominal stages, that is when it was not aiming to restrain real wages, was clearly in favour of the low paid and tuned to compress the dispersion of relative wages.

Overall, the course of incomes policy in Greece indicates the existence of a political cycle. Newly elected governments after taking-over used to award increases in order to compensate wage earners for income losses suffered during the period of their predecessors. They also used to adopt loose incomes policy in their way to re-election for a second term. And, then, after been re-elected, they used to discover the need to control real wages and cost-push inflation. It seems that, during the periods of formal incomes policy, wage determination remained part of the political game as it was throughout the post-war period. It is also noteworthy that a trend in favour of compressing pay relativities was in work and it was explicitly taken into account in incomes policy making since the late 1970s.

## 4.2.2. The Benchmark Period 1967-74.

The 1967-74 period, which is used as benchmark, should not be perceived as one free of wage controls. In fact, during those years there was no formal incomes policy promoted. Wages were largely being set unilaterally by the government. The right to strike was suspended by the military governments of the period. One strike of the drivers and the ticket collectors of the electric urban buses in Athens in 1971 is considered as an event of historical importance. No other strike activity was recorded. Probably, due to the political conditions, industrial conflict was not overt but covered. The massive migration abroad, while the level of unemployment was at its lowest level ever recorded in post-war Greece, suggests that an "exit" mechanism might have been at work.

The last National General collective agreement of the 1960s was signed in February 1967. As all such agreements referred to minimum wage rates, which were set at 20 per cent above those prescribed in the precedent general national collective agreement signed in December 1965. Two thirds of the increase were payable from the 1st February while the remainder was due from the 1st July 1967.

In April 1967 the military government seized the power and statutory regulation of minimum wages became the rule for wage determination. Throughout the period, the common rule in use for wage setting was based upon the growth of economy-wide

productivity in order to keep unit labour costs stable. Till 1971 the continuation of relatively loose labour market conditions helped the authorities in their aim of keeping aggregate wage increases in line with the rate of aggregate productivity advance. The floor of the wage structure was being set by minimum wages determined by the government. Collective bargaining was typical, but not essential. It was taking place between employers and industry-wide or occupation-based unions which were rather weak and had no strong links with the labour force they were supposed to represent.

Apart from the political conditions, developments in the official structure of trade-unions caused the collective bargaining processes to become rather typical and sterile. Trade-union officials were mainly governmental appointees. Indeed, collective agreements were subject to review by the Ministry of Labour either through legislation entitling the government to reject and/or modify any collective agreement and compulsory arbitration award or through the direct control of the compulsory arbitration courts. In fact, the government was influencing wage developments in two ways. First, through statutory adjustment of the minimum wage rates. Second, through dictating these adjustments as guidelines which had to be followed by the Ministry of Labour, the compulsory arbitration courts and the appointed trade-union leaders.

In those conditions, after the general national collective agreement signed in February 1967, the legal minimum wage was increased by 7 per cent on 1st October 1968 and by 8 per cent on

1st May 1969, with no further adjustment in 1970. In the early 1970s, an OECD (1971:14) report pointed out that "avoidance of wage inflation partly explains Greece' s success in containing price inflation". In the same report, it was intuitively noted that "the possibility that the causal connection runs the other way cannot be discarded". A year later similar comments praised the Greek performance in the field of wage and price inflation. "Greece' s favourable inflationary performance throughout the recent phase of generalised inflation abroad no doubt owes much to the policies pursued on the wage/price front. In respect of wages the aim has been to contain average nominal increases to the rate of productivity growth. Success in this field has been greater that in most member countries for various reasons -an important one having to do with the relative strength or weakness of trade-unions in different countries" OECD (1972:23).

While labour prices were controlled, labour quantities were not. Large scale immigration of Greek labour into Western Europe in the late 1960s and the early 1970s can be considered as a response of the labour force to such a statutory regulation of wage adjustments. Despite the declared rationale that wage rates should follow changes in productivity, they were in 1968-69 and 1972 falling behind rises in productivity, creating thus the higher ever recorded rates of profits in the Greek manufacturing sector. Presumably, political conditions along with favourable job prospects in European labour markets for migrant labour, mainly in West Germany where the Greek labour force had created a long tradition since the late 1950s, encouraged skilled workers

to quit the country.

Labour's option for exit caused the employers to bid up pay, thus increasing average wage rates. But the tightening of the labour market also forced the military governments to speed up adjustments in minimum wage rates. During 1973 three increases in minimum wages were awarded. In May the legal minimum wage for male workers was increased by 8.7 per cent; in September it was raised by 10.4 per cent; and in December a further 20 per cent increase was awarded. Nevertheless, labour shortages were not avoided. During the 1971-74 period, shortages of skilled and semi-skilled labour were being reported. The 1967-74 period ends with the restoration of a civilian government in July 1974. In September legal minimum wages for male workers were raised by 10 per cent so that employees be compensated for the accelerating inflation and income losses suffered during the period of the military governments.

To summarise, this period was one with neither free operation of the labour market nor formal incomes policy at work, with the government regulating directly wage determination. Indeed, there were no representative trade-unions in the labour market and no essential collective bargaining processes.

## 4.2.3. The Period 1975-81: Norm-based Policy.

Throughout the period 1975-81, with conservative governments in office a norm-based incomes policy was in operation. Successive governments aiming at decelerating wage inflation used to announce in the beginning of each year, when new annual collective agreements were to be contracted, a norm or guideline for nominal wage increases in two semestrial instalments.

As far as wage determination processes are concerned, the legal right of the Ministry of Labour to reject and/or modify collective agreements and compulsory arbitration awards was abandoned and the right of collective bargaining was re-established on the basis of the legislation observed in the mid-1960s, before the military regime. Minimum wage rates became again negotiable. They were being determined either by the General Confederation of Labour and the Employer's Associations or by the compulsory arbitration courts. The minimum wage rates were being established before any other rates and were serving as guideline for subsequent negotiations. Nevertheless, new appointees were during that period leading the General Confederation of Labour and the official trade-union structure.

The pattern of annual increases through two instalments was followed in minimum wage setting throughout the 1975-81 period. The governmental influence on wages determination was substantial for two main reasons. First, since the early 1970s, the public sector in its wide sense ( i.e. including civil

## Table 4.2.1

## THE NORM-BASED INCOMES POLICY
### 1975-1981

| Year | Inflation Jan to Jan change | Norm for Increases in Minimum Wages | Special Characte-ristics | Implemented via |
|------|------|------|------|------|
| 1975 | 13.4% | 12% :1 March<br>8% :1 Aug. | | General National Coll. Agr. |
| 1976 | 13.3% | 10% :13 Feb.<br>7% :1 July | | Compulsory Arbitration |
| 1977 | 12.2% | 10% :15 Feb.<br>5% :1 July | | General National Coll. Agr. |
| 1978 | 12.5% | 16% :1 Feb.<br>6% :1 July | | Compulsory Arbitration. |
| 1979 | 19.0% | 15% :1 Feb. | Only the low paid to get the full 15% | Compulsory Arbitration. |
| 1980 | 24.9% | 15% :1 Feb. | Only the low paid to get the full 15% | Compulsory Arbitration. |
| 1981 | 24.5% | 19% :1 Jan.<br>7% :1 July | Threshold clause for inflation higher than 20% | The norm for public sector used as guide-line in private sector. |

service and local government, public corporations and entities, the central bank, commercial banks and companies under state ownership), has been employing more than 35 per cent of employees in employment. In 1987, according to the annual Labour Survey, public sector employment amounted to 41 per cent. Second, in the private sector, formal collective bargaining was restricted at the secondary and tertiary level of the official trade-union structure. Indeed, the mechanism of compulsory arbitration was supposed to control any deviation from the norm for annual increases in wages.

During the 1975-77 period, in contrast to many other European and OECD countries, Greece was pursuing expansionary demand management aimed at achieving high levels of economic activity and employment. In technical terms, there were two main criteria for setting the norm : changes in consumer prices and productivity growth. In fact, as an advisor of the government at the time argued, the norm was ad hoc dominated by a rationale favouring the maintenance of real wages and salaries above their early 1970s levels (Economou, 1981:207). The economic criteria for setting the norm were becoming vague on its way from conception and design to announcement, as political criteria were taking priority.

In 1975, the new civilian government moved to what they considered as a cautious expansionary policy aimed to overcome the 1973-74 recession. In 1975 the minimum wage was increased by about 20 per cent, of which 12 per cent was effective on 1st March and the rest 8 per cent was scheduled for 1st August. In

1976 the norm for wage increases was ratified by the compulsory arbitration court which awarded a 17 per cent increase in minimum wage rates, again in two instalments. A 10 per cent increase was effective on 13th February with a 7 per cent becoming effective on 1st July. For 1977, in view of inflationary risks, the authorities decided to slow down increases in wage rates to a range below 15 per cent. Only the low paid were supposed to receive the full 15 per cent increase. Thus, minimum wages increased by 10 per cent on 15th February and 5 per cent on 1st July 1977. Favouring the low paid in order to reduce gradually any large disparities in pay became more emphasised in 1977 but was already declared as an aim of the wage policy in 1975.

In 1978 the view was adopted that the most important immediate task of economic policy was to bring down appreciably the rate of inflation. Domestic factors, notably the substantial annual nominal rises of wages and salaries were blamed. As the inflation rate remained comparatively high and accelerating in the first half of 1978, the government changed its stance and introduced more restrictive fiscal, monetary and incomes policy.

The anti-inflationary policy placed the emphasis on the moderation of labour cost increases. The norm for the annual increase in the minimum wage rates in 1979 was announced nearly seven months before the discussions for the next pay round were to begin. The pro-governmental leadership of the General Confederation of Labour was reluctant to sign a general national collective agreement involving the norm. The case was referred to

compulsory arbitration, which awarded an increase in line with the norm.   In 1979, instead of the usual increase in two semestrial instalments, an increase of 15 per cent was granted from the beginning  and for the whole year. Under conditions of accelerating inflation an identical incomes policy was adopted in 1980. The norm was set for a 15 per cent increase from the 15th February. In 1979 and 1980 the government made explicit the aim to stop the norm for increases in minimum wages from going automatically into every pay settlement as if the norm was only the floor for further collective bargaining. The emphasis was set so that to compress the wage structure.

Incomes policy in 1981, year of elections crucial for the conservative governments in office since 1974, was designed with two rather contradictory aims: first, to combat inflation, and second, to do it  without leading to a further sharp reduction in real earnings as it had happened in 1979 and 1980. On the basis of a forecast for an increase in consumer prices during the year lower than 20 per cent, the norm was set for a 12.5 per cent increase in January and  a further 7.5 per cent increase effective on 1st  July. A threshold clause was included in this year's policy. The authorities announced that there would be an additional increase by the end of the year if  inflation were to exceed the 20 per cent forecast. In the October 1981 election the conservative government was defeated and thus ended the period of norm-based incomes policy.

To summarise, this period was one with a formal incomes policy based upon the announcement and the promotion of the governmental

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norm for annual increases in nominal wages. Successive governments were trying to influence wage determination rather indirectly in comparison with the previous period. The compression of the wage structure became an explicit target of the norm-based incomes policy only after 1978.

### 4.2.4. The Period 1982-88: Partial Indexation Policy.

In the period 1982-88, with socialist governments in office, systems of partial indexation of nominal wages to the consumer prices index on a trimestrial basis were in operation. Nevertheless, in the same period, there were two wage freezes, in 1983 and 1985, and important amendments of both the plateau and the index used for the automatic and partial indexation.

In 1982, the new socialist government, to offset the erosion of real earnings of employees suffered in the 1979-81 period, and to fulfil electoral pledges, awarded substantial increases mainly for the lower paid wage and salary earners which took effect on 1st January 1982. Minimum wage rates were increased by about 32 per cent by fiat. Moreover the new government changed its stance with respect to incomes policy's rationales and mechanics. To preserve real wages, it introduced an indexation system for four-monthly adjustments on the basis of the consumer prices rises in the preceding four months. The indexation policy was also tuned in favour of the lower paid. Full indexation was provided for average monthly earnings up to Dr.35000. The band of earnings between Dr.35000 and Dr.55000 was indexed only to half of the

consumer prices increase. The next band, between Dr.55000 and Dr.80000 was entitled a 25 per cent indexation, while no indexation was provided for the band of monthly earnings above Dr.80000. This system of formal and partial indexation took effect in January 1982 with the first four-monthly adjustment due on 1st May.

As the wage increases awarded in 1982 along with deterioration in productivity performance fuelled the wage-price inflationary spiral, in 1983 the government was obliged to modify, only for 1983, the indexation scheme introduced the very previous year. It was decided to postpone the automatic adjustment due on 1st January 1983 for the rate of inflation over the previous four months. Only one half of this adjustment, namely 4.5 per cent, was awarded on 1st January with the second half scheduled for the 1st of May. The automatic adjustment due on 1st September was to compensate for consumer price increases during the first eight months of 1983. There was no modification of the scales for partial indexation. Indeed, those arrangements became, by law, compulsory for both the private and the public sector. Penalties were to be applied to those firms exceeding the guidelines for partial and delayed indexation. But there was no real mechanism to control for compliance with and evasion from the policy. This is why no real sanctions were imposed. Sanctions were speculative to ease the implementation of the wage freeze.

In 1984 and 1985 the indexation scheme was followed in its original version as it was conceived and adopted in 1982.

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**Table 4.2.2**

**THE INDEXATION INCOMES POLICY**
1982-1988

| Year | Annual Inflation | Automatic Increases in Wages Freezes | Scales of Indexation (in drachmas) | Implemented via |
|------|------|------|------|------|
| 1982 | 21.0% | 5000dr:1 Jan<br>7.3%:1 May<br>2.0%:1 Sep | 100% :<35000<br><br>50% :35000 -<br>55000 | Decree.<br>Compulsory<br>Arbitration. |
| 1983 | 20.2% | 8.8%:1 Jan<br>Wages Freeze<br>for 8 months<br>10.2%:1 Sep | 25% :55000 -<br>80000<br><br>0% :>80000 | Compulsory<br>by Decree. |
| 1984 | 18.5% | 8.9%:1 Jan<br>6.9%:1 May<br>2.2%:1 Sep | 100% :<50000 | General National<br>Coll. Agr. |
| 1985 | 19.3% | 8.2%:1 Jan<br>6.6%:1 May<br>2.1%:1 Sep<br>Wage Freeze<br>for 3 months<br>Index<br>Modified | 50% :50000 -<br>75000<br><br>25% :75000 -<br>100000 | General National<br>Coll. Agr.<br><br>Compulsory<br>by Decree. |
| 1986 | 23.0% | 4.5%:1 Jan<br>1.4%:1 May<br>4.7%:1 Sep | 0% :>100000 | General National<br>Coll. Agr. |
| 1987 | 16.4% | 4.1%:1 Jan<br>1.0%:1 May<br>4.5%:1 Sep | 100% :<60000<br><br>50% :60000 -<br>75000 | Compulsory<br>Arbitration. |
| 1988 | 13.5% | 8.5%:1 Jan<br>1.0%:1 May<br>6.5%:1 Sep | 25% :75000 -<br>100000<br><br>0% :>100000 | General National<br>Coll. Agr. |

Automatic pay adjustments were provided every four months. Partial indexation remained strongly in favour of the lower paid, with slightly modified scales, as full indexation was offered to monthly earnings up to Dr.50000. The next band covered earnings between Dr.50000 and Dr.75000. The band of earnings entitled a 25 per cent indexation was set between Dr.75000 and Dr.100000.

In 1982-85, unit labour costs were increasing rapidly, leading to a severe deterioration in the current account. It was then realised that wage rises every four months in line with the inflation performed during the past four months were not allowing inflationary expectations to decelerate and, indeed, were not allowing sufficient time for any productivity gains to exert any significant downward pressure on prices before the next rise in wages was to take place. But political calculus rather than economic considerations led the government to maintain the system of indexation in its original version. The government was then trying to compensate for rising unit labour costs through slow devaluation of the national currency.

After the socialist government was re-elected in the June 1985 election, an economic stabilisation programme was prepared. It was introduced in October 1985. One of its four main measures was a wage freeze for the last quarter of 1985 along with a modification of the indexation scheme. The rationale for the modified indexation scheme was to decelerate increases in unit labour costs. The indexation scheme underwent two-fold modification. First, the impact of import prices was excluded from indexation. Second, instead of adjusting wages on the basis

of the past price rises, the adjustment was, from January 1986, to be on the basis of the projected inflation. Corrective adjustments were announced for the end of 1986 and 1987 if the increase in consumer prices exceeded the projected inflation. This modified indexation scheme was also made, by law, compulsory for both the public and the private sector up to the end of 1987. Penalties were to be imposed to firms exceeding the guidelines for indexation. But these penalties were again notional due to the lack of effective mechanism for controlling compliance with and evasion from the guidelines for partial indexation. Scales for partial indexation remained stable in 1985 and 1986. In 1987 the limit for full indexation was raised to monthly earnings not exceeding the amount of Dr.60000, with the average level of monthly wage and salaries being, in 1987, just over Dr.70000.

In 1988, after the end of the stabilisation programme, the modified system of indexation was maintained and was used as the formal and official incomes policy. Wages were adjusted to projected inflation and a corrective percentage increase was due at the end of the year. The main elements in the package announced in November 1987 were : a 4.5 per cent increase in pay in the public sector to compensate for loss of purchasing power in 1987 (which was expected to produce a similar concession in the private sector where all restrictions on bargaining were lifted); freedom for employers to give productivity bonuses at the end of 1988 based on performance throughout the year; continuation of the indexation system with "imported inflation" being included in the calculations for pay up to Dr. 60000 and a

payment of the first automatic indexation increase from 1 January 1988. The incomes policy's emphasis remained on favouring the low paid.

The level of the adjustment which was to be made at the end of 1987 became a matter of political debate. The package agreed and announced by Mr. Simitis, the Greek Minister of National Economy, provided for that first increase to be delayed until May 1988, but Prime Minister Papandreou reversed the cabinet decision and this prompted Mr. Simitis' resignation as the government adopted a loose policy by awarding substantial increases in the beginning of 1988.

To summarise, during this period of formal indexation, incomes policy was at first tuned so that to preserve automatically real wages. Indeed, it was clearly oriented in favour of the low paid. But falls in productivity and rises in unit labour costs obliged the authorities to impose two short-term wage freezes and, then, to modify the indexation scheme and impose it through statutory regulation. Thus, the socialist governments which were claiming that they would protect real wages, mainly of the low paid, had to recourse to direct intervention in wage determination to implement incomes policies aimed to restrain real wages.

## 4.3. WAGE DEVELOPMENTS IN GREEK MANUFACTURING.

### 4.3.1. Wages and the Wage Structure across Manufacturing Industries.

Given the policies described in Section 4.2, Tables 4.3.1 and 4.3.2 illustrate the labour market conditions prevailing over the period 1965-88 and indicate the basic developments in the Greek manufacturing labour market as far as wages and unemployment are concerned. Developments regarding the nexus nominal wages-productivity-unit labour costs indicate the distinct characteristics over the periods under consideration. Productivity growth slowed down in 1975-81 and became negative in 1982-88. Unit labour costs soared in 1975-81, following the increases in nominal wages, and were slightly moderated during the 1985-87 stabilisation programme as increases in nominal wages were also restrained.

As far as real wages are concerned, while in 1975-81, compared to 1967-74, productivity growth slowed down, real wages rise at a rate twice that of productivity. In 1982-88, along with the negative productivity performance, real wages remained stable as the real incomes policy of the 1985-87 stabilisation programme counter-balanced the impressive increases awarded in 1982 and 1984. In other words, while both periods of norm-based and indexation policy are characterised by soaring unit labour costs, during the norm-based policy increases in real wages

exceeded productivity growth and during indexation policy negative productivity growth led to stagnating real wages. However, the course of real wage during the indexation period is less smooth than in earlier periods as is characterised by regressive moves. Distinct unemployment levels characterise also the periods under consideration. In 1967-74 and 1974-81 low levels of unemployment are observed, with the labour market being relatively tighter in 1974-81. But the period 1982-88 is characterised by relatively high unemployment.

The minimum wage as percentage of average wage played an important role in 1967-74, as it represented the 70 per cent of the average wage, but its ratio decreased in 1975-81 and in 1982-88 to levels around 55 per cent. These levels and trends are comparable to those prevailing in most industrialised market economies. In the late 1970s the relevant ratio was in the U.S. 1978:50 per cent, in Canada 1977:51 per cent, in Japan 1975-77:50 per cent, in Australia 1978:52 per cent, in France 1977:63 per cent and in the Netherlands 1977:75 per cent (Starr, 1981:42-47). But in the 1980s statutory minimum wages as a percentage of average earnings in the 1980s play a reduced role, though they remained highly significant in the Netherlands, Spain and France, where in 1984 they were equivalent to respectively 65 per cent, 41 per cent and 37 per cent of average manufacturing earnings OECD (1987:41). It appears that in Greece, compared to countries such as Spain and France, with socialist governments in office following indexation policies, minimum wages played a relatively more important role.

At the disaggregated level one interesting feature of the manufacturing wage structure is the high degree of stability over time in the hierarchy of relative wages in the twenty two-digit industrial branches. The coefficient of concordance in the ranking of the manufacturing wage structure for male workers in the period 1965-1988 is 0.82. This value means that male employees of certain high-wage industrial branches in Greek manufacturing maintained, throughout this period, their higher position in the wage structure.

The ranking in descending order of the average pay for male workers, as presented in Table 4.3.4, shows clearly that the composition of the top five high-wage industrial branches is very stable. Membership is restricted to the following branches : i) 34: Basic Metal Industries, ii) 32: Products of Petroleum and Coal iii) 28: Printing and Publishing, iv) 31: Chemicals, v) 38: Transport Equipment and vi) 33: Non-Metallic Mineral Products. In parallel, the club of the bottom five low-wage industrial branches has also stable composition and permanent members such as : i) 26: Furniture, ii) 25: Wood and Cork iii) 39: Miscellaneous Manufacturing iv) 36: Non-Electrical Machinery and v) 24: Clothing and Footwear.

This stability at the top and the bottom of the wage structure hierarchy is not a Greek-specific phenomenon. Marsden (1981) and Saunders and Marsden (1981) showed that in the 1970s there was an overall stability of inter-industry ranking in West European countries. Roughly the same industries were found among the

high-wage and among the low-wage industries in each country. The "energy" sector and printing dominated the high-wage industries, and textiles, clothing, and footwear were the most common among the low-wage. A more recent study by OECD (1985:92) reported findings consistent with previous research as at the lower end of the earnings distribution there was considerable uniformity across countries: textiles, clothing, and food and beverage industries dominated the low end. Moreover, while there was less uniformity across countries among the high-wage industries there was a tendency for chemical, primary metals, petroleum-refining and transportation equipment industries to be consistently in the high-wage sector.

Marsden (1983) reviewed the evidence on the factors accounting for different pay levels across industries. These factors include the relative skill composition of the industry labour force (skilled labour is paid better), the working conditions (wage differentials compensate for worse conditions), the industrial concentration in relatively few large firms (large firms pay better) and the sex composition of the labour force (female labour is paid less than male).

These factors account largely for different pay levels observed across the twenty two-digit industrial branches in Greek manufacturing. Table 4.3.5 presents estimates of the determinants of the manufacturing wage structure, based on cross-section regression analysis. Four variables, namely productivity, size, skill (as proxied by the share of salary earners to both salary and wage earners) and sex composition, are used as independent

variables in order to explain the manufacturing wage structure across twenty two-digit industrial branches. Size, skill and sex composition were found significant in 1981 and, indeed, their influence was stronger than 1976. In other words, factors such as size, sex and skill showed themselves up over the period 1976-81, during which the norm-based incomes policy was in use, strike activity soared and the informal system of collective bargaining became at work.

The inter-branch variance of hourly earnings can be described by the coefficient of variation. When the coefficient of variation is used as a summary indicator of wage differentials, the manufacturing wage structure in Greece, compared with other OECD countries, is classified in the category of those countries with considerable fluctuation -upward and downward- in the dispersion of inter-industry wages (OECD, 1985: 85). The OECD study arrived to this conclusion by examining the variability in wages for both male and female workers over the period 1975-83. Our analysis, presented in Table 4.3.6, arrived to the same conclusion by using wages of both sexes, of male workers and of female workers for a longer period that the OECD study, namely for 1965-88. However, throughout the period 1965-88, variability of wages across manufacturing was far greater in the case of male workers than in the case of female workers. Overall, the wage structure was rather narrow in 1967-74, became wider in 1975-81 and was compressed again in 1982-88 near its 1967-74 level.

In other European countries over the 1970s, as Saunders and

Marsden (1981:126) observed, the size of the differentials between industrial branches changed towards a very moderate narrowing. Only in Italy, where the differentials were rather wide in the early 1970s, was there a substantial narrowing, which appears to reflect the equalising policy of the unions. And only in Germany, where the differentials were relatively narrow, was there a widening. Thus in Greek manufacturing during the 1970s, and especially over the period 1975-81, a rather different course than in other European countries was followed. The widening of the wage structure in 1975-81 coincides with the use of the norm-based incomes policy as well as with the rise of strike activity and the creation of the informal system of collective bargaining.

4.3.2. Indices of Flexibility in Manufacturing Relative Wages.

When changes in relative wage ranking are used to measure the stability of the manufacturing wage structure, it appears that industry wage ranking in the Greek manufacturing is, as in the case of other European countries, relatively less stable, compared with non-European OECD members (OECD, 1985:85). The OECD study examined the ranking in industry wages for workers of both sexes. Our analysis of industry wages for all three categories of wages, presented in Table 4.3.6, found that the inclusion of wages of both sexes provides higher coefficients of variation indicating higher variability, as well as higher coefficients of determination indicating less unstable ranking. This implies that the existing variability does not affect the hierarchy as far as ranking is concerned, but evolves within the limits of the

existing hierarchy.

A different view on variability in industry wages is taken by focusing upon the evolution of the relative wage in each industrial branch separately, over the period 1966-81 and the sub-periods of distinct incomes policies. From Table 4.3.7, which presents the variability of relative wages over time in each of the twenty two-digit industrial branches, we can infer that there was no great variability in branch relative wages over the period 1966-88. According to Table 4.3.7, over the period 1966-88 only one industrial branch had a coefficient of variation exceeding 10 per cent. Six branches had a coefficient of variation exceeding 5 per cent. The majority, 13 branches, had a coefficient of variation which did not exceed 5 per cent.

The annual coefficients of variation in relative wages across manufacturing branches denote the existence of a rather flexible wage structure. But the branch coefficients of variation in relative wages over time indicate the existence of less variability in industry relative wages. This slight mismatch is of course due to methodological reasons as not exactly the same kind of variability is examined in each case. Annual inter-branch coefficients of variation refer to the positions of industrial branches relative to the average during a certain year. Branch coefficients of variation refer to the variability of industry relative wages over time with regard to their all-period average relative wage. Therefore the findings in Tables 4.3.6 and 4.3.7 indicate that while variability exists, does not result in

important changes in ranking as high-wage branches maintain their top positions and low-wage branches remain at the bottom of the hierarchy even if the gaps between them widen or narrow.

The examination of three sub-periods, selected according to the type of wage policy in force, leads to the identification of distinct levels of variability in the wage structure. At the aggregate level from Table 4.3.6 we infer that wage dispersion was wider in 1975-81 than in 1967-74 and 1982-88 for wages of both sexes and wages of male workers as well. At the disaggregated level, Table 4.3.7 where coefficients of variation estimated for the three sub-periods of distinct wage policies are compared, indicates that the sub-period 1968-74 is characterised by higher over time variability in relative wages of the majority of industrial branches. It is during that period that, in the context of rapidly expanding manufacturing employment, most changes in the relative position of branches occurred. During the sub-period 1982-88 relatively lower variability is observed, whatever happened in the precedent sub-periods. This suggests that, even if over the full period 1966-88 there was some, though small, "restructuring" in the wage structure, in 1982-88, a period during which growth in manufacturing employment slowed down and indexation policies were in use, this variability becomes smaller.

The examination of separate sub-periods suggests the existence of three patterns of over time variability in branch relative wages. First, there is a pattern of variability diminishing period after period. This pattern is mainly followed by low-wage

branches. Second, there is a pattern of variability peaking during 1975-81. This pattern is mainly followed by high-wage industries which display the higher variability in their relative wage during 1975-81. Third, the remaining branches, that is the majority, had the lowest variability in their relative wages during 1975-81. These centrifugal tendencies indicate that, when the evolution of relative wage of each industrial branch is considered separately, for the majority of them, the sub-period 1975-81 appears to be pivotal, in the sense that it is the one of the wider disturbances in the manufacturing wage structure as far as variability across manufacturing and over time are concerned.

Of course we must recognise the limits of indices such as the coefficient of variation in relative wages for assessing any flexibility in the wage structure. For such an assessment to be valid the wage structure should be related to other labour market outcomes such as changes in employment, productivity as well as trade-unions and collective bargaining developments. As the analyses with regard to the Australian wage structure by Keating (1983) and Withers et all (1983) suggest, there was more variation in wage relativities than it was usually alleged, even if the labour force responded to quite small adjustments to industry wage relativities. Indeed, as quantity adjustments (employment) are usually more important than price (wage) adjustments, an important role can be played by small variations in relative wages. From this point of view, simple indices of variability in relative wages when examined alone may understate

the actual flexibility in the wage structure with respect to the labour market outcomes.

To summarise the analysis of variability indicators, both at the aggregate and the disaggregated level, suggests that there is some flexibility in the inter-industry wage structure which should be examined. Moreover, the sub-period 1975-81 seems to hold a pivotal position as far as disturbances in the manufacturing wage structure are concerned. This seems consistent with the norm-based wage policy followed in 1975-81, which incorporated relatively less compulsion, as well as with the rise of the informal system of collective bargaining which took place then.

## 4.4. EMPLOYMENT REGULATION AND TRENDS IN EMPLOYMENT IN GREEK MANUFACTURING.

### 4.4.1. Employment Regulation and the Legislation on Collective Dismissals.

Employment protection and growth has been one of the main policy concerns in Greece during the post-war period. In the mid-1950s, in conditions which were considered as conditions of surplus labour in the primary sector of the economy, wage controls were aimed at securing employment growth in the manufacturing sector. Indeed, over the post-war period, while wage and employment policies were aimed at employment growth, stability in employment was considered as a principle which had to be met at any price and against any macro- or micro-economic rationale. The recurrence of the phenomenon of ailing industries nearly after every wave of important disturbances in the internal and external balance of the economy, and the governmental treatment of the recurring redundancies problem, have made clear that politicians, across the board, have been at odds with any alternative policy to subsidising ailing businesses, inefficient managements and insecure jobs -insecure in terms of market conditions.

Nowadays the question of flexibility with regard to employment regulation in the Greek labour market is mainly raised concerning the existing legislation on collective dismissals, on the basis of which labour adjustments have been taking place. The relevant

legislation was updated in 1983 to become in accordance with the EEC directive, adopted in 1975, on collective dismissals. In Law 1387/1983 strict limits are set for the maximum number of employees who could be dismissed per calendar month. According to it the collective dismissal of employees is permitted, for reasons not related to their individual contract, for a maximum of five employees in companies with between 20 and 50 employees, or for a maximum percentage of the employees in companies with more than 50 employees. For a dismissal to be considered as collective this percentage must be at least 2 per cent. The upper limit of permitted dismissals should not exceed the 10 per cent of the total number of employees, and it is subject to a maximum of 30 workers. The percentage of permitted dismissals is revised, after taking into account the situation of the labour market, at six-monthly intervals by Ministerial decision. For a long period stood in the range from 2 to 3 per cent.

Dismissals exceeding the afore-mentioned limits are deemed invalid and termination of the relevant labour contracts is considered as non-existent if, one month after their notification to the Manpower Employment Office, they have not been approved by the Minister of labour. Such approval is granted following an application by the employer which must submitted within 8 days of the notification of dismissals.

The main important change brought about by the updated legislation refers to requirements to inform and consult employee representatives and to tightened up provisions on notification and authorisation of collective dismissals. Authorisation of the

collective dismissal by the Ministry of Labour is essential for it to be lawful allowed and not revoked. According to the earlier legislation, before the introduction of Law 1387/1983, it was permitted, per calendar month and for economic reasons, the collective dismissal of 2 to 10 per cent of the workforce in firms normally employing at least 50 employees. The exact percentage was also determined and revised every six months (on 1 January and 1 July each year) by the Ministry of Labour. But, regardless of changes in legislation, for a long period stood, as already mentioned, between 2 and 3 per cent. This percentage has represented the maximum permitted level by which employers may reduce the size of their workforce, although the Ministry can waive this rule where firms find themselves in "special circumstances".

Nevertheless, for a long period, few permissions for exceeding the legislated maximum has been granted by the High Council of Labour, the advisory body which examines applications for exemption from the legislated limits and proposes to the Minister of Labour whether these applications should be accepted or not. Tables 4.4.1 and 4.4.2 provide information on cases of collective dismissals under the Minister of Labour's and the Perfect's jurisdiction respectively over the period 1983-86. In seven cases, out of the 29 reported, authorisation for exceeding the legislated limits was granted. Three of them, in 1986, involved the complete shut down of companies or plants. But this type of treatment was exceptional.

Indeed, this type of corporate economic adjustment was exceptional either. Ailing firms in need, inter alia, for labour adjustment became under the control of the state-owned and run "Organisation for Companies Rehabilitation" (OAE) set up in 1983, which since then controls firms employing more than 30000 salary and wage earners, i.e. nearly 10 per cent of the total employment of salary and wage earners in large-scale manufacturing industries. Natural wastage has been the only manpower policy used to minimise the excessive labour hoarding in the "problematic" firms.

The legislation on collective dismissals may have caused some kind of rigidity as far as the adjustment of employment at the firm level is concerned. Certainly, firms wanting to adjust employment downwards and cut the size of their workforce may rely on natural wastage. But the legislated limits may have also affected the way via which firms adjust employment upwards, in cases of short-term increases in demand for their products. The restrictive legislation on collective dismissals may have caused firms to channel their higher demand for labour towards higher overtime work rather than towards hiring more employees. It may also have worked in favour of more flexible forms of contracts such as subcontracting, short-term or fixed-term contracts etc. Therefore, the issue of labour adjustment consists the second half of the scissors by which firms adjust their workforce to short-term and long-term changes in the market. Indeed, it seems that in the Greek labour market, employment regulation has been stricter than wage regulation.

## 4.4.2. Manufacturing Employment: Change, Characteristics and Distribution.

The examination of changes in aggregate manufacturing employment as well as at a disaggregated level of industrial branches provides information about the conditions prevailing in the manufacturing labour market over the period under consideration.

Since the mid-1960s, aggregate employment in the Greek manufacturing sector increased in both absolute and relative terms. From this point of view, Greece, compared to the majority of OECD and EEC countries, is not a typical case as in those countries since the mid 1970s manufacturing employment has been falling. In Tables 4.4.3 and 4.4.4 we observe that since 1973 in the majority of OECD countries the average annual rate of change in manufacturing employment has been negative, and that the share of manufacturing employment in civilian employment has been decreasing. In both cases Greece has been exceptional. The average annual change slowed down but remained positive and the share of manufacturing continued increasing.

A recent OECD (1989:163) study pointed out that the historical experience suggests that, throughout the process of economic development, the share of industry in total employment follows an inverse U pattern. This pattern has been followed by most of the OECD countries as in the 1960s the share of industry employment rose, in the late 1960s peaked, and started declining after the first oil-shock in 1973. As Greece and Turkey experienced

increases in industry' s share in total employment, the study argued that this is compatible with the inverse U pattern as Greece and Turkey, countries with relatively lower levels of economic development, they have been, over the 1970s and the 1980s, in the upward side of the inverse U pattern.

The overall increases in manufacturing employment are not to say that employment was constantly expanding throughout the period 1965-88. Behind this increase, distinct periods can be discerned. Table 4.4.5 indicates that high rates of growth in manufacturing employment were observed from 1969 till 1974, in the aftermath of the first oil-shock. Then, till the second oil-shock in 1979, employment growth in manufacturing slowed down. A third phase of falling manufacturing employment followed. This fall was controlled, to a certain extent, by the stabilisation measures adopted in 1983 and in 1985-87.

When three different sub-periods, selected according to the wage policy in force, are examined, it appears that the sub-period 1967-74 was one of strong expansion in employment across the Greek manufacturing sector, clearly distinguished from the rest. After 1969 and till 1974, aggregate manufacturing employment was persistently increasing at the highest rates of the whole period 1965-88. In 1975-81, the increasing trend in aggregate manufacturing employment became weaker. Employment growth in manufacturing gave way to a fragile stability.

To discern whether the impressive increases in manufacturing employment in 1970, 1974 and 1983, came from expanding

establishments or new ones we examined the information provided by the Annual Industrial Surveys with regard to establishments and employment in large-scale manufacturing. Unfortunately the last one published and available refers to the year 1981. Therefore we can only discuss the impressive increases, exceeding 10 per cent, in 1970 and 1974. From 1969 to 1970 the number of large-scale manufacturing establishments (i.e. those employing more than 10 employees) decreased from 6356 to 6039. By contrast, from 1973 to 1974 the number of establishments increased from 6529 to 7767. It appears that while the 1969/70 increases came from existing establishments which expanded, the 1973/74 increases were caused by new establishments.

To trace further the sources of those increases in manufacturing employment, we examined the relevant information at the disaggregated level of two-digit branches. In 1969/70 in ten industrial branches employment increases exceeded the all-branches average increase of 10.76 per cent. In half of them the number of establishments increased either, while in the rest fewer establishments were recorded in 1970 compared to 1969. In 1973/74 in five manufacturing branches employment increases were above the all-branches average increase of 10.44 per cent, and in all of them the number of establishments increased too. Therefore it appears that the impressive expansion in manufacturing employment in 1970 and 1974 was largely due to the creation of new manufacturing establishments rather than to expanding old ones. This indicates that the workforce in those green-field sites was presumably involved in setting up from the very

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beginning new industrial relations as neither had a labour tradition and culture, nor was incorporated in already existing bargaining and trade-union structures, and, indeed, this happened in the context of the military regime.

As far as the composition of the manufacturing employment is concerned, Tables 4.4.6 and 4.4.7 suggest that over the period 1965-88 the percentage of salaried employment in the total number of manufacturing employees was steadily increasing. In fact, from 1965 to 1988, it was doubled. It was 17.1 per cent in 1965 and became 34.9 per cent in 1988. However, over the period 1976-88 the share of female labour in total manufacturing employment of salary and wage earners was rather stable around the level of 36 per cent.

At a disaggregated level, from 1965 to 1988, as Table 4.4.8 indicates, 15 out of 20 industrial branches increased their employment of wage earners. However, rates of expansion varied considerably over time and across the twenty two-digit industrial branches. From 1967 to 1974 employment of wage earners increased in 18 industrial branches. As Tables 4.4.5 and 4.4.11 indicate, for every single year during the 1967-74 period, on average, 14 industrial branches were increasing their employment of wage earners.

A different pattern characterises the sub-period 1975-81. From 1975 to 1981 6 industrial branches increased the employment of wage earners. Over the same sub-period and for every single year, on average, 7 industrial branches were expanding employment of

wage earners. As the increasing trend in aggregate manufacturing employment became weaker it seems that, in 1975-81 , employment growth in certain industries was counter-balanced by job losses in others.

During 1982-88, employment performance of manufacturing was rather contradictory. From 1982 to 1988 11 industrial branches increased the number of wage earners employed by them. For each single year, on average, 8 industrial branches were expanding their employment of wage earners. However, as negative developments dominated at the level of aggregate manufacturing employment this sub-period, it seems that employment growth in certain expanding industrial branches was outnumbered by job losses in contracting branches.

The distribution of employment in Greek manufacturing throughout the period 1965-88 is highlighted by Tables 4.4.6-4.4.11. Overall, the distribution of manufacturing employment across industrial branches is shaped by the increasing dominance of four industrial branches. From Tables 4.4.9 and 4.4.10 becomes clear that, on average, four industrial branches, namely 20:Food Industry, 23:Textiles, 24:Footwear and Clothing and 38:Transport Equipment, account for more than 50 per cent of wage earners in manufacturing employment. The stability of their share above 50 per cent and its slight increase over time indicate concentration rather than dispersion of employment across the twenty two-digit manufacturing branches.

The common characteristic in these four industrial branches is

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that, apart from being leaders in terms of employment shares, the hierarchy among them in terms of ranking in the distribution of employment is stable. Branch 23: Textiles employs the higher percentage of wage earners in manufacturing employment, on average, 19.7 per cent. Branch 20: Food industry employs, on average 12.8 per cent. Branch 24: Footwear and Clothing employs 11.8 per cent. And branch 38: Transport Equipment employs 7.8 per cent of wage earners in manufacturing employment.

Given the lack of statistical information on the occupational composition of employment in the Greek manufacturing sector, the male/female as well as the salary/wage earners composition of employment can be used as a rough indication of the skill mix. While female employment is usually associated with relatively lower skills, the employment of salary earners is associated with relatively higher skills. From this point of view, Table 4.4.7 suggests that in three of the four above mentioned branches, namely in 23: Textiles, 20: Food and 24: Footwear and Clothing, the labour force is composed by relatively high percentages of female wage earners. Only in branch 38: Transport Equipment the labour force is strongly dominated by male wage earners. Furthermore, as Table 4.4.6 suggests, the labour force in the branch 38 is also characterised by above-average employment of salary earners, while in the three other branches of high shares in manufacturing employment, the labour force is characterised by below-average employment of salary earners.

To summarise, the analysis on the evolution of manufacturing

employment at the aggregate and the disaggregated level suggests that, in spite of the overall expansion of manufacturing employment from 1965 to 1988, only the sub-period 1967-74 was one of very strong demand for labour in the manufacturing sector. In 1967-74 along with the rapid expansion in manufacturing employment a new generation of employees who had no labour tradition regarding collective bargaining and trade-unions was brought in largely new manufacturing establishments. Furthermore, the analysis of distribution of manufacturing employment across industrial branches suggests that manufacturing employment has been increasingly concentrated in a small number of industrial branches, actually four out of twenty. It is noteworthy that, as the information provided in Appendix 2 indicates, these observations, which refer to employment of wage earners, are also valid for employment of both salary and wage earners in manufacturing.

## 4.5. CONCLUSIONS.

In addition to the extensive procedural regulation of collective
bargaining, analysed in Chapters 2 and 3, extensive regulation is
also observed as far as substantial aspects, namely wages and
employment, are concerned. Formal incomes policies were
introduced after 1975. In 1975-81 norm-based incomes policies
were in use. In 1982-88 indexation policies were adopted. In this
context the accelerated growth of real wages observed in 1975-81
slowed down in 1982-88 and became negative during the
1985-87 stabilisation programme.

While the distinction between high-wage and low-wage industrial
branches remained very stable throughout the period 1965-88, the
wage structure became, compared to 1967-74, wider in 1975-81, to
narrow again in 1982-88. The variability in the manufacturing
wage structure did not undermine the ranking of industries in the
wage structure. However, major disturbances in the manufacturing
wage structure are observed in 1975-81, i.e. the period of norm-
based incomes policy during which strike activity soared and
informal collective bargaining procedures at the company and
plant level were set up. The observed inter-branch and over
time variability in relative wages indicates the existence of
some flexibility which must be examined in conjunction with
employment developments.

Employment adjustment has been under strict regulation too. The

Ministry of Labour maintained all over the period the right to regulate employment adjustments by setting limits on collective dismissals. In the context of this regulation, over the period 1965-88, contrary to what happened in other industrialised market economies, in Greece manufacturing employment was expanding. The period 1967-74 was the main period of rapid expansion in manufacturing employment, expansion largely associated with the creation of new establishments. In later periods the expansion of manufacturing employment was slower. Throughout the period 1965-88 manufacturing employment was rather concentrated to low-wage industries where relatively higher proportions of female labour are employed.

Overall, in the context of extensive regulation of the labour market via incomes policy and legislation on collective dismissals, the observed variability in the wage structure along with the employment growth and restructuring in the Greek manufacturing sector set a scene which prima facie is dominated by rigidities. However a certain variability in wages and employment is observed. In other words it seems that contradictory forces conducive to both rigidities and flexibilities operate in the labour market of the Greek manufacturing.

## Table 4.3.1

**NOMINAL, REAL, RELATIVE WAGES, PRODUCTIVITY, UNIT LABOUR COSTS, MINIMUM WAGE AS PERCENTAGE OF AVERAGE AND FEMALE AS PERCENTAGE OF MALE WAGE IN GREEK MANUFACTURING INDUSTRIES**
Industrial and Handicraft Establishments (>10)
1965-1988

| Year | Nominal Wages (a) change % | Real Wages (b) % | Relative (c) % | Producti vity (d) change % | Unit Labour (e) change % | Minimum Costs (f) % | Female Wage (g) % |
|------|------|------|------|------|------|------|------|
| 1965 | 8.26 | 5.16 | 18.06 | 2.03 | 3.21 | 67.80 | 61.86 |
| 1966 | 12.96 | 7.96 | 16.21 | 10.48 | 0.82 | 70.49 | 62.41 |
| 1967 | 9.47 | 7.77 | 12.77 | 4.09 | 9.97 | 74.74 | 67.59 |
| 1968 | 6.46 | 6.16 | 12.32 | 9.43 | -0.19 | 74.35 | 68.83 |
| 1969 | 8.13 | 5.73 | 12.73 | 9.07 | 2.88 | 74.78 | 69.23 |
| 1970 | 6.49 | 3.29 | 14.12 | -0.18 | 0.68 | 72.28 | 68.16 |
| 1971 | 8.85 | 5.85 | 13.83 | 3.04 | 3.81 | 66.69 | 65.99 |
| 1972 | 8.84 | 4.54 | 13.77 | 9.85 | -0.55 | 65.71 | 67.29 |
| 1973 | 17.67 | 2.17 | 14.88 | 7.62 | 2.45 | 59.06 | 64.96 |
| 1974 | 24.73 | -2.17 | 14.25 | -11.35 | 32.17 | 71.62 | 66.98 |
| 1975 | 21.35 | 7.95 | 14.49 | 3.29 | 18.70 | 69.66 | 69.47 |
| 1976 | 31.29 | 17.99 | 16.63 | 5.21 | 21.32 | 63.37 | 70.30 |
| 1977 | 22.34 | 10.24 | 17.94 | -1.06 | 22.15 | 59.76 | 68.72 |
| 1978 | 23.56 | 10.96 | 18.95 | 6.97 | 19.73 | 58.90 | 69.11 |
| 1979 | 21.85 | 2.85 | 17.52 | 5.88 | 16.22 | 55.59 | 67.99 |
| 1980 | 26.13 | 1.23 | 18.67 | 2.34 | 25.50 | 50.31 | 67.79 |
| 1981 | 26.54 | 2.04 | 18.56 | -0.05 | 26.30 | 49.83 | 67.18 |
| 1982 | 30.37 | 9.37 | 15.58 | -3.03 | 37.78 | 57.86 | 73.12 |
| 1983 | 20.49 | 0.29 | 14.21 | -8.94 | 18.68 | 58.18 | 74.65 |
| 1984 | 25.70 | 7.20 | 14.49 | 2.34 | 22.24 | 56.13 | 76.18 |
| 1985 | 18.56 | -0.74 | 13.59 | -1.75 | 17.50 | 55.73 | 77.62 |
| 1986 | 12.64 | -10.36 | 14.63 | -0.79 | 12.50 | 53.24 | 76.89 |
| 1987 | 9.93 | -6.47 | 14.04 | -0.70 | 10.75 | 53.39 | 77.57 |
| 1988 | 15.29 | 1.79 | 13.94 | 4.09 | 20.50 | 56.82 | 77.71 |
| Average | | | | | | | |
| 1967-74 | 11.33 | 4.17 | 13.59 | 3.95 | 5.68 | 69.90 | 67.38 |
| 1975-81 | 24.72 | 7.61 | 17.54 | 3.23 | 21.41 | 58.20 | 68.65 |
| 1982-88 | 19.00 | 0.15 | 14.36 | -1.26 | 19.99 | 55.91 | 76.25 |

Notes:
a. Hourly wage for male workers.
b. Change in nominal hourly wage minus change in consumer prices index.
c. Coefficient of variation in hourly wages for male workers across twenty two-digit industrial branches.
f. National minimum wage as percentage of average daily earnings.
g. Female hourly earnings as percentage of male earnings.

Sources:
a. NSSG, Monthly Statistical Bulletin, Table 11, Various Issues.
f. Minimum Wages determined by the National General Collective Agreements.

**Table 4.3.2**

**INFLATION AND LABOUR MARKET CONDITIONS IN GREECE**
**1965-1988**

| Year | Inflation[a] | Registered Unemployment[b] | Manufacturing Employment[c] | Unemployment[d] |
|------|-----------|--------------|--------------|--------------|
| | | Year to Year Change (%) | | Level |
| 1965 | 3.1 | - 1.50 | 3.56 | 4.82 |
| 1966 | 5.0 | 1.52 | 3.05 | 5.01 |
| 1967 | 1.7 | 29.20 | -0.67 | 5.40 |
| 1968 | 0.3 | -11.92 | -0.67 | 5.57 |
| 1969 | 2.4 | - 9.84 | 3.77 | 5.25 |
| 1970 | 3.2 | -26.80 | 4.66 | 4.16 |
| 1971 | 3.0 | -37.68 | 6.14 | 3.14 |
| 1972 | 4.3 | -21.37 | 3.78 | 2.11 |
| 1973 | 15.5 | -10.05 | 6.22 | 1.97 |
| 1974 | 26.9 | 26.28 | 1.07 | 2.05 |
| 1975 | 13.4 | 29.19 | 0.83 | 2.29 |
| 1976 | 13.3 | -27.04 | 6.12 | 1.91 |
| 1977 | 12.1 | 8.38 | 4.64 | 1.69 |
| 1978 | 12.6 | 11.71 | 3.09 | 1.83 |
| 1979 | 19.0 | 2.10 | 2.74 | 1.89 |
| 1980 | 24.9 | 17.86 | 1.14 | 2.75 |
| 1981 | 24.5 | 14.29 | 1.13 | 4.05 |
| 1982 | 21.0 | 19.05 | 0.12 | 5.83 |
| 1983 | 20.2 | 21.77 | -1.18 | 7.86 |
| 1984 | 18.5 | 15.56 | 0.38 | 8.14 |
| 1985 | 19.3 | 24.93 | -1.19 | 7.81 |
| 1986 | 23.0 | 19.47 | 0.06 | 7.38 |
| 1987 | 16.4 | 6.74 | -1.26 | 7.40 |
| 1988 | 13.5 | -4.51 | 1.02 | 7.74 |
| Average | | | | |
| 1967-74 | 7.2 | -7.77 | 3.04 | 3.71 |
| 1975-81 | 14.7 | 8.07 | 2.81 | 2.34 |
| 1982-88 | 18.8 | 14.72 | -0.03 | 7.45 |

Notes:
a. January to January percent change in consumer prices index.
b. Change in the annual average index for registered unemployment.
c. Change in the annual average employment of salary and wage earners in manufacturing.
d. Number of unemployed as percentage of the total labour force.

Sources:
a. OECD, Historical Statistics, 1960-1988, Table 8.11, page 83.
b. NSSG, Monthly Statistical Bulletin, Table 9, page 13, various issues.
c. NSSG, Monthly Statistical Bulletin, Table 8, page 13, various issues.
d. OECD, Historical Statistics, 1960-1986, Table 2.15, page 39, and OECD, Economic Outlook, November 1989, Table D4, page 67.

## Table 4.3.3

### KEYS FOR INDUSTRIAL BRANCHES IN MANUFACTURING SECTOR

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| Branch Code | Manufacturing Industry Description |
|---|---|
| 20 | Food Manufacturing |
| 21 | Beverage Industries |
| 22 | Tobacco manufactures |
| 23 | Manufacture of Textiles |
| 24 | Footwear and Clothing |
| 25 | Wood and Cork |
| 26 | Furniture |
| 27 | Manufacture of Paper and Paper Products |
| 28 | Printing and Publishing |
| 29 | Manufacture of Leather |
| 30 | Manufacture of Rubber and Plastic |
| 31 | Manufacture of Chemicals and Chemical Products |
| 32 | Manufacture of Products of Petroleum and Coal |
| 33 | Manufacture of non-metallic Mineral Products |
| 34 | Basic Metal Industries |
| 35 | Manufacture of Metal Products |
| 36 | Machinery and Appliances (non-electrical) |
| 37 | Manufacture of Electrical Machinery, Apparatus, Appliances and Supplies |
| 38 | Manufacture of Transport Equipment |
| 39 | Miscellaneous Manufacturing Industries |

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Note: Classification of branches in the Greek Standard Industrial Classification, according to which data and indices are compiled and published by the National Statistical Service in Greece (NSSG) is based upon and corresponds to the "International Standard Industrial Classification of All Economic Activities" (ISIC-United Nations, Statistical Papers, Ser. M, No 4, Rev. 2).

## Table 4.3.4

**RANKING OF INDUSTRIAL BRANCHES IN THE WAGE STRUCTURE**
(descending order)
1965-1988

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Coefficient of Concordance[a] = 0.82

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Industrial
Branch[b]

| Year | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|------|------|------|------|------|----|------|------|------|----|------|
| 1965 | 10.5 | 9.0 | 7.5 | 10.5 | 14 | 20.0 | 19.0 | 16.5 | 1 | 12.0 |
| 1966 | 14.5 | 8.5 | 4.5 | 10.0 | 16 | 20.0 | 19.0 | 14.5 | 1 | 12.0 |
| 1967 | 12.5 | 14.0 | 8.0 | 6.0 | 11 | 19.0 | 20.0 | 17.0 | 2 | 10.0 |
| 1968 | 11.0 | 17.0 | 8.0 | 6.0 | 14 | 19.5 | 19.5 | 12.0 | 1 | 9.0 |
| 1969 | 10.0 | 17.0 | 14.0 | 5.5 | 10 | 20.0 | 19.0 | 13.0 | 2 | 8.0 |
| 1970 | 13.0 | 17.0 | 15.0 | 7.5 | 10 | 20.0 | 16.0 | 11.0 | 2 | 7.5 |
| 1971 | 15.0 | 17.0 | 15.0 | 5.0 | 4 | 19.0 | 13.0 | 12.0 | 2 | 11.0 |
| 1972 | 14.0 | 17.5 | 17.5 | 7.0 | 6 | 19.0 | 15.0 | 9.0 | 2 | 12.0 |
| 1973 | 16.0 | 10.5 | 10.5 | 9.0 | 18 | 20.0 | 19.0 | 17.0 | 2 | 14.0 |
| 1974 | 14.0 | 12.5 | 16.0 | 7.0 | 17 | 19.0 | 20.0 | 9.5 | 2 | 15.0 |
| 1975 | 13.0 | 17.0 | 11.5 | 7.0 | 16 | 15.0 | 19.0 | 9.0 | 2 | 11.5 |
| 1976 | 15.0 | 17.0 | 10.0 | 7.5 | 9 | 16.0 | 20.0 | 7.5 | 2 | 13.0 |
| 1977 | 15.0 | 14.0 | 9.0 | 11.0 | 17 | 16.0 | 20.0 | 7.5 | 2 | 12.0 |
| 1978 | 15.0 | 14.0 | 8.0 | 11.0 | 16 | 18.0 | 19.0 | 10.0 | 2 | 13.0 |
| 1979 | 15.0 | 14.0 | 13.0 | 10.0 | 17 | 18.0 | 20.0 | 8.0 | 2 | 12.0 |
| 1980 | 18.0 | 15.0 | 13.0 | 10.0 | 14 | 16.0 | 19.0 | 8.0 | 2 | 12.0 |
| 1981 | 17.0 | 12.0 | 11.0 | 10.0 | 15 | 18.0 | 19.0 | 9.0 | 2 | 14.0 |
| 1982 | 15.0 | 12.0 | 8.5 | 8.5 | 16 | 14.0 | 19.0 | 10.0 | 4 | 17.0 |
| 1983 | 14.0 | 11.0 | 7.0 | 9.0 | 17 | 16.0 | 19.0 | 8.0 | 6 | 18.0 |
| 1984 | 14.0 | 9.0 | 6.0 | 11.0 | 18 | 15.0 | 20.0 | 8.0 | 7 | 17.0 |
| 1985 | 16.0 | 10.0 | 9.0 | 7.0 | 18 | 19.0 | 20.0 | 8.0 | 5 | 13.5 |
| 1986 | 15.0 | 10.0 | 7.0 | 8.0 | 19 | 18.0 | 20.0 | 9.0 | 6 | 14.0 |
| 1987 | 15.0 | 12.0 | 7.0 | 8.0 | 17 | 19.0 | 20.0 | 11.0 | 6 | 14.0 |
| 1988 | 16.0 | 11.0 | 8.0 | 7.0 | 17 | 18.0 | 20.0 | 12.0 | 6 | 15.0 |

(continued)

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Notes:

a. Coefficient of Concordance = Variance of rank sums / maximum possible variance of rank sums. Called also Kendall's W statistic. By definition cannot be negative and its maximum value is 1. For further information see Hays, W. L. 1973: *Statistics for Social Sciences*, Holt, Rinehart and Winston Inc., New York, pp. 801-803.

b. For keys see Table 4.3.3.

## Table 4.3.4 (continued)

### RANKING OF INDUSTRIAL BRANCHES IN THE WAGE STRUCTURE
(descending order)
1965-1988

| Industrial<br>Branch[b]<br>Year | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
|------|------|-----|----|-----|----|------|------|------|------|------|
| 1965 | 15.0 | 4.0 | 3 | 5.5 | 2 | 13.0 | 18.0 | 16.5 | 5.5 | 7.5 |
| 1966 | 11.0 | 6.5 | 3 | 4.5 | 2 | 13.0 | 18.0 | 17.0 | 6.5 | 8.5 |
| 1967 | 9.0 | 4.0 | 3 | 5.0 | 1 | 15.5 | 18.0 | 15.5 | 12.5 | 7.0 |
| 1968 | 7.0 | 4.0 | 3 | 5.0 | 2 | 14.0 | 18.0 | 16.0 | 14.0 | 10.0 |
| 1969 | 7.0 | 5.5 | 3 | 4.0 | 1 | 10.0 | 18.0 | 16.0 | 12.0 | 15.0 |
| 1970 | 5.0 | 6.0 | 3 | 4.0 | 1 | 12.0 | 19.0 | 14.0 | 9.0 | 18.0 |
| 1971 | 7.0 | 9.0 | 3 | 8.0 | 1 | 10.0 | 18.0 | 15.0 | 6.0 | 20.0 |
| 1972 | 4.0 | 5.0 | 3 | 8.0 | 1 | 11.0 | 16.0 | 13.0 | 10.0 | 20.0 |
| 1973 | 7.5 | 5.0 | 4 | 7.5 | 1 | 6.0 | 12.0 | 13.0 | 3.0 | 15.0 |
| 1974 | 6.0 | 5.0 | 4 | 9.5 | 1 | 8.0 | 11.0 | 12.5 | 3.0 | 18.0 |
| 1975 | 10.0 | 5.0 | 3 | 6.0 | 1 | 8.0 | 20.0 | 14.0 | 4.0 | 18.0 |
| 1976 | 11.0 | 4.5 | 3 | 6.0 | 1 | 12.0 | 18.0 | 14.0 | 4.5 | 19.0 |
| 1977 | 7.5 | 5.0 | 3 | 6.0 | 1 | 10.0 | 18.0 | 13.0 | 4.0 | 19.0 |
| 1978 | 9.0 | 5.0 | 3 | 6.0 | 1 | 7.0 | 17.0 | 12.0 | 4.0 | 20.0 |
| 1979 | 9.0 | 5.0 | 3 | 6.0 | 1 | 7.0 | 16.0 | 11.0 | 4.0 | 19.0 |
| 1980 | 9.0 | 5.0 | 3 | 6.0 | 1 | 7.0 | 17.0 | 11.0 | 4.0 | 20.0 |
| 1981 | 8.0 | 5.0 | 3 | 6.0 | 1 | 7.0 | 16.0 | 13.0 | 4.0 | 20.0 |
| 1982 | 7.0 | 2.0 | 3 | 6.0 | 1 | 11.0 | 18.0 | 13.0 | 5.0 | 20.0 |
| 1983 | 10.0 | 4.0 | 2 | 5.0 | 1 | 12.0 | 15.0 | 13.0 | 3.0 | 20.0 |
| 1984 | 10.0 | 3.0 | 2 | 5.0 | 1 | 12.0 | 16.0 | 13.0 | 4.0 | 19.0 |
| 1985 | 12.0 | 4.0 | 2 | 6.0 | 1 | 11.0 | 13.5 | 15.0 | 3.0 | 17.0 |
| 1986 | 12.0 | 5.0 | 2 | 4.0 | 1 | 11.0 | 13.0 | 16.0 | 3.0 | 17.0 |
| 1987 | 10.0 | 5.0 | 2 | 4.0 | 1 | 9.0 | 13.0 | 16.0 | 3.0 | 18.0 |
| 1988 | 9.0 | 4.0 | 2 | 5.0 | 1 | 10.0 | 13.0 | 14.0 | 3.0 | 19.0 |

Note: b. For keys see Table 4.3.3.

## Table 4.3.5

## DETERMINANTS OF THE WAGE STRUCTURE IN GREEK MANUFACTURING
### 1976, 1981

Dependent variable: Manufacturing Wages.
Number of observations = 20 (two-digit industrial branches).

| Year | 1976 | | 1981 | |
|---|---|---|---|---|
| Constant | 41.21 (11.72) | [0.00] | 125.05 (8.61) | [0.00] |
| Productivity | 0.01 (0.73) | [0.20] | -0.03 (-1.10) | [-0.34] |
| Size | 0.11*** (2.66) | [0.57] | 0.50***** (3.40) | [0.73] |
| Skill | -0.002 (-0.02) | [-0.003] | 0.76* (1.86) | [0.45] |
| Female | -0.16**** (-2.96) | [-0.36] | -0.55**** (-2.74) | [-0.39] |
| $R^2$ | .83 | | .77 | |
| $R^2$-adjusted | .79 | | .71 | |
| F-value | 18.42 | | 12.68 | |

Notes:

Wages = Hourly wage of workers of both sexes in branch i.
Productivity = Value added per employee in branch i.
Size = Number of employees per establishment in branch i.
Skill = Because of data unavailability we use as a proxy the share of salary earners in employment of salary and wage earners in branch i.
Female = Share of female wage earners in wage earners of both sexes in branch i.

Levels of significance: *=0.10, ***=0.025, ****=0.01, *****=0.005.
t-statistics in parentheses.
Standardised estimates in brackets.

## Table 4.3.6

**INTER-BRANCH VARIABILITY IN THE GREEK MANUFACTURING WAGE STRUCTURE**
### 1965-1988

| Index | Coefficient of Variation[a] | | | R-square[b] | | |
|-------|------------|------|--------|------------|------|--------|
| Year | Both Sexes | Male | Female | Both Sexes | Male | Female |
| 1965 | 21.29 | 18.06 | 11.47 | 1.00 | 1.00 | 1.00 |
| 1966 | 19.35 | 16.23 | 7.10 | .97 | .95 | .58 |
| 1967 | 15.47 | 12.77 | 6.48 | .89 | .86 | .56 |
| 1968 | 14.43 | 12.34 | 5.75 | .86 | .82 | .32 |
| 1969 | 14.90 | 12.74 | 4.68 | .82 | .78 | -.07 |
| 1970 | 16.99 | 14.08 | 5.39 | .81 | .74 | .15 |
| 1971 | 16.72 | 13.86 | 6.44 | .78 | .70 | .21 |
| 1972 | 16.38 | 13.77 | 8.13 | .74 | .67 | .25 |
| 1973 | 18.47 | 14.88 | 8.42 | .85 | .85 | -.19 |
| 1974 | 17.04 | 14.25 | 5.67 | .78 | .71 | -.14 |
| 1975 | 17.13 | 14.49 | 5.97 | .83 | .81 | .35 |
| 1976 | 19.60 | 16.63 | 7.88 | .79 | .75 | .17 |
| 1977 | 20.80 | 17.95 | 8.51 | .84 | .79 | .19 |
| 1978 | 21.36 | 18.95 | 8.72 | .86 | .81 | .03 |
| 1979 | 20.49 | 17.52 | 8.38 | .87 | .84 | .19 |
| 1980 | 21.14 | 18.67 | 10.23 | .84 | .81 | -.04 |
| 1981 | 20.58 | 18.56 | 12.41 | .82 | .79 | -.49 |
| 1982 | 17.23 | 15.59 | 9.13 | .71 | .62 | -.11 |
| 1983 | 16.32 | 14.21 | 8.84 | .68 | .58 | -.02 |
| 1984 | 16.47 | 14.49 | 8.47 | .67 | .57 | .29 |
| 1985 | 15.40 | 13.59 | 7.50 | .71 | .66 | .48 |
| 1986 | 16.72 | 14.63 | 8.40 | .70 | .61 | .51 |
| 1987 | 15.82 | 14.04 | 8.02 | .68 | .60 | .51 |
| 1988 | 15.68 | 13.94 | 7.76 | .67 | .60 | .36 |
| **Average** | | | | | | |
| 1965-66 | 20.32 | 17.15 | 9.29 | | | |
| 1967-74 | 16.30 | 13.59 | 6.37 | | | |
| 1975-81 | 20.16 | 17.54 | 8.87 | | | |
| 1982-88 | 16.23 | 14.36 | 8.30 | | | |

Notes: a. Coefficient of Variation= Standard Deviation/Mean,
n=20 (two-digit industrial branches).
b. R-square is used as indicator of stability in the
wage structure by correlating relative wages of
industries among pairs of years, one of which is the
base year. In this case 1965 is used as the base year.

## Table 4.3.7

### OVER TIME VARIABILITY OF BRANCH RELATIVE WAGES
### IN GREEK MANUFACTURING
### Selected Periods

| Branch | Coefficient of Variation in Period | | | |
| | 1966-88 | 1968-74 | 1975-81 | 1982-88 |
|---|---|---|---|---|
| 20 | 3.2 | 3.2 | 2.0 | 1.1 |
| 21 | 4.9 | 4.1 | 3.2 | 2.7 |
| 22 | 8.0 | 2.6 | 3.5 | 1.6 |
| 23 | 4.0 | 1.4 | 0.8 | 1.9 |
| 24 | 7.6 | 7.1 | 3.9 | 2.1 |
| 25 | 3.2 | 3.8 | 1.5 | 1.7 |
| 26 | 6.0 | 4.2 | 1.9 | 2.6 |
| 27 | 4.4 | 3.7 | 1.5 | 2.4 |
| 28 | 10.5 | 2.4 | 5.5 | 2.6 |
| 29 | 4.6 | 3.6 | 2.0 | 2.4 |
| 30 | 3.7 | 2.6 | 1.9 | 1.5 |
| 31 | 3.6 | 3.4 | 2.1 | 2.7 |
| 32 | 5.7 | 3.1 | 4.6 | 3.9 |
| 33 | 3.6 | 4.3 | 1.6 | 2.0 |
| 34 | 4.7 | 3.4 | 3.6 | 3.0 |
| 35 | 1.6 | 1.3 | 1.8 | 1.1 |
| 36 | 3.3 | 4.0 | 2.4 | 1.9 |
| 37 | 2.4 | 2.5 | 2.8 | 2.0 |
| 38 | 6.0 | 7.9 | 2.1 | 2.4 |
| 39 | 7.9 | 5.9 | 4.0 | 4.7 |

Note:

Wages refer to hourly wage of workers of both sexes. Relative
wage in branch i is compiled by dividing the wage in branch i by
the average wage of all branches. Variability is calculated by
estimating the coefficient of variation (standard deviation /
mean) in each branch relative wage over the selected periods. The
number of observations in each period is 1966-88:23, 1968-74:7,
1975-81:7, 1982-88:7. For keys see Table 4.3.3.

## Table 4.4.1

**CASES OF COLLECTIVE DISMISSALS UNDER MINISTER OF LABOUR JURISDICTION**
**1983-1986**

| Period | Total Number of Employees | Number of Employees Planned to Be Dismissed | Ministerial Decision |
|---|---|---|---|
| 1983[a] | | | |
| Firm 1 | 230 | 96 | Authorisation Denied |
| Firm 2 | 3000 | 96 | Agreement after Consultation |
| Firm 3 | 80 | 29 | Authorisation Denied |
| Firm 4 | 100 | 49 | Agreement after Consultation |
| | | | |
| 1984 | | | |
| Firm 5 | 153 | 12 | Authorisation Granted |
| Firm 6 | 183 | 49 | Authorisation Denied |
| Firm 7 | 67 | 7 | Authorisation Denied |
| Firm 8 | 335 | 100 | Authorisation Denied |
| Firm 9 | 228 | 75 | Authorisation Denied |
| Firm 10 | 140 | 75 | Authorisation Denied |
| | | | |
| 1985 | | | |
| No Cases | - | - | |
| | | | |
| 1986[b] | | | |
| Firm 11 | .. | 10 | Agreement after Consultation |
| Firm 12 | 61 | 31 | Authorisation Granted |
| Firm 13 | 297 | 297 | Authorisation Granted |
| Firm 14 | 142 | 39 | Authorisation Denied |
| Firm 15 | 289 | 109 | Authorisation Denied |
| Firm 16 | 906 | 225 | Authorisation Granted |
| Firm 17 | 2350 | 200 | Authorisation Granted |

Notes: a. September-December.
       b. January-October.

Source: Sabethai (1986:40).

## Table 4.4.2

**CASES OF COLLECTIVE DISMISSALS UNDER PREFECTS' JURISDICTION**
**1983-1986**

| Period | Total Number of Employees | Number of Employees Planned to Be Dismissed | Ministerial Decision | |
|---|---|---|---|---|
| 1983[a] | | | | |
| Firm 1 | .. | 28 | Authorisation | Denied |
| Firm 2 | .. | .. | Authorisation | Denied |
| | | | | |
| 1984 | | | | |
| Firm 3 | 179 | 179 | Authorisation | Denied |
| Firm 4 | 185 | 51 | Authorisation | Denied |
| Firm 5 | 140 | 26 | Authorisation | Granted |
| Firm 6 | .. | 5% | Authorisation | Denied |
| Firm 7 | .. | 30 | Authorisation | Denied |
| | | | | |
| 1985 | | | | |
| Firm 8 | .. | .. | Authorisation | Denied |
| | | | | |
| 1986[b] | | | | |
| Firm 9 | .. | .. | Authorisation | Denied |
| Firm 10 | .. | .. | Authorisation | Denied |
| Firm 11 | 40 | 15 | Authorisation | Granted |
| Firm 12 | 150 | 75 | Authorisation | Denied |

Notes: a. September-December.
       b. January-October.

Source: Sabethai (1986:40).

## Table 4.4.3

**RATE OF CHANGE IN MANUFACTURING EMPLOYMENT IN OECD COUNTRIES**
Selected Periods

| Period Country | 1960-68 | 1968-73 | 1973-79 | 1979-87 | 1960-87 |
|---|---|---|---|---|---|
| U.S. | 2.3 | 0.2 | 1.1 | -0.9 | 0.7 |
| Japan | 4.1 | 2.0 | -1.3 | 0.8 | 1.5 |
| Germany | 0.3 | 0.9 | -1.4 | -1.0 | -0.3 |
| France | 0.5 | 2.1 | -0.9 | -2.3 | -0.3 |
| U.K. | -0.3 | -1.0 | -1.3 | -4.2 | -1.8 |
| Italy | 0.8 | 0.4 | 0.2 | -1.8 | -0.2 |
| Canada | 2.8 | 2.1 | 1.5 | -0.1 | 1.5 |
| Austria | -0.7 | 1.8 | -0.7 | -1.5 | -0.5 |
| Belgium | 0.6 | 0.2 | -3.3 | -2.5 | 1.3 |
| Denmark | 0.1 | 1.5 | -1.5 | 0.5 | 0.1 |
| Finland | 1.0 | 4.8 | -0.1 | -1.0 | 0.8 |
| **Greece** | **1.9** | **5.0** | **1.6** | **1.4** | **2.2** |
| Iceland | -0.5 | 5.1 | 3.3 | 1.4 | 1.9 |
| Ireland | 1.6 | 1.8 | 1.2 | -2.0 | 0.5 |
| Luxemburg | 0.7 | | -2.2 | -1.5 | |
| Netherlands | 0.3 | -0.9 | -1.9 | -0.7 | -0.7 |
| Norway | 1.0 | | -0.2 | -1.1 | |
| Portugal | 0.6 | 0.9 | | | |
| Spain | 2.5 | | | -2.0 | |
| Sweden | 0.1 | -1.3 | -0.6 | | |
| Switzerland | 1.4 | 0.1 | -2.6 | -0.4 | -0.3 |
| Turkey | 3.6 | 3.4 | 1.7 | 3.1 | 3.0 |
| Australia | 1.1 | 1.6 | -1.7 | -0.6 | 0.0 |
| New Zealand | 2.7 | 0.8 | 0.7 | | |
| Total EEC | 0.5 | 0.6 | -0.9 | -1.9 | -0.5 |
| Total OECD | 1.6 | 0.8 | -0.4 | -0.9 | 0.3 |

Note:  Average annual percentage rates of change between
periods indicated.

Source: OECD 1988, Labour Force Statistics, Table 1.10, page 28.

## Table 4.4.4

### SHARE OF MANUFACTURING EMPLOYMENT IN OECD COUNTRIES
#### Selected Periods

| Period<br>Country | 1960-67 | 1968-73 | 1974-79 | 1980-87 | 1960-87 |
|---|---|---|---|---|---|
| U.S. | 26.8 | 25.8 | 23.0 | 20.2 | 23.9 |
| Japan | 23.7 | 26.9 | 25.4 | 24.7 | 25.0 |
| Germany | 35.3 | 36.6 | 35.1 | 32.7 | 34.8 |
| France | 27.6 | 27.6 | 27.2 | 23.9 | 26.4 |
| U.K. | 37.4 | 36.1 | 32.6 | 26.3 | 32.9 |
| Italy | 26.0 | 27.9 | 27.5 | 24.5 | 26.3 |
| Canada | 25.0 | 23.8 | 21.7 | 19.7 | 22.5 |
| Austria | 31.7 | 32.1 | 31.2 | 28.7 | 30.8 |
| Belgium | 39.1 | 36.5 | 31.5 | 26.0 | 33.2 |
| Denmark | 24.6 | | | 17.9 | |
| Finland | 26.8 | 28.5 | 28.0 | 25.2 | 26.9 |
| **Greece** | **13.1** | **16.5** | **19.1** | **19.4** | **16.9** |
| Iceland | 24.0 | 22.4 | 23.0 | 23.0 | 23.2 |
| Ireland | 18.3 | 20.3 | 21.2 | 19.9 | 19.8 |
| Luxemburg | 33.5 | | 30.4 | 24.8 | |
| Netherlands | 29.4 | 27.0 | 23.8 | 20.0 | 25.0 |
| Norway | 26.1 | | 22.6 | 18.3 | |
| Portugal | 23.3 | 24.1 | 25.1 | 25.5 | |
| Spain | 25.1 | 26.8 | 26.2 | 23.8 | 25.3 |
| Sweden | 31.4 | 28.3 | 26.4 | 22.8 | 27.2 |
| Switzerland | 38.5 | 36.5 | 33.0 | 30.3 | 34.6 |
| Turkey | 8.3 | 10.1 | 10.9 | 11.5 | 10.2 |
| Australia | 29.2 | 26.4 | 23.1 | 19.9 | 24.6 |
| New Zealand | 27.4 | 26.9 | 24.9 | | |
| Total EEC | 29.7 | 30.1 | 28.7 | 25.2 | 28.3 |
| Total OECD | 26.9 | 27.2 | 25.3 | 22.6 | 25.4 |

Note: Employment in manufacturing as percentage of
civilian employment.

Source: OECD 1988, Labour Force Statistics, Table 2.11, page 37.

Table 4.4.5

## SHARE OF AND CHANGE IN MANUFACTURING EMPLOYMENT IN GREECE
### 1965-1988

| Year | Manufacturing Share in Total Employment | | Aggregate Manufacturing Employment | | Branches Expanding Employment | |
|------|-------|-------|-------|-------|-------|-------|
| | All[a] (share %) | Employees[b] | SWE[c] (annual change %) | WE[d] | SWE (out of 20) | WE |
| 1965 | | | 5.93 | 5.18 | 19 | 18 |
| 1966 | | | 3.77 | 2.26 | 17 | 16 |
| 1967 | | | -1.45 | -2.88 | 12 | 8 |
| 1968 | | | -1.96 | -3.82 | 10 | 9 |
| 1969 | | | 2.10 | 1.51 | 12 | 11 |
| 1970 | | | 11.06 | 10.76 | 19 | 17 |
| 1971 | 17.14[e] | 27.35[e] | 6.56 | 6.42 | 17 | 15 |
| 1972 | | | 5.21 | 4.70 | 18 | 17 |
| 1973 | | | 7.64 | 6.41 | 19 | 17 |
| 1974 | | | 10.50 | 10.44 | 20 | 18 |
| 1975 | 26.68 | 29.03 | 1.19 | 0.64 | 9 | 8 |
| 1976 | 27.59 | 29.83 | 5.09 | 0.50 | 14 | 11 |
| 1977 | 27.66 | 29.84 | 2.58 | 1.84 | 14 | 11 |
| 1978 | 27.28 | 29.35 | 0.57 | -0.56 | 8 | 5 |
| 1979 | 27.11 | 29.30 | 0.22 | -0.41 | 12 | 9 |
| 1980 | 26.43 | 29.27 | -1.27 | -2.54 | 6 | 5 |
| 1981 | 19.29 | 28.52 | -1.23 | -2.84 | 4 | 2 |
| 1982 | 19.26 | 27.56 | -2.18 | -3.90 | 4 | 1 |
| 1983 | 19.19 | 27.47 | 9.27 | 12.48 | 15 | 16 |
| 1984 | 19.11 | 27.21 | -0.07 | -0.51 | 9 | 6 |
| 1985 | 18.91 | 26.59 | 3.10 | 0.07 | 13 | 11 |
| 1986 | 19.93 | 28.20 | 0.10 | -0.62 | 7 | 7 |
| 1987 | 19.90 | 27.44 | -1.30 | -2.77 | 7 | 6 |
| 1988 | | | 1.03 | -0.68 | 9 | 7 |
| Average | | | | | | |
| 1967-74 | - | - | 6.03 | 5.20 | 16 | 14 |
| 1975-81 | 26.01 | 29.31 | 0.85 | -0.57 | 10 | 7 |
| 1982-88 | 19.38 | 27.41 | 1.77 | 1.07 | 9 | 8 |

Notes:  a.  All types of employment included, i.e. employers, employees, self-employed and unpaid family workers.
        b.  Only salary and wage earners included.
        c.  Salary and Wage Earners.
        d.  Wage Earners.
Sources:a.  NSSG, Annual Labour Force Survey, Table 7 (for 1975-83 1985-88) and Table 8 (for 1984).
        b.  As for a.
        c.  Table A4.4.11.
        d.  Table 4.4.11.
        e.  Census 1971, Vol. 3, Table 8, page 225.

## Table 4.4.6

**SHARE OF SALARY EARNERS IN MANUFACTURING EMPLOYMENT BY BRANCH**
**1965-1988**

| Year | 1965 | 1970 | 1975 | 1980 | 1985 | 1988 |
|---|---|---|---|---|---|---|
| Branch | | | share per cent | | | |
| 20 | 23.78 | 24.88 | 23.99 | 26.21 | 31.25 | 32.85 |
| 21 | 37.41 | 40.34 | 41.86 | 42.68 | 52.73 | 58.54 |
| 22 | 7.67 | 13.01 | 13.49 | 18.53 | 21.94 | 24.67 |
| 23 | 10.63 | 13.50 | 14.60 | 20.13 | 18.49 | 20.98 |
| 24 | 8.61 | 9.74 | 8.47 | 8.00 | 11.77 | 12.33 |
| 25 | 8.16 | 11.19 | 15.90 | 19.40 | 30.40 | 33.65 |
| 26 | 12.08 | 10.63 | 11.47 | 18.52 | 17.84 | 17.53 |
| 27 | 15.16 | 25.78 | 27.70 | 32.97 | 38.04 | 50.42 |
| 28 | 36.92 | 33.55 | 36.36 | 39.98 | 54.56 | 54.69 |
| 29 | 6.93 | 9.51 | 9.01 | 14.82 | 16.77 | 16.65 |
| 30 | 17.45 | 20.97 | 22.55 | 20.99 | 27.50 | 29.87 |
| 31 | 32.71 | 44.76 | 50.10 | 60.47 | 56.76 | 59.15 |
| 32 | 58.33 | 64.13 | 73.00 | 73.79 | 81.08 | 82.56 |
| 33 | 14.98 | 23.09 | 29.97 | 32.57 | 39.34 | 42.38 |
| 34 | 16.92 | 31.63 | 30.64 | 34.37 | 41.62 | 43.56 |
| 35 | 12.21 | 16.39 | 20.16 | 26.88 | 27.94 | 31.92 |
| 36 | 11.70 | 15.87 | 20.78 | 27.21 | 33.05 | 37.99 |
| 37 | 23.87 | 27.46 | 32.03 | 36.80 | 45.98 | 47.78 |
| 38 | 22.20 | 23.08 | 26.24 | 45.63 | 45.38 | 48.37 |
| 39 | 12.19 | 13.68 | 14.16 | 19.23 | 28.68 | 30.66 |
| All | 17.13 | 21.71 | 23.55 | 29.61 | 32.32 | 34.93 |

Note: For keys see Table 4.3.3.

Sources: 1965-1975, NSSG, Annual Industrial Survey, Table 6.
1976-1988, NSSG, Labour Force Statistics, Table 3.

**Table 4.4.7**

**SHARE** **OF** **FEMALE** **EMPLOYEES** **IN** **MANUFACTURING** **EMPLOYMENT** **BY** **BRANCH**
1976-1988

| Year | 1976 | 1980 | 1984 | 1988 |
|------|------|------|------|------|
| Branch | | share per cent | | |
| 20 | 43.65 | 44.59 | 43.04 | 42.47 |
| 21 | 25.31 | 25.23 | 23.13 | 23.71 |
| 22 | 57.30 | 55.76 | 56.81 | 50.39 |
| 23 | 58.66 | 57.18 | 55.41 | 53.14 |
| 24 | 76.57 | 81.40 | 74.93 | 76.01 |
| 25 | 22.36 | 23.83 | 28.80 | 19.76 |
| 26 | 8.65 | 10.83 | 13.89 | 11.11 |
| 27 | 27.96 | 26.68 | 23.26 | 23.75 |
| 28 | 27.97 | 27.43 | 34.56 | 31.23 |
| 29 | 30.70 | 34.80 | 39.66 | 39.48 |
| 30 | 38.75 | 40.99 | 31.51 | 26.89 |
| 31 | 35.41 | 36.12 | 33.86 | 33.93 |
| 32 | 10.82 | 12.53 | 10.34 | 9.75 |
| 33 | 17.16 | 14.06 | 12.40 | 16.50 |
| 34 | 4.21 | 4.97 | 6.50 | 5.36 |
| 35 | 21.22 | 22.30 | 17.39 | 18.47 |
| 36 | 7.10 | 7.03 | 7.82 | 9.10 |
| 37 | 25.22 | 30.48 | 26.34 | 22.62 |
| 38 | 6.11 | 6.25 | 7.28 | 6.47 |
| 39 | 51.39 | 50.56 | 39.68 | 38.75 |
| All | 35.26 | 36.48 | 36.83 | 35.62 |

Note: Share of female employees in total employment of both salary and wage earners.

Source: NSSG, Labour Force Statistics, Table 3.

## Table 4.4.8

**CHANGES IN EMPLOYMENT OF WAGE EARNERS IN MANUFACTURING BY BRANCH**
Selected Periods

| Period Branch | 1967/74 | 1975/81 | 1982/88 | 1965/88 |
|---|---|---|---|---|
| | | change per cent | | |
| 20 | 38.12 | -14.62 | 42.63 | 75.52 |
| 21 | 47.90 | -16.33 | 14.48 | 69.41 |
| 22 | -31.21 | 8.36 | -15.63 | -54.65 |
| 23 | 26.08 | -5.18 | 6.93 | 25.54 |
| 24 | 131.44 | 9.54 | 29.91 | 282.65 |
| 25 | 52.57 | -16.66 | -9.04 | 1.54 |
| 26 | 59.78 | -19.70 | 4.19 | 19.33 |
| 27 | -0.86 | -8.64 | 11.35 | -1.24 |
| 28 | 18.93 | -16.37 | -11.13 | -19.48 |
| 29 | 2.34 | -12.82 | 33.50 | -0.20 |
| 30 | 39.61 | 24.31 | -19.41 | 76.55 |
| 31 | 28.99 | -13.31 | 31.76 | 23.12 |
| 32 | 102.25 | 20.46 | -13.02 | 82.03 |
| 33 | 11.20 | -14.01 | 21.24 | 1.86 |
| 34 | 83.58 | -22.41 | 23.57 | 113.31 |
| 35 | 45.50 | 1.23 | -7.85 | 20.33 |
| 36 | 33.52 | -12.83 | -28.46 | -21.31 |
| 37 | 79.05 | -16.96 | -4.44 | 28.26 |
| 38 | 122.04 | 24.69 | -28.38 | 70.79 |
| 39 | 80.83 | -34.01 | 35.73 | 70.01 |
| All | 41.58 | -4.02 | 7.47 | 40.28 |

| Number of Branches with Expanding Employment | 18 | 6 | 11 | 15 |
|---|---|---|---|---|

Sources: 1967-1975, NSSG, Annual Industrial Survey, Table 6.
1976-1988, NSSG, Labour Force Statistics, Table 3.

## Table 4.4.9

**DISTRIBUTION OF WAGE EARNERS ACROSS MANUFACTURING INDUSTRIES**
1965-1988

| Year | 1965 | 1970 | 1975 | 1980 | 1985 | 1988 |
|------|------|------|------|------|------|------|
| Branch | | | per cent | | | |
| 20 | 12.04 | 13.73 | 12.94 | 11.56 | 13.76 | 15.07 |
| 21 | 1.52 | 2.05 | 2.03 | 1.91 | 2.12 | 1.83 |
| 22 | 7.48 | 4.38 | 2.71 | 3.08 | 2.50 | 2.42 |
| 23 | 21.85 | 19.31 | 19.84 | 20.17 | 19.43 | 19.55 |
| 24 | 5.92 | 7.28 | 11.26 | 12.52 | 15.58 | 16.14 |
| 25 | 2.77 | 3.10 | 2.83 | 2.59 | 2.15 | 2.00 |
| 26 | 2.17 | 2.47 | 2.37 | 1.97 | 1.82 | 1.84 |
| 27 | 2.83 | 2.50 | 2.06 | 1.99 | 2.25 | 1.99 |
| 28 | 2.55 | 2.69 | 2.19 | 2.16 | 1.49 | 1.46 |
| 29 | 2.03 | 1.65 | 1.29 | 1.20 | 1.64 | 1.45 |
| 30 | 2.99 | 3.30 | 3.69 | 4.65 | 4.01 | 3.76 |
| 31 | 4.60 | 4.04 | 3.67 | 3.24 | 4.12 | 4.03 |
| 32 | 0.31 | 0.38 | 0.38 | 0.54 | 0.36 | 0.40 |
| 33 | 8.08 | 7.28 | 5.97 | 5.60 | 6.11 | 5.87 |
| 34 | 1.50 | 2.31 | 2.56 | 2.24 | 2.63 | 2.28 |
| 35 | 7.06 | 6.91 | 6.83 | 6.79 | 6.21 | 6.06 |
| 36 | 3.58 | 3.67 | 3.27 | 2.99 | 2.27 | 2.01 |
| 37 | 4.06 | 5.15 | 4.69 | 4.19 | 3.83 | 3.71 |
| 38 | 5.85 | 6.67 | 8.22 | 9.60 | 6.80 | 7.12 |
| 39 | 0.82 | 1.14 | 1.20 | 0.98 | 0.91 | 1.00 |
| All | 100 | 100 | 100 | 100 | 100 | 100 |
| (20, 23, 24, 38) | 45.66 | 46.99 | 52.26 | 53.85 | 55.57 | 57.88 |
| Total | 181430 | 194846 | 256752 | 253616 | 265184 | 254502 |

Sources: 1965-1975, NSSG, Annual Industrial Survey, Table 6.
1976-1988, NSSG, Labour Force Statistics, Table 3.

## Table 4.4.10

**AVERAGE EMPLOYMENT OF WAGE EARNERS IN MANUFACTURING INDUSTRIES**
Selected Periods

| Branch | Average 1967-74 | Share % | Average 1975-81 | Share % | Average 1982-88 | Share % | Average 1966-88 | Share % |
|---|---|---|---|---|---|---|---|---|
| 20 | 26603 | 13.02 | 29953 | 11.65 | 34549 | 13.38 | 29895 | 12.67 |
| 21 | 4232 | 2.07 | 4965 | 1.93 | 5054 | 1.96 | 4663 | 1.98 |
| 22 | 8561 | 4.19 | 7840 | 3.05 | 6589 | 2.55 | 7926 | 3.36 |
| 23 | 40390 | 19.76 | 50331 | 19.58 | 50291 | 19.47 | 46426 | 19.68 |
| 24 | 15982 | 7.82 | 31277 | 12.17 | 40567 | 15.71 | 27908 | 11.83 |
| 25 | 6339 | 3.10 | 6534 | 2.54 | 5687 | 2.20 | 6150 | 2.61 |
| 26 | 4734 | 2.32 | 5801 | 2.26 | 4987 | 1.93 | 5103 | 2.16 |
| 27 | 5113 | 2.50 | 5255 | 2.04 | 5713 | 2.21 | 5352 | 2.27 |
| 28 | 5135 | 2.51 | 5726 | 2.23 | 4244 | 1.64 | 5029 | 2.13 |
| 29 | 3172 | 1.55 | 3217 | 1.25 | 3866 | 1.50 | 3410 | 1.45 |
| 30 | 7110 | 3.48 | 11271 | 4.39 | 10846 | 4.20 | 9463 | 4.01 |
| 31 | 8333 | 4.08 | 8487 | 3.30 | 10844 | 4.20 | 9150 | 3.88 |
| 32 | 635 | 0.31 | 1476 | 0.57 | 1031 | 0.40 | 1002 | 0.42 |
| 33 | 14538 | 7.11 | 14987 | 5.83 | 15156 | 5.87 | 14880 | 6.31 |
| 34 | 4730 | 2.31 | 5761 | 2.24 | 6057 | 2.35 | 5388 | 2.28 |
| 35 | 14023 | 6.86 | 17385 | 6.76 | 16470 | 6.38 | 15737 | 6.67 |
| 36 | 7290 | 3.57 | 8770 | 3.41 | 5880 | 2.28 | 7283 | 3.09 |
| 37 | 10967 | 5.37 | 11235 | 4.37 | 9708 | 3.76 | 10499 | 4.45 |
| 38 | 14254 | 6.98 | 23860 | 9.28 | 18424 | 7.13 | 18288 | 7.75 |
| 39 | 2213 | 1.08 | 2890 | 1.12 | 2269 | 0.88 | 2409 | 1.02 |
| All | 204353 | 100 | 257021 | 100 | 258232 | 100 | 235962 | 100 |
| (20 23 24 38) | | 47.85 | | 55.16 | | 57.58 | | 53.53 |

Sources: 1967-1975, NSSG, Annual Industrial Survey, Table 6.
1976-1988, NSSG, Labour Force Statistics, Table 3.

## Table 4.4.11

**ANNUAL CHANGES IN MANUFACTURING EMPLOYMENT OF WAGE EARNERS BY BRANCH**
### 1965-1988

| Year Branch | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|---|---|
| 20 | 1.59 | 6.47 | -0.56 | -3.13 | 3.76 | 15.06 |
| 21 | 9.63 | 18.62 | 12.06 | -7.95 | -2.88 | 21.72 |
| 22 | 7.68 | -5.66 | -15.10 | -8.91 | -13.84 | 0.02 |
| 23 | 0.80 | 1.72 | -4.68 | -7.22 | -2.51 | 8.25 |
| 24 | 4.51 | 3.60 | 3.94 | 0.10 | -0.43 | 23.16 |
| 25 | 15.35 | 3.37 | 1.75 | -4.28 | 5.93 | 12.66 |
| 26 | 1.95 | 1.07 | -0.18 | 0.50 | -3.96 | 25.57 |
| 27 | 15.75 | 5.45 | -1.26 | -1.80 | -3.90 | -3.39 |
| 28 | -0.79 | 3.78 | 0.21 | -4.51 | 0.28 | 13.84 |
| 29 | -2.12 | -5.74 | -0.37 | -6.17 | -2.34 | 0.94 |
| 30 | 2.92 | 9.61 | 2.88 | 2.55 | 13.21 | -9.43 |
| 31 | 19.46 | 1.45 | -10.26 | 2.66 | 3.59 | -2.44 |
| 32 | 2.97 | -23.78 | 5.20 | 6.29 | -0.42 | 59.02 |
| 33 | 14.76 | 1.78 | -3.21 | -6.94 | -2.04 | 7.68 |
| 34 | 24.20 | 23.49 | -0.30 | 0.98 | 20.60 | 10.18 |
| 35 | 1.89 | -0.15 | -6.35 | 0.44 | 1.70 | 10.01 |
| 36 | 4.74 | 2.46 | -0.26 | -6.18 | 7.02 | 7.31 |
| 37 | 1.32 | -3.22 | 9.84 | 0.18 | 10.05 | 16.19 |
| 38 | 5.27 | 0.08 | -9.27 | -5.05 | 14.73 | 23.86 |
| 39 | 13.47 | 6.84 | 2.51 | 0.55 | 0.37 | 34.34 |
| All | 5.18 | 2.26 | -2.88 | -3.82 | 1.51 | 10.76 |

| Year Branch | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 |
|---|---|---|---|---|---|---|
| 20 | 5.01 | 0.47 | 2.89 | 10.01 | 3.99 | -8.01 |
| 21 | 12.62 | 5.55 | 3.84 | 10.10 | -3.77 | -5.31 |
| 22 | -2.74 | -10.04 | -1.38 | 1.55 | -6.91 | 14.87 |
| 23 | 6.41 | 6.03 | 7.66 | 6.01 | 5.15 | -0.62 |
| 24 | 9.80 | 11.01 | 12.09 | 38.02 | 8.04 | -4.33 |
| 25 | 5.45 | 9.59 | 8.94 | 6.08 | -9.78 | -9.93 |
| 26 | 0.10 | 4.22 | 2.09 | 23.77 | -4.02 | 10.21 |
| 27 | 2.40 | 1.24 | -0.42 | 5.32 | -0.32 | 5.71 |
| 28 | -0.04 | 1.94 | 2.86 | 4.07 | -1.73 | 12.24 |
| 29 | -0.65 | -13.34 | 0.54 | 27.81 | -6.31 | -1.77 |
| 30 | 6.94 | 9.53 | 6.64 | 6.30 | 10.92 | 13.62 |
| 31 | -0.75 | 9.29 | 7.48 | 6.64 | -3.76 | -4.63 |
| 32 | -10.81 | 3.89 | -2.59 | 33.14 | 9.78 | 73.18 |
| 33 | 5.54 | -0.79 | 2.42 | 5.62 | -4.57 | 3.28 |
| 34 | 7.04 | 11.08 | 15.36 | -0.26 | 6.64 | -9.94 |
| 35 | 3.78 | 8.07 | 5.96 | 8.95 | 0.58 | -5.78 |
| 36 | 1.66 | 1.18 | 11.19 | 8.34 | -5.31 | 12.80 |
| 37 | 18.15 | 10.16 | 10.54 | -2.85 | -14.21 | 4.20 |
| 38 | 20.57 | 7.11 | 6.71 | 19.40 | -1.34 | 7.87 |
| 39 | 5.78 | 6.53 | 11.30 | 6.34 | 4.67 | 8.83 |
| All | 6.42 | 4.70 | 6.41 | 10.44 | 0.64 | 0.50 |

(continued)

## Table 4.3.11 (continued)

**ANNUAL CHANGES IN MANUFACTURING EMPLOYMENT OF WAGE EARNERS BY BRANCH**
1965-1988

| Year<br>Branch | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| 20 | -1.08 | -0.99 | -6.33 | 4.61 | -3.30 | -5.22 |
| 21 | 2.45 | 3.47 | -2.44 | -4.91 | -10.13 | -6.52 |
| 22 | 4.22 | -2.84 | 0.01 | -3.46 | -3.52 | -3.29 |
| 23 | 0.85 | -1.56 | -0.61 | 2.37 | -5.55 | -3.66 |
| 24 | 10.46 | 7.65 | 8.06 | -10.67 | -0.25 | -0.13 |
| 25 | 1.27 | -4.38 | -0.24 | 3.91 | -7.82 | -7.48 |
| 26 | -4.48 | -6.41 | -7.60 | -9.55 | -2.47 | -7.82 |
| 27 | -1.54 | -3.11 | -2.41 | -2.84 | -4.46 | -5.66 |
| 28 | -3.05 | -3.52 | 0.55 | -7.78 | -14.10 | -10.87 |
| 29 | 2.78 | 2.26 | -6.59 | -5.31 | -4.53 | -4.77 |
| 30 | 1.54 | 6.93 | 6.96 | -5.53 | -0.28 | 0.91 |
| 31 | -7.96 | -1.49 | 0.36 | 0.61 | -0.72 | -4.64 |
| 32 | 4.61 | -9.07 | 1.54 | -16.79 | -13.45 | -2.42 |
| 33 | -0.31 | -0.97 | -4.26 | -4.99 | -7.28 | -6.54 |
| 34 | -3.06 | -1.98 | 1.53 | -0.32 | -10.41 | -7.69 |
| 35 | 5.96 | 0.53 | 0.01 | -2.10 | 3.02 | -5.74 |
| 36 | 4.62 | -0.80 | -9.09 | -15.11 | -3.53 | -2.36 |
| 37 | -8.39 | -1.77 | -5.31 | -0.63 | -5.89 | -1.02 |
| 38 | 9.18 | -5.60 | 3.02 | 0.77 | 8.04 | -3.85 |
| 39 | -2.14 | -7.74 | -3.95 | -14.59 | -18.13 | -8.44 |
| All | 1.84 | -0.56 | -0.41 | -2.54 | -2.84 | -3.90 |

| Year<br>Branch | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|---|
| 20 | 19.89 | 10.50 | 2.47 | -1.74 | 1.61 | 5.24 |
| 21 | 28.59 | 5.67 | 1.41 | -5.76 | -6.58 | -5.63 |
| 22 | -4.84 | -8.22 | 3.92 | 9.71 | -25.05 | 13.05 |
| 23 | 5.85 | 0.28 | 4.29 | 3.48 | -2.00 | -4.76 |
| 24 | 40.22 | -0.37 | -6.47 | -1.23 | -0.48 | 1.14 |
| 25 | 16.80 | -9.28 | -3.83 | -1.23 | -6.70 | -3.13 |
| 26 | 32.25 | -7.97 | -12.03 | -3.39 | 3.21 | -2.40 |
| 27 | 27.02 | -1.16 | 4.47 | 3.85 | 7.72 | -24.10 |
| 28 | 26.86 | -9.15 | -18.11 | -2.56 | -0.87 | -2.52 |
| 29 | 34.14 | 11.43 | 5.46 | 3.13 | -11.94 | -6.74 |
| 30 | 1.39 | -2.74 | -9.16 | -2.86 | -5.72 | -1.77 |
| 31 | 65.72 | -4.67 | -11.28 | 0.96 | -3.04 | -3.97 |
| 32 | -5.03 | -5.51 | -8.32 | -2.10 | 7.90 | 0.09 |
| 33 | 27.44 | -0.48 | 3.73 | -0.80 | -5.18 | -2.03 |
| 34 | 27.51 | 4.81 | 11.09 | -3.90 | -12.07 | -1.50 |
| 35 | 3.21 | -1.38 | -3.28 | 0.90 | -4.89 | -2.45 |
| 36 | -14.66 | -0.72 | -0.26 | -7.61 | -7.36 | -1.08 |
| 37 | 3.65 | -11.76 | 12.23 | -2.49 | -6.44 | 2.05 |
| 38 | -30.40 | -5.70 | 8.56 | -8.09 | 1.06 | 8.22 |
| 39 | 10.03 | 2.31 | 15.22 | 0.22 | 1.73 | 2.64 |
| All | 12.48 | -0.51 | 0.07 | -0.62 | -2.77 | -0.68 |

**CHAPTER 5: RELATIVE WAGE FLEXIBILITY IN GREEK MANUFACTURING**

## 5.1. INTRODUCTION AND SUMMARY.

Given the extent of wage and employment regulation in Greece, as analysed in earlier chapters, this chapter examines the formation of relative wages at a disaggregated level of analysis. It focuses upon flexibility in relative wages at the level of two-digit industrial branches. In theory there can be three different situations. First, there can be lack of flexibility, second, there can be competitive flexibility and third, non-competitive flexibility may be observed. While the distinction between rigidity and flexibility is rather a matter of degree differences with regard to market outcomes, the distinction between competitive and non-competitive flexibility is, rather, a matter of kind.

This chapter examines the extent to which, the Greek manufacturing wage structure was responsive or not either to competitive influences or to industry-specific conditions. Industry-specific changes in productivity, rates of strike activity and changes in employment are examined as potential sources of non-competitive flexibility in relative wages. Moreover, as the two different types of flexibility may exert opposite influence upon labour allocation and employment growth, this chapter discusses the extent to which the asymmetric response of wages to productivity, if any, was employment

enhancing or not.

Section 5.2 discusses the theoretical aspects of competitive and non-competitive flexibility in industry wages and the relevant findings of the empirical research in this area. Section 5.3 clarifies the hypotheses which are tested in this chapter and presents the methodology adopted. Section 5.4 presents and discusses the findings of the bivariate correlation analysis for testing the competitive hypothesis. Section 5.5 presents and discusses the results of the cross-section regression analysis for industry-specific determinants of relative wages. Finally, Section 5.6 summarises the conclusions on relative wage flexibility in Greek manufacturing.

Our analysis suggests that over the period 1966-88 the manufacturing labour market operated far from the competitive model, with the noticeable exception of the 1967-74 sub-period, during which competitive forces were given a chance and showed themselves up. But throughout the 1966-88 period non-competitive flexibility associated with industry-specific changes in productivity in the long-run, and industry-specific rates of strike activity in the short-run, characterised relative wages in the Greek manufacturing sector. Furthermore, over the period 1977-88, the asymmetric response of industry wages to changes in industry productivity hindered employment growth. Overall, the analysis suggests that wage and employment regulation disfavoured competitive flexibility and provided an environment conducive to non-competitive flexibility.

## 5.2. RELATIVE WAGE FLEXIBILITY AND RELATIVE EMPLOYMENT.

### 5.2.1. The Flexibility Debate and Relative Wages.

Most of the theoretical issues underlying the labour market flexibility debate are not new. But only since the early 1980s, have they become in the centre of the interest of economists, industrial relation specialists and politicians. The flexibility debate mounted to address the failure of the traditional mechanisms of wage and employment regulation to allow for necessary adjustments in face of changing international economic conditions in the 1970s. Since then the boundaries of the flexibility debate, both in theory and in policy making, have not been stable.

In a bibliographical essay on the labour market flexibility literature Gaudier (1987) aimed to show the state of the discussion of labour market flexibility under way in industrialised countries. On the central question what is flexibility she concluded that "interpretation depends on cultural, scientific and organisational factors that broaden the range of meanings ascribed to it and of the circumstances it covers". However, from the analysis it is made clear that labour costs, conditions of employment and hours of work are the mostly discussed issues. Moreover, Gaudier (1987:44) pointed that "wages are in the forefront of the battle" as the most frequent criticisms are of wage determination and indexing systems,

centralised wage bargaining, rigid opposition to reduction of wages and increase of wages without any counterpart in increased productivity.

Developments in labour markets with regard to flexibility lead to similarly varied conclusions. The comparative anthology by Sarfati and Cobrin (1988) illustrated some of the fundamental developments in labour market flexibility and summarised the evidence on different forms of flexibility. On the latter issue, Sarfati and Cobrin argued that "there are as many forms of flexibility as there are components in the employment relationship" and that "they all form the subject of compromises which reflect a number of parameters specific to the country, the sector or the enterprise in question". In the same line of argument Sarfati and Cobrin (1988:39) stress that "there is a general move towards greater flexibility, but ... the methods of achieving it vary according to the economic, social and institutional context in each country".

However, despite of the wide variety of approaches and issues raised in the flexibility debate, the review of the literature as well as of policy developments suggests that in several countries and in particular those with more centralised bargaining systems and indexation policies, such as Italy, Spain, Belgium, Denmark and Australia, the flexibility debate is mainly focused upon policies for wage moderation and de-indexation. Furthermore, from the technical report of OECD (1986) and Metcalf' s (1987) survey of evidence on labour market flexibility , we can infer that, in the broad area of issues raised by the flexibility

debate, the issue of wages remains central. Indeed, the issue of relative wages can be considered as one key issue of wage flexibility.

With regard to relative wage flexibility three situations can be defined. In theory, these three situations may imply varying consequences as far as labour allocation and employment growth are concerned. First, the situation of wage rigidity refers to wages lacking responsiveness to either unfavourable macro- or micro-economic changes. In such a situation, the labour market adjusts through quantities, that is employment and unemployment. Second, the competitive flexibility situation in which wage flexibility, by definition, allocates employment efficiently and, thus, enhances employment growth. Third, the non-competitive flexibility situation when the causes of and gains from flexibility are related to industry-specific factors such as productivity and unionisation. In such a case, the employment consequences of wage flexibility may be either positive or negative.

## 5.2.2. Competitive Flexibility in Relative Wages.

In the ideal world of competitive and clearing labour markets there is not much room for unemployment and inefficient allocation of labour. Relative wages adjust any imbalances and, thus, after all, they only reflect skill differences. Competitive flexibility in relative wages delivers, by definition, efficient allocation of labour and employment growth.

According to the competitive model, given the short-run inelasticity in labour supply, relative wages play an essential allocative role. They are used to attract workers in expanding sectors. Therefore, there should be a positive relation between wage and employment changes. In the context of either structural changes or business cycle fluctuations, greater wage growth will be observed in expanding compared to contracting sectors. As already mentioned, according to the competitive model the relationship of greater wage growth in expanding sectors should be observed only in the short-run, because, only then is labour supply considered to be relatively inelastic. Overall, recent and past evidence, summarised in OECD (1985:93-94) and Metcalf (1987:62-63), shows that there is no strong, and sometimes not even positive, significant correlation between employment and wage changes in the short-run.

But the lack of strong evidence supporting the competitive model with regard to the positive relationship between changes in employment and changes in wages is not considered as invalidating the competitive theory itself. In the literature two types of explanation have been offered. They both call for more sophisticated technical elaboration of the prevailing labour market conditions and focus on the conditions required for a positive correlation between changes in wages and employment to be observed.

In the first type of explanation is stressed that the short-run elasticity of labour supply is also affected by the state of the

labour market. If there is high unemployment then the short-run labour supply may be relatively more elastic than in a tight labour market. This implies that in periods of either loose or tight labour market the role of wage differentials may vary considerably. From the existing evidence, which overall does not strongly support the competitive model, and in particular that summarised by Reder (1962:290) and OECD (1985:94), it can be inferred that the little evidence which supports the competitive hypothesis refers mainly to periods of low unemployment and tight labour markets, where the short-run supply of labour is more inelastic.

In the second type of explanation belongs the methodological criticism, developed by Keating (1983) and Withers et al (1983), of the bivariate correlation analysis as inappropriate for testing the competitive model. Both emphasise that the influence of relative wages changes on the distribution of employment can only be adequately assessed if supply effects are distinguished and there is a separate consideration of shifts in the supply of labour from shifts in demand. Though, both authors point out the difficulties, mainly arising from data unavailability, for applying this type of analysis.

If relative wages are not sensitive to increasing employment in the short-run, then what is the alternative method through which firms attempt to attract or retain their labour force? Metcalf (1987:61-62), reiterated Reddaway's institutional approach to the wage-employment relationship. This approach by Reddaway

(1959) was emphasised as the alternative to the competitive model. While in the competitive model labour allocation works through price signals, in the institutional approach labour allocation works through quantity signals for vacancies. In the institutional approach "the essential characteristic is that the main way in which employment will either be increased or reduced is through direct action by the employers and that only exceptionally will they have to include a change in the relative wage offered in order to secure the desired number of workers". (Reddaway, 1959:33).

Thus, relative wage flexibility is not considered as the only way for efficient allocation of labour. Indeed, as Pissarides and McMaster (1984:1-2) pointed out "quantity signals could also signal relative labour requirements and the reallocation of labour could take place regardless of relative wages". This could happen through the higher vacancy rate in the expanding sectors. "Generally a higher vacancy rate implies a lower incidence of unemployment in the sector. Workers interested in maximising incomes over a long horizon would respond positively to such change ... they would move to the expanding sector to take advantage of the improved employment prospects. In this way labour could be reallocated between sectors and so some kind of market mechanism would work, without changes in relative wages".

## 5.2.3. Non-Competitive Flexibility in Relative Wages.

In a competitive labour market relative wages are not influenced by different rates of productivity growth unless the latter

reflects changes in occupational composition of the labour force. Supply and demand adjust in terms of wages and employment so that the gains from different rates of productivity are equally distributed across the board via employment and wage growth. While relative wage flexibility is not the only way for efficient labour allocation, relative wage flexibility, when observed, does not imply that wages are responsive to competitive forces. Reddaway in his analysis of the institutional approach, where employers do not use the wage (price) signals as the main mechanism for increasing or decreasing employment, discussed also the case of non-competitive flexibility in relative wages. The same case has been recently analysed by Freeman and Bell (1985).

Even when a positive association between change in wages and employment had been observed, Reddaway noticed the possibility that institutional industry-specific factors, unions for instance, might had caused that association. For instance, when demand for labour increases, unions may capture this opportunity and capitalise upon it by increasing their wage premium. In Reddaway' s (1959:44) own words, "a higher wage might be necessary to attract workers to an expanding industry, or it might simply reflect the fact that the union concerned has taken advantage of the increasing level of demand to negotiate a higher wage, even though enough workers would in fact have been forthcoming at the old wage in response to offers of employment. We cannot hope to establish that the wage increase was necessary to attract workers, we can only see what in fact happened".

In fact, the rationale described by Reddaway reappears in Bell and Freeman's definition of non-competitive flexibility. According to Freeman (1987:2) non-competitive flexibility refers to the situation "in which changes in wages respond to conditions that are not associated with supply and demand factors and thus do not facilitate employment changes. Our example of non-competitive flexibility would be wage increases in a highly profitable high-wage firm that is not necessary to attract or retain labour. Another would be union-induced increases for workers already paid above-market rates." The slight difference between Reddaway's and Freeman's definition is that Reddaway put the emphasis upon union influence which, in turn, might have been strengthened in conditions of expanding employment. Bell and Freeman, as they sought a basis for comparisons to the findings of the study by Salter (1960) as well as to past work on the U.S. wage structure, emphasised productivity as the key industry-specific factor in shaping relative wages, without dealing with either other conditions or the processes which allow relative wages to follow changes in productivity.

The recent evidence on the existence of industry-specific non-competitive flexibility stresses the importance of this type of flexibility. Salter (1960) in his analysis of inter-industry wage structure in the U.K., found that changes in wages among industries were unrelated to industry conditions, and in particular were not related to changes in productivity. He interpreted this as indicating the operation of a competitive

labour market. Bell and Freeman (1985) reported a different result. They found the U.S. wages rising most rapidly in sectors having rapid increases in productivity and/or product prices. An OECD (1985) study found weaker tendencies of industry-specific factors which influence wage changes. For the 1979-84 period in U.K. manufacturing, Freeman (1987) found relations between industry-specific productivity growth and wage growth that were quite strong and in contrast to the earlier findings by Salter. In other words, the evidence suggest that, even if this is not consistent with the competitive hypothesis, changes in wages which reflect industry level conditions consist a form of wage flexibility which sometimes may be found rather important.


5.2.4. Non-Competitive Flexibility and Employment Growth.

As already mentioned, recent evidence suggests that in many cases the existing flexibility is related to industry-specific factors rather than to the competitive working of the labour market. In theory the non-competitive flexibility can boost or lower aggregate employment. Therefore when changes in productivity are the key industry-specific factor influencing relative wages, the question is whether the positive relation between changes in wages and changes in productivity is employment enhancing or employment hindering. Freeman and Bell (1985) analysed this issue on theoretical grounds and tested for the employment consequences of industry wage flexibility in the U.S. According to this analysis the positive relation between growth of industry productivity and growth of industry wages may boost employment if

wages respond more to relative declines in productivity than to relative increases in productivity. Only such an asymmetry in the response of wages to changes in industry productivity may result to a net positive outcome in terms of employment growth. Because more jobs may be "saved" in industries where wages are more responsive to relative declines in productivity, and less jobs may be "forgone" in industries where wages are less responsive to relative increase in productivity.

In practical terms ,the required asymmetry should exist between two broad sectors which are defined in terms of above-average and below-average changes in productivity. As the OECD (1986:31) study summarised the rationale on the asymmetric response "if these two "sectors" are of equal size, have equal elasticities of labour demand, then greater employment than otherwise would have occurred will be observed only if there is significant asymmetry in the wage response. If the asymmetry hypothesis has any explanatory power, the coefficient [for sectors] of below-average changes in productivity should be positive significant and greater than that [for sectors] of above-average changes in productivity."

The evidence on the employment consequences of productivity-related flexibility in relative wages is contradictory. Freeman and Bell (1985) found that among U.S. industries in the 1970s, industries with rapid productivity growth tended to have lower rather than higher employment growth. This implies that, in that case, flexibility in relative wages was employment hindering. In

other words, they found that kind of wage flexibility inconsistent with the competitive hypothesis as far as employment growth is concerned. Salter had addressed the same issue and had found a strong positive correlation between productivity growth and employment growth in the U.K. An OECD (1986) study found the opposite results for the U.S. than those presented by Bell and Freeman, and argued that the industry wage-productivity system in the U.S. was not employment hindering. It also found results supporting the asymmetrical wage response for Canada and Sweden as well.

These contradictory findings with regard to the employment consequences of industry-specific wage flexibility in the U.S. are mainly due to methodological differences in testing for the existence of asymmetry in the wage response to changes in productivity. Bell and Freeman (1985) in testing if such asymmetry holds for the U.S. allowed for asymmetric responses of wages to above- and below-average productivity increases. As the coefficient for sectors of above-average changes in productivity was found significant and greater than the coefficient for sectors of below-average changes in productivity, wages were found more flexible upward than downward. The OECD study reported, contrary to Bell and Freeman, that the U.S. wage structure did exhibit the required asymmetry. According to the OECD (1986:44) study the reason for these different results is caused by the specification of productivity changes as independent variable in the regression analysis. Bell and Freeman used as independent variable the actual industry wage changes,

while the OECD study used the actual difference between each industry wage change and the average wage change across all industries, which stands for the industry relative wage change.

## 5.2.5. Summary.

To summarise the analysis of this section, flexibility in relative wages can be either competitive or non-competitive. But even when the positive association between changes in employment and changes in wages is observed, it may be not evidence of competitive flexibility and, indeed, it may be due to industry-specific factors. Non-competitive flexibility may be caused by industry-specific factors such as productivity changes, union bargaining power, high profitability etc. In the relevant literature, productivity changes are considered as the key industry-specific factor influencing relative wages. The consequences of productivity-related wage flexibility on employment growth, given a positive association between changes in industry wages and industry productivity, depend upon the asymmetry of industry-specific wage flexibility with regard to productivity changes. When wages are more flexible upward (downward) than downward (upward), they may cause relative job losses (gains) and, thus, contribute to employment decline (growth).

## 5.3. HYPOTHESES TO TEST AND THEIR RATIONALES.

### 5.3.1. Relative Wage Flexibility in the Context of Greek Industrial Relations?

Did any relative wage flexibility, competitive or non-competitive, exist over the period 1966-88? The overall context of wage and employment regulation in the Greek manufacturing sector suggests that, prima facie, there was not much room for such flexibility. However, as Tables 4.3.6 and 4.3.7 indicate there was some variability in the wage structure. This variability should be explained. It seems reasonable to attribute part of the observed variability to incomes policies themselves, and to consider it as a by-product of them, to the extent that, during the period under consideration, they treated relative wages in varying ways.

Even if the regulation of wages and employment by successive governments have been conducive to rigidities in the labour market, this does not imply that, at the end of the day, the labour market outcomes should be considered as unilaterally determined by governmental policies. Governmental policies should rather be perceived as one source of influence among others. The extent of the influence exerted by market and institutional forces is a matter of evidence. Econometric tests can provide the basis for attributing the observed variability in relative wages either to incomes policies themselves, or to competitive and non-competitive industry-specific factors lying beyond incomes policy

and out of the range of governmental controls.

Wage regulation either by governmental policies or under
collective bargaining between employers and trade-unions is
neither a  new phenomenon nor a Greek specific characteristic. It
has been observed in the labour markets of Western developed
economies since the early decades of the century. As Hicks
(1932:vi) put it in the introduction of "The Theory of Wages"
"the historical fact which dominates the wage history of the
present century -both in Britain and in other countries- is the
growth of Trade Unions power and the development of state
regulation of wages...".  But, according to Hicks " ... the same
forces which determine wages in a free market are still present
under regulation; they only work rather differently." Or, as he
put it when dealing with the working of competition and the
conception of the wages of labour as a "system", following Clay'
s approach, "the forces elucidated by equilibrium analysis are
the forces which, in nearly every case, cause wages to change."
(Hicks, 1932:86).

This theoretical argument, according to which even in regulated
labour markets, that is markets under conditions of state
intervention and trade unions, the main forces of the competitive
model should be considered as if they are still at work,
provides the basis upon which our own hypotheses are built.

In the context of the U.K. economy, from which  Hicks drew
empirical observations for theorising, it may be true that
competitive forces have been working even under governmental

regulation and widespread collective bargaining. Indeed, what Hicks suggested may be true in the case of most industrialised market economies. The evidence discussed in Section 5.2 indicates that, to a certain extent, competitive forces have been at work regardless of institutional conditions. But whether or not this has happened in the case of Greece is a more open question, because Greece has followed a dissimilar trajectory in economic development as well as in the evolution of industrial relations. In Western developed economies there has been a sequence of developments which occurred during nearly a full century. This sequence is not observed in the case of Greece where developments such as industrialisation, governmental intervention and formation of trade-unionism occurred in a period of less than three decades.

In Western developed economies the industrialisation process was followed by the rise of trade-unionism and, then, its establishment as a functional part of the economy through institutions and processes for collective bargaining. Governments intervened in wage determination to control the bargaining power of trade-unions by adopting incomes policies. Recently, the flexibility drive was adopted in order to modify long-lasting characteristics in the workings of institutionalised labour markets.

In the case of Greece, similar phenomena were developed in a shorter period of time and without following the historical sequence of the Western developed economies. Industrialisation took place during the post-war period and mainly in the 1960s.

Governments have been intervening in wage determination from the very beginning of the post-war industrialisation process. There has been no long tradition of trade-unionism and in manufacturing trade-unions have flourished since 1975, after a seven year period during which free trade-unionism, collective bargaining and strike activity were essentially banned.

In this context, it seems reasonable to assume that there have been important differences with regard to flexibility in relative wages between those national labour markets extensively studied in the flexibility literature, mainly those of the U.S. and the U.K., and the Greek labour market. Such differences may have been caused, first, by the degree of wage and employment regulation and its dominance in the working of the Greek manufacturing labour market, and second, by the incidence of major disturbances in the system of industrial relations in a short period of time. This is not to say that in the case of Greece "economic laws" have not been at work. It rather means that, presumably, they have not been allowed to work properly, or to the extent they have done in the context of other industrialised market economies.

Similar phenomena can probably be observed in other national labour markets and the relevant question about flexibility can be raised concerning every national labour market and its relative position in an international context. Up to the present it appears that there has been a gap in the OECD and EEC literature on labour market flexibility in countries such as Greece, Spain

and Portugal which share some common characteristics as far as economic, political and industrial relations developments are concerned.

The Greek-specific characteristics which may have influenced flexibility in manufacturing relative wages have been discussed in earlier chapters, and include first, the incomes policies and the extensive use of compulsory arbitration, second, the legislation on collective dismissals, third, the conditions of rising manufacturing employment along with waves of migration of Greek labour abroad, fourth, the ban of the right to strike in 1967-74 and the radical changes in manufacturing industrial relations initiated by the rise of strike activity and the creation the informal system of collective bargaining after 1975. This rich combination of factors, in the context of extensive and permanent regulation of wages and employment, may have created both rigidities and flexibilities depending on the exact blend of factors prevailing in distinct periods.

From this point of view, we address the questions whether the wage and employment regulation has buttressed wage rigidity and whether manufacturing wages have been flexible and to what extent. More specifically, we attempt to clarify whether or not forces which work in conditions of competitive labour markets, or forces related to industry-specific conditions have been present in the labour market of the Greek manufacturing sector and, thus, the extent to which there has been any scope for either competitive or non-competitive wage flexibility.

Both types of flexibility are related to the firms and employees behaviour in the context of governmental, procedural and substantial, regulation. Therefore the underlying questions are: Given the governmental wage policies, what has been the role of firms and trade unions in the regulated labour market? Have they acted in line with forces that the competitive theory considers as present even under regulation? Have employers raised the wage rate to attract labour in expanding sectors, enhancing, thus, a better allocation of labour? Have employees shared any industry-specific gains such as rises in productivity? With what consequences upon employment allocation and growth? Have industry-specific factors been related to industrial relations such as high bargaining power or strike activity?

Finally, if any of the above phenomena are observed, do they refer to the full period under examination or they are associated with distinct sub-periods? In testing for the presence of competitive and non-competitive flexibility during four distinguishable periods, namely 1966-88, and the sub-periods 1967-74, 1975-81 and 1982-88, the issue under investigation is also whether there were period differences in the way that relative wages responded to competitive or industry-specific factors. This investigation may shed some light on the flexibility performance during each separate period and, through it, to the flexibility performance of distinct types of wage policy.

To address these questions on competitive and non-competitive flexibility in relative wages bivariate correlation analysis and

cross-section regression analysis are combined. Both types of analysis can provide evidence on the function of relative wages over the period 1966-88 and its distinct sub-periods.

## 5.3.2. Competitive Flexibility in Relative Wages.

Overall, the long-lasting conditions of wage and employment regulations lead us to the hypothesis that there has been not much room for competitive forces to exert themselves in the context of the Greek manufacturing sector. In other words, the extensive regulation of the labour market may have not been in favour of the use of relative wages as a mean for labour allocation.

Incomes policies, by restraining wage determination processes, presumably do not favour competitive flexibility in relative wages. Labour market conditions of relatively high urban unemployment and the existence of the pool for unskilled labour in the primary sector do not exert pressures upon firms and employers to use higher relative wages as a means for attracting or retaining labour. The legislation on collective dismissals may have caused the firms to expand gradually their employment, at first through increased overtime work and then, when the need for expansion was not seasonal, through hiring new workers in a loose labour market.

However, we may expect episodes during which competitive forces were given a chance and showed themselves up, as there were

important changes in the labour market conditions. The coexistence of high urban unemployment along with concealed unemployment and under-employment in the rural sector had created loose labour market conditions. Unskilled labour has never been in short supply. But in the late 1960s-early 1970s exceptional conditions were created in the labour market, especially in the manufacturing sector. Labour, mainly the skilled and semi-skilled, became, partially due to massive migration abroad, in short supply. At the same time, as indicated in Table 4.3.2, the level of unemployment reached its lowest levels ever recorded in post-war Greece.

With regard to competitive flexibility in relative wages, we postulate that during the period 1967-74 were the prevailing conditions favourable for competitive forces to work in the manufacturing labour market, for four reasons. First, it was a period of low unemployment. Second, it was a period during which manufacturing employment was rapidly expanding across the board. Third, there were not trade-union activities and strikes. And fourth, for most of that period, changes in manufacturing wages imposed by the government in office were falling behind average productivity increases, creating thus, a space for manoeuvre concerning industry wage setting for manufacturing employers.

Such preconditions were not observed in the following periods. First, the growth of manufacturing employment slowed down. Second, unemployment soared. Third, collective bargaining came back in the manufacturing sector via waves of wildcat strikes at the plant level. And, fourth, formal incomes policies limited

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the space for manoeuvre available to manufacturing employers. Since 1975 the continuous use of formal incomes policy created an environment not favourable for competitive relative wage flexibility. Of course, after 1975 tendencies towards more decentralised wage setting processes developed along with the re-establishment of collective bargaining and the rise of the informal system of collective bargaining in the manufacturing sector. But such developments in the manufacturing bargaining structure may have been a factor causing industry-specific non-competitive flexibility rather than competitive flexibility in relative wages.

To test for the presence of competitive flexibility in relative wages in the Greek manufacturing sector we examine the bivariate correlation between changes in wages and changes in employment. A positive correlation between changes in employment and changes in wages is considered as evidence of competitive flexibility. However, as Reddaway (1959:44) put it, "any such relationship cannot prove anything but it is worthwhile to see what the data suggest". To allow for the case where supply shifts cause a negative correlation between wage and employment changes, which can be consistent with the competitive model, systematic evidence on the bivariate correlation along with factual support concerning the institutional and economic state of the labour market over the period under examination are considered as necessary for evaluating any results indicating competitive flexibility in relative wages.

## 5.3.3. Non-competitive Flexibility in Relative Wages.

While both economic conditions and industrial relations prevailing in the Greek manufacturing sector over the period 1966-88 may have not been very conducive for the development and the expression of competitive forces, they may have been relatively more favourable for industry-specific factors to influence the formation of industry relative wages. Probably, regulation does no allow the competitive forces to dominate the workings of the labour market. But it seems reasonable to hypothesise that in the context of first, continuing industrialisation, second, major disturbances in the system of industrial relations and third, the continuous use of formal incomes policies, regulation "favours" non-competitive flexibility in relative wages. Because, in face of successive governmental policies, firms and groups of employees who "beat the gun" and evade from policy restrictions become more flexible as far as wage determination is concerned.

In other words, we presume that under policies of regulation, which by being continuously used they create a climate or culture of regulation in the labour market, flexibility -if any- is probably non-competitive, that is related to industry-specific factors and arising from deviant behaviour against the policies of regulation. Overall, industry-specific changes in productivity and industry-specific bargaining power and strike activity may have been sources of industry-specific non-competitive wage

flexibility in the Greek manufacturing sector. From this point of view, non-competitive flexibility may be more a source of problems for policy implementation rather than a solution to labour market imbalances.

As wage policies were, for the most of the 1966-88 period, mainly targeted to control the employees side and to contain wage increases in line with average productivity growth, employers may have shared with their employees any industry-specific gains arising from changes in productivity, or may have had to increase wage rates in order to retain or attract the more productive skilled labour. Furthermore, the reconstitution of manufacturing trade-unionism at the plant level along with the rise of the informal system of collective bargaining consist another source of potential industry-specific influence upon wage formation. Employers may have been under pressure, arising from collective bargaining power and/or strike activity, to concede above-average increases in nominal wages, justified or not by industry-specific changes in productivity.

Of course, such industry-specific influences vary from period to period. For the 1967-74 period, with neither formal incomes policy in force nor, from April 1967, lawful strike activity and essential collective bargaining processes, we hypothesise that there was not much room for industry-specific factors, such as bargaining power expressed in relatively high unionisation and strike activity, to exert any decisive influence upon industry wages. However, this does not exclude the possibility that firms may had shared industry productivity gains with their employees

even in the absence of collective bargaining and strike activity procedures.

In 1975-81 the economic and industrial relations environment changed dramatically and under the norm-based wage policy and the rising system of informal collective bargaining in the manufacturing sector, industry-specific influences, related to strike activity and productivity growth, may have affected industry wages. Then, in 1982-88 the wage policy of partial indexation, as it was explicitly designed to compress the wage structure, imposed stricter controls upon industry wages. Thus, while both wage policy and industrial relations became less favourable for industry-specific wage flexibility, the lack of effective controls regarding compliance with mandatory incomes policies as well as the occurrence of waves of strikes indicating the presence of industry-specific factors, may have allowed some room for non-competitive flexibility in relative wages.

To test for the presence of non-competitive wage flexibility in the Greek manufacturing sector we examine the influence of industry-specific factors upon changes in industry wages by using cross-section regression analysis. We test for the influence exerted upon changes in nominal wages by changes in productivity, levels of industry strike activity and changes in employment.

In the literature, productivity is considered as the key industry-specific variable. In Bell and Freeman (1985) and OECD (1986), for instance, the key industry-specific variable is the

value productivity per worker. As the change in productivity reflects technical change, relative price changes and changes in the composition of an industry's employment it is not possible to sign it a priori. If changes in wages and changes in productivity are not related this result should be considered as consistent with the competitive model. A positive relationship indicating that employees have shared industry-specific productivity gains should be considered as consistent with the non-competitive flexibility hypothesis and with the workings of a decentralised and informal system of wage determination. A negative correlation between productivity and wage changes indicating that wages are determined regardless of industry productivity growth, as well as against the variability of productivity growth across industrial branches should be considered as consistent with the implementation of incomes policy via either centralised collective bargaining or the machinery of compulsory arbitration.

In the context of informal collective bargaining in the Greek manufacturing sector after 1975 the industry-specific level of strike activity represents an institutional source of potential industry-specific influence upon industry relative wages. Of course, a straightforward positive relationship should be expected only if strike activity indicates bargaining power. And this is not always the case. Strike activity sometimes indicates only dissatisfaction and militancy rather than bargaining power. Instead of bargaining power can simply reflect failed attempts to influence the process of wage determination. Moreover, even when strike activity does indicate bargaining power, it is possible

that this bargaining power is demonstrated once, of course not for all, but at least once for a period of time which can vary considerably. This demonstrated bargaining power, in turn, may have a threat effect during recurring annual bargaining rounds.

From this point of view, the association between changes in wages and the rate of strike activity is considered as indicator of industry-specific influence upon relative wages exerted by the employees collective action. A positive relationship is expected to indicate that strike activity, ascertaining bargaining power, has led employers to concede further increases in industry wages. A negative association may denote the function of strike activity as a safety valve or as an expression of inefficient militancy and a way of expressing discontent.

Changes in industry employment are usually considered as a source of competitive influence upon changes in nominal wages, in the short-run. But they may also be associated with industry-specific influences as employment growth can affect positively the bargaining power of the workforce already inside industries expanding employment. Therefore, while a positive association between changes in wages and changes in employment in the short-run should be considered as evidence in favour of the competitive hypothesis, in the long-run this relationship should not be observed. If it does then this may indicate an industry-specific influence arising from additional, explicit or implicit, bargaining power of employees in industrial branches characterised by long-run expansion.

To test for the presence of these industry-specific influences upon relative wages we use cross-section regression analysis. As Freeman (1987:1) argued, the analysis is better cast in terms of cross-sectional changes for three reasons. First, it allows to "difference-out" period effects. Second, it permits to by-pass the problem of evaluating time-series evidence when all variables move, more or less, together. Third, because it provides greater number of observations. However, Freeman considered as a disadvantage of the cross-section approach that we cannot be certain that factors which affect wage structures have similar impacts on changes over time. For our analysis in order to estimate and evaluate any sub-period effects of industry-specific variables, it is important to develop the analysis, not only for the full period 1966-88, but for its sub-periods as well. Therefore, we also test for the presence of determinants of industry-specific wage flexibility during three distinct sub-periods of wage determination processes and incomes policies.

Finally, in the eventual presence of asymmetries in changes in wages and changes in productivity the issue of the employment consequences of this hypothesised asymmetry becomes important. The question is whether this asymmetric responsiveness of wages to productivity at the industry level boosted or lowered aggregate employment. Furthermore, the policy issue is whether policy for employment growth via employment regulation and protection was undermined by industry-specific flexibility in relative wages arising from asymmetrical changes in productivity, and whether the restrictive legislation has been

mistakenly considered as the main way for securing jobs. Indeed, the question is whether, in some cases, the employment and wage regulation measures were contradictory as long as, indexation for instance, caused a certain degree of rigidity in relative wages especially in low-wage low-productivity change industries, which, in turn, caused job losses, both potential and actual.

## 5.4. THE COMPETITIVE HYPOTHESIS: ANALYSIS OF BIVARIATE CORRELATION BETWEEN WAGE AND EMPLOYMENT CHANGES.

According to the competitive hypothesis there should be a positive correlation between changes in wages and changes in employment unless supply shifts predominate in labour market developments.

To test for the existence of any positive correlation between changes in industry nominal wages and changes in industry employment across the twenty two-digit industrial branches of the Greek manufacturing we use two slightly different approaches. First, we estimate the correlation coefficients relating changes in nominal wages and changes in employment for the whole period 1966-88, as well as for the sub-periods 1967-74, 1975-81, 1982-88, which are characterised by different wage policies and varying conditions with regard to demand for labour in the manufacturing sector. These period correlation coefficients are reported in Table 5.4.1. Second, we estimate the correlation coefficients for each year from 1966 to 1988 separately. These year correlation coefficients are reported in Table 5.4.2. Changes in nominal wages refer to average hourly wage of workers of both sexes and changes in employment refer to wage earners.

In both cases, correlation coefficients are estimated for changes in the short-run and in the long-run. According to the competitive theory, because of the short-run inelasticity in labour supply, significant and positive correlation should be observed only in the short-run. The market mechanism is supposed

to adjust any imbalances in longer periods of time. Therefore we estimate the correlation coefficients for both short- and long-run changes in wages and employment in order to detect any weakening of their association in relatively longer periods of time. For this purpose, a continuum-like set of coefficients, ranging from one-year changes to twenty three-year changes, including two-year, three-year, five-year and ten-year changes, is reported.

Overall, the period correlation coefficients for changes in industry wages and employment in the Greek manufacturing sector provide no systematic evidence in favour of the competitive hypothesis. Correlation between changes in wages and employment is found negative when the full period 1966-1988 is examined. It seems that in the period 1966-88, the manufacturing labour market in Greece was operating far away from the competitive model in the sense of the use of relative wages to retain and attract labour in expanding industrial branches. This is probably due, first, to the extensive regulation in terms of both wage and employment determination and, second, to employment developments in the manufacturing sector.

When the sub-periods characterised by distinct types of wage policy and varying levels of unemployment are examined, the estimated correlation coefficients do not provide systematic evidence supporting the competitive hypothesis either. However, the correlation analysis suggests that competitive flexibility existed only during 1967-74. This result is supported by the

facts concerning the state of the labour market as well as the state of industrial relations at the time. In that period there was no formal incomes policy in force. There was no collective bargaining and strike activity. There was a tight labour market (low levels of unemployment). And, after all, that was the main period of expanding manufacturing employment in Greece. Such an association is observed in the case of one-year changes. Coefficients for two-year and three-year changes are also positive but not statistically significant. In addition, the gradual decrease of the estimated correlation coefficients is consistent with the competitive hypothesis, as the supply of labour becomes less inelastic and, thus, wages have to be raised relatively less than over shorter periods of time.

Correlation coefficients for the sub-period 1975-81 are found positive in the case of one-year, two-year and three-year changes and negative in the case of five-year and ten-year changes. But only the latter are significant. A different pattern of coefficients is estimated for 1982-88. They are found negative in the case of one-year and five-year changes. For the remaining cases, they are positive and, indeed, in the case of two-year and ten-year changes are significant as well.

This variety of estimated correlation coefficients hardly denotes the presence of competitive flexibility in relative wages. Certainly, the important criterion for the validity of the competitive hypothesis refers to the association between wages and employment in the short-run. And in the short-run, as the period correlation coefficients suggest, there was not strong,

positive and significant correlation between changes in employment and changes in nominal wages. The estimated coefficients for one-year changes over the period 1966-88 are negative and significant. But they are positive and significant for 1967-74. In the sub-period 1975-81 the estimated coefficients are positive though nearly zero and not significant, while those of 1982-88 period are found nearly zero and not significant either.

The year correlation coefficients, estimated separately for each year from 1966 to 1988, relating changes in industry nominal wages and industry employment, for both short-run and long-run changes, are reported in Table 5.4.2. They also provide not systematic evidence in favour of the competitive hypothesis. Coefficients of one-year changes are found either positively or negatively signed, but the majority of them are not statistically significant. Only the correlation between annual changes in nominal hourly wages and changes in employment of wage earners for 1965/66 and 1983/84 are positive and statistically significant. Thus, two out of three significant coefficients for one-year changes are positive. When we examine changes over a two-year period, three out of four significant coefficients are found positive. For changes over a three-year period two out of three significant coefficients are found positive. But the majority of the estimated coefficients are neither statistically significant nor stable with regard to their sign.

As an OECD (1985:94) study reiterated, it has been frequently

argued that the expected positive wage and employment change association may be obscured by examining the entire range of industries and not the range of industries with employment increases. To test whether such an asymmetry influences the findings of our correlation analysis, we also examine the correlation between annual changes in wages and annual changes in employment only for the case of industrial branches experiencing increases in employment. For this test industrial branches with negative changes in employment are assigned a zero value. This test, the results of which are reported in Table 5.4.3, apart from a slight decrease of the significance levels and the values of the correlation coefficients, does not provide any differing correlation coefficients as far as their significance, sign and level are concerned.

While the lack of systematic evidence of positive correlation between wage and employment changes is considered as lack of support for the competitive hypothesis, in the sense of the use of relative wages to retain and attract labour in expanding industrial branches, the occurrence of negative and significant correlation raise the question how to interpret it. The negative correlation coefficients for the full period 1966-88 seem to be rather systematic as they are significant when one-year, two-year, three-year, five-year and ten-year changes are examined. Indeed, they increase gradually the longer becomes the period of change under consideration.

According to Keating (1983:386) and Withers et al (1983:7) a negative correlation between wage changes and employment changes

might be consistent with the competitive model if shifts in the supply side of the labour market require lower wages to clear the market or lead to reduced demand for labour in the case of exogenous increases in wages.

A group of explanations based on supply side factors can be considered concerning the causes of the negative correlation between changes in wages and changes in employment. First, the increase in the supply price of labour above its market clearing level, imposed either by trade-unions or by compulsory arbitration and governmental wage policies may provide a rationale for the negative correlation. Such increases probably occurred during the periods of the norm-based and the indexation incomes policy. During the norm-based policy such wage increases may be due to the militancy of trade-unions at the plant level. During the indexation policy such wage increases were probably caused by the system of automatic indexation itself. From this point of view, the negative correlation implies that jobs were being forgone along with the imposed increases in wages. Of course, in this explanation we need to take into account the role of productivity and product market developments.

Second, higher labour supply, even in conditions of rising manufacturing employment, may have required lower wages to clear the labour market. As already mentioned, the coexistence of urban and concealed unemployment along with the labour pool in the primary sector of the economy, remained a permanent characteristic of the Greek labour market in the post-war period.

However, in the 1960s and especially in 1967-74, the immigration of labour abroad created unusual tight conditions in the labour market of the Greek manufacturing sector. As after 1974 the trends of immigration abroad were reversed and expansion in manufacturing employment slowed down, it seems reasonable to assume that a certain shift in the labour supply took place. Moreover, there is evidence (Karantinos, 1989) that since 1975 the rate of female participation in the labour force increased, thus contributing also to a certain shift of labour supply.

Third, the negative correlation between wage changes and employment may be explained by introducing in the analysis the restructuring process in the manufacturing sector. From this point of view, the negative correlation coefficient may reflect developments similar to those in the British nationalised industries, as steal and coal. Those industries, while undergoing a major restructuring process affecting the levels of employment continued to pay relatively high wages to the remaining employees in order to speed up the restructuring process and to avoid major and continuous industrial conflicts.

In 1975-81 the slow down of the manufacturing employment expansion coincided with the two oil-shocks which imposed severe pressures for restructuring and adjustment in the Greek manufacturing industries. These pressures became more severe in 1982-88. In fact, the restructuring and the rehabilitation of wide segments of the Greek manufacturing sector has been a priority of Greek governments in power since 1982. Regardless of the efficiency and the results of this programme, the indexation

policy, which was followed firmly by the industries under governmental control, insulated wage determination from market developments and especially from the market position of ailing industries which while in need for shedding out labour continued paying relatively high wages.

All the above explanations are to a certain extent plausible and relevant to developments in the Greek manufacturing labour market and probably capture parts of the reasons which lie behind the negative correlation between changes in wages and employment. However, even if we can explain the lack of systematic evidence supporting the competitive hypothesis in the sense of the use of relative wages for attracting and retaining labour in expanding industries, the main conclusions of the analysis are two.

First, over the period 1966-88 the Greek manufacturing labour market does not appear to be operating in line with the competitive hypothesis as far as the use of relative wages as means for retaining and attracting labour is concerned. It appears that increases in the supply price of labour, caused by unions, arbitration awards or incomes policies, resulted at systematic negative association between changes in industry wages and industry employment.

Second, during the sub-period 1967-74 both the results and the prevailing conditions suggest the presence of competitive working in the labour market as firms used relative wage increases for retaining and attracting labour in the context of rapidly expanding manufacturing employment, banned strike activity and

wage policy allowing much room for firms' manoeuvre in wage setting. Finally, it is noteworthy that analysis of correlation between changes in wages and changes in employment of both salary and wage earners leads to similar conclusions. The relevant results are reported in Appendix 3.

## 5.5. INDUSTRY SPECIFIC DETERMINANTS OF RELATIVE WAGES: CROSS-SECTION REGRESSION ANALYSIS.

### 5.5.1. Methods and Variables.

Our test for the presence of non-competitive flexibility in relative wages is undertaken with regard to both short-run and long-run industry-specific wage flexibility. Long-run non-competitive flexibility is captured by focusing upon the base-year to end-year changes in nominal wages as dependent variable. First, in order to explain changes in industry nominal wages from 1966 to 1988, the full period 1966-88 is examined. Then three sub-periods, namely 1967-74, 1975-81, 1982-88, are examined on the basis of the base-year to end-year changes in industry nominal wages. This analysis also refers to long-run industry-specific wage flexibility. Short-run industry wage flexibility is examined by using the annual changes in industry nominal wages as dependent variable. This analysis is too  applied for the full period 1966-88 as well as for the sub-periods selected according to the type of incomes policy in force.

Three variables are considered as potential sources of industry-specific flexibility in manufacturing relative wages. First candidate is the rate of change in productivity. We use the industry production index to calculate an output per worker index for industry productivity. This specification reflects technical change and changes in the composition of the industry's

employment. Second potential source of non-competitive flexibility is the rate of industry strike activity as expressed by the index of hours lost in strike activity per 1000 employees. Third potential source of industry-specific flexibility is the rate of change in each industry's employment.

In addition to these three variables which are tested as potential sources of industry-specific wage flexibility, two more variables are included in the regression specifications. First, the proportion of female employment in industry employment is included, to control for the influence exerted by the fact that, as indicated in Table 4.3.1, female workers are on average paid less than male workers, namely they get 60 to 70 per cent of the average male wage. Second, the initial level of the industry nominal wage is included, to capture the influence exerted by wage policies upon the manufacturing wage structure. The OECD (1986) study included also as an independent variable, the absolute change in the percentage of non-production workers to total employment. But in that study, the dependent variable was the change in (relative) earnings, covering the earnings of both salary and wage earners. In this analysis there is no need to include a variable for change in non-production workers to total employment because dependent variable is the change in hourly wages, which refer to wage earners alone, and not to salary earners who are usually considered as non-production employees.

## 5.5.2. Long-run Industry-specific Flexibility.

The estimates of industry-specific determinants of long-run changes in nominal wages across manufacturing industries in Greece, are reported in Table 5.5.1. In this specification it is not included the strike activity variable as in such long-run changes variation in bargaining power may be captured better by levels of unionisation rather than by annual rates of strike activity. But data on unionisation levels in Greek manufacturing are not available.

The estimated coefficient for the productivity variable is found strong, positive and significant for the period 1966-88, but not for any of the sub-periods. This strong and positive coefficient for the period 1966-88, implies that the long-run change in industry nominal wages, observed from 1966 to 1988, reflects to a wide extent, vibrant changes to industry-specific productivity, and thus, a lot of the observed flexibility should be attributed to industry-specific changes in productivity.

The estimated coefficients for the variables representing long-run changes in industry employment are found insignificant for all the tested periods. Furthermore, the regression specifications without the employment variable are relatively more significant and with slightly higher coefficients of determination than the specifications which include the industry employment variables. This result implies that long-run changes in industry employment have not influenced changes in industry nominal wages and is consistent with the competitive model.

The coefficients for the initial wage level variable are found negative and significant for the period 1966-88. This result reflects the long-run tendency, over the full period 1966-88, towards a more compressed manufacturing wage structure as well as the dominance of governmental incomes policy in industry wage determination processes. Negative signs characterise the original wage level variable in the sub-period regressions for 1967-74 and 1982-88, but the estimated coefficients are not significant. Nevertheless, the estimated coefficient in the specification for 1975-81 is found significant and positive. This result implies a intermittent tendency towards a widening inter-industry wage structure. This is consistent with the norm-based policy in force during that period and with the major disturbances observed during that period in the manufacturing industrial relations caused by the high frequency of decentralised strike activity and the widespread collective bargaining at the plant level.

Finally, the control variable for female employment in each industry's employment is found negative and significant in the 1977-88 period regression, that is the period for which data on the female participation in industry employment are available. The negative sign simply reflects the fact that, as female workers are, on average, paid less than men workers, the increase of their share in an industry' s employment affects negatively average changes in wages of both sexes.

## 5.5.3. Short-run Industry-specific Flexibility.

The estimates of industry-specific determinants of short-run changes in nominal wages across manufacturing industries in Greece, are reported in Table 5.5.2. We find no positive and significant coefficients for the productivity variable. However, the estimated coefficients for changes in productivity are found negative and significant for the full period 1966-88 as well as for the sub-period 1967-74.

This negative association between short-run, namely annual, changes in nominal wages and changes in industry productivity implies that the dominant pattern over the period under consideration has not been for annual changes in wages to be following changes in industry productivity. This, in turn, may have happened because annual rates of change in industry wages either have been falling behind productivity increases, or wages have been increasing more that allowed by productivity performance. Such developments have been probably caused by the varying incomes policy in force as well as by the major changes in the manufacturing bargaining structure and processes, especially in 1975-81. Both of them insulated wages from average and industry productivity developments. From this point of view, we can infer that productivity changes were not a source of short-run industry-specific flexibility in relative wages.

The inverse results on the influence of industry-specific productivity upon industry wages, as it is found strongly

positive in the long-run and negative in the short-run, do not contradict one other. While at the end of the period under examination the overall change in industry wages reflect the long-run change in industry productivity, it appears that their course through the annual rounds of wage determination over the period 1966-88 has not been smooth and linear because of the alterations in incomes policy and equally major changes in bargaining structures and processes.

The estimated coefficients for the employment variable indicate that annual changes in employment have not been associated with wage flexibility. They are found negative and significant for the period 1966-88 and insignificant for the sub-periods. This finding is consistent with our conclusions drawn from the bivariate correlation analysis of changes in wages and change sin employment over the same period. This result implies a negative relationship between increases in nominal wages and employment growth. As in the cross-section analysis we control for productivity changes, the negative relationship between increases changes in nominal wages and industry employment growth indicates that over the period under consideration the year to year course of industrial pay may has contributed to relative loss of potential jobs by causing reduced demand for labour.

While neither short-run changes in industry productivity nor short-run changes in industry employment are found influential determinants of industry-specific wage flexibility, the estimated coefficients for the strike activity variable indicate that over the period 1966-88 the rate of industry strike activity has

caused a certain degree of short-run industry-specific wage flexibility. The estimated coefficients for the strike activity variable are positive and significant for the full period 1966-88, as well as the sub-periods 1967-74 and 1982-88, except the period 1975-81 for which the regression results are generally poor as the estimated equation itself is insignificant. The strong positive coefficient for 1967-74 refers to the effects of strike activity undertaken during the first fourth months, namely from January to April, of 1967 as only for that period strike activity was lawful. In our data set from 1968 till 1974 the industry strike activity variable has zero values. But, overall the regression results indicate that strike activity has been a source of short-run industry-specific wage flexibility.

The estimated coefficient for the initial wage level variable is found negative and significant for the indexation period 1982-88 and positive and significant for 1967-74. The coefficient for the indexation period is consistent with the type of incomes policy in force, as partial indexation was aimed to compress the wage structure. But the coefficient for the sub-period 1967-74, during which no formal incomes policy was in force, collective bargaining was typical and strike activity banned, due to the political regime of the period, indicates that the forces working for a wider wage structure dominated the year-to-year changes in the manufacturing wage structure.

Finally, the estimated coefficient of the control variable for female employment is found, as expected, negative and

significant, indicating that the increase of the female share in industry employment affects negatively the rate of change in average nominal wages of both sexes the females wage is, on average, nearly 70 per cent of the males wage.


## 5.5.4. Employment Consequences of the Asymmetric Response of Wages to Productivity.

Given the results suggesting the presence of industry-specific wage flexibility associated with changes in productivity in the long-run, we also test for the employment consequences of the productivity-related wage flexibility. The results from testing the hypothesis of asymmetric response of wages to productivity are given in Tables 5.5.3 and 5.5.4. Table 5.5.3 presents the results from testing the asymmetric response hypothesis in the long-run, that is on the basis of base-year to end-year changes. Table 5.5.4 presents the results from testing it in the short-run, that is on the basis of year-to-year changes.

The results concerning long-run wage flexibility provide no support in favour of the asymmetric response hypothesis. The estimated coefficients are found insignificant in all regressions specified for the period 1966-88 and its sub-periods. The results of the regression analysis relating changes in relative wages and above- and below-average changes in relative productivity, in the short-run, provide no support of the asymmetric response either. However, the estimated coefficients are found significant in the case of the 1982-88 period, but the variable for changes

in productivity below-average is negatively signed, while the variable for changes in productivity above-average is found with positive sign. This result implies that in 1982-88, that is over the period of indexation policy, wages in the sector of below-average productivity changes were not responsive to this relative productivity performance and were rising without being connected to productivity developments. At the same time wages in the sector of above-average changes in productivity were responsive to their better relative productivity performance.

Thus, the test on asymmetric response suggests that the observed productivity-related flexibility was employment hindering. This is caused by the fact that wages in industrial branches with above-average changes in productivity by being more responsive to productivity changes led to relative job losses, while wages in industrial branches with below-average changes in productivity by being de-connected from their relative productivity performance saved less jobs than would have saved by following the relative productivity developments.

This de-connection of industry wages from industry productivity performance seems to be mainly caused by the indexation policy, as indexation by applying automatically across the board insulated year-to-year wage developments from differentials in productivity change. However, results similar to those regarding the sub-period 1982-88 are found for the sub-period 1977-88 too. As indexation policy was introduced in 1982, it seems that, in 1977-81, either the norm-based policies insulated wages from relative productivity performance or collective bargaining

developments had a similar effect.

As far as incomes policy is concerned over the period 1977-88, its common characteristic, despite the differences in type between norm and indexation, was their aim to narrow the wage structure by favouring the low-paid segments of the labour force. As far as collective bargaining developments are concerned, the positive and significant coefficient found for strike activity for period 1966-88 suggests that informal collective bargaining at the plant level contributed to the de-connection of changes in industry wages from changes in industry productivity changes.

To summarise, our analysis on industry-specific determinants of flexibility over the period 1966-88, suggests that in the long-run industry wages were associated with industry-specific productivity changes, while in the short-run strike activity was the main source of industry-specific wage flexibility. Furthermore, it appears that over the period 1977-88 asymmetries in the association between relative changes in productivity and wages at the industry level were employment hindering rather than employment enhancing as wages in industries of relatively poor productivity changes were insulated from this productivity performance. Incomes policy aimed to compress the wage structure seems to be the major cause of this employment hindering asymmetry.

## 5.6. CONCLUSIONS.

In theory flexibility in relative wages can be either competitive or non-competitive. Competitive is considered the flexibility associated with the use of relative wages for balancing labour demand and supply at the industry level, when, for instance, increased wages are used for retaining and attracting labour in expanding sectors. Non-competitive is considered the flexibility associated with industry-specific factors such as changes in productivity or bargaining power.

In Greek manufacturing over the period 1966-88, although flexibility in manufacturing relative wages was not an overwhelming characteristic, in conditions of extensive regulation of the labour market, that is in conditions which do not resemble very much to the ideal competitive labour market, non-competitive factors played a more important role than the competitive ones. The observed flexibility is mainly of the non-competitive type as it is caused by industry-specific factors such as productivity changes and industry-specific rates of strike activity.

The lack of competitive flexibility as well as the characteristics of non-competitive flexibility are mainly due to successive incomes policies implemented in the context of permanent employment regulation and to the militancy of trade-unions at the plant level which transformed the manufacturing

bargaining structure. These developments implied that for a number of years the Greek manufacturing sector was characterised by wage rises that were directly associated with industry-specific productivity changes.

The productivity-related flexibility suggests that workers in certain sectors shared industry-specific productivity gains. The strike activity-related flexibility suggests that workers, militancy and informal collective bargaining related to industry-specific characteristics resulted too in higher relative wages. It seems that the overall regulation disfavours competitive flexibility and sets the scene for non-competitive flexibility caused by institutional forces.

While overall, there was not much scope for competitive flexibility, in 1967-74 both the bivariate correlation analysis and the background information suggest that that period can be considered as an episode of competitive flexibility in the Greek manufacturing sector. The sub-periods characterised by different types of wage policy are different as far as flexibility is concerned either. Apart from the episode of competitive flexibility in 1967-74, non-competitive flexibility dominated the relative wages scene, but only for the sub-periods 1982-88 and 1977-88 the rates of industry strike activity are associated with non-competitive flexibility. The results for the sub-period 1975-81 are poor and this may be due to the wide disturbances caused in the system of industrial relations in Greek manufacturing.

As far as the employment consequences of asymmetric responses of

relative wages to industry-specific changes in productivity are concerned, they were found employment hindering for the period 1977-88, that is the period of egalitarian incomes policies of both types, norm-based and indexation. Overall, the extensive and varying policies of wage and employment regulation as well as their repercussions in the area of industrial relations are behind the observed non-competitive flexibility in relative wages and the asymmetries in the wage-productivity-employment nexus.

But the observed variability in relative wages should not be attributed only to these industry-specific factors. Incomes policies themselves may account to a certain extent for changes in relative wages as they treated them in varied ways.

## Table 5.4.1

**BIVARIATE CORRELATION COEFFICIENTS RELATING CHANGES IN NOMINAL WAGES AND CHANGES IN EMPLOYMENT OF WAGE EARNERS** (Time periods: 1966-88, 1967-74, 1975-81, 1982-88).

| Changes of | Full Period: 1966-1988. | | Period: 1967-1974. | |
|---|---|---|---|---|
| 1 year | 65/66-87/88 n=460 | $-.09^{**}$ | 66/67-73/74 n=160 | $.16^{**}$ |
| 2 years | 65/67-86/88 n=440 | $-.09^{**}$ | 65/67-72/74 n=160 | $.11$ |
| 3 years | 65/68-85/88 n=420 | $-.16^{***}$ | 65/68-71/74 n=140 | $.04$ |
| 5 years | 65/70-83/88 n=380 | $-.32^{***}$ | | |
| 10 years | 65/75-78/88 n=280 | $-.43^{***}$ | | |
| 23 years | 66/88 n=20 | $-.15$ | | |

| Changes of | Period 1975-1981. | | Period 1982-1988. | |
|---|---|---|---|---|
| 1 year | 74/75-80/81 n=140 | $.002$ | 81/82-87/88 n=140 | $-.01$ |
| 2 years | 73/75-79/81 n=140 | $.12$ | 80/82-86/88 n=140 | $.16^{*}$ |
| 3 years | 72/75-78/81 n=140 | $.03$ | 79/82-85/88 n=140 | $.13$ |
| 5 years | 70/75-76/81 n=140 | $-.26^{***}$ | 78/82-83/88 n=140 | $-.04$ |
| 10 years | 65/75-71/81 n=140 | $-.27^{***}$ | 72/82-78/88 n=140 | $.21^{***}$ |

Note: Levels of Significance: $*$ = 0.10, $**$ = 0.05, $***$ = 0.01.

## Table 5.4.2

**BIVARIATE CORRELATION COEFFICIENTS RELATING CHANGES IN NOMINAL WAGES AND CHANGES IN EMPLOYMENT OF WAGE EARNERS.**
(Short-run and Long-run changes over the period 1966-88)

| Year | Period of Change: 1 year | 2 years | 3 years | 5 years | 10 years | 23 years |
|------|------|------|------|------|------|------|
| /66 | .45** | | | | | |
| /67 | .20 | .23 | | | | |
| /68 | -.12 | .12 | .13 | | | |
| /69 | .28 | -.02 | -.07 | | | |
| /70 | -.08 | -.08 | -.29 | -.16 | | |
| /71 | .24 | .21 | .20 | -.17 | | |
| /72 | .36 | .37 | .13 | -.07 | | |
| /73 | -.01 | .07 | .17 | .35 | | |
| /74 | -.13 | -.37 | -.32 | .02 | | |
| /75 | -.12 | -.02 | -.41* | -.19 | -.21 | |
| /76 | -.24 | -.09 | -.16 | -.28 | -.35 | |
| /77 | .28 | .48** | .34 | .11 | -.04 | |
| /78 | -.03 | -.16 | .17 | .01 | -.01 | |
| /79 | -.60** | -.51** | -.42 | -.07 | -.12 | |
| /80 | .12 | .17 | .03 | .30 | -.09 | |
| /81 | .21 | .40* | .31 | .02 | -.22 | |
| /82 | .43 | .28 | .49** | .35 | -.15 | |
| /83 | -.33 | .01 | -.01 | .0002 | .11 | |
| /84 | .48** | -.10 | .14 | .11 | .09 | |
| /85 | .001 | .45** | -.06 | .17 | .15 | |
| /86 | -.13 | .10 | .53** | .21 | -.16 | |
| /87 | .10 | .01 | .08 | -.07 | .09 | |
| /88 | .08 | .16 | .10 | .35 | .15 | -.15 |

Notes: N = 20 (Two-digit industrial branches of manufacturing).
Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.

## Table 5.4.3

**BIVARIATE CORRELATION COEFFICIENTS RELATING ANNUAL CHANGES IN NOMINAL WAGES AND ANNUAL CHANGES IN EMPLOYMENT OF WAGE EARNERS.**
(comparison between coefficients for all branches
and coefficients for expanding branches)

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Period of Change: 1 year

| Year | CHWEi | CHWEi>0 |
|------|-------|---------|
| /66 | $.45^{**}$ | .25 |
| /67 | .20 | .18 |
| /68 | -.12 | -.28 |
| /69 | .28 | $.39^{*}$ |
| /70 | -.08 | -.05 |
| /71 | .24 | .26 |
| /72 | .36 | .30 |
| /73 | -.01 | .006 |
| /74 | -.13 | -.13 |
| /75 | -.12 | -.01 |
| /76 | -.24 | -.22 |
| /77 | .28 | .16 |
| /78 | -.03 | -.37 |
| /79 | $-.60^{***}$ | $-.41^{*}$ |
| /80 | .12 | -.22 |
| /81 | .21 | .18 |
| /82 | .43 | .27 |
| /83 | -.33 | -.37 |
| /84 | $.48^{**}$ | $.41^{*}$ |
| /85 | .00 | .03 |
| /86 | -.13 | -.04 |
| /87 | .10 | .08 |
| /88 | .08 | -.07 |

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Notes:
N = 20 (Two-digit industrial branches of manufacturing).
Levels of Significance: $*$ = 0.10, $**$ = 0.05, $***$ = 0.01.

## Table 5.5.1

## ESTIMATES OF THE INDUSTRY SPECIFIC DETERMINANTS OF NOMINAL WAGE CHANGES ACROSS MANUFACTURING INDUSTRIES IN GREECE.
(base-year to end-year changes)

Dependent Variable: CHWi

| Period | CT | CHWEi | CHPRi | WLi | CHFEi | $R^2/R^2$ | F-value |
|--------|------|-------|-------|-----|-------|-----------|---------|
| 1966 | 4,688.68 | .07 | 2.29** | -82.89** | | .45 | 4.36** |
| /88 | (11.89) | (.07) | (2.11) | (-2.67) | | .35 | |
| | | | | | | | |
| n=20 | 4,691.77 | | 2.27** | -82.84** | | .45 | 6.95** |
| | (12.36) | | (2.27) | (-2.75) | | .39 | |
| | | | | | | | |
| 1967 | 126.43 | .03 | .16 | -1.20 | | .08 | .45 |
| /74 | (4.45) | (.22) | (1.06) | (-.53) | | -.10 | |
| | | | | | | | |
| n=20 | 125.49 | | .14 | -1.01 | | .08 | .69 |
| | (4.59) | | (1.12) | (-.50) | | -.03 | |
| | | | | | | | |
| 1975 | 212.09 | .38 | .14 | 1.84** | | .29 | 2.22 |
| /81 | (7.27) | (1.15) | (.94) | (2.35) | | .16 | |
| | | | | | | | |
| n=20 | 212.85 | | .06 | 1.81** | | .24 | 2.62** |
| | (7.23) | | (.42) | (2.28) | | .15 | |
| | | | | | | | |
| 1982 | 192.08 | -.07 | -.005 | -.17 | -.37 | .22 | 1.03 |
| /88 | (10.20) | (-.49) | (-.03) | (-1.66) | (-.52) | .01 | |
| | | | | | | | |
| n=20 | 191.07 | | .03 | -.16 | -.41 | .20 | 1.36 |
| | (10.46) | | (.23) | (-1.67) | (-.59) | .01 | |
| | | | | | | | |
| 1977 | 885.81 | -.03 | -.30 | -2.73** | -4.64* | .61 | 5.77** |
| /88 | (15.82) | (-.06) | (-.83) | (-2.82) | (-2.00) | .50 | |
| | | | | | | | |
| n=20 | 885.61 | | -.29 | -2.72*** | -4.63* | .61 | 8.20*** |
| | (16.36) | | (-.89) | (-2.93) | (-2.07) | .53 | |

Notes: CHWi = Change in Nominal Hourly Wage Paid in Branch i.
CT = Constant Term.
CHWEi= Change in Employment of Wage Earners in Branch i.
CHPRi= Change in Productivity in Branch i.
WLi = Initial Level of Wage in Branch i.
CHFEi= Change in the Share of Female Employment in Branch i.

Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.
t-statistics in parentheses.

Table 5.5.2

# ESTIMATES OF THE INDUSTRY SPECIFIC DETERMINANTS OF NOMINAL WAGE CHANGES ACROSS MANUFACTURING INDUSTRIES IN GREECE.
(year to year changes)

Dependent Variable: CHWi

| Period | CT | CHWEi | CHPRi | SIi | WLi | CHFEi | $R^2$ | F-value |
|--------|-----|-------|-------|-----|-----|-------|-------|---------|
| 1966 -88 n=460 | 17.74 (29.80) | -.13*** (-2.88) | -.12*** (-3.02) | .20*** (5.38) | -.0001 (-.05) | | .09 | 11.55*** |
| 1967 -74 n=160 | -4.34 (-2.58) | -.09 (-1.55) | -.14*** (-2.94) | 10.45*** (2.37) | .89*** (10.15) | | .44 | 30.62*** |
| 1975 -81 n=140 | 23.53 (23.55) | .03 (0.59) | .02 (.58) | -.005 (-.20) | .02 (1.43) | | .02 | .55 |
| 1982 -88 n=140 | 35.51 (20.68) | -.05 (-.96) | .06 (1.16) | .18*** (3.73) | -.05*** (-10.84) | -.15** (-2.38) | .53 | 29.93*** |
| 1977 -88 n=240 | 27.71 (35.51) | -.06 (-1.34) | -.05 (-1.12) | .05* (1.74) | -.03*** (-10.50) | -.18*** (-3.21) | .35 | 24.88*** |

Notes: CHWi = Change in Nominal Hourly Wage Paid in Branch i.
CT = Constant Term.
CHWEi= Change in Employment of Wage Earners in Branch i.
CHPRi= Change in Productivity in Branch i.
SIi = Index of Strike Activity in Branch i.
WLi = Initial Level of Wage in Branch i.
CHFEi= Change in the Share of Female Employment in Branch i.

Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.
t-statistics in parentheses.

## Table 5.5.3

**ESTIMATES OF THE RELATIONSHIP BETWEEN RELATIVE NOMINAL WAGE CHANGES AND RELATIVE PRODUCTIVITY CHANGE**
(base-year to end-year change)

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Dependent Variable: CHRWi

| Period | CT | CHPRAi | CHPRBi | WLi | CHFEi | $R^2$ | F-value |
|--------|-----|--------|--------|-----|-------|-------|---------|
| 1966/88 | $1,119.39^{**}$ | 1.35 | 3.14 | $-89.38^{**}$ | | .45 | $4.45^{**}$ |
| n=20 | (2.19) | (0.53) | (1.28) | (-2.54) | | | |
| 1967/74 | 24.27 | -.27 | .40 | -1.41 | | .15 | .92 |
| n=20 | (0.81) | (-.49) | (1.57) | (-0.69) | | | |
| 1975/81 | $-63.26^{**}$ | .12 | -.04 | $1.81^{**}$ | | .24 | 1.69 |
| n=20 | (2.10) | (.49) | (-.11) | (2.23) | | | |
| 1982/88 | 34.43 | .05 | .02 | -.16 | -.41 | .20 | .96 |
| n=20 | (1.61) | (.16) | (.08) | (1.58) | (-.55) | | |
| 1977/88 | $185.10^{***}$ | -.84 | -.60 | $-2.99^{***}$ | -3.63 | .67 | $7.72^{***}$ |
| n=20 | (3.33) | (-1.91) | (-1.01) | (-3.37 ) | (-1.66) | | |

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Notes: CHRWi = Change in Relative Wage Paid in Branch i.
CT   = Constant Term.
CHPRAi= Change in Productivity in Branches with Above Average Increase in Productivity.
CHPRBi= Change in Productivity in Branches with Below Average Increase in Productivity.
WLi  = Initial Level of Wage in Branch i.
CHFEi= Change in the Share of Female Employment in Branch i.

Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.
t-statistics in parentheses.

## Table 5.5.4

**ESTIMATES OF THE RELATIONSHIP BETWEEN RELATIVE NOMINAL WAGE CHANGES AND RELATIVE PRODUCTIVITY CHANGE**
( year to year change)

Dependent Variable: CHRWi

| Period | CT | CHPRAi | CHPRBi | WLi | CHFEi | $R^2$ | F-value |
|--------|-----|--------|--------|------|-------|-------|---------|
| 1966-88 | -.17 | .018 | -.020 | .0004 | | .0001 | .17 |
| n=460 | (-.49) | (0.52) | (-.06) | (.33) | | | |
| 1967-74 | -.83 | -.049 | .060 | .046 | | .009 | .47 |
| n=160 | (-.60) | (-.59)· | (.85) | (.70) | | | |
| 1975-81 | .84 | -.023 | .059 | -.005 | | .009 | .39 |
| n=140 | (.88) | (-.40) | (.99) | (-.57) | | | |
| 1982-88 | .11 | .12** | -.15*** | -.003 | -.11*** | .099 | 3.70*** |
| n=140 | (.09) | (2.22) | (-2.41) | (-.96) | (-2.61) | | |
| 1977-88 | -.12 | .09** | -.11** | -.002 | -.11*** | .059 | 3.67*** |
| n=240 | (-.22) | (2.09) | (-2.31) | (-1.04 ) | (-2.95) | | |

Notes: CHRWi = Change in Relative Wage Paid in Branch i.
CT = Constant Term.
CHPRAi= Change in Productivity in Branches with Above Average Increase in Productivity.
CHPRBi= Change in Productivity in Branches with Below Average Increase in Productivity.
WLi = Initial Level of Wage in Branch i.
CHFEi = Change in the Share of Female Employment in Branch i.

Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.
t-statistics in parentheses.

# CHAPTER 6.INCOMES POLICY AND RELATIVE WAGES IN GREEK MANUFACTURING.

## 6.1. INTRODUCTION AND SUMMARY.

Since 1975 there has been no period without formal incomes policy in force. The policies undertaken since then fall into two categories. First, were the norm-based policies of the 1975-81 period. Second, policies based on systems of indexation were in operation throughout the period 1982-88. These policies were undertaken in the context of changing bargaining structures and processes in manufacturing. As argued in Chapter 5 these developments are associated with non-competitive flexibility in relative wages.

Given the high frequency of strikes and the rise of informal collective bargaining at the plant-level, this chapter examines the level and the direction of influence exerted by the norm-based and the indexation-based incomes policy upon the inter-industry wage structure in the Greek manufacturing sector over the period 1975-88. The period 1967-74, during which no explicit incomes policy was enforced, is adopted as benchmark for the comparison and the evaluation of the formal incomes policies' effects upon the inter-industry wage structure. It also examines the level and the direction of economy-wide influences, namely those by inflation and unemployment.

The inter-industry wage structure in Greek manufacturing is described by the coefficient of variation of average hourly pay of male workers across twenty two-digit branches. In

other words, the coefficient of variation and its variability over time are used as summary indicators representing the relative position of the average male worker in each of the twenty industrial branches with respect to hourly wage receipts.

Section 6.2 deals with the theoretical issue of how incomes policies may, if successful, narrow the wage structure. And, then, discusses the set of factors, apart from incomes policy, which may also account for both formation and change over time of the manufacturing wage structure. Section 6.3 elaborates and clarifies the hypotheses concerning changes in relative wages which are to be tested in this chapter. In Section 6.4 the equations' specification for testing on the leverage of incomes policies upon the inter-industry wage structure is presented and the relevant regression results are discussed. Finally, Section 6.5 draws the conclusions of the analysis.

Our analysis suggests the norm-based and the indexation policies are both associated with the widening of the manufacturing wage structure compared to the benchmark period 1967-74. However, the indexation policy widened the wage structure half as the norm-based policy. Furthermore, changes in inflation and unemployment are associated with variation in the wage structure in a rather unconventional way. Higher inflation and lower unemployment lead to increased inter-industry wage differentials. Strike activity is found to vary inversely to the coefficient of variation in manufacturing wages. Therefore it cannot be considered as an

indicator of bargaining power. The common cause lying behind these results is the rise and the workings of the informal system of collective bargaining at the plant level and the behaviour of the high-wage and high-bargaining power industrial branches which benefited the most from the decentralisation and the fragmentation of collective bargaining  in manufacturing.

## 6.2. WAGE STRUCTURE, INCOMES POLICY AND BUSINESS CYCLE.

### 6.2.1. Incomes Policy Rationales.

The use of incomes policy as a tool of macroeconomic management for controlling wage inflation, is of interest to both economic and industrial relations' analysis. Artis (1981) drawing on an analytical as well as historical perspective summarised the main rationales underlying the incomes policies which were adopted during the post-war period. Flanagan, Soskice and Ulman (1983) provided an extensive review of international experiences with incomes policy over the same period. These analyses made clear two points.

First, rationales of incomes policy are influenced by political calculus. Incomes policy design, implementation and effectiveness are, usually, a matter of economic as well as political debate. Under conditions of wage determination through collective bargaining, incomes policy aiming to control wages can be viewed as attempt to control collective bargaining either. The political dimension of incomes policy in conditions of collective bargaining was stressed by the keynesian school and its founder himself. The wage-raising power of unions was perceived as "a political rather than economic problem".

As Brawn (1975) pointed out, incomes policies in the post-war period, when they were not part of corporatist settlements and social contracts, were considered as direct offensive to trade-

unions and free collective bargaining and from this point of view incomes policies have been strongly criticised as unable to cope with wage inflation in an environment of collective bargaining and as causing more problems in the system of industrial relations than they resolve.

According to Clarke (1987:45), in the 1970s incomes policies "even with positive support from trade-union centres frequently had no more than a short term moderating effect, which might be followed by a surge of wage increases when the policy was relaxed".    Tarling and Wilkinson (1982), drawing on the U.K. experience with incomes policies in the 1970s, concluded that those policies created anomalies in the general process of earnings changes which in turn led to significant instabilities and disturbances once policies ended.

Second, the views of both policy-makers and economists about the rationales of, and the roles for, incomes policy are closely related to the evolution of theorising about wage determination and wage inflation. Varying theories on wage inflation imply different rationales for the role of incomes policy in macroeconomic management. In an extreme case, the monetarist account of inflation implies no room for incomes policy as a tool for controlling wage inflation. By contrast, in the set of cost-push theories of inflation, incomes policy should be adopted in order to control wage costs and, thus, minimise inflationary factors at their origin.    In this framework, the issue of relative wages is crucial for controlling wage inflation.

Theories on wage determination in a market environment, as summarised by Artis (1981), fall into four categories: the wage theorem view, the Phillips curve, the augmented Phillips curve and the real wage resistance model. The issue of relative wages is not in the centre of interest in theories dealing with wage determination at the aggregate level. Nevertheless, it is an important issue for theories based upon the wage theorem view. According to the wage theorem view, in its hey-day, "the maintenance of full employment removes the restraint upon trade-unions to press for higher wages ... and inter-union rivalry makes it impossible for the lesson that higher wages mean higher prices to be learnt; rather it encourages an inflationary spiral. Individual (group) money wage rates depend heavily on relativities, with the result that the absolute (average) level of money wages (and prices) is essentially indeterminate" (Artis,1981:7).


## 6.2.2. Incomes Policy and Wage Structure.

The analysis of wage determination at the disaggregated level leads to the question whether or not there are any leaders and followers, that is groups of wage earners who set the pace in wage bargaining processes which is then followed by other groups. According to Blackaby (1971:44) leaders in wage bargaining may include: highly capital intensive industries where productivity rises rapidly; highly unionised and militant industries with strong trade-unions; industries employing workers with skills in

scarcity; workers with great importance to export industries; and workers in industries which tend to get left behind in the medium term. As Blackaby notes "it is important to distinguish between the influence of high pay and the influence of the high pay bargain struck on a particular occasion". What mainly matters with regard to wage inflation and its association with developments in the wage structure, is the influence of high pay.

From this point of view, incomes policy should be focusing upon wage determination in industries leading the wage inflation process. These industries, in the absence of such a policy, would achieve higher wage increases. In turn, these increases, could create, through pay comparability and partial spillover effects, accelerating wage inflation.   Earlier attempts, as by Sargan (1971), to test for the existence of such relationships confronted problems since wage statistics on which the analysis had to be based did not match with negotiating groups. The use of the coefficient of variation as a proxy of variations in the wage structure helps to overcome the problem of matching bargaining groups and wages behaviour.

In testing for the incomes policy's effects upon relative wages and the resulting wage structure the assumption is made that the labour market is divided in sectors with specific characteristics as far as wage determination and the sectors position in the wage structure are concerned. Wachter (1974) distinguishes between the competitive and the non-competitive sector, the latter being the large oligopolistic unionised industries. These unionised industries are considered as the home of cost-push inflation.

Metcalf (1977), in the same line of argument, distinguishes between sectors covered and uncovered by collective bargaining. In this case the covered sector behaves as the non-competitive sector in Wachter's definition. The origins of these divisions can be traced in earlier attempts to analyse the wage inflation at a disaggregated level. Bowen (1960:74-81), for instance, divided the industries into two groups. First, a market power sector consisting of industries that are both highly concentrated and highly unionised. Second, a competitive sector in which the industries have the reverse characteristics.

On the basis of the distinction between competitive or non-covered sector and non-competitive or covered sectors, given the positive correlation between non-competitive or covered industries from the one side, and wages from the other side, both Wachter and Metcalf assume that, in the case of cost-push inflation, a successful incomes policy should stabilise or reduce the width of the wage structure. Certainly, the assumption that a successful incomes policy narrows the wage structure by setting restrictions on the rate of wage increases in the high-wage non-competitive sector holds true when the pressure upon wages comes mainly from the high-wage highly unionised and covered by collective agreements industries.

But a different, although temporary, effect upon the wage structure may be caused when the pressure comes from the low-wage industries. In such a case, low wage industries may contribute in narrowing, temporarily, the wage structure.

Nevertheless, if pay comparability is a principle upon which wage claims are formed, any improvement in the relative pay of the low-wage industries may cause the high-wage industries to react in order to re-establish their relative position in the wage structure. But, typically, wage inflation is not created by low-wage pushers which oblige high-wage industries to react. This might be only a temporary case which has rather to do with the second side of the distinction made by Blackaby, that is the influence of the high pay bargain struck in a particular occasion. In any case, a successful incomes policy should be able to control wage inflation caused by wage spirals initiated by either the high-wage or the low-wage industries and, at least, not allow the wage structure to become wider.


## 6.2.3. Business Cycle and Wage Structure.

Incomes policy is not the only determinant of variation in the wage structure. Whatever the specific rationale of an incomes policy is with respect to the wage structure, the latter is also influenced by structural and cyclical changes in the economy. Factors which may account for the inter-industry wage differentials include product market conditions, conditions related to capital and technology, and human capital characteristics of the industry's labour force. Moreover, include labour market conditions and industrial relations characteristics such as unionisation, militancy and bargaining power.

Wachter (1970) provided a view on factors determining cyclical variation in relative wages. According to his approach, cyclical variation in relative wages can be analysed in terms of shifts in industry labour supply curves. These shifts in industry labour supply are caused by changes in aggregate unemployment. In his model, the labour market is divided into two sectors, the high-wage non-competitive sector and the low-wage competitive sector. Each sector is assigned a sector-specific labour supply curve. If the labour market tightens, low-wage industries have to improve their pay in order to maintain a certain level of labour supply. If unemployment rises, low-wage industries may adjust downwards their relative wage.

High-wage industries, in turn, adopt wage policies that permit them to maintain their relative position in the wage structure and they may, according to Wachter, allow their relative wages vary inversely with the business cycle. This inverse variation is due to the trade-unions' interest in wage developments within high-wage groups rather than outside them. It is also due to their interest for a smoother variation in wages than in line with the business cycle variation. It can be also explained by the smoothing effect that the periodic collective bargaining of contracts has upon cyclical variations. This rationale led Wachter to the, then corroborated, hypothesis that the size of the wage differentials is a positive function of the level of unemployment, with the variable of unemployment representing excess demand conditions in the labour market.

Moreover, Wachter found that a cost of living variable may also

affect variations in the wage structure, as industries differ in the speed with which they adjust wages to changes in consumer prices. In the context of the U.S. wage formation processes, with three-year long contracts, wage rounds and institutional lags in wage determination, high-wage industries responded more rapidly during slow inflation and less rapidly during rapid inflation, than low-wage industries.

According to the model proposed and tested by Wachter, it appears that there is a negative association between inflation and the wage structure and a positive association between unemployment and the wage structure, so that a decrease in unemployment and an increase in inflation may both act to narrow the wage structure over the business cycle. Metcalf (1977) arrived to similar results with respect to the influence of unemployment and inflation upon variation in the U.K. wage structure.

Apart from the incomes policy influence, three other sets of factors may account for formation and evolution of the manufacturing wage structure over time. The first set refers to differences in the competitive structure in the product markets, which determine differences in capital and productivity. The second refers to human capital characteristics which also imply differences in labour productivity. The third set refers to the business cycle influence upon the manufacturing wage structure. To summarise, on the business cycle influence upon variations in the wage structure, there is evidence concerning the variation in

the U.S. and the U.K. wage structures that unemployment is positively and inflation is negatively associated with it.

# 6.3. HYPOTHESES TO TEST AND THEIR RATIONALES.

## 6.3.1. High-wage and Low-wage Sectors.

Despite the long-lasting characteristics of undeveloped formal institutions and processes of collective bargaining, in the context of strike activity at the plant level and informal collective bargaining, the model of high-wage highly concentrated highly unionised and low-wage less concentrated less unionised industries is substantiated and becomes relevant to developments in the Greek manufacturing sector.

As far as relative wages in the twenty two-digit industrial branches are concerned the coefficient of concordance in the ranking of the manufacturing wage structure for male workers in the period 1965-1988, presented in Table 4.3.4, is 0.82. This value means that male employees of certain high-wage industrial branches in Greek manufacturing maintained, throughout this period, their higher position in the wage structure. The composition of the top five high-wage industrial branches is very stable and the club of the bottom-five low-wage industrial branches has also stable composition and permanent members.

This stability of the wage structure hierarchy over the period 1965-88 and the central role of the size variable in the determination of the manufacturing wage structure, indicated in Table 4.3.5, implies that the model proposed and tested by Wachter and Metcalf may capture the essential workings of the

Figure 6.3.1

# INDUSTRIES IN WAGE & STRIKE STRUCTURE

## AVERAGE RANKING, 1975–1988
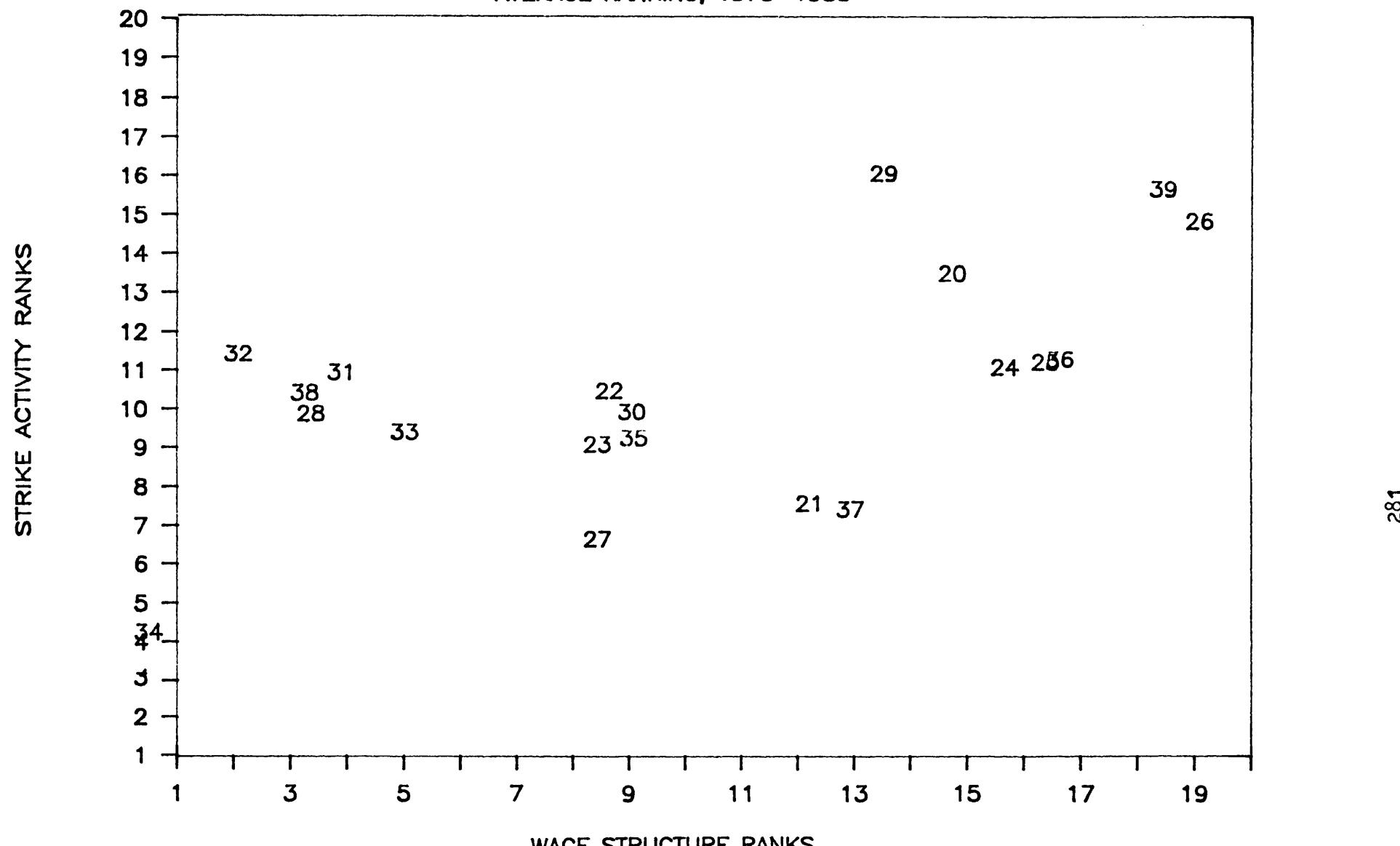


Note: Numbers from 20 to 39 refer to keys for manufacturing industries.

Greek labour market with respect to wage determination in the manufacturing sector. However, while the high-wage and low-wage sectors are clearly distinguishable, the evidence on the ranking of industrial branches according to their strike-proneness may not reduce the validity of the model. In the case of the high-wage and low-wage industrial branches in Greek manufacturing the combination of ranking of the twenty industrial branches according to wages and strike activity, as presented in Figure 6.3.1 indicates that some high-wage industrial branches hold also high ranks in the strike activity hierarchy while other high-wage branches hold relatively low ranks with respect to strike activity. The same mixed picture is also observed in the case of the low-wage industrial branches. Some of them are rather passive while others hold high ranks in the strike activity hierarchy.

Given the theoretical and empirical considerations discussed in Section 6.2 and in earlier chapters respectively, it seems reasonable to assume that country- and period- specific characteristics are crucial for the analysis of variation in the Greek manufacturing wage structure. They may bring about alterations in the explanation of rationales with regard to determination of relative wages. These country and period specific characteristics are taken into account in formulating the testable hypotheses of this chapter. These hypotheses refer to three sets of influence exerted upon the Greek manufacturing wage structure over the years 1967-88, that is the influence of incomes policy, business cycle and strike activity respectively.

## 6.3.2. The Influence of Incomes Policy.

Our hypotheses concerning the influence of incomes policies are slightly modified when compared with those in earlier work by Wachter and Metcalf. This modification is due to the fact that in the U.S. and the U.K. case there were both incomes policy-on and incomes policy-off periods in conditions of wage determination under collective bargaining. In the Greek case, there have been incomes policy-on periods with collective bargaining emerging in parallel. Thus, in this chapter different periods of incomes policy are compared with a period during which neither incomes policy nor essential collective bargaining were at work.

During the period 1967-74, with essential collective bargaining suspended, strike activity banned and statutory regulation of wages by the government, the ability of high-wage high-bargaining power industries to maintain and to increase their wage premium was taken away. This may have created relatively better conditions for the low-wage less powerful industries which faced no severe change with respect to wage determination conditions.

In the period 1975-81, with the re-establishment of the right of collective bargaining and the adoption of norm-based incomes policies the wage structure is expected to become wider than that of the period 1967-74, for the following reasons. First, the norm-based incomes policy may have failed to provide a low level of uncertainty with respect to inflationary erosion of wages. The policy's pattern was to award a substantial increase in the beginning of the year and a less important increase in its second

semester regardless of any accelerating rises in consumer prices. Thus, high-wage high-bargaining power industries may have been pre-active and aimed at higher increases to avoid erosion of their real wage. In the same time, low-wage low-bargaining power industries may have been reactive and failed to keep up with rising inflation.

Second, the rise of the informal system of collective bargaining at the plant level in the Greek manufacturing industries may have enabled the high-wage highly-unionised industries to recover, re-establish and increase their wage premium, by initiating a bargaining behaviour which considered the norm as the floor for additional increases in nominal wages. In the same time, low-wage low-bargaining power industries may have had no alternative but to follow the norm. The evidence on the wide dispersion of the strike activity across the manufacturing sector given in Tables 3.4.7-3.4.10, along with the existence of a clearly identified group of high-wage highly active, in terms of strike activity behaviour, industries, as denoted by Figure 6.3.1, suggest that a wage premium may have been extracted by the high-wage high-bargaining power industries via the informal system of collective bargaining.

In the period 1982-88, the indexation policy is expected to cause the wage structure to narrow, in comparison to that of the norm-based policy period, for three reasons. First, the system of indexation was securing an automatic adjustment of wages to consumer prices increases, and thus minimised the level of

uncertainty with respect to wage determination in conditions of double-digit inflation. In other words, this policy permitted, by design, to both high-wage and low-wage industries to adjust regularly and with the same speed their wage rates. Thus, the automatic adjustment of wages would stabilise the wage structure. Second, the system of partial indexation was clearly in favour of the low-wage industries and it seems reasonable to assume that, throughout the period 1982-88, the system of partial indexation was compressing the relative position of the high-wage industries.

Third, this period was also a period of high unemployment and job insecurity for a large number of ailing manufacturing industries employing nearly 10 per cent of manufacturing employees. These developments may have affected negatively the bargaining power of the unionised labour force. Presumably, the high-wage high-bargaining power industries, which were exerting their power to extract and maintain a wage premium, saw it being eroded. In conditions of higher unemployment, the low-wage and less powerful industries, perhaps, found themselves in a relatively better position as the level of unemployment did not erode their bargaining power which they never dispossessed and which never was a main determinant of their relative position. In addition, it may have been the case that the system of indexation was offering to the low-wage low-bargaining power industries more than they could get by any means of collective action or by the competitive workings of the loose labour market. Thus, with the low-wage industries in the greenhouse and the high-wage

industries exposed to market and governmental pressures, the wage structure is expected to narrow.

However, the indexation policy is expected to experience a wage structure wider than that of the benchmark period. During the period of indexation the means for collective action and collective bargaining were available. And if used, as the recorded strike activity partly indicates, they may have affected positively the variation in the wage structure. In the benchmark period, collective bargaining was suspended and any means for collective action were taken away from the high-wage high-bargaining power industries. From this point of view, during the indexation policy, at least during the sub-periods when it was not made compulsory by law, the high-wage high-bargaining power industries dispossessed collective bargaining as a means for extracting a, more or less curtailed, wage premium.

To summarise, the hypotheses with respect to incomes policy are that both the norm-based and the indexation policies will both widen the variation in the wage structure, with the norm-based policy exerting a relatively stronger influence than the indexation policy.

### 6.3.3. The Influence of Business Cycle.

Can the assumptions made by Wachter and its model be applied in the case of the Greek labour market with respect to wage formation and the evolution of the manufacturing wage structure throughout the period 1967-88? Does the fluctuation

of the coefficient of variation of average hourly pay for male workers across twenty two-digit industrial branches, reflect influences exerted by unemployment and inflation? Is their leverage expected to be positive or negative?

Our hypotheses concerning the influence of the business cycle are also affected by the way the system of wage determination has evolved in the Greek manufacturing sector during the last two decades. Contrary to the evidence provided by Wachter and Metcalf, in the context of the informal system of collective bargaining in Greece we contend that business cycle factors work in an unconventional way as pay of the high-wage and high-bargaining power branches reflect more inflation and unemployment influences than pay of the low-wage low-bargaining power branches.

In the context of the dual system of wage determination, which includes both formal and informal collective bargaining, it seems reasonable to hypothesise, contrary to Wachter's and Metcalf's evidence, that rising consumer prices are positively associated with variation in the wage structure. This means that an increase in inflation causes the wage structure to become wider. This may have happened if employees in the less powerful industrial branches, failed to compensate themselves for inflation, when employees in industrial branches with bargaining power were able to keep up with inflation, to get higher increases in nominal wages and, thus, secure a higher wage premium.

Obviously, this case is quite different from that of the U.S. and the U.K. where the existence of formal annual or two to three year collective contracts causes a certain stickiness in wage changes of the high-wage and highly unionised industrial branches. In the case of the Greek manufacturing sector, if the informal and erratic mechanism for wage determination was in operation, the outcome may have been that rising inflation caused the wage structure to widen rather than to narrow. It is likely that rising inflation led high-wage and high-bargaining power to widen the wage structure via the workings of the informal system of collective bargaining.

In the same context, contrary to Wachter's and Metcalf's conclusions, unemployment may have been negatively associated with variations in the manufacturing wage structure. In other words, an increase in aggregate unemployment causes the wage structure to narrow, while a decrease causes a wider wage structure. This may have been the case when, in the context of informal collective bargaining, rising unemployment mainly affects adversely the employees in the high-wage high-bargaining power industrial branches, rather than the low-wage low-bargaining power branches. Likewise, a tighter labour market reinforces more the bargaining power of the high-wage high-bargaining power than that of the low-wage low-bargaining power industrial branches.

In both cases, a negative association between unemployment and the wage structure may be observed, as with rising unemployment

the low-wage and less powerful industrial branches become in a relatively worse bargaining position, while with tightening labour markets the high-wage high-bargaining power industrial branches become in a relatively better bargaining position. If unemployment affects in such a way the relative bargaining power of high-wage and low-wage industrial branches, then a negative association between the level of unemployment and the wage structure may be observed.

Contrary to this hypothesis, it was argued by Wachter that rising unemployment permits low-wage industrial branches to adjust downwards their relative wages, while high-wage industrial branches become under less pressure for rising their relative wages. But, even if rising unemployment undermines to a certain extent unions' bargaining power, high-wage industrial branches cannot dispense with institutional pressure from the trade-unions side, which aim to preserve their relative position in the wage structure. In this case, according to the rationale proposed by Wachter and corroborated by himself and Metcalf, rising unemployment may cause the wage structure to become wider. The difference in the rationale of our hypothesis is caused by our postulation concerning the system of industrial relations and wage determination.

In the U.S. and the U.K. case, rising unemployment is considered as undermining the relative position of employees in the low-wage industries, while institutionalised collective bargaining in high-wage industries causes a stickiness in cyclical variation of wages. In the Greek case, we assume that rising unemployment

undermines the relative position of employees in high-wage industries, because of the lack of institutionalised collective bargaining at the plant level. Thus, rising unemployment makes the informal system of collective bargaining weaker and less effective. In other words, rising unemployment, while in the U.S. and the U.K. does not undermine formal collective bargaining arrangements, in Greece may have undermined the very existence of the system of collective bargaining at the plant level, that is the informal one.

Finally, another matter for investigation with regard to the business cycle influence upon the wage structure, is whether or not this influence is exerted by the actual or the past values of inflation and unemployment, that is with or without a time-lag. For instance, in the context of institutionalised bargaining with contracts lasting for two to three years, as in the U.S. inflation may exert its influence with a relevant lag. In the context of informal and erratic bargaining procedures, the influence of inflation may be caused by its actual rates. In the same context the analogy can be drawn concerning the actual or lagged influence of unemployment.

To summarise, the hypotheses with regard to the business cycle influence upon the wage structure are that prices inflation causes the wage structure to become wider, while unemployment affects it negatively.

## 6.3.4. The Influence of Strike Activity.

Our hypothesis about the influence of strike activity upon variation in the wage structure is rather ambiguous. Prima facie, strike activity may be considered as being positively associated with changes in the wage structure. However, it is equally reasonable to assume that it may be, also, negatively associated with variations in the wage structure. It all depends on how the role of strike activity is perceived with respect to collective bargaining and wage determination.

If strike activity is considered as indicator of bargaining power, then, it is quite reasonable to expect a positive relationship between strike activity and the wage structure. But it is not definite that strike activity denotes bargaining power. Industrial branches with high bargaining power, which is established and recognised in a certain system of industrial relations, do not need to recourse to industrial action for achieving their aims. Inversely, industrial branches with low bargaining power can be more strike-prone than high-bargaining power branches, although less effective. In other words, strike activity is only a part of the bargaining process and not an indicator of the balance of power within it.

In the context of the system of industrial relations in the Greek manufacturing sector as developed since 1975, strike activity at the plant level indicates that an informal system of collective bargaining was initiated. Indeed, strike activity may have offered the only way via which employees were able to initiate

this informal system. To build an informal bargaining structure, the establishment of a new bargaining relationship is required. Strike activity, by demonstrating a certain level of bargaining power, offers the means through which such a new collective bargaining relationship can be set up. Furthermore, employees may have to recourse to strike activity periodically in order to preserve this new relationship, if the latter is not formal and institutionalised. Perhaps, industrial branches of low bargaining power, in their effort to initiate and preserve bargaining relationships of this kind, may have had to recourse to industrial action more often than high- bargaining power branches.

In the Greek manufacturing sector over the years 1975-88, as discussed in section 6.3.1 and described in Figure 6.3.1, the coexistence of all four combinations of industrial branches ranked according to their high/low wages and their high/low strike activity records, underlines the question which lies behind this ambiguity about the influence that strike activity exerts upon the wage structure. This is the question of the character and the role of the strike activity in Greece, and especially in the manufacturing sector. The same question is also raised by statistics which indicate that during the hey-days of strike activity, in the period 1976-81, only 6 per cent of strikers where reported as being fully or partially successful (Ioannou, 1989:102).

After all, does strike activity play a central role in wage

determination processes across the board, or reflects only, or mainly, discontent and adversarial industrial relations? In such a case the possibility of a negative association of the strike activity with variation in the wage structure should not be discarded. If variation in strike activity indicates variation in collective bargaining power a positive association should be expected. But as bargaining power, usually does not vary to the extent that strike activity does, the rationale on the strike activity as indicating occasionally either discontent and low bargaining power or high bargaining power may capture better the role of strike activity in the Greek manufacturing sector. By testing on the relationship between the variation in the wage structure and strike activity, this question is to be addressed to a certain extent.

To summarise, the hypothesis concerning the influence of strike activity remains open. There are good reasons for not to consider strike activity as a good proxy for collective bargaining power. This is due to the ambiguity on the character and the role of strike activity in the system of wage determination in the Greek manufacturing sector.

## 6.4. EQUATIONS SPECIFICATION AND REGRESSION RESULTS.

On the basis of the analysis developed in earlier Sections, variation in the wage structure is considered as a function of five sets of factors, which include i) incomes policy, ii) the business cycle, iii) product market characteristics, iv) human capital characteristics and v) developments in industrial relations.

From these sets of factors, we have not elaborated the influence of both product market and human capital characteristics. Unavailability of the relevant data do not allow to test for their influence on variation in the wage structure. Thus, with respect to product market conditions the assumption is made that over the period under examination any differences among the manufacturing industrial branches in the competitive structure of their product markets remained constant. In other words, we assume that there was no variation in the degree of their monopolistic power in the product market. Furthermore, with regard to the human capital composition of the male labour force in manufacturing, the assumption is made that there was no variation over time in the skills mix within each industry.

Consequently, to test for the incomes policies' influence upon the wage structure, an equation is specified which includes as dependent variable the annual coefficient of variation of average hourly wage receipts of male workers across the twenty two-digit

industrial branches of the Greek manufacturing sector. The coefficient of variation is used to represent the relative variability of the average hourly pay of male workers across manufacturing industry. Five independent variables are included; two to control for the business cycle influence, one for the influence of strike activity and two for the types of incomes policy under examination.

The norm-based and the indexation incomes policy variables are represented by two dummy variables taking the value of 1 for the years they were used. Both incomes policy variables take the value of 0 for the benchmark period 1967-74. According to our hypotheses, it is expected a positive association of the norm-based incomes policy variable with the coefficient of variation in wages. Similarly, it is expected the positive association of the indexation policy variable with the coefficient of variation in the wage structure, but in this case the estimated parameter should be indicating the indexation's lower positive influence upon the wage structure.

The business cycle variables are one for inflation and one for the labour market conditions. As far as the business cycle influence is concerned, slightly modified specifications are tested with inflation and labour market conditions variables regressed with and without one-year lag. Of course, the lagged specifications imply no change in the way the explanatory variables are expected to be associated with the coefficient of variation in manufacturing wages.

The variable for inflation is the annual rate of inflation. According to our hypothesis, the inflation variable is expected to be positively associated with the coefficient of variation in manufacturing wages.

Conditions in the labour market are represented alternatively by four relevant variables. First, the average annual level of unemployment is expected to be negatively associated with variation in the wage structure. Second, the reciprocal of the annual level of unemployment, as its inverse is expected to be negatively associated with the coefficient of variation in wages, should be positively associated with the dependent variable. Third, the year to year change in the annual index for the registered unemployment is also used as a proxy for labour market conditions and, according to our hypothesis, it is expected to behave in the same way as the variable for the level of unemployment does, that is to be negatively associated with variation in relative wages. Four, the year to year change in the total employment of employees in the manufacturing sector is used as independent variable for labour market conditions. It is expected to be positively associated with the coefficient of variation in wages.

Not each one of these slightly different variables for conditions in the labour market are considered as being of the same explanatory value. They do represent alternative proxies of labour market conditions. Statistics on registered unemployment underestimate the total level of unemployment in the Greek labour market. This level of unemployment is better captured by the

annual labour force survey from which the variable for the average annual level of unemployment is drawn. However, statistics on registered unemployment are more reliable for labour market conditions faced by those unemployed with long experience in the labour market and more stable participation in the labour force. Normally, registration as unemployed is made for claiming benefits which are only paid to those with a certain minimum period in work. Thus, statistics on registered unemployment underestimate the number of unemployed by excluding new job seekers, casual labour, women dropping in and out of the labour force etc.

Moreover, both the level of unemployment and the level of registered unemployment may provide a biased view with respect to the labour market conditions prevailing in the manufacturing sector and, in particular, in industries employing more than 10 employees from which the sample for manufacturing wages is drawn. These industries employ less than three quarters of the total number of employees in employment, while employees in employment account, throughout the post-war period, for less than 50 per cent of the total labour force. This is why the variable representing the annual change in the average annual employment of employees in the manufacturing sector may be a better proxy for the labour market conditions prevailing in the Greek manufacturing sector.

Finally, the strike activity variable is the annual coefficient of variation in days lost in strike activity per 1000 employees.

It takes the value of 0 in the period 1967-74, during which no strike activity was recorded. According to our hypothesis, as variation in strike activity is not considered as a good proxy of bargaining power, there is no strong view on its positive or negative association with variation in the wage structure.

In testing for the incomes policy influence upon the manufacturing wage structure 22 annual observations, covering the period 1967-88, are used. Regression results of three sets of equations are given in Tables 6.4.1, 6.4.2, 6.4.3 and 6.4.4. Table 6.4.1 presents results for the equation in which the business cycle variables are incorporated in their actual annual values. Table 6.4.2 provides the results for the specification in which the business cycle variables are regressed with one-year lagged values. Table 6.4.3 presents the results of the regression in which the labour market conditions variable is incorporated with one-year lag while the inflation variable is incorporated in its actual annual values. Table 6.4.4 examines various specifications of the strike activity variable. In Tables 6.4.1-6.4.3 four equations are reported, as four variables for labour market conditions are used alternatively. In Table 6.4.4 four equations are reported as four varying specifications of the strike activity variable are tested.

In general, all the hypotheses with regard to the influence exerted upon variation in the wage structure by the incomes policy and the business cycle variables are supported by the regression results. It appears that incomes policy dominates the evolution of the manufacturing wage structure, while the business

cycle variables play a second but noticeable role.

All equations suggest that the norm-based incomes policy is associated with the widening of the wage structure. As far as indexation policy is concerned, the hypothesis that it caused the wage structure to become wider in comparison with the benchmark period, but relatively narrower than caused by the norm-based policy is also corroborated. The incomes policy coefficients for the norm-based policy are strongly significant across all sets of equations. The estimated coefficients of the indexation policy variable are less significant in some equations due to collinearity with the variable of inflation. But, overall, they suggest that indexation policy is associated with the widening of the wage structure as much as half as the norm-based policy did. This result fits with our hypotheses regarding the influence of incomes policy upon the manufacturing wage structure over the period under examination.

How much does the categorisation of incomes policy make difference in widening or narrowing the wage structure? This question can be answered by considering the standardised regression coefficients. The standardised regression coefficients for equation 4, which provides better results than any other equation in the set examined, are the following:

$$CVW = 0.32CPI + 0.22CHME - 0.40CVSTR + 1.13NIP + 0.42IIP$$

These results imply that the influence of the norm-based incomes policy in widening the manufacturing wage structure is three

times the influence of the indexation policy.

As hypothesised  the independent variable for inflation, when regressed without time-lag, gives significant estimates with positive sign. But its estimates in the lagged specification are neither stable nor significant. A relatively better performance of the lagged specification would have been consistent with the predominance of formal and institutionalised annual wage bargaining. But the better performance of the actual rate of inflation is more consistent with the erratic wage rounds evolving within the informal system of collective bargaining.

The positive correlation indicates that the higher the rate of inflation the wider the wage structure becomes as high-bargaining power branches adjust their wages to past and expected inflation, while low-bargaining power branches fail to keep up with. In this context, the influence of inflation upon the wage structure is not minimal as the standardised estimated coefficient compares to that of the indexation policy variable.

Labour market conditions influence the wage structure in a quite stable way. Variation in the wage structure is a negative function of the level of unemployment. This negative association is corroborated by all three alternative variables representing the state of unemployment. Stability in signs as well as consistency are remarkable. In all sets, the variable representing the annual change in manufacturing employment, provides  estimates which are consistent with the negative sign in the parameters for unemployment. The two variables for

registered unemployment and change in manufacturing employment perform better than the variable for the level of unemployment and its reciprocal.

Indeed, equations which include changes in manufacturing employment as a proxy for labour market conditions, provide the overall best fit. When it turns to how much influence the labour market variables exert upon the wage structure it appears that it is not very important in quantitative terms, as the standardised estimated coefficient for change in manufacturing employment is nearly half of that for the indexation policy variable.

The negative association between unemployment and variation in the wage structure implies that an increase in unemployment leads to a narrower wage structure. This indicates that industrial branches leading the widening of wage differentials are vulnerable to higher unemployment. This is consistent with the erratic character of the informal collective bargaining procedures which are not protected by the law and are not a central element of the official trade-unionism in Greek manufacturing.

Another interesting finding in all sets of regressions is the negative coefficient of the strike activity parameter which appears stable both in sign and in magnitude. The negative sign indicates that variation in the wage structure develops inversely to variation in strike activity. This inverse relationship indicates that strike activity it is not an indicator of bargaining power. The question which way works the causal link

between variation in the wage structure and variation in strike activity is addressed in Table 6.4.4 where two alternative variables on strike activity are tested with and without a one year lag. The estimated coefficient for the strike activity variable in the equation with the lagged specification is found insignificant. However, is found significant and negative in the specification without lag. This result indicates that strike activity varies inversely to the variation in the wage structure and suggests that variation in strike activity does not determine variation in the wage structure. Therefore the conclusion can be drawn that strike activity is not always an indicator of bargaining power, especially in the context of the informal system of collective bargaining.

To summarise, regression results suggest that, in comparison with the benchmark period 1967-74, formal incomes policies do widen the wage structure, with the norm-based policy exerting the stronger positive effect while indexation policy exerts a lower positive influence. Incomes policies dominate the making of the manufacturing wage structure over the period 1975-1988 with the business cycle variables exerting a rather secondary but noticeable influence. Inflation is positively associated with variation in the wage structure, while unemployment is negatively associated. Variation in strike activity is found negatively associated with variation in the wage structure. The regression results support the original hypotheses. They confirm that country-and period-specific characteristics with respect to the system of industrial relations, as analysed in earlier Chapters,

account for this unconventional association between variation in
the wage structure and business cycle.

## 6.5. CONCLUSIONS.

In the Greek manufacturing sector, after a long tradition of permanent intervention in wage determination, the adoption of formal incomes policy since 1975 for controlling rising inflation, coincided with the rise of an informal system of collective bargaining at the plant level. In this context, the comparison of two types of formal incomes policy, with the period 1967-74 used as benchmark, leads to the conclusion that both types of policy, namely the norm-based and the indexation, are positively associated with variation in the wage structure. Indeed, while both policies were aiming at a narrow wage structure, although not with equal emphasis, the norm-based policy failed and, in fact, did widen the wage structure. Indexation policy was relatively more successful in compressing the manufacturing wage structure.

This difference in performance may be attributed to the workings of the informal system of collective bargaining in the manufacturing sector, via which high-wage high-bargaining power industrial branches were extracting their wage premium in the 1975-81 period. The indexation policy did cause a relatively narrower wage structure by protecting institutionally the relative wage of the low-wage low-bargaining power industrial branches. From this point of view, if the dispersion of the wage structure is used as criterion for the incomes policy evaluation, indexation can be considered as more successful. It appears that the indexation policy succeeded in narrowing relatively the wage

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structure via two ways. First, by improving the relative position of the low-wage industrial branches. Second, by controlling the high-wage industrial branches. Thus, it is not a paradox that trade-unions while being strongly in favour of the indexation system, cast their criticism upon the scale used for partial indexation which causes the decline in inter-industry wage differentials.

Behind the issue of the incomes policy effectiveness and failure lies the issue of the institutional framework of wage determination in the manufacturing sector. Industrial relations developments such as the lack of a formal system for collective bargaining at the plant level and the rise of informal collective bargaining, cause the wage structure to become wider when the incomes policy is rather voluntary and allows room for informal collective bargaining.

Indeed, in this context, the business cycle causes contradictory influences upon the wage structure. Inflation undermines the relative wage of the low-wage less powerful industrial branches. Unemployment controls the high-wage high-bargaining power industrial branches in extracting a wage premium. In other words, because of incomes policies and the institutional developments in the manufacturing bargaining structure it appears that changes in the wage structure not only became less responsive to business cycle conditions but, indeed, their responsiveness is the inverse than that observed in industrialised market economies such as the U.S. and the U.K.

where collective bargaining evolves through relatively stable structures and processes.

With regard to industrial relations developments, given that strike activity was the main weapon for initiating new bargaining relationships and setting up the informal system of collective bargaining at the plant level, the inverse variation in strike activity suggests that the inter-industry efficiency of strike activity was not a function of the hours lost in industrial conflict. The evidence on the expansion of strike activity, along with its inverse variation compared to variation in the wage structure suggest that in many cases the low-wage low-bargaining power industrial branches have been locked in a vicious cycle of low relative wages and adversarial industrial relations.

## Table 6.4.1

### REGRESSION EQUATIONS
### TO EXPLAIN INTER-BRANCH VARIANCE IN WAGES, 1967-1988.

| Variable | SD | M | ES | Equation 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|
| CVW | 2.03 | 15.09 | | | | | |
| CT | | | | 13.94 (15.40) | 12.73 (17.91) | 12.80 (29.03) | 12.48 (25.53) |
| CPI | 8.33 | 14.05 | + | $0.06^{*}$ (1.68) | $0.06^{**}$ (1.93) | $0.09^{****}$ (2.62) | $0.08^{****}$ (2.61) |
| U | 2.43 | 4.46 | - | -0.20 (-1.04) | | | |
| RECU | 0.17 | 0.31 | + | | 1.22 (0.61) | | |
| CHRU | 20.13 | 4.42 | - | | | $-0.02^{*}$ (-1.36) | |
| CHME | 2.52 | 1.91 | + | | | | $0.18^{**}$ (1.90) |
| CVSTR | 85.51 | 98.47 | ? | $-0.01^{**}$ (-1.85) | $0.01^{**}$ (-1.80) | $-0.01^{**}$ (-1.74) | $-0.01^{**}$ (-1.84) |
| NIP | | | + | $4.85^{*****}$ (4.20) | $4.88^{*****}$ (4.07) | $4.93^{*****}$ (4.42) | $4.84^{*****}$ (4.53) |
| IIP | | | + | $2.29^{**}$ (1.75) | $1.66^{*}$ (1.50) | $1.40^{*}$ (1.42) | $1.78^{**}$ (1.85) |
| $R^2$-adjusted | | | | .797 | .788 | .805 | .823 |
| Durbin-Watson | | | | 1.75 | 1.71 | 1.87 | 1.73 |
| Method of Estimation | | | | OLS | OLS | OLS | OLS |

Notes:
SD = Standard Deviation.
M = Mean.
ES = Expected Sign.
CVW = Coefficient of variation in hourly wage of male workers across twenty two-digit manufacturing branches.
CPI = Annual rate of inflation.
U = Level of unemployment.
RECU = Reciprocal of unemployment level.
CHRU = Change in registered unemployment.
CHME = Change in manufacturing employment.
CVSTR = Coefficient of Variation in hours lost per 1000 employees in strike activity across twenty two-digit industrial branches.
NIP = Norm-based incomes policy.
IIP = Indexation incomes policy.
t-statistics in parentheses.
Levels of Significance *=.1, ***=.025, *****=.005, **=.05, ****=.01

## Table 6.4.2

### REGRESSION EQUATIONS
### TO EXPLAIN INTER-BRANCH VARIANCE IN WAGES, 1967-1988.

| Variable | SD | M | ES | Equation 5 | Equation 6 | Equation 7 | Equation 8 |
|---|---|---|---|---|---|---|---|
| CVW | 2.03 | 15.09 | | | | | |
| CT | | | | 15.15 (13.40) | 12.38 (15.78) | 13.05 (30.18) | 12.75 (25.29) |
| $CPI_{t-1}$ | 8.55 | 13.66 | + | -0.02 (-0.26) | 0.003 (0.05) | 0.05 (1.02) | 0.01 (0.27) |
| $U_{t-1}$ | 2.32 | 4.34 | - | -0.37* (-1.67) | | | |
| $RECU_{t-1}$ | 0.17 | 0.31 | + | | 4.15* (1.54) | | |
| $CHRU_{t-1}$ | 20.04 | 4.70 | - | | | -0.3*** (-2.10) | |
| $CHME_{t-1}$ | 2.53 | 2.00 | + | | | | 0.23** (2.10) |
| CVSTR | 85.51 | 98.47 | ? | -0.01 (-1.19) | -0.01* (-1.37) | -0.01** (-2.02) | -0.01* (-1.50) |
| NIP | | | + | 4.94***** (3.89) | 4.74***** (3.47) | 6.04***** (5.60) | 5.58***** (5.13) |
| IIP | | | + | 3.30**** (2.64) | 2.66** (2.42) | 2.50*** (2.48) | 2.76** (2.66) |
| $R^2$-adjusted | | | | .770 | .765 | .789 | .788 |
| Durbin-Watson | | | | 1.88 | 1.72 | 2.41 | 2.06 |
| Method of Estimation | | | | OLS | OLS | OLS | OLS |

Notes:
SD = Standard Deviation.
M = Mean.
ES = Expected Sign.
CVW = Coefficient of variation in hourly wage of male workers across twenty two-digit manufacturing branches.
CPI = Annual rate of inflation.
U = Level of unemployment.
RECU = Reciprocal of unemployment level.
CHRU = Change in registered unemployment.
CHME = Change in manufacturing employment.
CVSTR = Coefficient of Variation in hours lost per 1000 employees in strike activity across twenty two-digit industrial branches.
NIP = Norm-based incomes policy.
IIP = Indexation incomes policy.
t-statistics in parentheses.
Levels of Significance *=.1, ***=.025, *****=.005, **=.05, ****=.01

## Table 6.4.3

### REGRESSION EQUATIONS
### TO EXPLAIN INTER-BRANCH VARIANCE IN WAGES, 1967-1988.

| Variable | SD | M | ES | Equation 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|
| CVW | 2.03 | 15.09 | | | | | |
| CT | | | | 13.98 (13.32) | 12.66 (16.41) | 12.82 (33.86) | 12.56 (27.14) |
| CPI | 8.33 | 14.05 | + | $0.05^*$ (1.38) | $0.05^*$ (1.33) | $0.07^{***}$ (2.33) | $0.05^{**}$ (1.77) |
| $U_{t-1}$ | 2.32 | 4.34 | − | −0.19 (−0.93) | | | |
| $RECU_{t-1}$ | 0.17 | 0.31 | + | | 1.89 (0.65) | | |
| $CHRU_{t-1}$ | 20.04 | 4.70 | − | | | $-0.03^{**}$ (−2.17) | |
| $CHME_{t-1}$ | 2.53 | 2.00 | + | | | | $0.19^{**}$ (1.88) |
| CVSTR | 85.51 | 98.47 | ? | $-0.01^*$ (−1.73) | $-0.01^*$ (−1.71) | $-0.008^*$ (−1.64) | $-0.008^*$ (−1.59) |
| NIP | | | + | $4.72^{*****}$ (3.92) | $4.70^{*****}$ (3.65) | $5.24^{*****}$ (5.06) | $4.94^{*****}$ (4.64) |
| IIP | | | + | $2.06^*$ (1.68) | $1.76^*$ (1.53) | $1.87^{**}$ (1.98) | $1.99^{**}$ (2.00) |
| $R^2$-adjusted | | | | .794 | .788 | .832 | .822 |
| Durbin-Watson | | | | 1.76 | 1.69 | 2.27 | 1.96 |
| Method of Estimation | | | | OLS | OLS | OLS | OLS |

Notes:
SD = Standard Deviation.
M = Mean.
ES = Expected Sign.
CVW = Coefficient of variation in hourly wage of male workers across twenty two-digit manufacturing branches.
CPI = Annual rate of inflation.
U = Level of unemployment.
RECU = Reciprocal of unemployment level.
CHRU = Change in registered unemployment.
CHME = Change in manufacturing employment.
CVSTR = Coefficient of Variation in hours lost per 1000 employees in strike activity across twenty two-digit industrial branches.
NIP = Norm-based incomes policy.
IIP = Indexation incomes policy.
t-statistics in parentheses.
Levels of Significance *=.1, ***=.025, *****=.005, **=.05, ****=.01

## Table 6.4.4

### REGRESSION EQUATIONS
### TO EXPLAIN INTER-BRANCH VARIANCE IN WAGES, 1967-1988.

| Variable | SD | M | ES | Equation 4 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|
| CVW | 2.03 | 15.09 | | | | | |
| CT | | | | 12.48 (25.53) | 12.40 (20.23) | 12.47 (19.09) | 12.42 (19.49) |
| CPI | 8.33 | 14.05 | + | 0.08**** (2.61) | 0.09**** (2.88) | 0.09**** (2.60) | 0.09**** (2.61) |
| CHME | 2.52 | 1.91 | + | 0.18** (1.90) | 0.18** (1.76) | 0.21*** (2.08) | 0.22*** (2.31) |
| CVSTR | 85.51 | 98.47 | ? | -0.01** (-1.84) | | | |
| CVSTR$_{t-1}$ | 85.12 | 97.72 | ? | | 0.003 (1.12) | | |
| RSTR | 355 | 277 | ? | | | 0.0003 (0.34) | |
| RSTR$_{t-1}$ | 355 | 278 | ? | | | | 0.001* (1.38) |
| NIP | | | + | 4.84***** (4.53) | 2.43***** (3.47) | 2.62***** (3.71) | 2.35***** (3.45) |
| IIP | | | + | 1.78** (1.85) | -0.33 (-0.38) | 0.10 (0.12) | -0.11 (-0.15) |
| $R^2$-adjusted | | | | .823 | .821 | .808 | .829 |
| Durbin-Watson | | | | 1.73 | 1.82 | 1.84 | 1.81 |
| Method of Estimation | | | | OLS | EIIM AR(1) | EIIM AR(1) | EIIM AR(1) |

Notes:
SD = Standard Deviation.
M = Mean.
ES = Expected Sign.
CVW = Coefficient of variation in hourly wage of male workers across twenty two-digit manufacturing branches.
CPI = Annual rate of inflation.
CHME = Change in manufacturing employment.
CVSTR = Coefficient of Variation in hours lost per 1000 employees in strike activity across twenty two-digit industrial branches.
RSTR = Rate of strike activity i.e.
NIP = Norm-based incomes policy.
IIP = Indexation incomes policy.
t-statistics in parentheses.
Levels of Significance *=.1, ***=.025, *****=.005, **=.05, ****=.01

CHAPTER 7. CONCLUSIONS AND POLICY IMPLICATIONS

In a nutshell the conclusion of the thesis is that in the Greek manufacturing sector, despite the extensive and continuous regulation of wage determination procedures, changes in industrial relations which occurred after 1975 and were marked by decentralised and fragmented collective bargaining, were accompanied by flexibility in relative wages. The causes of this flexibility, which is largely non-competitive, are related to the rise of decentralised, fragmented and informal collective bargaining at the company and plant level.

This conclusion has been reached through an approach developed in three stages. First, we examined the main characteristics of the national system of industrial relations, that is the formal bargaining structure, the machinery of compulsory arbitration and the behaviour of salary and wage earners as expressed in strike activity. Second, we analysed the wage and employment policies undertaken over the period 1966-88 along with the basic developments as far as wages and employment in manufacturing are concerned. Third, based upon the inferences drawn regarding incomes policies and developments in industrial relations, we tested first for the existence of flexibility in relative wages and second for the influence exerted upon the wage structure by incomes policies, inflation, unemployment and strike activity.

Our approach was based on the assumption that industrial relations, through which labour markets operate, influence labour

market outcomes. More specifically, to analyse the national system of collective bargaining in Greece, we adopted as framework the twofold distinction first between centralised and decentralised bargaining, and second between coherent and fragmented bargaining structures. The aim of this approach has not been just to classify the Greek bargaining structure in a certain category, but to trace its continuity and its change over the period 1966-88, and when necessary beyond that.

Since 1955, when the basic legislation on collective bargaining was introduced, two have been the central elements of the national system of collective bargaining; first, the formalised and regulated by the law bargaining levels and units and second, the extensively used machinery of compulsory arbitration. The legislation, namely and mainly Law 3239, defined the levels and units at which bargaining can take place by permitting company and plant level collective bargaining only for exceptional cases and by excluding manufacturing industries. Therefore, the formal bargaining structure favoured by the existing legislation is rather centralised. Indeed, it has been supposed to be coherent as well, because the legislation by defining bargaining levels and units aimed to avoid overlapping among different levels of negotiation.

Arbitration, in turn, was made compulsory in the sense that one party can unilaterally refer a dispute to the arbitration court the award of which is binding for the parties involved in the dispute. The aim of compulsory arbitration when it was adopted

was to control industrial conflicts and minimise the occurrence of strikes as well as to promote tripartite collaboration.

After examining the aims and the provisions upon which the national system of collective bargaining has been based, we conclude that since 1975, as far as bargaining procedures and structures are concerned, there has been a gap between aims and outcomes, exemplified by the creation, especially in manufacturing, of a dual structure of collective bargaining. First, strong tendencies towards decentralised and fragmented bargaining have been observed which resulted in the creation of an informal system of collective bargaining at the company and plant level. Second, despite the central role played by arbitration, as a major proportion of dispute cases in the Greek labour market have been going to arbitration, its extensive and increasing use has been positively associated with the rise of strike activity. The evidence on the characteristics of strike activity suggests that the use of arbitration led to higher rates of strike activity rather than the other way round.

The increase after 1975 in the number and density of bargaining units acting inside and outside the formal bargaining structure has been impressive. This increase, indicating decentralisation and fragmentation of collective bargaining, can be explained by four factors referring to political, structural, economic and industrial relations developments. First, the political developments refer to the fall of the military regime and its succession by a parliamentary democracy, which led to a more liberal climate in industrial relations and trade unions. More

specifically, the freeze of trade-union activities during the period of the military regime, along with the appointment of pro-governmental leaderships in the official structure of trade-unionism, resulted, after the fall of the military regime, in a political and organisational vacuum in Greek trade-unionism.

Second, the period 1967-74 was characterised by the most rapid expansion of manufacturing employment ever observed in Greece. This expansion was largely associated with the creation of new establishments in which new workers, lacking experience and tradition with regard to trade-union activities, had to organise from the very beginning their bargaining institutions and processes. Third, since 1975 the rate of inflation, which over the 1960s remained on average at levels lower than 2 per cent, soared at double-digit levels, and generated the need for wage and salary earners to keep up, at least, with inflation rates to preserve their real incomes.

Fourth, the formal bargaining structure, more specifically the formal levels and units for collective bargaining determined and certified by the law, were not compatible with the changing structure of the expanding manufacturing employment as company and plant level bargaining units were excluded. Furthermore, within the formal system of collective bargaining the control of compulsory arbitration by the Ministry of Labour, and its use as a machinery for implementing the governmental incomes policy, did not encourage salary and wage earners to seek wage settlements through the formal system.

Strike activity, the rate of which increased impressively after 1975 and since then remained at high levels, has been the vehicle by which salary and wage earners, representing new bargaining units, attempted to establish new bargaining relationships at the company and plant level. However, it is noteworthy that strike activity and informal collective bargaining were not equally developed across the board. Some industrial branches were more strike-prone while others where less active.

There are two reasons for considering that strike activity reflects efforts to initiate procedures and institutions alternative to the formal system of collective bargaining. First, it is the positive association between direct and indirect regulation of collective bargaining by the Ministry of Labour and strike activity. Second, it is the fact that strike activity was largely evolving at the company and plant level. Even if some of those strikes were protest-strikes, the collective action undertaken by salary and wage earners can be considered as indicator of new bargaining units at their early stages. In other words, it seems that while regulation and compulsory arbitration had a "freezing effect" upon the formal collective bargaining, at the same time they had a "de-freezing effect" upon collective bargaining evolving out of the formal bargaining structure.

After all, in Greek manufacturing the number and the density of bargaining units within the formal system as well as the number and the density of conflicts occurring at the company and plant level indicate the decentralisation and fragmentation of

the bargaining structure. Therefore, the developments over the period 1975-88 suggest that the Greek system of collective bargaining while typically, that is its formal part, is rather centralised, in reality, that is after taking into account its informal part, is decentralised and fragmented too. It falls somewhere between the two extremes, with fragmented collective bargaining being a dominant feature.

These developments in industrial relations over the period 1975-88, not surprisingly, were not very favourable for the successful implementation of formal incomes policies introduced since 1975. This is because, normally, incomes policies in order to effective require centralised collective bargaining. The two types of policy adopted over the period 1975-88 had the common characteristic that both favoured, more or less, the low paid and aimed at the compression of the wage structure. In conditions of rising inflation, incomes policies based largely on flat-rate and scale elements, (the system of automatic and partial indexation is typical of this case) normally result in a decline in wage differentials. This has been the case as far as wages of individuals are concerned. But it appears that in 1975-81, despite the egalitarian incomes policy, inter-industry wage differentials in manufacturing increased. Indeed, the variability in relative wages observed over the whole period 1966-88 indicates the existence of some flexibility.

Given the developments in the bargaining structure and the rationales and mechanics of incomes policies adopted since 1975, we examined the extent to which the variability in relative wages

reflects competitive or industry-specific non-competitive flexibility. The main issue examined with regard to competitive flexibility has been whether or not increases in relative wages were associated with the use of wages for retaining and attracting labour in expanding sectors. The main issue examined with regard to non-competitive flexibility has been whether or not the increases in relative wages reflected industry-specific productivity gains shared by the workforce or reflected industry-specific bargaining power and militancy.

The results suggest that the observed variability over the period 1966-88 mainly reflects non-competitive flexibility associated with long-run industry-specific productivity gains while in the short-run reflects industry-specific bargaining power and militancy. It appears that the decentralised and fragmented collective bargaining via the informal system created conditions conducive to non-competitive flexibility in relative wages. Indeed, the overall context of wage and employment regulation by governmental policies disfavoured competitive flexibility and provided some room for non-competitive flexibility.

However, some sub-period characteristics are noteworthy. First, in 1967-74, when no formal incomes policy was in force and strike activity was banned, competitive forces were given a chance and were at work. Low unemployment, rapid expansion in manufacturing employment creating strong demand for labour. The wage fixing in line with the average productivity growth allowed expanding industries to use relative wages for retaining and attracting

labour. Second, in 1977-88, that is over the period of egalitarian incomes policies, the asymmetries in wage changes and in productivity changes at the industry level were found employment hindering because wages in industrial branches with below-average productivity growth were less responsive to that relatively poor productivity performance than wages in industrial branches with above-average changes in productivity. The causes of this asymmetry can be traced first, to the egalitarian incomes policies themselves and second, to the workings of the informal system of collective bargaining at the plant level.

The effects of the decentralised and fragmented collective bargaining upon relative wages were also expressed in the way that incomes policies, inflation and unemployment were associated, over the period 1967-88, with the evolution of the inter-industry wage structure. The predominant role of factors such as the establishment size, the skill and the sex composition of the labour force as determinants of the manufacturing wage structure and the stable hierarchy at the top and at the bottom of the manufacturing wage structure indicate that a two-sectors model of high-wage, concentrated and high-bargaining power industries on the one hand, and low-wage, less concentrated and low-bargaining power industries on the other, is substantiated.

In the context of decentralised, fragmented and informal collective bargaining it has been found that the norm-based incomes policy was associated with the widening of the wage structure twice as much as the indexation policy. Our explanation for this is that under the norm-based policy the high-wage high-

bargaining power branches, by considering the norm as the floor for additional increases in nominal wages, were able to extract a wage premium via the informal system of collective bargaining, while the low-wage industries had to struggle for getting wage settlements near the governmental norm.

The relatively narrower wage structure associated with the indexation policy is consistent with the fact that automatic indexation along with the scales for partial indexation protected and increased the relative wage of low-wage low-bargaining power branches, while at the same time, by being made statutory in 1983 and 1985-87 controlled, to a certain extent, wage rises in high-wage high-bargaining power industrial branches.

The effects of the decentralised, fragmented and informal bargaining are also prominent in the way that economy-wide factors such as inflation and unemployment influenced the inter-industry wage structure over the period 1967-88. Relative wages not only became less responsive to inflation and unemployment but their responsiveness was inverse than that observed in the U.S. and the U.K. manufacturing sector.

In the U.S. and the U.K., for instance, the existence of formal collective agreements lasting one, two or three years causes a certain stickiness in wage changes of the high-wage industries. But in Greece high-wage industries keep up with rising inflation via the informal system of collective bargaining, while low-wage industries fail to do so. Thus, as indicated by the positive correlation between inflation and variation in the

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wage structure, rising inflation leads to wider inter-industry wage differentials.

A similar inverse association has been observed with regard to unemployment and variation in the wage structure. It appears that unemployment affects more the high-wage high-bargaining power industries, probably because rising unemployment undermines the workings of the informal system of collective bargaining. This negative association between unemployment and variation in the wage structure was not observed in the U.S. and the U.K. where formal collective bargaining in high-wage and high-bargaining power industries is not affected by changes in the level of unemployment.

With regard to the annual inter-industry variation in strike activity the results indicate the existence of a negative association with variation in the wage structure. In other words, the wider variation of the rate of strike activity from year to year did not cause an analogous variation in the wage structure. This could be explained on the basis that strike activity does not always indicate bargaining power. It may well operate as a way of expressing collective discontent and protest.

Incomes policy in Greece can be evaluated from two standpoints. First, according to its, more or less, stated rationales and objectives. Second, according to its overall contribution in macroeconomic and industrial relations developments. Normally these two standpoints are identical. But it appears that in the case of incomes policy in Greece these standpoints differed. This

has been due to the conflict between economic and political calculations of successive governments when designing and implementing incomes policy over the period 1975-88.

When, the annual change in nominal wages or the annual change in unit labour costs are adopted as criteria, as they are from a macroeconomic point of view rather important with respect to cost-push inflation, the distinction between success and failure of the norm-based and the indexation policy becomes less clear as both are related to good and bad performances and both, under the pressure of deteriorating current accounts, had to change their stance from nominal to real incomes policy. It appears that real incomes policy implemented via the indexation scheme has been far more effective in controlling real wages and unit labour costs than such policies implemented via the norm-based scheme.

As far as the inter-industry wage structure is concerned the experience suggests that it may become wider or narrower because of quite different influences such as the pressure exerted by the high-wage high-bargaining power industries or the indexation-based incomes policies securing relatively high relative wages for the low-wage low-bargaining industries. However, both cases signal the problems in the functioning of the Greek labour market. These problems are first related to governmental incomes policy itself, and second, refer to bargaining structures and procedures.

On incomes policy the main question is whether or not the system of indexation should be abandoned altogether. Such an option

would have to answer the questions  how to control high-wage high-bargaining power industrial branches and how to offer protection for minimum wages  to low-wage low-bargaining power industrial branches.  Because it seems unlikely that changes in formal indexation provisions could lead to a reduction of the willingness of employees and trade-unions to preserve real wages and their share in income distribution. It is not the indexation system which makes them to behave in the bargaining process without having any money illusion.

Moreover, it is an open question as to whether  the wide dispersion in manufacturing wages observed over the period 1976-81 set long-term standards  which were suppressed by the indexation policy  but were not disposed of  by the narrower standards imposed in the period 1982-88. Indeed, a related question is whether or not the abandon of incomes policies would be followed by major disturbances to the wage structure.

On bargaining structures and procedures the main problem refers to the harmonisation of the formal bargaining structure with the real bargaining structure as well as to the creation of really independent machinery able to provide conciliation and arbitration services without being overridden by the governmental policies. The harmonisation of the dual bargaining structure, in turn, is related to the recognition of the right to bargain and contract collective agreements at the company and plant level. The institution of independent arbitration services depends largely on the initiatives of the Ministry of Labour which has

been addicted to direct and indirect regulation of wage determination. dependent it comes the question of obtaining more coherence in the bargaining structure.

The recognition of the right to bargain at the plant level may initiate changes in the bargaining structure towards more coherence, as many not really representative formal bargaining units would be made redundant. But as the existing structure has been built over a quite long period, decrees and rational normative approaches and decisions at the top of the trade-unions structure do not seem, in the short-run, able to generate any impressive reform.

Finally, in the context of decentralised and fragmented collective bargaining it is not easy to achieve corporatist-like arrangements based upon a quid pro quo for greater flexibility in relative wages and moderation in wage determination on the one hand, and continued policies for employment protection on the other. The prevailing conditions may well continue working in favour of non-competitive flexibility which is not a solution but part of the problem.

**APPENDICES**

## APPENDIX 1: SYSTEMS OF ARBITRATION IN THE U.S. THE U.K. AND AUSTRALIA

These three systems of arbitration developed in a common cultural tradition but in different contexts of industrial relations. Blain, Goodman and Loewenberg (1987) compared mediation, conciliation and arbitration frameworks in these countries and concluded that the British and the American industrial relations systems can be essentially characterised as collective bargaining systems with conciliation mediation and arbitration occupying an ancillary position, while the Australian system involves the greatest degree of compulsion. They drew the line by using as main criterion the degree of compulsion in the existing legislation and machinery.

From our point of view these distinct models of arbitration which are associated with different systems of industrial relations provide the basis to discuss the conditions under which arbitration may be compatible with collective bargaining first with regard to the key issue who is who performs the role of arbitrator, considers the parties offers and external information to arrive to the final award, be it compulsory or not, and second with regard to the degree of governmental intervention, as the state is at the same time responsible for setting the legal framework, for protecting the national economic interest and often for serving as industrial peacemaker. For instance, incomes

policies have been more often at work in the U.K. and in Australia than in the U.S.

First, let us consider the system of arbitration provided by independent professionals which is used in the U.S. Similar system of arbitration is used in Canada. According to Cordova (1987:331), in Jamaica, Malaysia, Panama, the Philippines and Zambia systems of private arbitration like the north-american are practised too.

In the U.S. the collective bargaining structure is highly decentralised. Collective bargaining takes place mainly at the company and the plant level. Collective agreements are very detailed and the great majority of them content arbitration clauses. (Wheeler and Hoyt, 1987). Conventional and final-offer or binding arbitration are common forms of interest arbitration in use. Binding arbitration is mainly used in the public sector. Many state laws provide for such arbitration of unresolved disputes. Arbitrators are selected among lawyers and academics. Their decisions are usually considered as final, binding and unappealable. Overall, as Bloom and Cavanagh (1987:354) concluded, the American system of industrial relations exhibits a strong normative preference for resolving disputes without the aid of third parties.

Second, the system of voluntary arbitration provided in the U.K. by the ACAS an autonomous institution. In the U.K. arbitration is voluntary and therefore an unwilling party cannot be compelled to go to arbitration. Moreover, arbitration awards are not legally

binding but arrangements for arbitration are made on the basis that the award will be honoured by the parties. In this context of voluntary arbitration even the terms of reference are usually agreed by the parties. Arbitrators are not members of the staff of the ACAS but are appointed by ACAS from lists of industrial relations specialists.

There are three types of arbitral bodies. In the first type, the arbitration procedure is performed by a single arbitrator. In the second type it is performed by specially appointed boards of arbitration consisted of a chairman and one a side members. In the third type arbitrator is the Central Arbitration Committee which is a more permanent tripartite body the members of which are appointed by the Secretary of State for Employment from lists proposed by the interested parties.

However, as Brown (1987:113) argued, the predominant position of collective bargaining in conflict resolution in Britain and the fact that the government has largely and for a long period avoided involvement in dispute resolution, has meant that there has been little scope for third party institutions. Moreover, the main bulk of disputes referred to ACAS is concerned with conciliating over industrial grievances and only a small proportion of disputes procedures involve an ACAS arbitrator at the final stage. Overall, in the U.K. arbitration has not been a central element in conflict resolution and in industrial relations in general.

Third, the Australian system of compulsory arbitration provided

by the ACAC. an autonomous institution. Similar systems of compulsory arbitration are used in New Zealand and Israel. According to Blanpain (1987:7) the Australian system of compulsory arbitration has been adopted by a great number of developing countries like Singapore, Kenya, Trinidad and Tobago, Zambia, Sierra Leone and Malaysia. Perhaps this wide adoption of the Australian model of compulsory arbitration is related to the fact that in the 1960s compulsory arbitration was considered and proposed as the best choice, with regard to equity in distribution and political stability, for developing and less developed countries. (Turner, 1965 and Braun, 1975:212-213).

In Australia the system of arbitration has been under continuous and systematic scrutiny . (Committee of Review into Australian Industrial Relations Law and Systems, 1985). It includes both federal and state arbitral bodies. Either party to the bargaining process can refer a dispute to the arbitral body. The main arbitral body is the Australian Commission of Conciliation and Arbitration which has a long history going back to the beginning of the century. All members of the Commission are appointed by the Governor General on advice of the government in office. However, the ACAC is independent from the government. The government is only responsible for the legislation governing the system and cannot intervene directly in the wage and industrial relations regulation. The Commission itself is empowered to intervene in disputes extending to more than one state. Arbitration is compulsory in two ways. First, both parties to the bargaining process are required to submit to a compulsory

procedure for representing their arguments. Second, awards are binding on the parties. Awards specify minimum standards of pay and conditions.   Federal awards tend to set the pattern for all other tribunals.

Under the legislation on arbitration all federal unions are required to register with the arbitration authorities. Only registered organisations are entitled to institute proceedings before the Commission and obtain or enforce awards. Conciliation procedures are the first step undertaken by the commission. If parties are able to reconcile their differences through conciliation may present a memorandum of agreement to the Commission for certification or request that an award be made. A certified agreement has the value of an award. If conciliation is unsuccessful totally or partially the commission is obliged to resolve the dispute by arbitration.

The Commission consists of a President, Deputy Presidents, a Senior Commissioner and Commissioners. They are permanent members of the Commission. The President is required to have a legal background but the rest should be persons with experience at "high level" in industrial relations or have a relevant university degree.   All members have a tenure until age 65. Presidential members appointed before 1972  have tenure until 70. The Commission works in a panel system. Panels are responsible for a number of sectors or industries.

Thus, in Australia traditional tasks of collective bargaining have largely been shouldered by the statutory conciliation and

arbitration machinery. Therefore the scale and the significance of collective bargaining vary considerably when compared with other industrialised market economies. Collective bargaining appears to have been in a secondary position as a mode for wage and job regulation. This is why Windmuller (1987:92) in his comparative study of systems of industrial relations considers that collective bargaining is not one of the central features of the Australian system. The centrality of conciliation and arbitration makes it fundamentally different from other systems in industrialised market economies. A rather similar system of arbitration has been used also in New Zealand which has also a long history going back in the beginning of the century.

The Australian system of compulsory arbitration has been the subject of extensive research comparing its labour market outcomes with those of systems of collective bargaining. Overall, as the Committee of Review into Australian Industrial Relations Law and Systems (1985: 169) reported, the evidence as to how the the system of compulsory arbitration has affected Australia's experience in respect of inflation and unemployment is less decisive and "certainly does not support confident assertions about ill-effects due to the Commission's presence".

Mulvey (1986) reviewed the literature on the effects that compulsory arbitration might have had upon the wage structure and concluded that the evidence is ambiguous. Many studies such as those by Brawn et all (1980) and Norris (1980) who compared the wage structure in Australia with that in the U.K. and the U.S. to

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test whether compulsory arbitration brings about a more egalitarian wage structure than would obtain under free collective bargaining show less dispersion in the inter-occupational and inter-personal distribution of earnings in Australia as compared with the U.K. and the U.S. Only the low-paid workers were found better off in Australia and this can be attributed to arbitration. But the differences are of modest proportion and they cannot be interpreted as indicating that compulsory arbitration induces severe distortions of the wage structure.

Withers et al (1983) examined how well the Australian system of wage determination facilitates disaggregated labour market adjustment by comparing it with the major alternatives in the U.S. the U.K. and Sweden and found not important differences between the Australian system of compulsory arbitration and its alternatives. Therefore, we can draw the conclusion that, while arbitration may affect the wage structure in an egalitarian way through comparability, not important differences between labour outcomes under collective bargaining and under arbitration are observed at the level of national systems of industrial relations.

# APPENDIX 2: EMPLOYMENT OF SALARY AND WAGE EARNERS IN GREEK MANUFACTURING.

In Section 4.4 we discussed the characteristics and the evolution of the employment of wage earners in manufacturing over the period 1965-1988. This appendix provides the Tables which present the characteristics, the distribution and the evolution of the employment of both salary and wage-earners in the Greek manufacturing sector. Tables with A prefix correspond to those included in Section 4.4.

## Table A4.4.8.

## CHANGES IN EMPLOYMENT OF SALARY AND WAGE EARNERS IN MANUFACTURING BY BRANCH
### Selected Periods

| Period | 1967/74 | 1975/81 | 1982/88 | 1965/88 |
|---|---|---|---|---|
| Branch | | change per cent | | |
| 20 | 39.91 | -10.05 | 49.94 | 99.20 |
| 21 | 54.52 | -10.26 | 39.22 | 155.73 |
| 22 | -29.00 | 16.63 | -10.59 | -44.42 |
| 23 | 29.84 | 1.11 | 8.37 | 41.99 |
| 24 | 126.85 | 9.15 | 34.54 | 298.91 |
| 25 | 62.30 | -10.48 | 6.92 | 40.55 |
| 26 | 55.94 | -12.48 | 1.26 | 27.22 |
| 27 | 9.83 | -1.45 | 45.80 | 68.99 |
| 28 | 19.18 | -5.09 | -0.06 | 12.10 |
| 29 | 1.35 | -5.17 | 34.54 | 11.43 |
| 30 | 49.64 | 27.69 | -17.01 | 107.80 |
| 31 | 49.18 | 11.54 | 19.24 | 102.81 |
| 32 | 160.84 | 41.71 | 8.75 | 334.83 |
| 33 | 28.01 | -8.25 | 36.96 | 50.28 |
| 34 | 92.06 | -14.65 | 33.86 | 214.02 |
| 35 | 55.47 | 10.22 | -2.10 | 55.16 |
| 36 | 40.11 | -5.18 | -16.01 | 12.05 |
| 37 | 92.00 | -7.75 | 11.97 | 86.99 |
| 38 | 116.26 | 68.97 | -26.23 | 157.35 |
| 39 | 82.76 | -29.08 | 55.22 | 115.29 |
| All | 48.24 | 5.95 | 12.37 | 78.64 |
| Number of Branches with Expanding Employment | 19 | 8 | 14 | 19 |

Sources: 1967-1975, NSSG Annual Industrial Survey, Table 6.
1976-1988, NSSG Labour Force Statistics, Table 3.

**Table A4.4.9.**
**DISTRIBUTION OF SALARY AND WAGE EARNERS ACROSS MANUFACTURING INDUSTRI**
1965-1988

| Year<br>Branch | 1965 | 1970 | 1975 | 1980 | 1985 | 1988 |
|---|---|---|---|---|---|---|
| | | | per cent | | | |
| 20 | 13.09 | 14.31 | 13.01 | 11.03 | 13.54 | 14.60 |
| 21 | 2.01 | 2.68 | 2.67 | 2.35 | 3.03 | 2.88 |
| 22 | 6.72 | 3.94 | 2.40 | 2.66 | 2.17 | 2.09 |
| 23 | 20.26 | 17.48 | 17.76 | 17.77 | 16.13 | 16.10 |
| 24 | 5.37 | 6.32 | 9.40 | 9.58 | 11.95 | 11.98 |
| 25 | 2.50 | 2.73 | 2.57 | 2.26 | 2.09 | 1.96 |
| 26 | 2.04 | 2.16 | 2.05 | 1.71 | 1.50 | 1.45 |
| 27 | 2.77 | 2.64 | 2.18 | 2.09 | 2.46 | 2.62 |
| 28 | 3.35 | 3.17 | 2.63 | 2.53 | 2.22 | 2.10 |
| 29 | 1.81 | 1.42 | 1.09 | 0.99 | 1.33 | 1.13 |
| 30 | 3.00 | 3.27 | 3.64 | 4.15 | 3.75 | 3.49 |
| 31 | 5.66 | 5.73 | 5.62 | 5.78 | 6.45 | 6.43 |
| 32 | 0.61 | 0.84 | 1.09 | 1.46 | 1.29 | 1.48 |
| 33 | 7.88 | 7.41 | 6.52 | 5.85 | 6.82 | 6.63 |
| 34 | 1.50 | 2.65 | 2.82 | 2.41 | 3.05 | 2.63 |
| 35 | 6.66 | 6.47 | 6.54 | 6.54 | 5.83 | 5.79 |
| 36 | 3.36 | 3.41 | 3.15 | 2.89 | 2.30 | 2.11 |
| 37 | 4.42 | 5.56 | 5.27 | 4.66 | 4.80 | 4.63 |
| 38 | 6.23 | 6.79 | 8.52 | 12.43 | 8.42 | 8.97 |
| 39 | 0.78 | 1.03 | 1.07 | 0.86 | 0.87 | 0.93 |
| All | 100 | 100 | 100 | 100 | 100 | 100 |
| (20, 23,<br>24, 38) | 44.95 | 44.90 | 48.69 | 50.81 | 50.04 | 51.65 |
| Total | 218938 | 248892 | 335853 | 360284 | 391840 | 391119 |

Sources: 1965-1975, NSSG Annual Industrial Survey, Table 6.
 1976-1988, NSSG Labour Force Statistics, Table 3.

**Table A4.4.10.**

**AVERAGE EMPLOYMENT OF SALARY AND WAGE EARNERS IN MANUFACTURING INDU**
Selected Periods

| Branch | Average 1967-74 | Share % | Average 1975-81 | Share % | Average 1982-88 | Share % | Average 1966-88 | Share % |
|--------|------|-------|------|-------|------|-------|------|-------|
| 20 | 35632 | 13.62 | 40097 | 11.24 | 49743 | 13.04 | 41069 | 12.62 |
| 21 | 7016 | 2.68 | 8438 | 2.37 | 10765 | 2.82 | 8514 | 2.62 |
| 22 | 9722 | 3.72 | 9471 | 2.66 | 8305 | 2.18 | 9400 | 2.89 |
| 23 | 46653 | 17.83 | 61961 | 17.38 | 62196 | 16.30 | 55987 | 17.20 |
| 24 | 17651 | 6.75 | 34068 | 9.55 | 45939 | 12.04 | 31020 | 9.53 |
| 25 | 7203 | 2.75 | 8013 | 2.25 | 7960 | 2.09 | 7614 | 2.34 |
| 26 | 5399 | 2.06 | 6873 | 1.93 | 6165 | 1.62 | 6045 | 1.86 |
| 27 | 6692 | 2.56 | 7579 | 2.13 | 9488 | 2.49 | 7807 | 2.40 |
| 28 | 8083 | 3.09 | 9120 | 2.56 | 8696 | 2.28 | 8573 | 2.63 |
| 29 | 3495 | 1.34 | 3686 | 1.03 | 4522 | 1.19 | 3877 | 1.19 |
| 30 | 9010 | 3.44 | 14238 | 3.99 | 15105 | 3.96 | 12375 | 3.80 |
| 31 | 15108 | 5.77 | 20331 | 5.70 | 25074 | 6.57 | 19634 | 6.03 |
| 32 | 2211 | 0.84 | 5064 | 1.42 | 5371 | 1.41 | 4005 | 1.23 |
| 33 | 18926 | 7.23 | 21536 | 6.04 | 24954 | 6.54 | 21508 | 6.61 |
| 34 | 6767 | 2.59 | 8541 | 2.40 | 10458 | 2.74 | 8332 | 2.56 |
| 35 | 16816 | 6.43 | 23223 | 6.51 | 23026 | 6.03 | 20566 | 6.32 |
| 36 | 8808 | 3.37 | 11548 | 3.24 | 8547 | 2.24 | 9512 | 2.92 |
| 37 | 14852 | 5.68 | 17453 | 4.89 | 17622 | 4.62 | 16253 | 4.99 |
| 38 | 18980 | 7.25 | 41918 | 11.76 | 34434 | 9.02 | 30443 | 9.35 |
| 39 | 2594 | 0.99 | 3425 | 0.96 | 3172 | 0.83 | 2989 | 0.92 |
| All | 261617 | 100 | 356584 | 100 | 381542 | 100 | 325522 | 100 |
| (20 23 24 38) | | 45.45 | | 41.93 | | 50.40 | | 48.70 |

Sources: 1967-1975, NSSG Annual Industrial Survey, Table 6.
1976-1988, NSSG Labour Force Statistics, Table 3.

## Table A4.4.11.

### ANNUAL CHANGES
### IN MANUFACTURING EMPLOYMENT OF SALARY AND WAGE EARNERS BY BRANCH
### 1965-1988

| Year / Branch | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|---|---|
| 20 | 2.05 | 6.92 | 0.13 | -1.04 | 3.79 | 12.98 |
| 21 | 10.13 | 19.56 | 12.39 | -8.00 | -0.17 | 22.93 |
| 22 | 7.62 | -4.94 | -13.63 | -8.31 | -12.47 | 1.28 |
| 23 | 0.98 | 2.31 | -3.85 | -6.44 | -2.39 | 9.17 |
| 24 | 5.06 | 3.90 | 5.34 | 0.65 | 0.62 | 20.74 |
| 25 | 13.75 | 3.73 | 2.38 | -2.05 | 4.94 | 13.82 |
| 26 | 3.16 | 2.17 | 0.07 | 0.63 | -3.28 | 20.90 |
| 27 | 16.07 | 8.26 | -0.02 | 1.01 | -5.65 | 5.20 |
| 28 | 0.73 | 6.38 | -3.83 | -2.96 | 3.32 | 4.92 |
| 29 | -1.22 | -5.22 | 0.77 | -5.67 | -1.51 | 0.68 |
| 30 | 4.72 | 8.88 | 3.33 | 4.20 | 15.81 | -8.76 |
| 31 | 19.28 | 3.91 | -1.60 | 2.13 | 4.98 | 4.95 |
| 32 | 21.64 | 3.45 | 2.47 | 11.54 | -5.02 | 39.57 |
| 33 | 14.05 | 3.50 | -2.18 | -2.70 | -0.96 | 9.57 |
| 34 | 23.82 | 37.13 | 2.42 | 7.18 | 18.10 | 12.91 |
| 35 | 3.07 | 1.09 | -5.65 | 1.82 | 1.96 | 11.43 |
| 36 | 5.89 | 4.04 | 1.61 | -3.13 | 7.69 | 4.80 |
| 37 | 3.77 | -1.95 | 9.29 | 1.01 | 8.87 | 21.29 |
| 38 | 6.88 | 1.87 | -5.91 | -1.96 | 11.39 | 18.38 |
| 39 | 16.14 | 7.42 | 1.15 | 6.94 | 1.67 | 27.87 |
| All | 5.93 | 3.77 | -1.45 | -1.96 | 2.10 | 11.06 |

| Year / Branch | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 |
|---|---|---|---|---|---|---|
| 20 | 4.82 | 0.65 | 3.96 | 9.92 | 1.80 | -8.95 |
| 21 | 10.56 | 6.51 | 5.17 | 10.49 | -1.91 | -8.99 |
| 22 | -3.13 | -9.62 | -1.77 | 1.56 | -6.10 | 18.83 |
| 23 | 6.45 | 6.35 | 8.15 | 6.38 | 5.31 | 2.53 |
| 24 | 8.92 | 10.98 | 12.45 | 36.47 | 8.28 | -4.12 |
| 25 | 6.11 | 10.52 | 10.12 | 7.42 | -8.28 | -8.09 |
| 26 | 1.32 | 4.55 | 3.79 | 20.53 | -3.62 | 14.12 |
| 27 | 2.34 | 0.91 | 0.90 | 5.13 | 1.57 | 5.78 |
| 28 | 5.80 | 0.54 | 4.23 | 2.19 | -1.20 | 6.46 |
| 29 | -0.54 | -12.96 | 1.04 | 23.87 | -4.87 | 1.17 |
| 30 | 8.68 | 9.83 | 6.42 | 7.01 | 10.55 | 7.97 |
| 31 | 2.27 | 10.60 | 10.39 | 6.17 | -0.07 | 12.23 |
| 32 | -3.54 | 15.24 | 33.39 | 18.96 | -0.65 | 44.68 |
| 33 | 4.81 | 1.00 | 5.12 | 8.94 | -2.09 | 0.54 |
| 34 | 7.50 | 7.01 | 14.52 | 1.99 | 7.03 | -10.53 |
| 35 | 4.05 | 8.26 | 6.93 | 11.58 | 1.47 | -0.52 |
| 36 | 3.32 | 1.93 | 11.15 | 9.48 | -2.76 | 14.50 |
| 37 | 14.74 | 10.58 | 10.43 | 2.73 | -11.10 | 8.13 |
| 38 | 20.47 | 8.33 | 9.34 | 17.22 | 1.22 | 40.75 |
| 39 | 5.96 | 7.65 | 14.29 | 0.84 | 6.79 | 6.44 |
| All | 6.56 | 5.21 | 7.64 | 10.50 | 1.19 | 5.09 |

(continued)

## Table A4.4.11(continued)

### ANNUAL CHANGES
### IN MANUFACTURING EMPLOYMENT OF SALARY AND WAGE EARNERS BY BRANCH
### 1965-1988

| Year<br>Branch | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|---|
| 20 | -0.37 | 1.14 | -4.25 | 3.54 | -1.10 | -3.14 |
| 21 | 0.67 | 4.17 | 1.19 | -2.20 | -4.99 | 0.51 |
| 22 | 4.62 | -1.81 | 0.25 | -2.54 | -2.20 | -2.63 |
| 23 | 2.90 | -0.38 | 0.35 | 1.78 | -5.81 | -3.66 |
| 24 | 9.84 | 7.69 | 7.67 | -10.52 | -0.10 | 1.04 |
| 25 | 0.91 | -3.11 | 0.85 | 4.09 | -5.10 | -7.12 |
| 26 | -4.67 | -4.93 | -6.27 | -7.72 | -2.17 | -6.57 |
| 27 | 0.22 | 0.73 | -1.18 | -2.25 | -4.45 | -2.60 |
| 28 | -0.94 | -0.16 | 1.58 | -3.48 | -8.06 | -1.90 |
| 29 | 2.44 | 2.89 | -3.85 | -4.87 | -2.80 | -5.15 |
| 30 | 3.51 | 6.74 | 5.98 | -3.33 | 4.48 | 5.37 |
| 31 | -3.86 | -2.46 | 1.08 | 3.63 | 1.19 | 0.05 |
| 32 | 2.32 | -3.13 | 2.95 | -2.88 | -1.16 | 2.72 |
| 33 | 0.80 | -0.63 | -2.50 | -1.90 | -4.75 | -5.76 |
| 34 | -1.67 | -0.57 | 2.38 | 2.19 | -6.74 | -4.80 |
| 35 | 6.76 | 1.96 | 0.65 | -1.55 | 2.73 | -4.43 |
| 36 | 5.61 | 0.08 | -5.89 | -13.66 | -3.58 | -2.32 |
| 37 | -7.67 | -0.52 | -3.73 | -0.76 | -2.79 | -1.03 |
| 38 | 9.44 | -1.27 | 0.73 | 2.20 | 7.93 | -1.60 |
| 39 | 0.09 | -6.99 | -1.89 | -11.89 | -17.20 | -7.78 |
| All | 2.58 | 0.57 | 0.22 | -1.28 | -1.24 | -2.18 |

| Year<br>Branch | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|---|
| 20 | 17.92 | 6.76 | 10.71 | -0.05 | 1.92 | 5.59 |
| 21 | 26.60 | 3.96 | 11.66 | -0.89 | -2.55 | -1.91 |
| 22 | -10.49 | -7.31 | 11.90 | 8.52 | -20.17 | 11.19 |
| 23 | 3.80 | 0.52 | 4.24 | 3.60 | -1.28 | -2.58 |
| 24 | 44.51 | 0.17 | -7.12 | -1.31 | -0.27 | 1.67 |
| 25 | 19.86 | -6.18 | 1.55 | -0.32 | -5.02 | -1.11 |
| 26 | 34.85 | -6.85 | -16.85 | -4.57 | 2.81 | -1.18 |
| 27 | 32.33 | 1.30 | 2.50 | 4.17 | 7.44 | -5.19 |
| 28 | 14.53 | -2.85 | -4.88 | -1.11 | -1.12 | -3.41 |
| 29 | 24.94 | 10.85 | 14.86 | 2.25 | -11.69 | -6.33 |
| 30 | 0.36 | -1.69 | -9.56 | -1.81 | -4.07 | -1.25 |
| 31 | 30.69 | -5.62 | -2.85 | -0.09 | 0.16 | -0.56 |
| 32 | -3.06 | -0.49 | -1.72 | 8.69 | 2.74 | 2.73 |
| 33 | 32.79 | 1.54 | 4.71 | -0.23 | -3.09 | 0.34 |
| 34 | 32.79 | 5.38 | 11.11 | -1.95 | -10.20 | -2.23 |
| 35 | -0.08 | -0.19 | -0.94 | 2.46 | -1.76 | -1.55 |
| 36 | -16.09 | -2.27 | 12.05 | -5.34 | -6.49 | 3.26 |
| 37 | 6.17 | -2.17 | 11.95 | -0.88 | -4.88 | 2.14 |
| 38 | -34.06 | -4.01 | 9.61 | -5.47 | 4.81 | 7.31 |
| 39 | 24.97 | 0.05 | 15.35 | 1.37 | 0.54 | 5.59 |
| All | 9.27 | -0.07 | 3.10 | 0.10 | -1.30 | 1.03 |

APPENDIX 3: <u>RELATIVE</u> <u>WAGE</u> <u>FLEXIBILITY</u> <u>IN</u> <u>GREEK</u> <u>MANUFACTURING,</u>
<u>CORRELATION</u> <u>AND</u> <u>REGRESSION</u> <u>RESULTS</u> <u>AFTER</u> <u>INCLUDING</u> <u>IN</u>
<u>THE</u> <u>EMPLOYMENT</u> <u>VARIABLE</u> <u>BOTH</u> <u>SALARY</u> <u>AND</u> <u>WAGE</u> <u>EARNERS</u>
<u>INSTEAD</u> <u>OF</u> <u>WAGE</u> <u>EARNERS</u> <u>ALONE</u>.

A methodological issue concerning the variable for employment has
to be addressed before proceeding in testing for the existence of
relative wage flexibility in Greek manufacturing. Which variable
for employment should we use? Employment of salary and wage
earners or employment of wage earners alone? Theory, of course,
does not specify which changes in employment should be looked at
primarily. For instance, when we discuss the expanding
employment, and we consider it as indicator of excess demand for
labour in the short-run, under inelastic supply of labour, should
we refer to both salary and wage earners or only to wage earners?

This is a matter which, at first sight, should be resolved on the
basis of data homogeneity. From this point of view, as the
variable for wages is the annual average hourly pay of male and
female wage earners, the variable for employment of wage earners
was preferred. But in the correlation analysis as well as in the
cross-section analysis, to allow for any important difference
caused by, or causing, substitution effects, we used both
variables for employment, that is employment of salary and wage
earners and employment of wage earners alone.

Changes in nominal wages refer to average hourly wage of workers

of both sexes, while changes in employment are represented by two alternative variables, one for salary and wage earners and a second for wage earners alone. Correlation coefficients for salary and wage earners and for wage earners alone, were, sometimes, found slightly different but not important differences are observed with regard to either their sign or their level of significance. In fact, as shown by correlation analysis results not reported here, correlation between changes in these two alternative variables for manufacturing employment was found very high, sometimes approaching the value of unity.

Moreover, an interesting issue is the relatively higher, compared to changes in employment of wage earners alone correlation coefficient found for changes in employment of both salary and wage earners. It seems that higher wage increases were offered when the employment of salary and wage earners was expanding rather than when the employment of wage earners alone was expanding. Does this indicate that increases in employment of salary and wage earners give the signal of higher demand for wage earners? This can be explained by an internal labour market situation in which filling and hiring from within the firm is observed.

In the test for industry-specific influence upon changes in industry nominal wages we used these two alternative variables for manufacturing employment as well. One including both salary and wage earners and one including only wage earners. Not important differences were observed. This appendix contains the correlation and regression results of the specifications where

both salary and wage earners were included in the employment variable. The following Tables with A prefix correspond to those included in Sections 5.4 and 5.5.

## Table A5.4.1.

### BIVARIATE CORRELATION COEFFICIENTS RELATING CHANGES IN NOMINAL WAGES AND CHANGES IN EMPLOYMENT.
(Time periods: 1966-88, 1967-74, 1975-81, 1982-88).

| Changes of | Full Period: 1966-1988. | | | Period: 1967-1974. | |
|---|---|---|---|---|---|
| 1 year | 65/66-87/88 | $-.08^{*}$ | | 66/67-73/74 | $.21^{***}$ |
| | n=460 | | | n=160 | |
| 2 years | 65/67-86/88 | $-.08^{*}$ | | 65/67-72/74 | $.16^{**}$ |
| | n=440 | | | n=160 | |
| 3 years | 65/68-85/88 | $-.16^{***}$ | | 65/68-71/74 | $.09$ |
| | n=420 | | | n=140 | |
| 5 years | 65/70-83/88 | $-.31^{***}$ | | | |
| | n=380 | | | | |
| 10 years | 65/75-78/88 | $-.38^{***}$ | | | |
| | n=280 | | | | |
| 23 years | 66/88 | $-.20$ | | | |
| | n=20 | | | | |

| Changes of | Period 1975-1981. | | | Period 1982-1988. | |
|---|---|---|---|---|---|
| 1 year | 74/75-80/81 | $.007$ | | 81/82-87/88 | $.02$ |
| | n=140 | | | n=140 | |
| 2 years | 73/75-79/81 | $.09$ | | 80/82-86/88 | $.19^{**}$ |
| | n=140 | | | n=140 | |
| 3 years | 72/75-78/81 | $-.03$ | | 79/82-85/88 | $.13$ |
| | n=140 | | | n=140 | |
| 5 years | 70/75-76/81 | $-.26^{***}$ | | 78/82-83/88 | $-.07$ |
| | n=140 | | | n=140 | |
| 10 years | 65/75-71/81 | $-.19^{**}$ | | 72/82-78/88 | $.19^{**}$ |
| | n=140 | | | n=140 | |

Notes: Levels of Significance: $*$ = 0.10, $**$ = 0.05, $***$ = 0.01.

## Table A5.4.2.

## BIVARIATE CORRELATION COEFFICIENTS RELATING CHANGES IN NOMINAL WAGES AND CHANGES IN EMPLOYMENT OF SALARY AND WAGE EARNERS.
(Short-run and Long-run changes over the period 1966-88)

| Year | Period of Change: 1 year | 2 years | 3 years | 5 years | 10 years | 23 years |
|------|--------|---------|---------|---------|----------|----------|
| /66 | .10 | | | | | |
| /67 | .27 | -.02 | | | | |
| /68 | -.24 | .03 | -.30 | | | |
| /69 | .28 | -.04 | -.08 | | | |
| /70 | -.06 | -.003 | -.23 | -.19 | | |
| /71 | .31 | .22 | .21 | -.15 | | |
| /72 | .27 | .37 | .15 | -.11 | | |
| /73 | .20 | .19 | .30 | .29 | | |
| /74 | -.03 | -.28 | -.22 | .05 | | |
| /75 | -.26 | -.01 | -.31 | -.06 | -.28 | |
| /76 | -.27 | -.18 | -.23 | -.10 | -.21 | |
| /77 | .16 | .29 | .11 | -.18 | .07 | |
| /78 | -.16 | -.10 | .10 | -.13 | .17 | |
| /79 | -.57*** | -.55*** | -.36 | -.24 | .07 | |
| /80 | .28 | .14 | -.06 | .33 | .19 | |
| /81 | .17 | .50** | .24 | .19 | .05 | |
| /82 | .04 | .11 | .40* | .13 | .04 | |
| /83 | -.05 | .18 | .07 | .02 | .10 | |
| /84 | .29 | .16 | .24 | .08 | .07 | |
| /85 | .17 | .49** | .06 | .11 | .11 | |
| /86 | .15 | .28 | .56*** | .22 | -.10 | |
| /87 | .06 | .13 | .17 | .003 | -.06 | |
| /88 | -.13 | .09 | -.10 | .15 | -.02 | -.20 |

Notes: N = 20 (Two-digit industrial branches of manufacturing).
Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.

**Table A5.4.3.**

**BIVARIATE CORRELATION COEFFICIENTS RELATING ANNUAL CHANGES
IN NOMINAL WAGES AND EMPLOYMENT OF SALARY AND WAGE EARNERS.**
(comparison between coefficients for all branches
and coefficients for expanding branches)

Period of Change:1 year

| Year | CHSWEi | CHSWEi>0 |
|------|--------|----------|
| /66 | .10 | .09 |
| /67 | .27 | .14 |
| /68 | -.24 | -.41 |
| /69 | .28 | .36 |
| /70 | -.06 | -.04 |
| /71 | .31 | .32 |
| /72 | .27 | .17 |
| /73 | .20 | .21 |
| /74 | -.03 | -.03 |
| /75 | -.26 | -.20 |
| /76 | -.27 | -.24 |
| /77 | .16 | .04 |
| /78 | -.16 | -.35 |
| /79 | -.57*** | -.45** |
| /80 | .28 | -.01 |
| /81 | .17 | .14 |
| /82 | .04 | .25 |
| /83 | -.05 | -.04 |
| /84 | .29 | .33 |
| /85 | .17 | .15 |
| /86 | .15 | .24 |
| /87 | .06 | -.14 |
| /88 | -.13 | -.18 |

Notes: N = 20 (Two-digit industrial branches of manufacturing).
Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.

# Table A5.5.1.

## ESTIMATES OF THE INDUSTRY SPECIFIC DETERMINANTS OF NOMINAL WAGE CHANGES ACROSS MANUFACTURING INDUSTRIES IN GREECE.
### (base-year to end-year changes)

Dependent Variable: CHWi

| Period | CT | CHSWEi | CHPRi | WLi | CHFEi | $R^2/R^2$ | F-value |
|--------|-----|--------|-------|-----|-------|-----------|---------|
| 1966 | 4,695.76 | .51 | 2.37** | -87.21** | | .46 | 4.58** |
| /88 | (12.14) | (.60) | (2.29) | (-2.76) | | .36 | |
| n=20 | | | | | | | |
| | | | | | | | |
| | 4,691.77 | | 2.27** | -82.84** | | .45 | 6.95** |
| | (12.36) | | (2.27) | (-2.75) | | .39 | |
| | | | | | | | |
| 1967 | 124.25 | -.02 | .13 | -.82 | | .08 | .45 |
| /74 | (4.29) | (-.18) | (.94) | (-.35) | | -.10 | |
| n=20 | | | | | | | |
| | | | | | | | |
| | 125.49 | | .14 | -1.01 | | .08 | .69 |
| | (4.59) | | (1.12) | (-.50) | | -.03 | |
| | | | | | | | |
| 1975 | 215.80 | .33 | .16 | 1.62** | | .31 | 2.39** |
| /81 | (7.46) | (1.31) | (1.05) | (2.06) | | .18 | |
| n=20 | | | | | | | |
| | | | | | | | |
| | 212.85 | | .06 | 1.81** | | .24 | 2.62** |
| | (7.23) | | (.42) | (2.28) | | .15 | |
| | | | | | | | |
| 1982 | 192.34 | -.07 | .001 | -.17 | -.40 | .22 | 1.04 |
| /88 | (10.19) | (-.05) | (.005) | (-1.64) | (-.55) | .01 | |
| n=20 | | | | | | | |
| | | | | | | | |
| | 191.07 | | .03 | -.16 | -.41 | .20 | 1.36 |
| | (10.46) | | (.23) | (-1.67) | (-.59) | .01 | |
| | | | | | | | |
| 1977 | 887.61 | -.18 | -.29 | -2.74** | -4.62* | .61 | 5.88** |
| /88 | (15.91) | (-.42) | (-.87) | (-2.87) | (-2.01) | .51 | |
| n=20 | | | | | | | |
| | | | | | | | |
| | 885.61 | | -.29 | -2.72*** | -4.63* | .61 | 8.20*** |
| | (16.36) | | (-.89) | (-2.93) | (-2.07) | .53 | |

Notes: CHWi = Change in Nominal Hourly Wage Paid in Branch i.
CT = Constant Term.
CHSWEi = Change in Employment of Salary and Wage Earners in Branch i.
CHPRi = Change in Productivity in Branch i.
WLi = Initial Level of Wage in Branch i.
CHFEi = Change in the Share of Female Employment in Branch i.

Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.
t-statistics in brackets.

## ESTIMATES OF THE INDUSTRY SPECIFIC DETERMINANTS OF NOMINAL WAGE CHANGES ACROSS MANUFACTURING INDUSTRIES IN GREECE.
### (year to year changes)

Dependent Variable: CHWi

| Period | CT | CHSWEi | CHPRi | SIi | WLi | CHFEi | $R^2$ | F-value |
|---|---|---|---|---|---|---|---|---|
| 1966 -88 n=460 | 17.83 (28.50) | -.12** (-2.42) | -.11*** (-2.80) | .20*** (5.36) | .0003 (.093) | | .09 | 10.90*** |
| 1967 -74 n=160 | -4.29 (-2.54) | -.05 (-.73) | -.12*** (-3.02) | 10.62*** (2.40) | .87*** (9.80) | | .43 | 29.80*** |
| 1975 -81 n=140 | 23.47 (22.99) | .04 (.64) | .03 (.63) | -.005 (-.19) | .02 (1.44) | | .02 | .56 |
| 1982 -88 n=140 | 35.44 (20.57) | .02 (.23) | .10* (1.69) | .18*** (3.75) | -.05*** (-10.78) | -.16** (-2.56) | .53 | 29.56*** |
| 1977 -88 n=240 | 27.76 (35.38) | -.04 (.50) | -.03 (-.78) | .05* (1.72) | -.03*** (-10.44) | -.19*** (-3.33) | .34 | 24.43*** |

Notes: CHWi = Change in Nominal Hourly Wage Paid in Branch i.
CT = Constant Term.
CHSWEi = Change in Employment of Salary and Wage Earners in Branch i.
CHPRi = Change in Productivity in Branch i.
SIi = Index of Strike Activity in Branch i.
WLi = Initial Level of Wage in Branch i.
CHFEi = Change in the Share of Female Employment in Branch i.

Levels of Significance: * = 0.10, ** = 0.05, *** = 0.01.
t-statistics in brackets.

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