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PROFITS AND WAGES IN IRELAND, 1987-1996

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Abstract: A striking feature of the Irish economic resurgence since 1987 has been a major factor income shift away from labour and towards capital. (The profit share has increased from 25.1 per cent in 1987 to 34.8 per cent in 1996.) In this paper, we examine the role of the national strategy of wage moderation in explaining this shift, consider its potential benefits and ask whether it is sustainable. We highlight the critical role of fiscal policy in minimising the trade-off between the returns to capital and labour. Finally, imminent membership of a European Monetary Union makes it all the more important not to overshoot the equilibrium rate of wage growth for the Irish economy.

1. INTRODUCTION

The remarkable constancy of factor income shares in the United States data has persuaded many academic economists to pay little attention to issues concerning the distribution of income between capital and labour[1]. However, some researchers have noted that factor income shares are much more unstable in the other industrialised countries[2]. As is shown below in Section 2, a striking example is the dramatic shift in income shares from labour to capital that has taken place during the recent Irish economic resurgence that began in 1987[3]. In this paper, we attempt to make sense of this phenomenon, tease out its implications and investigate whether the current trend is sustainable.

We begin in Section 2 by documenting the stylised facts about the movements of the profit and wage shares since 1987. This is complemented by the calculation of alternative profitability indices, such as rates of return and markups. In Section 3, we consider some candidate explanations for the declining labour share. We briefly address the possible contributions of rising capital intensity and transfer pricing before examining the role played by the national strategy of wage moderation. We ask why unions have generally supported this policy and reflect on the loss in the bargaining power of labour that has been generated by the increased globalisation of

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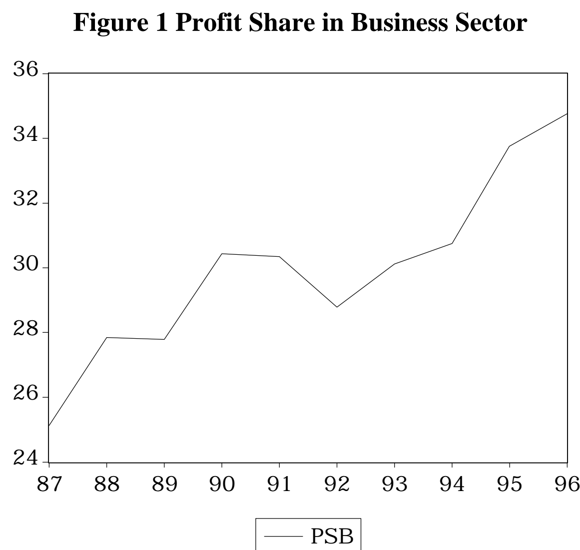
international capital markets. In addition, we investigate the important supporting role of fiscal policy in ensuring its feasibility.

Section 4 outlines some benefits of a high profitability environment, which include increased capital inflows, improved financial positions for firms and faster output growth. Moreover, we argue that these benefits are magnified for smaller and more open countries such as Ireland. In Section 5, we turn to the key question of whether the factor income shift is sustainable. We discuss the potential for faster wage growth under one- and two-tier centralised/coordinated bargaining (including profit-sharing schemes) and under decentralised wage determination. We briefly examine a possible role for the coordination of policies at a European Union level to improve the bargaining position of labour relative to capital and analyse the prospects for a continuing role for fiscal policy in improving post-tax labour incomes. Finally, in Section 6, we recapitulate our main findings and offer some conclusions.

2. PROFITS AND WAGES

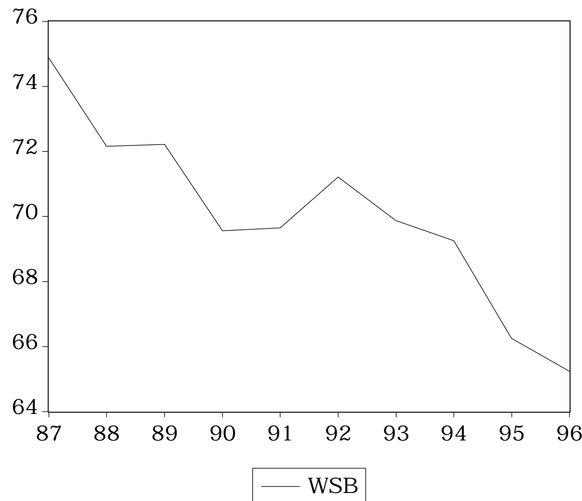
Figure 1 plots the evolution of the profit share in the business (i.e. non-government) sector in Ireland over 1987-96, using data from the OECD *Economic Outlook* databank[4]. As is clearly evident in the graph, the profit share has sharply increased, rising from 25.1 per cent in 1987 to 34.8 per cent in 1996. The corollary is that the wage share has declined from 74.9 per cent in 1987 to 65.2 per cent in 1996 (see Figure 2).

Figure 1 Profit Share in Business Sector



Source: OECD Economic Outlook Database

Figure 2 Wage Share in Business Sector.



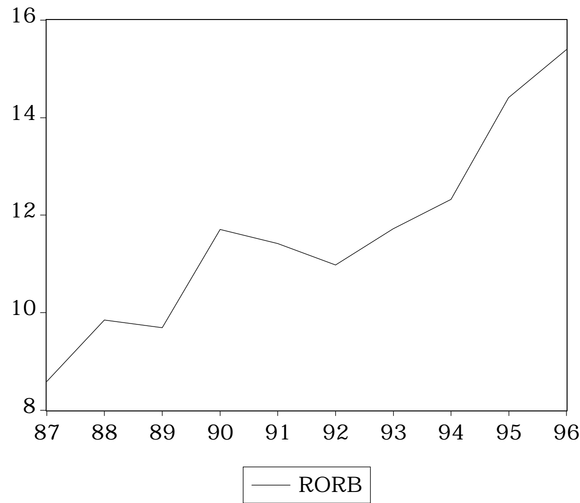
Source: OECD Economic Outlook Database

In Figures 3-4, we present two alternative measures of profitability: the rate of return on capital and the average markup of prices over unit labor cost[5]. These show a similar pattern of a significant upward trend in profitability in Ireland. It is striking that the rate of return on capital has almost doubled, rising from 8.6 per cent in 1987 to 15.4 per cent in 1996. However, as is also the case with the profit share, it is also worth noting that these profitability indicators exhibit a temporary slowdown or reversal during the period 1990-92. Table 1 presents the data for the evolution of the profit and wage shares, the rate of return and output in the business sector over 1987-96[6].

In summary, the general picture emerging from Figures 1-4 and Table 1 is one of a radical factor income shift away from labour and towards capital over the last decade. In the rest of this paper, our goal is to investigate some forces that can help explain this remarkable event, consider the benefits of a rising profit share and ask whether it is sustainable.

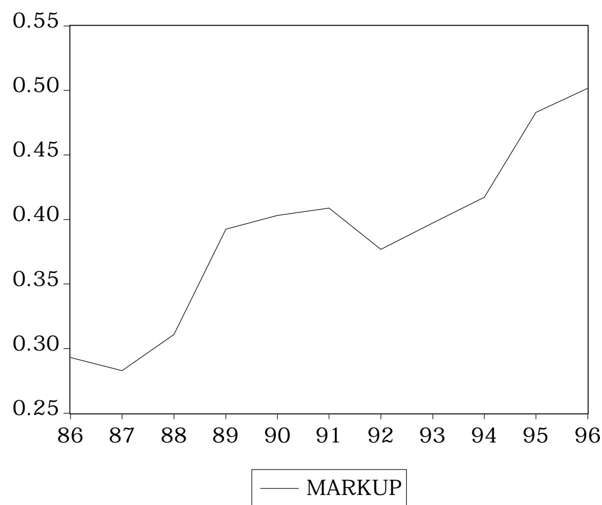
At this stage, it may be useful to explain why we focus on the post-1987 period. During 1980-87, a recovery in the profit share was a general OECD-wide phenomenon, following the disruptions of the 1970s oil shocks. Since 1987, there has been much cross-country variation in profit shares. The profit share has been relatively stable in most countries, although countries such as Spain and Italy have also experienced a continued income shift towards capital[7]. However, in those countries, a rising profit share has been associated with increasing capital intensity and a fall in the profit rate relative to the wage rate (Blanchard 1997). In contrast, as will be shown below, Ireland has experienced an employment boom and a fall in the

Figure 3 Rate of Return in Business Sector



Source: OECD Economic Outlook Database

Figure 4 Mark-up in Business Sector



Source: OECD Economic Outlook Database

relative factor price of labour in parallel with the increase in the profit share. It is this singular combination of stylised facts that motivates the analysis in this paper.

Table 1 Profits, Wages and Output: OECD Data

Year	ΔProfit	ΔWages	ΔROR	ΔOutput	Profit Share	Wage Share	ROR
1987	13.1	0.7	17.3	3.6	25.1	74.9	8.6
1988	14.7	0.7	13.7	4.4	27.8	72.2	9.9
1989	8.0	8.3	-1.6	8.2	27.8	72.2	9.7
1990	18.5	5.6	18.9	9.4	30.4	69.6	11.7
1991	1.8	2.2	-2.5	2.1	30.4	69.6	11.4
1992	-1.2	6.3	-3.9	4.1	28.8	71.2	11.0
1993	7.4	1.0	6.6	2.9	30.1	69.9	11.7
1994	8.9	6.0	5.1	6.9	30.7	69.3	12.3
1995	20.2	6.4	15.6	10.8	33.8	66.3	14.4
1996	10.7	6.2	6.6	7.7	34.8	65.2	15.4
1987-96	10.2	4.3	7.6	6.0	30.0	70.0	11.6

***D**Profit is growth rate of profits in business (i.e. non-government) sector. **D**Wages is growth rate of total wages in business sector. **D**ROR is growth rate of rate of return in business sector. **D**Output is growth rate of output in business sector. Profit Share is profit share in business sector, Wage Share is wage share in business sector, ROR is rate of return in business sector. Source: OECD Economic Outlook database.*

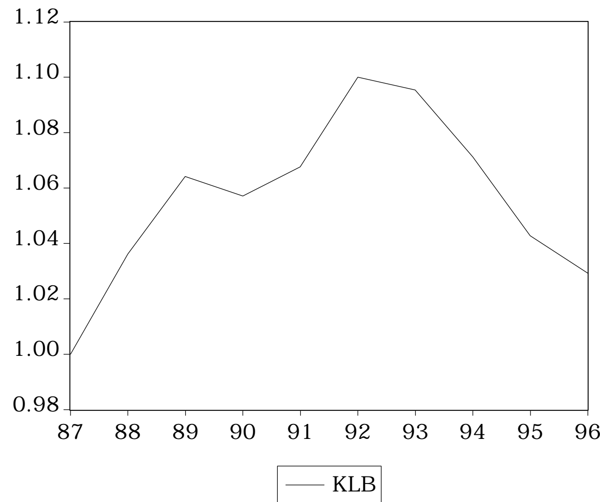
3. EXPLANATIONS

In principle, capital-biased technical change could be one driving force behind an increasing profit share in total output. Similarly, a shift in the composition of production in favour of capital-intensive sectors could also mechanically generate an aggregate rise in the profit share. However, if an increase in the capital intensity of production, for either reason, were the dominant explanation of the rising profit share, we would also expect to see an increasing trend in the capital-labour ratio. Figure 5 shows the capital-labour ratio over the period 1987-96 --- the graph shows that, in fact, the capital-labour ratio has actually been declining since 1992. This pattern indicates that we must look elsewhere for explanations of the recent improvement in profitability.

In light of the large role played by foreign-owned firms in the domestic manufacturing sector, distortions induced by transfer pricing practices surely inflate the level of recorded profits in Ireland (see, for instance, Murphy 1994). However, it is unlikely that transfer pricing alone can fully account for the massive growth in profits since 1987[8]. One problem for the transfer pricing explanation is that the significant increase in the level of employment suggests that much of the output expansion that has occurred is true growth, rather than just an accounting illusion. A second is that, since the introduction of the final *Section 482* regulations in 1994, the United States Internal Revenue Service has severely increased its monitoring of the transfer pricing practices of American multinationals, making it more difficult for these corporations to arbitrarily shift profits to subsidiaries in low-taxation countries. A third is that the fluctuations in the path for profits over 1987-96 appear negatively correlated with the rate of growth of wages, which is *prima facie* evidence that

domestic costs are a contributory factor in the determination of profitability in Ireland. We would not expect to see such a high-frequency correlation if transfer pricing alone were responsible for the increase in measured profits.[9]

Figure 5 Capital-Labour Ratio in Business Sector



Source: OECD Economic Outlook Database

To illustrate the sensitivity of profits to labour costs, Figure 6 graphs changes in the rate of return (ROR) against the growth rate of average labour compensation (RWSS) in the business sector. The scatter indicates a negative relationship. A formal regression confirms the existence of a significant negative correlation between changes in the rate of return on capital and the growth rate of real wages, giving the results[10]

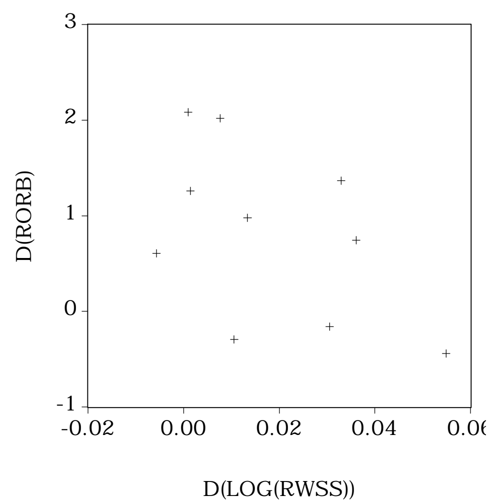
$$d(ROR) = \underset{(0.19)}{1.38} - \underset{(0.1)}{1.33} * d(\log(RWSS)) \qquad \text{adj. } R^2 = 0.42 \; DW = 2.53$$

Finally, further support for a role played by labour costs in the determination of profitability is provided by the concurrent timing of the sharp rise in profitability since 1987 and the formation of the new consensus among the social partners, as formalized in the negotiation of a sequence of national agreements. This is suggestive that the incomes policy that lies at the heart of the new consensus is an important factor in explaining the income shift from labour to owners of capital.

Table 2 shows the path for wage growth laid out by the four national agreements that have been negotiated since 1987 --- the Programme for National Recovery (1988-90); the Programme for Economic and Social Progress (1991-93); the Programme for Competitiveness and Work (1994-96); and the Partnership 2000

(1997-2000). With the benefit of hindsight, the overall pattern of wage growth laid out in the national agreements appears very moderate, in light of the strong cumulative growth in output and the declining wage share since 1987. However, the initial Programme for National Recovery was negotiated in a crisis environment of exploding public debt, stagnant output and high rates of unemployment and emigration so that annual wage increases of 2.5 per cent over 1988-90 ex-ante could even have been criticised as excessive.

Figure 6 Scatter of first difference of the rate of return against growth rate of real total compensation - Business Sector



Source: OECD Economic Outlook Database

The 1991-93 Programme for Economic and Social Progress did in fact attempt to claw back some of the pay concessions previously granted and set an accelerated pace for wage growth. At a time of international recession and instability in the European exchange rate mechanism, this policy achieved an improved wage share but at the cost of contributing to a decline in profitability and a sharp slowdown in output and employment growth (see Tables 1 and 3). In turn, the renewal of wage moderation in the 1994-96 Programme for Competitiveness and Work has a natural interpretation as a reaction to the relatively poor economic performance under the previous national agreement, in particular the difficult conditions during 1992-93. Wage moderation is most clearly evident in the latest national agreement, namely the Partnership 2000 that was negotiated in 1996. Despite the combination of extremely strong output and employment growth and a sharply declining wage share over 1994-96, unions agreed to the continuation of a policy of average annual wage growth below 2.5 per cent for the period 1997-2000.

Table 2 Recommended Pay Increases under Social Partnership Agreements

Agreement	Period	Increase
Programme for National Recovery	1988-1990	2.5
Programme for Economic and Social Progress	1991-1993	3.58
Programme for Competitiveness and Work	1994-1996	1.82
Partnership 2000	1997-2000	2.04

Average recommended nominal pre-tax wage increases.

Table 3 Wages and Employment

Year	Δ Wage Rate	ΔEmployment	Wage Rate	Employment
1987	3.5	-0.1	14174	851000
1988	1.2	-0.9	14349	843000
1989	1.2	0.4	14515	846000
1990	3.5	4.2	15038	882000
1991	2.2	1.6	15364	896000
1992	5.9	-1.0	16290	887000
1993	1.3	2.1	16504	906000
1994	0.8	4.0	16641	943000
1995	1.6	4.9	16909	990000
1996	2.1	4.0	17265	1030095
1987-96	2.3	1.9	15705	907410

Δ Wage Rate is growth rate of average real compensation (wages plus social security contributions) in business sector. ΔEmployment is growth rate of employment in business sector. Wage Rate is average real compensation in business sector, in constant local prices. Employment is total employment in business sector. Source: OECD Economic Outlook database.

A number of factors help explain why the union movement has agreed to a path of slow growth in wage rates. One is that the government has mitigated the negative impact of slow wage growth on workers' disposable incomes by reducing taxes on labour. Indeed, this policy has been a key component in the national agreements since 1987: in exchange for moderation in the growth rate of pre-tax wages, the government has conceded significant reductions in labour income taxes. This process is self-reinforcing: since workers ultimately care about their post-tax wage rate, a cut in labour taxes relieves the burden on union leaders to press for larger pre-tax wage increases from employers. Calculations by O'Toole (1997) of average labour tax rates for different income levels are shown in Table 4 and these estimates show a significant decline in the labour tax burden over 1987-96. Similarly, Leddin and Walsh (1997) note that reductions in tax rates accounted for about one third of the increase in post-tax labour income over 1987-97. Finally, another indicator of the decline in labour taxes is the reduction in the ratio of direct taxes on households to GDP from 14.0 per cent in 1987 to 12.4 per cent in 1996 (OECD data). At an international level, evidence on the strength of the positive relationship between

labour taxes and labour costs has been provided by Alesina and Perotti (1997a) for a large number of countries.

Table 4 Average Tax Rates

Year	50%	100%	200%	500%
1987/88	22.0	35.4	48.8	54.9
1995/96	17.4	30.0	41.5	46.8

Average tax rates for employees earning 50, 100, 200 and 500 per cent of the average industrial wage. The individual exemption limit, personal, PAYE and PRSI allowances are incorporated. Source: O'Toole (1997, Table 4, p10)

Beyond the reduction in the tax burden on labour, fiscal policy can help to contain labour costs in other ways. In particular, the containment of the level of wage government consumption (i.e. the total wage bill in the government sector) relieves pressure in the labour market. For instance, a contraction in government employment releases workers who are then available to work for private firms and hence this expansion in the available supply of labour permits an increase in employment and a decline in wages in the non-government sector. Similarly, the control of wage rates in the government sector can have a salutary demonstration effect on private wage claims.

In this regard, as is shown in Table 5, a noteworthy feature of the 1987 Irish fiscal turnaround is that reduced wage government consumption was a key component of the fiscal reform. A contraction in wage government consumption in fact is a recurrent feature in other examples of successful fiscal adjustment programmes across the industrialised nations (Alesina and Perotti 1995, 1997b). Moreover, the macroeconomic benefits of reduced wage government consumption is clearly evident in the international data: in econometric panel studies of twenty OECD countries over 1960-95, Lane and Perotti (1996, 1997, 1998) have shown that decreases in wage government consumption are systematically associated with a reduction in unit labour costs and increases in profitability, employment, output and exports.

However, Table 6 shows that, while government employment has significantly declined as a share of total employment, the average government wage rate has actually increased by 8.2 per cent relative to the average wage rate in the business sector during the period 1987-96. This adverse trend in government wage rates has diminished the positive overall contribution of fiscal policy in containing labour costs.[11]

At a more abstract level, increased international mobility of capital can also help explain the rising profit share. To see this, think of firms and workers as bargaining over the distribution of the surplus from production between profits and wages. In any standard model of bargaining, an improvement in one side's outside option improves its bargaining position and its equilibrium share of the production surplus.

We can think of an increase in the international mobility of capital as improving its outside option, since firms can credibly threaten to relocate production overseas. Recognising this, workers accept a smaller share of the surplus as the price of maintaining the level of employment (Bertocchi 1997, Rodrik 1997). Some supporting evidence is provided by Borjas and Ramey (1995), who document the decline in the bargaining power of workers in traded sectors in the United States, and Slaughter (1997), who estimates that the labour elasticity of demand has risen in these exposed sectors.

Table 5 Government Spending

Year	ΔG	ΔWGC	ΔY	G/Y	WGC/Y
1987	0.9	1.7	4.6	48.9	12.0
1988	-3.8	-3.5	4.3	45.1	11.1
1989	-8.8	-0.6	6.7	38.6	10.3
1990	8.8	8.4	8.0	38.9	10.3
1991	5.4	7.8	2.1	40.2	11.0
1992	4.9	6.9	3.9	40.6	11.3
1993	3.3	7.0	3.0	40.7	11.8
1994	5.8	3.8	6.3	40.5	11.5
1995	4.4	3.4	9.8	38.4	10.8
1996	4.9	2.9	7.0	37.6	10.3
1987-96	2.6	3.8	5.6	41.0	11.0

DG is growth rate of total government spending. DWGC is growth rate of wage government consumption. DY is growth rate of GDP. Source: OECD Economic Outlook database.

Table 6 Government Employment and Government Wages

Year	EG/EB	WG/WB
1987	24.2	97.5
1988	23.7	96.0
1989	22.7	98.2
1990	21.7	101.6
1991	21.8	106.2
1992	22.6	108.9
1993	23.2	110.3
1994	22.7	111.3
1995	21.8	112.6
1996	21.1	112.5
1987-96	22.5	105.5

EG/EB is ratio of employment in government sector to employment in business sector. WG/WB is ratio of government wage rate to wage rate in business sector. Source: OECD Economic Outlook database

This factor helps to rationalise the acquiescence of pragmatic union leaders to the national policy of wage moderation. The continuing explosion in world trade, in combination with declining technological and policy barriers to cross-border capital movements, has sharply expanded the pool of globally mobile capital. Moreover, with the dismantling of exchange controls and the relaxation of restrictions on overseas investment by domestic pension funds, even competition for domestic sources of capital has intensified. The competition to play host to foreign capital has also become more fierce, with the adoption of more capital-friendly policies in some other European Union countries, the new availability of well-educated workforces in Central and Eastern European and sustained reform in Central and Latin American countries (which have a geographical advantage as a location for multinationals serving the United States market)[12].

As explained by the Irish Congress of Trade Unions (1990), another incentive in 1987 for unions to agree to wage moderation was the threat of radical Thatcher-style institutional and legal reforms that would have sharply reduced union power. From the perspective of the national union leadership, the alternative to an agreement among the social partners would have been a shift to a decentralised, competitive "Anglo Saxon" labour market. In the crisis environment of 1987, according to this view, the survival of a strong union movement required participation in a social partnership approach to macroeconomic strategy.

Finally, Walsh (1998) argues that high initial unemployment and the elastic labour supply were the key factors, more than centralised wage bargaining, in achieving wage moderation. While it is true that such considerations have contributed to the willingness of the union movement to agree to wage moderation, it is unlikely that these factors in themselves could have delivered wage moderation if the unions had adopted an aggressive wage strategy.

4. BENEFITS

An environment of wage moderation and high profitability promises a number of significant benefits[13]. For a fixed level of the capital stock, a fall in wages permits a greater level of employment. Moreover, in a world of international capital mobility, the supply of capital to a small open economy is highly elastic[14]. If a country adopts policies that improve the domestic rate of return on capital, it will attract increased inflows of foreign capital from overseas investors. In turn, for a given level of wages, an enlarged capital stock permits an expansion in the level of employment. Finally, in the case of firms that have flexibility in their choice of technologies, lower wages encourage substitution in the factor mix away from capital and towards labour, further augmenting employment. Indeed, as is shown in Table 3, employment growth in the business sector has been spectacular, rising by 21 per cent over 1987-96 and at an annual average rate in excess of 4 per cent since 1994.

It is important to appreciate that the payoff to capital-friendly policies is disproportionate in a small open economy, as capital flows magnify the impact of

policy changes on the level of output. Moreover, a small open economy can more easily absorb a larger capital stock. One reason is that it can change its product mix towards more capital-intensive sectors as the capital stock grows, with little impact on world relative prices (Findlay 1996, Ventura 1997). Another way that a high rate of return can be maintained is by increased labour inflows. In these ways, diminishing returns to capital can be avoided and a high growth rate sustained.

Second, higher profits make it easier for firms to finance new projects and increase capital investment. Although the benchmark Modigliani-Miller theorem asserts that, under ideal conditions, a good project can always obtain funding, this is no longer true if there is imperfect information in financial markets. For instance, the corporate finance literature highlights moral hazard in the use of borrowed funds, that is facilitated by the impossibility of costless monitoring of the behaviour of debtors, as a distortion that pervades credit relationships[15]. The typical solution to this moral hazard problem is for creditors to only offer partial financing and to condition lending on the net worth of the firm. Accordingly, in equilibrium, increased profits allows firms to increase the role of internal funds in financing new investment projects and relaxes their borrowing constraints in external credit markets.

To the extent that higher profits accrue to domestically-owned firms, the positive impact of increased retained earnings on their ability to invest promises increases in future gross national product. Note that this need not take the form of increased domestic activity by these firms. In this regard, a noteworthy feature of the recent Irish experience has been the significant increase in overseas investment activity by profitable domestic firms, which is now beginning to generate significant positive investment income inflows from the returns on these foreign operations (Honohan and Kelly 1997)[16]. These positive investment income inflows act to offset the investment income outflows generated by profit repatriation by foreign-owned firms operating in Ireland and hence narrow the gap between gross domestic product and gross national product.

5. IS IT SUSTAINABLE?

In this section, we address the question of what would happen if workers decided that annual individual real wage growth of 2.3 per cent and average collective wage growth of 4.3 per cent (see Table 3) were no longer acceptable in a booming economy and pressed for an improved return to labour. We initially assume that a framework of national wage bargaining is maintained before turning to the possibility of decentralised wage setting. Next, we briefly consider the possible role of international coordination efforts in raising the bargaining power of labour relative to capital. Finally, we consider whether the current role of fiscal policy in underpinning the factor income shift is sustainable.

A: A Wage Push

A basic problem in pushing for faster wage growth at a national level is that it is difficult to gauge the aggregate ability of firms to absorb an increase in labour costs. Inevitably, those firms operating at the margin will be forced to lay off workers or cease operations. Although an "exceptional circumstances" clause could be written into the national agreement that would excuse firms with severe financial problems from granting wage increases, the impact of such a clause would necessarily be limited[17]. One reason is that asymmetric information between owners and workers regarding the financial situation of a firm means that it is hard to convince workers that a refusal to pay a nationally-mandated wage increase is based on genuine distress (see Bruno and Sachs 1985). In response, workers may take industrial action in pursuit of their wage claim, pushing a troubled firm yet further in the direction of bankruptcy.

A second is that, even in the absence of asymmetric information, a failure to match the nationally-sanctioned rate of wage growth would damage worker morale by violating the social norm, further reducing the productivity of a firm in distress[18]. Finally, an exceptional circumstances clause would not cover a firm that is profitable at the current wage rate but operates in a low-margin industry. Although it might be currently profitable, such a firm could experience a catastrophic loss in demand in response to even a fractional increase in labour costs and hence ex-post would have to shut down.

More generally, in an open economy it is hard to precisely estimate the international elasticity of capital in response to an increase in aggregate wages. To correctly make this calculation, accurate and detailed information on current and future global demand conditions, the rate of worldwide capital accumulation and labor cost developments in competitor countries would be required. The scale and difficulty of this task means that a strategy of greater aggression in national wage claims resembles a shot in the dark, with considerable uncertainty about its impact.

A related objection takes account of the "herding'' feature of international capital allocation[19]. It has been noted that the current boom in multinational activity in Ireland has a self-feeding quality: for instance, the presence of existing computer firms is believed to encourage yet others to locate here. This argument is partly built on an imperfect information story: in a world of costly information acquisition, especially with respect to small countries, it is rational for firms to mimic the choices made by other firms and to place great store in widely-publicised commonly-known "stylised facts." One of these stylised facts in the case of Ireland is cheap (quality-adjusted) labour and it is conceivable that a national agreement that sanctioned a general wage push could trigger a dramatic reversal in international investors' perceptions of the relative attractiveness of the Irish economy. Disproportionate investor reactions to even small amounts of bad news have been a striking feature of international capital markets in recent years (Calvo and Mendoza 1997).

If greater aggression in national wage bargaining is rejected, there remains the option of local flexibility in determining the return to labour. This could take several forms. One approach is to combine a nationally-agreed basic rate of wage growth that is set conservatively with local bargaining over the magnitude of any additional increases in compensation. Another is to write, either nationally or locally, a compensation contract that links wages to the performance of the firm in a profit-sharing arrangement. A third is move to a fully decentralised system of wage determination.

The first approach is partially incorporated into the Partnership 2000 agreement, which contains a clause allowing the local negotiation of an extra pay increase of up to 2 per cent, depending on the financial circumstances of the firm or industry. In broad terms, a two-tier approach is subject to criticism from two directions. On the one side, the nationally-determined basic pay increase may act as a powerful focal point for local negotiations, making it difficult to obtain greater wage concessions locally. By this argument, firms can employ the baseline figure as a reference point and argue that it is unfair and costly to lose out to competitors by granting pay increases in excess of the national benchmark. On the other side, unions may treat the national figure as a trivial concession and regard it as strictly a floor for substantive local negotiations. The former problem is more likely when the labour market favours "buyers,'' such as in an environment of high unemployment; the latter when "sellers'' have the advantage, such as is the case in a tight labour market. The high unemployment that prevailed in Ireland from the early 1980s until recently doubtless improved the bargaining power of firms in local bargaining. However, Durkan (1992) has recorded the aggressive stance adopted by unions in the local negotiations permitted under the national wage agreements of the 1970s when labour market conditions were more favourable to workers. In light of the recent signs of tightening in the labour market, this recurrence of this problem cannot be discounted.

Regarding the second approach, profit-sharing schemes have the merit of aligning the interests of workers with the performance of their employers. However, making the return to labour contingent on the return to capital would raise the volatility of wage income. If workers are risk averse and have only limited ability to hedge this exposure on financial markets, higher wage volatility would in itself reduce welfare.

From the firm's perspective, ignoring any positive effects on the productivity of workers, profit-sharing acts like a tax on the return to capital and hence has an adverse effect on investment incentives. Moreover, if the profit-sharing arrangement is one-way, in the sense that workers share in profits but are not liable for losses, another distortion is introduced into the investment decisions of firms. The rationale is that, being fully exposed to losses but only partially gaining from any profits, there is a greater incentive to avoid losses and hence the firm will favour low-risk low-return projects over high-risk high-return alternatives. This would have the effect of lowering the average output growth rate. By way of contrast, the non-

contingent path for wages that has been laid down by the social partnership agreements since 1987 provided excellent investment incentives, in the sense that the undertakers of risky projects could be confident that they would fully capture the upside gains from such activities, since the return to labour was exogenously and invariantly determined at a national level.

One way to implement two-way profit sharing would be for workers to purchase an equity stake in the firm. However, this may be inappropriate for the worker from a portfolio management perspective: in the event of a downturn, not only would the worker face the risk of losing her job but also experience an additional loss by virtue of the decline in the capitalised value of her share in the firm's profits (Bottazi, Pesenti and van Wincoop 1996, Baxter and Jermann 1997).

A final objection to profit-sharing is that it would involve significant monitoring costs to ensure that firms do not engage in accounting manoueveres in order to minimize reported domestic profits. This would be a particularly acute problem with domestic- or foreign-owned firms that also have overseas business activities, since these enterprises could shift recorded profits from Ireland to other jurisdictions by an adjustment in their transfer pricing strategies.

The third approach is to move to decentralised wage setting. It is at the local level that the ability to pay greater wage increases can best be ascertained and the absence of a nationally-mandated baseline pay agreement provides a simpler environment in which local bargaining can take place. However, it is pertinently argued by advocates of centralised bargaining that decentralised bargaining can be distorted in the presence of local monopoly power (O'Donnell 1993, National Economic and Social Council 1986, 1989, 1996). With respect to monopsony power on the part of employers, this objection has greatest force in a slack labour market where competition for labour is weak but it is less compelling when unemployment is low and falling and labour is a scarce factor. In such conditions, monopoly union power may be a more pressing concern, in particular if unions attempt to bargain wages on a uniform basis across firms within an industry or region. In this scenario, the benefits of decentralisation would not be reaped while the coordination gains to national-level wage agreements would also be sacrificed.

Accordingly, for decentralised bargaining to work properly, a legal and institutional drive to weaken union power, along the lines of what has already taken place in the United States and the United Kingdom, may be required. As was pointed out in Section 3, according to the Irish Congress of Trade Unions (1990), it was precisely the threat of this strategy that motivated the Irish union movement to enter into social partnership with the employers' federations and the government in 1987. Although centralised/coordinated bargaining may have been the best option for workers at the time, when unemployment was high and labour demand slack, it is not so clear that it remains optimal during the current boom conditions, with the emergence of much tighter conditions in the labour market.

Finally, regardless of the level at which wage negotiations takes place, the imminent participation of Ireland in a European Monetary Union will make excessive wage growth all the more costly. In the absence of the option to devalue, relative wage corrections will have to take the form of nominal wage cuts (holding fixed the price level) which, for a host of well-known reasons, are difficult to achieve without a high cost in terms of increased unemployment (see Lane 1997).

B: International Coordination

An entirely different route in seeking an improved level of wages is to participate in international coordination efforts, most realistically at the European Union level that are targeted at improving the bargaining power of labour relative to capital. It was argued in section 3 that increased cross-border mobility of capital is partially responsible for the declining wage share so one counter-response is to limit the international competition for capital by implementing, for instance, a common set of European Union policies with respect to capital tax rates and labour regulations[20]. However, it is unlikely that Irish workers would on net gain by participation in such a coordination strategy. As a country that is capital-scarce and currently imposes low tax rates on capital, Ireland is a natural attractor of capital so that policies aimed at reducing the intra-European Union competition for capital would lead to a redirection of capital away from Ireland. This is compounded by our peripheral location, since it is arguable that Ireland needs to offer an especially favourable return on capital to compensate for the additional costs of producing at a distance from core customer markets[21]. Another problem is that Ireland, more than most other European Union member countries, is a host location for non-European Union multinational corporations and these firms may respond to an increase in European Union capital costs by shifting production to non-European Union facilities.

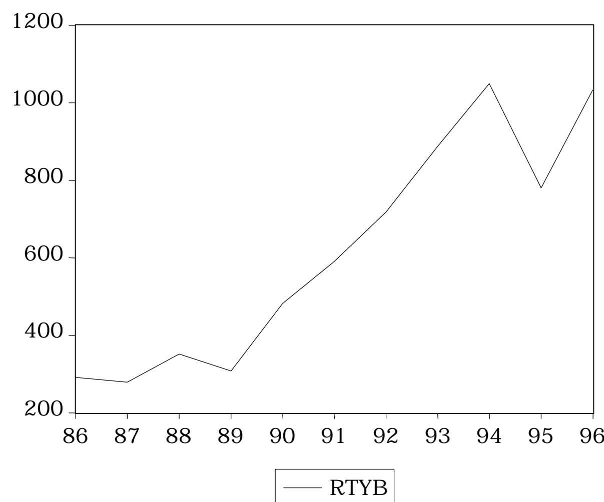
Finally, European Union member countries surely differ in how they view the trade-off between current consumption and capital accumulation. One reason is that wealthier countries plausibly take a more benign view of sacrificing additional future consumption opportunities[22]. A second is that countries with older populations have a weaker motivation to save for the future. Since Ireland is still relatively poor and has a relatively young population, our ideal capital tax rate may be significantly lower than the capital tax rate that would be collectively favoured by other European Union member countries. Accordingly, a uniform capital tax rate would likely be excessively anti-growth from the perspective of our national self-interest.

C: Role of Fiscal Policy

As was discussed in section 3, fiscal policy has been central in mitigating the adverse impact of moderation in pre-tax wage claims on the post-tax disposable incomes of workers. If a continuing decline in the tax burden on labour were not sustainable, this would add to the pressure to push for higher pre-tax wage growth.

For a declining tax burden on labour to be feasible, the government must adapt its fiscal policy in response to the loss in revenue from labour taxes. One option is to improve the revenue stream from other components of the tax base. An important constraint is that increasing the tax rate on capital is a limited option, in light of the international mobility of capital. That said, at a given tax rate, policies that favour capital, such as a strategy of wage moderation, act to increase revenues from this source by encouraging domestic investment and stimulating capital inflows. Indeed, this positive effect has been powerful in Ireland, with direct tax revenues from businesses increasing from IR£257.9m in 1987 to IR£1151m in 1996, corresponding to a real average annual growth rate of 12.7 per cent. Over the same period, direct taxes on business as a share of total tax revenues have more than doubled from 3.1 per cent to 7.5 per cent. As can be seen in Figure 7, revenues from this source have accelerated since 1989.

Figure 7 Plot of direct tax revenues from business sector, in constant prices (GDP deflator)



Source: OECD Economic Outlook Database

Another avenue is to increase value-added tax and excise duties but this faces the problem that workers ultimately care about the real purchasing power of their wages, which is eroded by increases in such taxes. As such, the price level increases induced by higher value-added tax and excise duties would feed into demands for increased pre-tax wages. In contrast, there may be scope for greater reliance on property taxation, in light of the fact that land is an immobile factor and is currently lightly taxed in Ireland.

The other option is to reduce government expenditure, in order to allow a decline in total tax revenues. Fortunately, the decline in the public debt has reduced servicing

costs from 6.8 per cent of GDP in 1987 to 3.6 per cent in 1996 (OECD data). Another positive factor is that falling unemployment and a rising participation rate reduces pressure on welfare spending. Moreover, Ireland's young demographic structure means that the burden imposed by the pay-as-you-go state pension scheme is in the short-term not especially heavy, relative to most other OECD countries. (That said, a prudent long-range fiscal strategy would be to move to a fully funded pension scheme and to resist lobbying efforts to reduce the retirement age, in light of the trends toward later entry into the workforce and rising life expectancy[23].) In addition, the falling school-age population permits a decline in education spending, even allowing for efforts to improve quality indicators such as the student-teacher ratio. However, since public infrastructure must be improved in line with the expansion in economic activity, if congestion and bottlenecks are to be avoided, the scope for reductions in government investment is limited.

As was already discussed in Section 3, the containment of wage government consumption is particularly important. We noted that, while Ireland has done reasonably well in controlling growth in public employment, government wage rates have grown relative to labour compensation levels in the business sector (see Table 6). In reducing wage government consumption, it is important to seek out ways to maximize productivity improvements in the delivery of public services (see also Boyle and O'Leary 1998). That said, even allowing for such productivity growth, the key to controlling the level of wage government consumption remains in achieving moderation in pay agreements with public sector unions. This is made more difficult by virtue of the fact that public sector unions can afford to be more aggressive in making wage claims than their counterparts in the business sector, for the reason that they are not directly exposed to the threat of international competition[24]. In this regard, it is possible that the joint participation of public and business sector unions in the social partnership framework constrains union leaders in the business sector from advancing the interests of their members through lobbying for a tougher government stance in its pay negotiations with public sector workers.

6. CONCLUSIONS

The decline in the labour income share is a remarkable feature of the economic resurgence in Ireland. The national strategy of wage moderation has been a major contributory factor in facilitating rapid economic growth but at the same time has limited the extent to which workers have shared in the fruits of rising prosperity. Fiscal policy, by reducing the tax burden on labour, has helped to improve the growth rate of post-tax labour income, mitigating the effects of moderation in pre-tax wage growth.

Although a high profitability environment offers significant benefits in terms of promoting accumulation and economic growth, it is an open question whether the national strategy of wage moderation is excessively penalising labour income growth. In considering options to improve the rate of wage growth, decentralised

bargaining may be the most promising route in a booming economy, being less risky than either one- or two-tier centralised/coordinated wage agreements. However, the international coordination of policies, at a European Union level, to improve the bargaining power of labour relative to capital is unlikely to be of net benefit to Irish workers.

In terms of the policy environment, the containment of government spending, in particular government wage rates, is central to minimising the trade-off between the returns to capital and labour, by making possible further reductions in the tax burden imposed on workers. On the monetary side, Ireland's imminent membership of a European Monetary Union rules out devaluation as an option in correcting excessive wage growth. This consideration provides further motivation for prudent behaviour on the part of wage-setters in both the public and private sectors in the difficult process of discovering the optimal, sustainable rate of wage growth for the Irish economy.

Footnotes

1. See Romer (1989), Glick and Rogoff (1995) and Bottazi, Pesenti and van Wincoop (1996). Much more attention is paid to shifts in the distribution of income between different grades of labour. We do not address intra-labour distributional issues in this paper. See Barrett, Callan and Nolan (1997) for a recent analysis of wage dispersion in Ireland. To the extent that wage inequality has grown in Ireland, the declining aggregate labour share masks an even sharper decline in the output share going to low-skilled workers.
2. See Sachs (1979, 1980), Bruno and Sachs (1985), Bottazi, Pesenti and van Wincoop (1996) and Blanchard (1997).
3. This paper concentrates on just this one dimension of the recent Irish expeience. See Walsh (1996), Bradley et al. (1997) and Leddin and Walsh (1997) for general analyses of the Irish economic boom.
4. The output of the business sector is calculated as GDP minus the sum of government wage consumption, government fixed capital formation, net indirect taxes and the GDP statistical discrepancy.
5. The rate of return is the profit share divided by the capital-output ratio, so it measures the average profit per unit of capital. The markup is the ratio of the output price deflator to unit labor costs in the business sector. Since the deflator is an index, the units in which the markup is measured are arbitrary. See Hill (1979) for a review of alternative measures of profitability.
6. As a cross-check, we also calculated profit and wage shares using domestic National Accounts data and obtained broadly similar results.
7. That said, Ireland experienced the largest increase in the profit share over 1987-96 among the EU members, the US and Japan. See *European Economy*, No. 62, November 1996, Table 32.
8. Moreover, there is evidence that profitability has been rising even in the indigenous manufacturing sector. Forfas (1996) estimates that profits in this sector have increased from 4.5 per cent to 8.9 per cent of sales during the 1989-95 period.
9. However, a *sustained* decline in wages could lead to an increase in transfer pricing activity by inducing more multinationals to locate in Ireland. I am grateful to Frank Barry for suggesting this possibility.
10. 1987-96 (10 observations). The estimation contains an AR(1) correction.
11. Evidence of inadequate control of government spending during the current boom can also be found in the procyclical behaviour of various fiscal aggregates. For details, see Lane (1998a).
12. In this regard, Sachs (1997) notes that Intel recently decided to locate a major new production facility in Costa Rica rather than in Ireland.
13. To avoid confusion, what I mean by low wages are labour costs that are relatively cheap, adjusting for worker quality, rather than in absolute terms. Those who reject a 'low wage'' strategy are typically referring to the absolute level of wages.

14. See Kouri (1979), Sachs (1979, 1980) and Bruno and Sachs (1985). Using Irish data, labour costs were found to be critical in the location decisions of multinational corporations by Bradley and Fitzgerald (1988).
15. See Hart (1995) and Hillier and Worrall (1995) for overviews of this literature.
16. Lane (1998b) further investigates outward investment activity by Irish firms.
17. The recent national agreements have contained an "economic and social circumstances'' clause that attempts to provide for such exceptions.
18. This argument stems from the efficiency wage literature. See Yellen (1984).
19. Krugman (1997) outlines the positive side of this argument in the context of the recent Irish experience.
20. There are active moves to reduce differences in capital tax rates across the European Union and the Social Charter strives to impose common labour standards across member countries.
21. Let $R\{IRE\}$and $R\{EU\}$ denote the raw profit rates in Ireland and a representative better-situated European Union country respectively and let x stand for the additional fixed cost of operating in a peripheral location. It is straightforward that a firm chooses to locate in Ireland if $(R\{IRE\}-R\{EU\})>x$. Now imagine a common tax rate σ is imposed on profits across the European Union. The class of firms with $(R\{IRE\}-R\{EU\})>x$, but $(1-\sigma)(R\{IRE\}-R\{EU\})<x$ that would previously have chosen to operate in Ireland will now move to other European Union locations.
22. Uzawa (1968) formally represents this notion by modelling the discount factor at which consumers value future consumption as a declining function of the level of wealth.
23. Delayed entry into the workforce can be mainly attributed to the sharp increase in enrolment in third-level education.
24. See Alesina and Perotti (1997a)

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DISCUSSION

Kieran Kennedy: I wish to join with other respondents in congratulating Dr Lane on his excellent Barrington Prize Lecture - the first, I hope, of many future presentations by him to this Society.

The extraordinary progress of the Irish economy over the last decade makes it difficult to understand what is happening, and even harder to predict what economists will say about it! Nothing illustrates this more than the fact that the author concludes by "considering options to improve the rate of wage growth". Those of us who have spent the best years of our lives arguing the need for pay restraint in the interests of employment creation are likely to feel, as I do at any rate, that the setting of such an objective is somewhat premature. I believe that we were wholly right in our insistence on pay restraint, and fully vindicated by the outcome of events in the claim that it was a necessary condition for significant employment growth. The level of unemployment remains unacceptably high in Ireland, and even the jobs already created are by no means secure in the face of a rapid acceleration in wage growth.

In fact, a careful reading of Dr Lane's paper suggests to me that, notwithstanding some unguarded remarks, he would not disagree with the foregoing. Earlier in the paper, he stresses the need for "prudent behaviour on the part of wage setters in both the public and private sectors". And in his final paragraph, he rightly emphasises the fact that "the containment of government spending, in particular government wage rates, is central to minimising the trade-off between the returns to capital and labour, by making possible further reductions in the tax burden imposed on workers".

That last point highlights what I regard as the greatest domestic threat to sustaining the economic strategy pursued so successfully over the last 10 years, namely, how to keep a rein on public sector wage and salary rates. Even already over the period 1987/96, Dr Lane's figures in Table 6 show that increases in the government wage rate outstripped those in the business sector by a cumulative 15.4 per cent. Since 1996 the government has been faced with wage demands from various public sector groups - the nurses, the Gardaí and the national teachers - which could blow apart the Partnership 2000.

Pay trends in the private sector are less of a worry: the unions there are fully alive to the fact that they are operating in competitive markets, they are well informed about pay trends in other EU countries, and they have a good understanding of the degree to which excessive wage increases would jeopardise the employment of their members. I do not detect the same understanding among public servants or their union leaders. Public servants do not suffer involuntary unemployment because of excessive pay increases: even when redundancies arose in the 1980s, the arrangement was voluntary and the terms offered far more generous than any private sector employer could offer. The public sector unions also have immense power, both industrial and political. In many cases their workers are monopoly suppliers of

essential economic or social services; while in our centralist political system, no government is willing to antagonise any large group of such workers.

There is no complete answer to this dilemma, but I believe that the partnership approach still presents the best hope of achieving a satisfactory outcome - because of the healthy moderating influence exerted by the private sector unions on their public sector counterparts. The former know that the larger the increases awarded to public sector workers, the less money is available for tax cuts to sweeten the pill of pay restraint by their own members.

A feature of public sector pay adjustments that needs to be challenged is the prevalence, scale and frequency of special pay awards. We might begin at the top: why should the Gleeson awards be superimposed on the general level of pay increases deemed appropriate in the partnership agreements, and then be followed a few years later by the Buckley awards, with another review to follow on? The justification for such a parallel path of substantial ongoing adjustments is not at all obvious in the context of centralised partnership pay agreements.

Finally, I disagree with Dr Lane's dismissal of transfer pricing as an explanation of the rise in the share of profits. He reasons that "the significant increase in the level of employment suggests that much of the output expansion that has occurred is true growth, rather than just an accounting illusion". This overlooks the fact that transfer pricing can generate "true growth". Because foreign firms can engage in transfer pricing and so enhance their profits (at the expense, by the way, of foreign exchequers, not the Irish exchequer), this makes Ireland a more attractive location for foreign investment and thereby stimulates growth in real output and employment. Dr Lane is of course correct in saying that "it is unlikely that transfer pricing alone can fully account for the massive growth in profits since 1987", but it is probably an important part of the reason.

Again, I extend a warm welcome to this stimulating paper.

Paul Sweeney: Paul of Sweeney of SIPTU congratulated Dr. Philip Lane on his excellent paper. He said that he agreed with most of the analysis and he wished to add a few extra reasons for why the trade unions had agreed to wage moderation since the first national agreement in 1987.

He said an important point that was not mentioned in the paper was that studies done by the unions had shown that real wages had fallen each year in the period of the "free for all" between 1980 and 1987. He agreed with Dr. Lane, who said that SIPTU and other unions were conscious of the Thatcher, anti-union policies which had been pursued in the UK in the mid-1980s. Irish Trade Unions had acted differently than British Unions', always undertaking secret ballots before industrial action etc., and while they had not believed that the Thatcher-Right phenomenon would arise in Ireland, it was something that they were conscious of.

Another factor was the influence of institutions and people in other EU countries. In the 1980s many Irish trade unionists were mixing with their peers in other EU countries and were party to tripartite systems where employers, the Commission and unions got together in various industrial groups and sectors. This consensual approach was an extremely civilised way of doing things and it had a positive influence on trade union attitudes in Ireland.

Paul Sweeney agreed that transfer price-fixing by multi-nationals is substantial and is undertaken by many companies. In his experience in visiting multi-national companies, the finance director often said that there was no case for looking at the accounts as they did not reflect reality. He often had to be satisfied in examining inter-plant comparisons on costs or activity based accounting systems.

The low rate of corporation tax in Ireland did attract profits in to Ireland which were not generated here and while this was of benefit to the Irish taxpayer, it did distort the National Accounts.

Another factor in the overall low increase in wages was the introduction of low entry payment systems by many companies. This had often been agreed by trade union members which allowed companies to bring in new employees at substantially lower rates of pay. However, he pointed out that in many companies, particularly today with labour shortages, employers were beginning to recognise that two-tier work systems were not working very well. Other companies had recognised that they caused stresses and tensions in the workplace which were not productive.

Paul Sweeney said that it might surprise some people that a trade unionist would say this, but he felt that the rate of profits, for indigenous companies in Ireland had been very low. He said that there was a strong case for higher rates of profits for some companies. But he asked are overall profit rates and profit levels now not too high? A switch in the share of profits of national income from 25% to 35%, or a 40% increase in just a decade, was phenomenal and not acceptable in the long term. It must fall back or there may be problems, he said.

Looking to the future, Mr. Sweeney said that he would like to look at dangers to the partnership approach to industrial relations which had contributed so much to building the Celtic Tiger. He said that the first danger would arise if the government was to have a budget in the Autumn similar to the one it introduced in 1997 where the gross amount of tax relief given was as agreed with the trade unions, but it was given in a way which was very cynical. The relief had been given to the higher paid and not to the lower paid. A repeat of this might bring the Partnership 2000 to a halt, he said.

A second major danger is that if the issue of union recognition was not dealt with, then many trade unionists would feel that they should return to the old adversarial ways. He cited the example of Ryanair, which had blossomed in the booming Celtic Tiger, which had been partially generated by the moderate wage settlements agreed

in the successive national agreements. In spite of its success in riding the Celtic Tiger, Ryanair would not recognise unions. In the baggage handlers section, virtually all of the workers had originally joined SIPTU, but the company had pursued a relentless anti-union campaign which lead to the total closure of Ireland's main link with the outside world, Dublin airport, in the spring of 1998. He said that union recognition was a very important issue for trade unionists and how it should be implemented would be a matter of negotiation.

Paul Sweeney said that if inflation rises then it is clear that there will be pressure on wages. He said that a fourth danger to the Partnership approach was the poor response by employers to new systems of reward, such as gainsharing and profit-sharing. There is only a limited number of companies which have agreed to implement such schemes and it appears that many highly profitable companies were not prepared to share them in any way with their employees.

This brought him to the fifth danger which was a growing consciousness of the high levels of profitability of many companies by workers. He said that Dr. Lane's paper will contribute to this increased consciousness and, of course, the high level of profits coincides with the reduction in the rates of corporation tax, which is seen by many workers as a "double bonanza" for the corporate sector.

He said that while it may appear to be correct to say that the bargaining power of working in the traded sector is eroded with globalisation and increased mobility of capital, he felt that from his experience, workers in many multi-national firms could have got higher wage settlements from their highly profitable employers in a free for all. He said that many of these workers felt the same way and that could lead to a rejection of further national agreements in the future.

He said that the sixth danger was that there was a fair percentage of trade union members who were against the idea of national agreements in principle, and many of these were also against the idea of partnership. Finally, he said that as the economy booms, so too has inequality, and this may be rectified at some level by the introduction of a minimum wage which could be enhanced with the recognition that people on low incomes should not be taxed at all. But if people were becoming smug and complacent, then the co-operative approach to wage settlement would be undermined.

Looking at the positive side of the national agreements, Paul Sweeney said that since the first in 1987, workers had enjoyed real increases in their take-home pay every year, and this had increased their standard of living. What is possibly the most exciting economic outcome of the current good fortune in the Irish economy was the very substantial growth in employment. He said that total employment would grow by as much as one-third in the twelve year period to 1999 on current forecasts. This was a superb achievement by any criterion, but it was especially good when one looked at the sad economic history of Ireland since Independence.

He said that the economic boom had benefited most people and it has also created more choice for people, which meant that people could switch jobs and it gave them a better sense of well-being. He also said that there was a greater consciousness of the real meaning of "competitiveness" now and it was no longer seen as just labour costs or wage competitiveness. The National Competitiveness Council's latest report had shown that it is a complex issue and a clear understanding of it by all sides helps in formulating good economic policy.

He said that partnership is now official SIPTU policy and it is the union's policy not just to be in partnership with the government and employers at national level, but to also participate in developing corporate strategy and in improving processes and products at plant level, which will add to Ireland's overall economic wealth.

In conclusion, Paul Sweeney said that Ireland and its people had matured in recent years. Partnership, its structures and processes took up a lot of time and effort, but the results were there to be seen by everyone. This approach must be developed to ensure a much more equitable division of the growing national cake.