

Presidential Address

An Inquiry into the Declining Labour Share of National Income and the Consequences for Economies and Societies

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Abstract: For over three decades, the share of national income going to labour in most countries has been in decline. Conversely, capital's share of national income has increased. The trend in the decline in labour's share of income has been less noticeable as national income has continued to rise. The reasons for the decline in labour share are complex and will be analysed. This decline has been secular, other than a small recent temporary reversal in some countries. This paper will examine (i) the trends in this decline in many countries, including Ireland; (ii) the definitional issues and trends within both the labour and capital share; (iii) its causes; and (iv) the implications for economic development and the consequences of this shift on economies and societies. The decline in labour's share has contributed to increased inequality in the distribution of national income and there has also been a substantial redistribution within the labour share. The decline may have major consequences for economies, with declining demand and other impacts and also for societies, where social cohesion may be threatened by a continuation of the trend.

Keywords: labour share, national income

JEL Classifications: J01, J08

1. INTRODUCTION

For over three decades, the share of national income going to labour in most developed countries has been in decline. This trend may have major consequences for economies, with reduced demand and also for societies, where social cohesion may be threatened by the trend.

The reasons for the decline in labour share are complex. They include technology and increased returns to capital; globalisation; the reduction of labour's bargaining power and the financialisation of the economy. The trend in the decline in labour's share of income has been less noticeable as national income has continued to rise. Nonetheless, the decline in labour's share has led to (i) a major shift in income distribution at the expense of labour; (ii) to increased polarisation in the distribution of personal income and (iii) a substantial redistribution within the labour share, with high earners gaining.

The functional distribution of national income between wages, profits and rents was a major point of interest to classical economists, with David Ricardo stating it was "the principal problem of Political Economy."² The decline in labour share was masked with the apparent rise on overall income, but after the Crash of 2008, the dissipation of the wealth effect of the asset boom and the fall in demand, interest in the area has risen. Lane (1998), Lawless and Whelan (2011), Flaherty and O'Riain (2013), Bassanini and Manfredi (2012), Stockhammer (2012), Glynn (2011), Young, (2010), Checchi and Penolosa (2005), Bentolila and Saint-Paul (2003), and international organisations, the OECD (2012), ILO (2007 & 2012), and IMF (2007) have examined the decline. Lane gave a Barrington Prize Lecture before the Society in 1998 on the decline in the labour share of national income and since then, as we will see, the decline has continued.

¹ Thanks to Dr Chris Sibley of CSO, Bill Keating, Prof. Richard Mack, Dr Peter Rigney, Ronan O'Brien and Raffique Mottiar. The usual disclaimer applies.

² Ricardo 1817, quoted in Glyn 2009.

Labour's share of national income is the remuneration of employees; their wages and salaries and employers' social contributions and to this is added the income of the self-employed.³ Capital is domestic trading profits before tax, and rent, including imputed rent. A number of issues within these definitions will be addressed.

Gordon and others have argued⁴ that in developed countries, economic growth of the levels seen for much of the past century may be over because its drivers, the large gains from public education, increased female participation, infrastructural investment etc., have largely been reaped. If this is so, and the cake is no longer growing at the pace we have been used to for more than a century, then its division will become more contested. The paper shows that since the early 1970s, in spite of rising productivity, average /median incomes in the US have risen only slightly. In most countries in all continents, the labour share of national income has been falling for many years. The complex issue of defining the labour share is examined and the reasons for the decline are analysed. Finally, the paper focuses on how policy should respond to the decline to end and reverse it.

In many states in Europe since the War, the current generation will be the first not to see substantial improvement in living standards over those of their parents. The decline in the labour share is a key factor in this.

This decline has been secular, other than a small recent temporary reversal in some countries. Only four developed countries have not seen a decline. This wide-ranging paper will examine the trends in this decline in the labour share, with a focus on Ireland; the definitional issues on capital/labour share; the reasons for the decline in labour's share; the implications for on economies and societies; and, what should be done.

2. TRENDS IN THE DECLINE IN LABOUR SHARE OF NATIONAL INCOME

2.1 *Decline in Labour Share of National Income Internationally*

The decline in the labour share has occurred in most countries in the West since the mid 1970s. It has also been in decline in Asia and Africa in later years. The International Labour Organisation (ILO) points out that "a stable labour income share was accepted as a natural corollary or "stylized fact" of economic growth."⁵

The ILO found that the simple average of labour shares in 16 developed countries, including Ireland, for which data was available for this long period saw a fall from about 75 per cent of national income in the mid 1970s to 65 per cent to the years before the Crash. In a group of developing countries, it fell from around 62 per cent in the early 1990s to 58 per cent before the Crash.

"Even in China where wages roughly tripled over the last decade, GDP increased at a faster rate than the total wage bill and hence the labour income share went down." The crash reversed the trend, albeit only temporarily, with a reversal to trend in 2009 in developed countries. This reflects "the countercyclical nature of the wage share which arises because wages tend to be less volatile than profits during economic downturns."⁶

The wage share has fallen "in three quarters of 69 countries from the early 1970s to late 2000s for which data is available" and the drop in the wage share is more pronounced in emerging and developing economies."⁷ Since 1994, the wage share in Asia is down by 20 per centage points and the pace of decline accelerated in the past decade. In China, the wage share is down by 10 per cent since 2000, in spite of rising real wages. In Africa the wage share is down by 15 per centage points since 1990 with acceleration in later years and in North Africa by a spectacular 30 per centage points since 2000. Latin America has had the lowest fall. Since 1993 it was down only by 10 per centage points and it slowed in recent years (perhaps due to political change in many countries). The ILO confirms that in the advanced countries the wage share has been falling since 1975 but "the decline is more modest than in emerging and developing economies, falling roughly 9 per cent since 1980."⁸

³ For more on definitions see National Income & Expenditure, 2010, Appendix 1 or the OECD definition in its statistical database. Earnings include overtime, bonuses, directors' fees, commissions, social contributions etc.

⁴ Robert J Gordon (2012) and the libertarian economist, Tyler Cowen, (2011).

⁵ ILO Global Wage Report 2012/13 p 42 citing this as *Bowley's Law* after Arthur Bowley and also Paul Douglas with Charles Cobb – the Cobb Douglas production function. Keynes described this empirical constancy as "a bit of a miracle" and Solow questioned the evidence, correctly as the past three decades demonstrates.

⁶ ILO *ibid* p 42

⁷ ILO World of Work Report 2011, p 55.

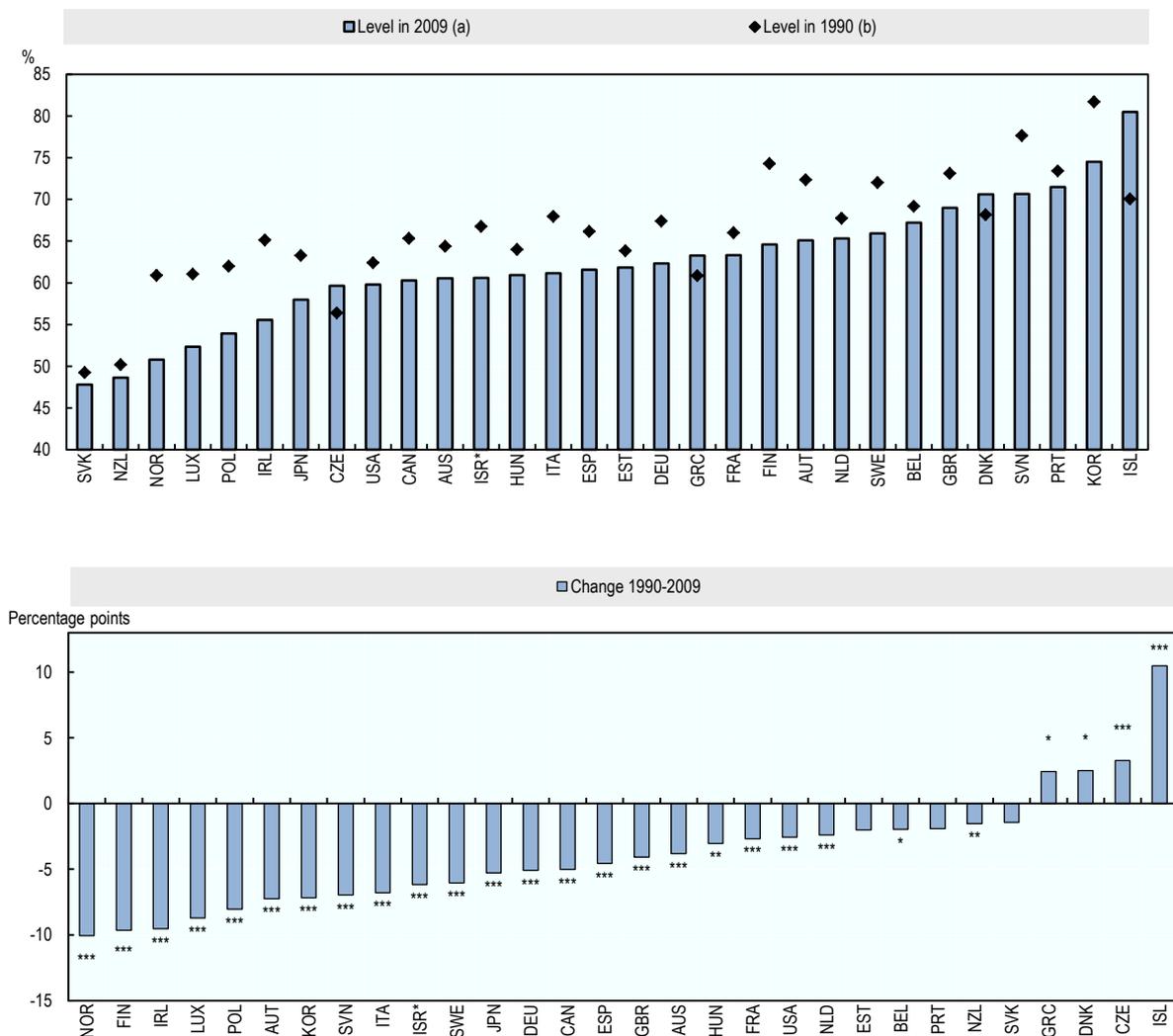
⁸ ILO *ibid* and it adjusts its figures as the self employed having lower incomes.

The OECD found that the rising capital share of national income has been associated with the rise in inequality internationally, “as the income of the average capital owner tends to be higher than the income of the average worker.”⁹ It also says “standard labour share statistics moreover, tend to underestimate the contraction of the share of national income that is received by the average worker. Recent work shows that the top income earners have seen their share of national income increase.”

The OECD found that between 1990 and 2009, Ireland had the third largest decline in labour share. The largest was in Norway, followed by Finland and then Ireland. Four countries had an actual rise as can be seen from second graph below. The median share declined from 66.1% to 61.7% but in Ireland case the decline was from 65% to 56% in the period. These figures differ from the CSO as different methodologies are used, but the trend is the same. For example, the EU’s AMECO database uses GDP (gross including depreciation in the denominator) and this reduces the labour share.

The labour share in Ireland in 2009 was around 55 per cent which was fifth from the bottom, with 25 countries with higher rates in Figure 1. Most countries had seen declines in the 19 year period. As the second OECD chart shows, the share in Ireland has fallen substantially below the average in these 30 odd countries in the period.

Figure 1. The Decline of the Labour Share in OECD countries, 1990 - 2009

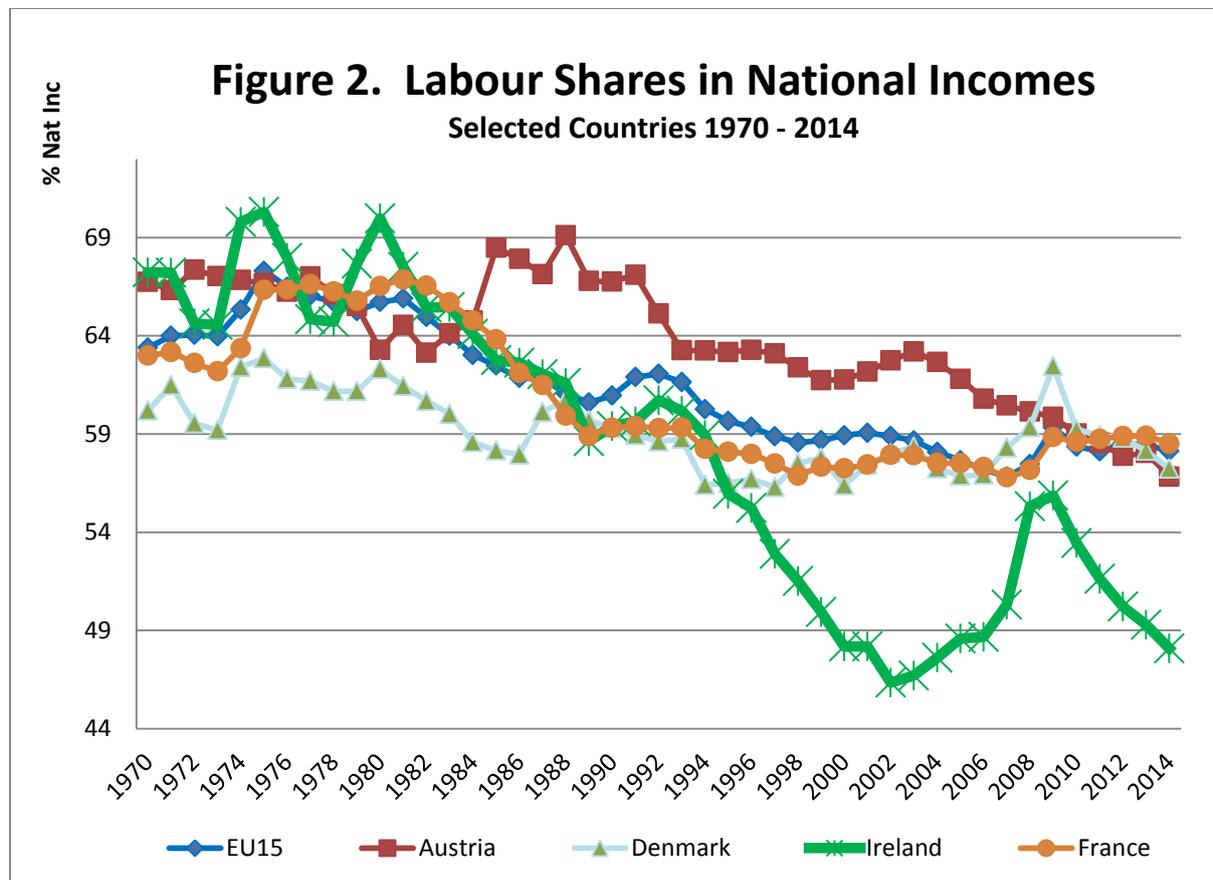


Source: OECD, Chapter 3, Employment Outlook 2012

Notes: 3-year averages, starting and ending with indicated years. ***, **, * significant at the 1%, 5% and 10% level respectively. Statistical significance refers to the coefficient of the time trend in a bivariate regression on annual data with the labour share as dependent variable. The wage of the self-employed is imputed assuming that their annual wage is the same as for the average employee of the whole economy. The three year averages smooth the data and make it less comparable to say, Irish figures.

⁹ OECD, 2012, Employment Outlook, Ch 3 p114

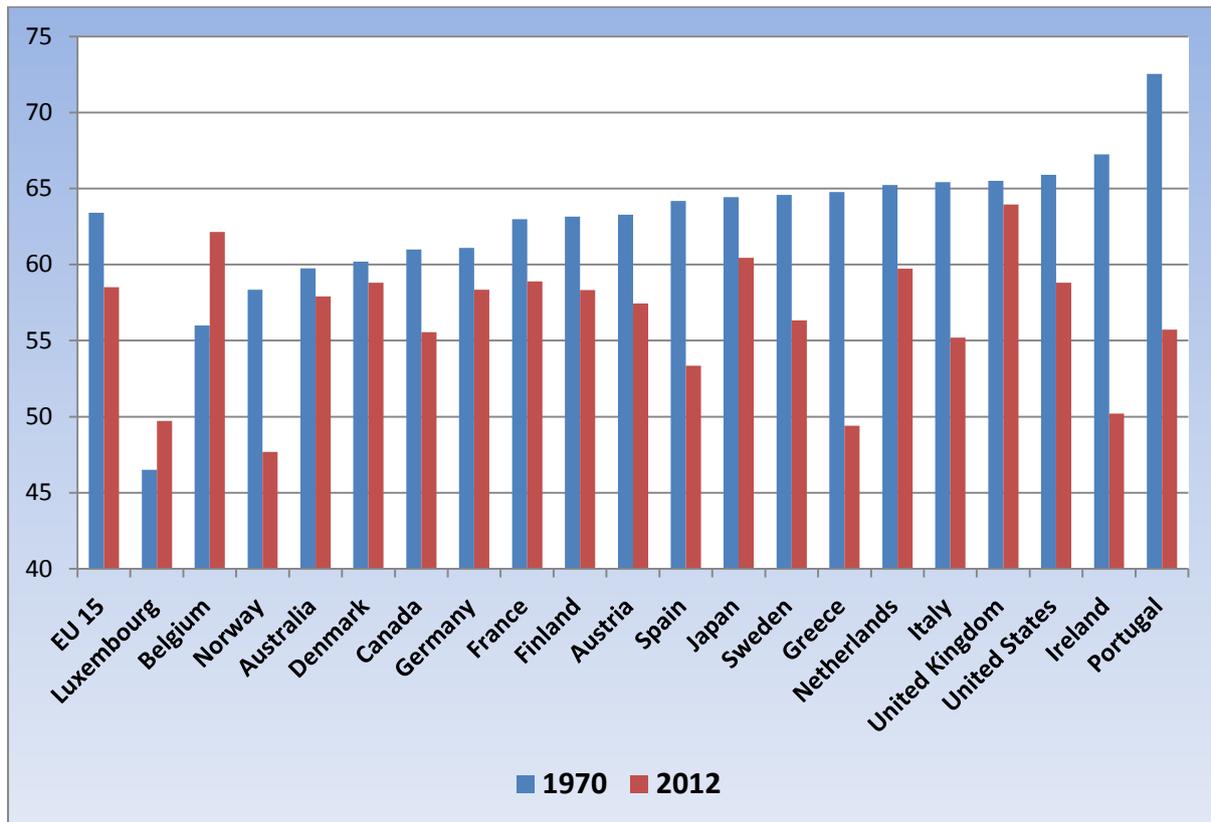
By historical and international standards the Irish labour share in the 1970s and 1980s appears exceptionally high. There are a number of probable explanations. First, profit levels were not high in Ireland in the 1970s and 1980s. Secondly, there may have been substantial under-reporting of rental and profit income under a relaxed Revenue administration.



Source: OECD. Adjusted wage share: total economy: as per centage of GDP at current market prices (Compensation per employee as per centage of GDP at market prices per person employed.)

As can be seen for Ireland (green) in Figure 2, the collapse is the most dramatic of the 4 countries (and EU15). Figure 3 shows the decline in 20 countries, mainly in Europe between 1970 and 2012 with Ireland and Greece with the largest falls.

Figure 3. Change in Labour Share 1970 to 2012 in 20 Countries and EU15



Source: EU Ameco, 2012

Another international body, the IMF, showed that the decline in the labour share since 1980 has been much more pronounced in Europe and Japan (about 10 percentage points) than in the Anglo Saxon countries including the US (3-4 percentage points). It found that the strongest decline has been in Austria and Ireland. It makes the point that “despite the fall in labour share, real labour compensation has expanded robustly in all advanced countries since 1980,”¹⁰ but this reflects “both employment growth and increases in real compensation per worker, with a stronger weight on employment in the Anglo Saxon countries and on real compensation per worker in Europe.”

In short, average income per worker in the Anglo Saxon countries did not rise, though since the mid 1990s in Europe, employment growth outpaced the growth in real compensation per worker. Most bodies cite the fact that incomes rose but ignore the fact that income is relative. People view their own income against that of others.

2.2 Decline in Labour Share of National Income in the US.

The US led the world with the “American Dream” where citizens had expected to have a higher living standard than that of their parents, with the resultant growth in its middle class.¹¹ It was, however, one of the first nations to see that dream fade. With the growth in inequality, the hopes of a great proportion of Americans for improved living standards have diminished. While the stagnation of earnings in the US and the financial insecurity of its middle class are fairly well known, an examination is worthwhile, for the rest of the world may follow America.

After the Second World War, the US economy boomed and family incomes grew uniformly across income distributions. However, between 1979 and 1995, those further up the income distribution scale saw their incomes grow fastest. In the late 1990s, incomes growth was uniform for the bottom four fifths but more rapid at the very top. Between 2000 and the Crash of 2008, income growth was weak in the US for all distributions (those at the top were hit by the stock market collapse of 2001).

¹⁰ IMF, 2007a, p 168.

¹¹ The term was coined by JT Adams.

It can be seen from Table 1 that the growth in household incomes in the US for the middle fifth fell behind those in the top fifth in each period except 2000-2007, when middle fifth incomes fell very slightly less.

Average real incomes of the middle fifth grew from \$47,432 in 1979 to \$50,865 in 2010 which was just 7.2 per cent. However, average incomes of the top fifth rose from \$124,917 to \$174,985 or 40.1 per cent. The average real income of the top 5 per cent rose from \$190,513 to \$296,763 – a rise of 55.8 per cent as the right hand column in Table 1 shows.

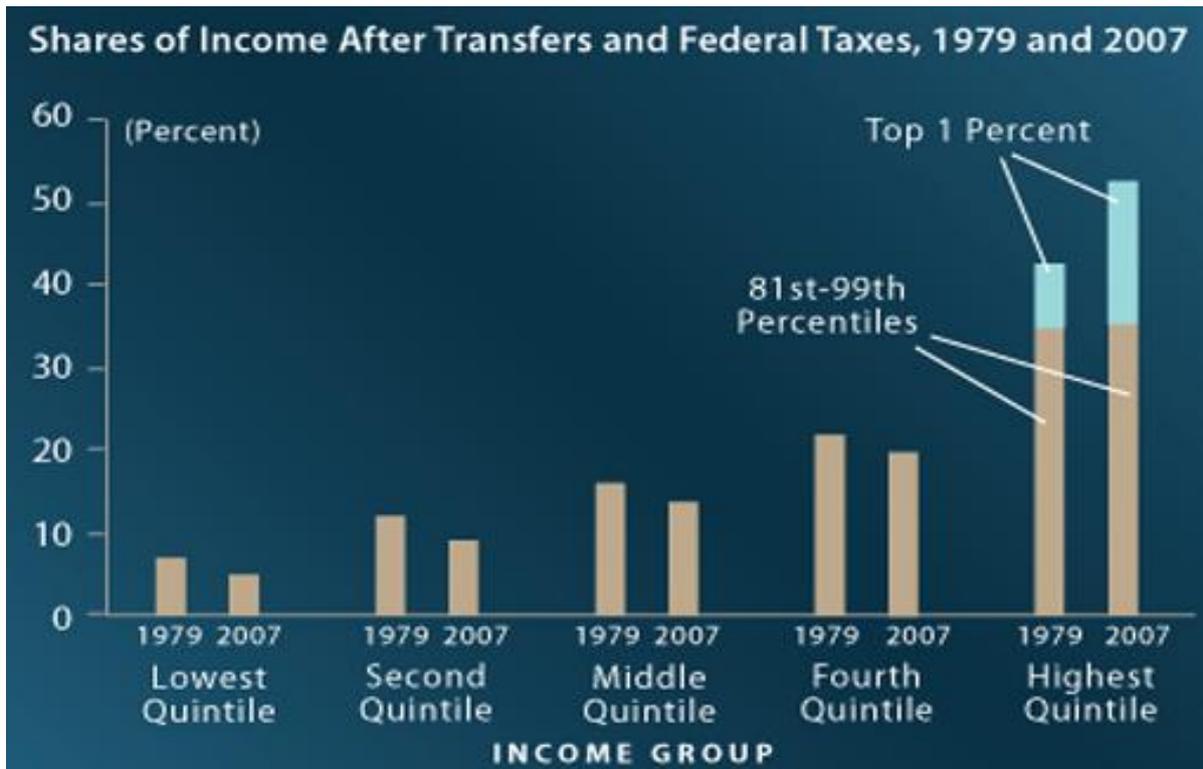
| Table 1 Average household income, by income group, 1967-2010 (2011 dollars) | | | | | | | |
|--|---------------|---------------|---------------|---------------|------------|----------------------------------|-----------------------|
| Income fifth | | | | | | Breakdown of top fifth | |
| | | | | | | 80th <95th per centile | Top 5 per cent |
| | Bottom | Second | Middle | Fourth | Top | | |
| Real money income | | | | | | | |
| 1967 | \$9,420 | \$26,100 | \$41,668 | \$58,300 | \$104,920 | \$84,725 | \$165,505 |
| 1979 | 11,566 | 28,769 | 47,432 | 69,606 | 124,917 | 103,052 | 190,513 |
| 1989 | 12,249 | 30,475 | 50,658 | 76,626 | 149,790 | 119,051 | 242,009 |
| 1995 | 12,229 | 29,890 | 49,979 | 76,830 | 160,332 | 121,539 | 276,710 |
| 2000 | 13,266 | 33,123 | 55,159 | 85,747 | 185,812 | 137,866 | 329,650 |
| 2007 | 12,530 | 31,937 | 54,202 | 85,815 | 182,205 | 139,097 | 311,527 |
| 2010 | 11,382 | 29,540 | 50,865 | 81,534 | 174,985 | 134,393 | 296,763 |
| Average annual change | | | | | | | |
| 1967-1979 | 1.7% | 0.8% | 1.1% | 1.5% | 1.5% | 1.6% | 1.2% |
| 1979-1989 | 0.6 | 0.6 | 0.7 | 1.0 | 1.8 | 1.5 | 2.4 |
| 1989-1995 | 0.0 | -0.3 | -0.2 | 0.0 | 1.1 | 0.3 | 2.3 |
| 1995-2000 | 1.6 | 2.1 | 2.0 | 2.2 | 3.0 | 2.6 | 3.6 |
| 2000-2007 | -0.8 | -0.5 | -0.2 | 0.0 | -0.3 | 0.1 | -0.8 |
| 1979-2007 | 0.3 | 0.3 | 0.4 | 0.7 | 1.2 | 0.9 | 1.5 |
| 2007-2010 | -3.2 | -2.6 | -2.1 | -1.7 | -1.3 | -1.1 | -1.6 |

Source: L. Mishel *et al.*, Table 2.2 Chapter 2 “State of Working America” based on Historical Income Tables in Population Survey, Social & Economic Suppl.

Mishel *et al.* in their analysis of income distribution in the US, which they undertake annually, examined the composition of income and found that wages make up 86.1 per cent of all income of all distributions, but make up only 26.7 per cent of total income for the top 1 per cent of households. Conversely, capital income (interest and dividends, capital gains and business income, other than proprietors’ income) makes up less than 5 per cent of total income for each fifth in the bottom four fifths, but 58.9 per cent for the top 1 per cent.

The US Congress Budget Office (CBO) has very similar findings to Mishel *et al.* The CBO figures for income after tax and transfers are illustrated in Figure 4 which shows that the lowest quintile had 7 per cent of income in 1979, but this fell to only 5 per cent by 2007, whereas the highest quintile enjoyed 5 times that income at around 36 per cent in 1979, much the same as in 2007. The middle three income quintiles all saw their shares of after-tax income decline by 2 to 3 per centage points between 1979 and 2007. The equalizing effect of transfers and taxes on household income in the US was smaller in 2007 than it had been in 1979.

Figure 4. Household Income Distribution in USA 1979 & 2007 after transfers and taxes



Source: US Congress Budget Office, 2011.

Average real after-tax household income for the 1 per cent of the population with the highest income grew by 275 per cent between 1979 and 2007. For other households in the highest-income quintile (the 81st through 99th per centiles), average after-tax income grew by 65 per cent. For the 60 per cent of the population in the middle of the income scale (the 21st through 80th per centiles), the growth in average real after-tax household income was 37 per cent.

The rising inequality in the US has primarily been driven by developments in market incomes, especially the concentration of income derived from labour and from capital. Mishel *et al.* found that trends in taxes and welfare have not countered the rise in concentration of market incomes, as did the CBO. The share of income from owning capital increased substantially and there was a fall in the share from other sources, especially work. For the top 1 per cent of households, almost a third of their income share increase was driven by the shift towards capital-based income. The top 1 per cent gained 39.4 per cent of all capital income in 1979, but this soared to 65 per cent by 2007.

Analysing market-based incomes, it is clear that it was not rising hourly wages which contributed to increased incomes but an increase in the hours worked. The rise in annual wages for the middle fifth was driven by an increase in average hours worked of 327 between 1979 and 2007. Further, middle income households boosted their educational attainment by 50 per cent with those with a four year college degree rising from 14.5 to 22.3 in the period and yet hourly wages remained relatively stagnant for them.

After the War, between 1947 and 1979, income growth of all fifths was evenly spread, with those at the bottom faring a little better than those in the top one fifth. In contrast, there was no annual growth in the bottom fifth between 1979 and 2007, 0.4 per cent for the second, 0.6 per cent for the third, 0.9 per cent for the fourth and 1.5 per cent for the top fifth.

As wages make up most of the income for middle income families, Mishel *et al.* state “the failure of wages to contribute significantly to income growth between 1979 and 2007 is a cause for much concern. Worse, the large majority of annual wage growth during this period occurred because middle income families worked more hours and became more educated and experienced over time.”

This income distribution in the US has demonstrated that the very top quintile has done very well, with the top 1 per cent taking a greatly disproportionate share, while those at the bottom and indeed the middle have not fared so well.

2.3 Trends in Ireland

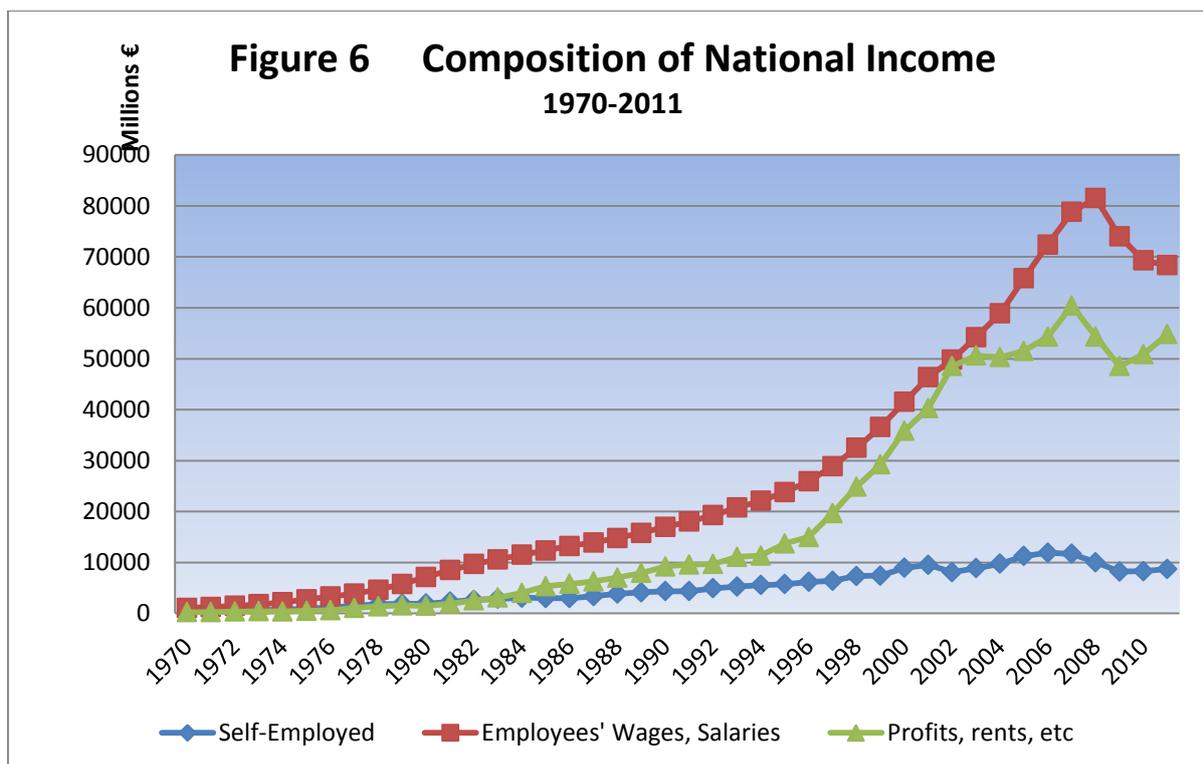
It was seen that Ireland had one of the largest declines in the labour share of national income in the industrialised countries. The fall in the labour share from 1970 to 2012 was very large from 89 per cent to 60 per cent of national income (peaking at 92 per cent in 1975 and 1976) as seen in Figure 5. The lowest point was 57 per cent in 2003 and while it rose since to 66 per cent in 2008, it is falling again. Indeed, the labour share rose for a time in most countries in the period up to the Crash. In a study of 28 OECD countries, Bassanini and Manfredi show that Ireland has the largest point decline in labour share of value added in aggregate and in the business sector.



Source: CSO, National Income Accounts.

Note: There was a change in the data in 1975 and 2011 is an estimate.

The trend in the share of national income by category can be seen in Figure 6. Profits and rents are capital, as are the domestic profits of corporations, rents, (actual and imputed) and savings. On the labour side, the earnings of the self-employed are by convention added to those of the employee's (examined below). It will be seen that it was a profit surge, largely due to the operations of multinational corporations (MNCs), which boosted the profit share and so depressed labour's share in Ireland since the early 1990s.



The impact of the crash can be seen clearly in Figure 6 with the fall in income of profits and wages. However, the crash appears to have impacted less on the self-employed than on the other two categories, wages¹² and profits. It can also be seen that there was a strong rise in the incomes of employees and of capital from the Celtic Tiger period which began in 1994. This rise was not apparently mirrored by a similar rise in the incomes of the self-employed, which may be explained in part by the proportionate decline in the sector as a percentage of those at work. The incomes of partnerships and other high income self-employed have been subtracted and put with capital/profits from 2002 by the CSO which defined them as incomes which would be normally from incorporated bodies, that is, as “quasi-corporations.”

It can be seen that capital’s share in profits etc. recovered after 2008, while employees earnings did not. This can be accounted for largely by the fall in employment, of 360,000 by 2012, and not in individual incomes.

The growth in the economy in the two decades from 1987 meant that people were unaware of the deep fall in the labour share. This is particularly true for the Celtic Tiger era, 1994 to 2000 inclusive, when GDP averaged 8.9 per cent per annum. This period saw 450,000 net new jobs and was followed by the Domestic Boom period, 2001 to 2007 inclusive, with “apparent growth” averaging 4.5 per cent and 400,000 net new jobs.¹³

3. DEFINITIONAL ISSUES

3.1 *Inclusion of the Self-Employed in the Labour Share*

In estimating the labour share, most national statistics offices add the earnings of the self-employed to those of workers’, assuming the same average earnings level. This presents two problems. First, is it correct to do so as some self-employed e.g. the professions, some distributors and large farmers make much more than the average workers? Secondly, many self-employed have assets on which they are making a return on capital, for example, farmers with farmland, buildings and machinery, thus part of their income should more correctly be included on the capital side.

¹² Wages is total earnings etc. as per note 3.

¹³ Sweeney 2008, p 2 and Appendix 2.

There are four approaches to this issue. First is to assign the self-employed a wage which is equal to the employees which is the convention of statistics offices. In contrast, Bentolila and Saint-Paul (2003) assume that income of the self-employed is usually less than half of that of employees. Secondly, the earnings of the self-employed are imputed from wages of employees at sectoral level (Askenazy 2003). Thirdly, the earnings of the self-employed are imputed from micro economic data. Freeman (2011) used household survey data from the US and assigned the wages of employees to the self-employed with the same characteristics of ages, education, sex and industry. Finally, Revenue data for the declared income of the self-employed could be used.

The number of self-employed in Ireland rose from 267,000 in 1985, peaked at 375,000 in 2008, but declined to 300,000 in 2012. In per centage terms they were around 23 per cent in the 1970s and since the mid 1980s have been in decline, down at 16 per cent in 2012.

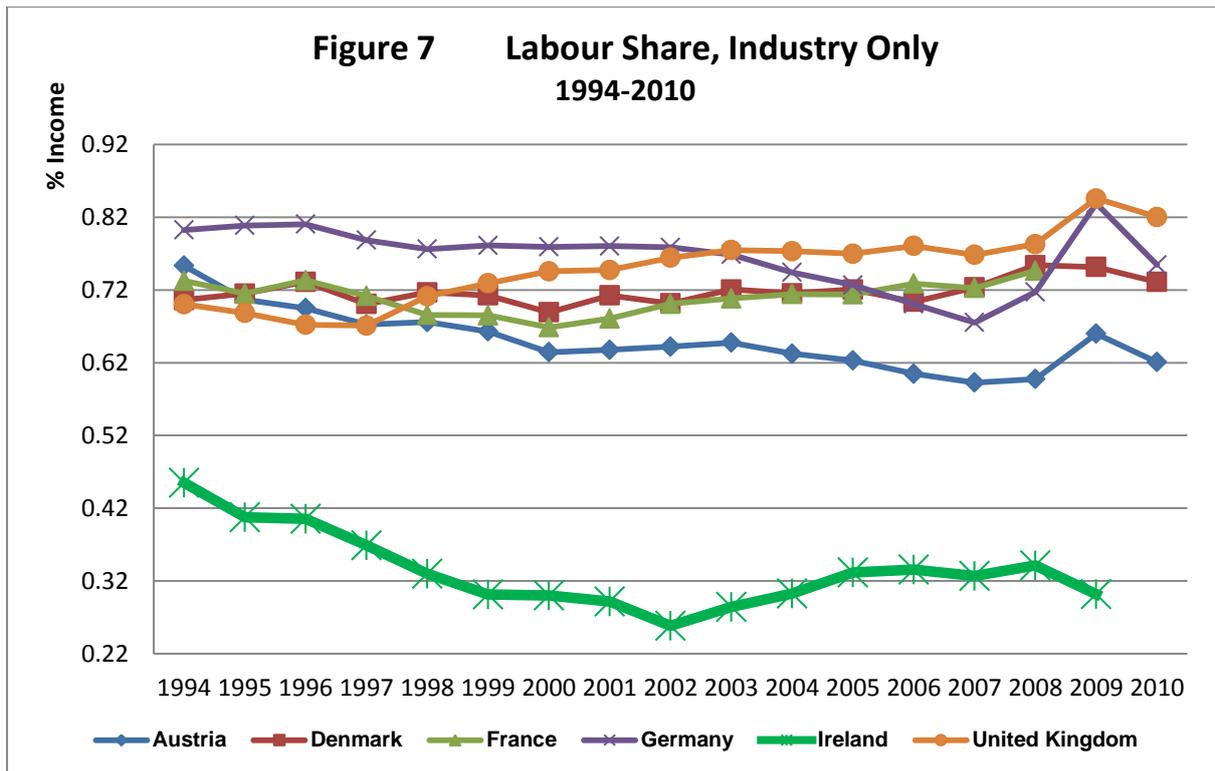
The number of farmers in self-employment is important because they are the largest component and on average, they earn less than industrial production workers, but are usually treated as if they earn the same in all national accounts, thus boosting the labour share. The largest category of the self-employed, farmers, earned an average of under €16,000 over the past six years compared to the average of a worker at €36,100. If the average number of farmers is taken at 81,000 (and this figure is difficult to estimate) then the aggregate difference is over €1.6bn. This means that the labour share is overstated by this amount for farmers who earn less than workers. On the other hand, Revenue data for income distribution for both categories indicates that overall, the self-employed earn more than employees. If this were so, then the labour share would be understated had average incomes of the self-employed been used. However, the CSO uses actual Revenue data on the self-employed for Ireland.

Another factor boosting labour side is the income of certain professions and unincorporated sole traders who employ assets and employees on which they make profits. It was €1,124m in 2011 and is added to capital. There are many questions around giving the self-employed the same incomes as those of employees in determining the labour share of national income. More research is required on this issue. Nonetheless, the current allocation to the labour share of tax incomes for the self-employed which is done in Ireland appears to be reasonable.

3.2 *Transfer Pricing*

Transfer pricing substantially boosts the share of profits in Ireland. Transfer pricing (TFP) is a legitimate form of accounting within large firms.¹⁴ There is widespread evidence that it is used to reduce taxation by increasing costs in high tax countries and reducing them in low (corporation) tax economies like Ireland, Netherlands and Luxembourg. Figure 7 below indicates that the labour share of Irish industry is well below that of other countries; or rather the other components of value-added e.g. profits are high, relatively.

¹⁴ The 2010 Finance Act introduced a formal TFP regime into Ireland. TFP is the pricing of transactions within firms. Intergroup transfers are supposed to be at arm's length but this is difficult within firms where the trade is in goods, services, intangibles, intellectual property, etc. Of course, many firms utilise the complexities for tax minimisation purposes, to Ireland's advantage.



A clear indication of TFP is the very high productivity of Irish workers in MNCs. For example, the value added per worker in chemicals including pharma in Ireland between 2004 and 2007 was around €155 per hour, which was a multiple of that in the US at €75 or the EU average of around €60. For software and paper it was as high as €127 in Ireland in 2007 compared to around €40 in Europe US and UK (NCC, 2012). Similar value added figures are found for other sectors like electronics where the MNCs dominate, but this is not so for transport, wood and paper or materials and mineral manufacturing. This appears to confirm that either Irish workers are extraordinarily productive, or there is transfer pricing (in our favour). Annex 1 of the NCC study of productivity gives a wealth of detail on the very high output per hours for many MNC sectors and the lower level for indigenously dominated sectors. Drilling down to individual industries, say beverages, reveals even higher output per worker.

There is evidence of tax driven transfer pricing in Ireland. For example, Brooks (2013) in one of many examples of transfer pricing, cited a deep UK Revenue review of Barclays Bank's tax, where it was found that the bank had extracted around £300m in payment protection insurance which "was sold through a couple of Dublin subsidiary companies who wrote the policies but fell foul of the 'transfer pricing rules.'"

While transfer pricing is not illegal, the OECD and other bodies are concerned about its use to shift profits to lower tax jurisdictions like Ireland. It is a criminal offence if TFP is used to evade tax, but it is difficult to prove. Transfer pricing of scale in a small economy does distort national income data.

Ireland is a unique country with a large disparity between GDP and GNP which amounted to a very large 18% of GDP in the latest data, for Q4, 2012. Most accept that it is largely due to the large number of foreign owned multinational corporations (MNCs) located here and their TFP activities that contribute to the gap.

In conclusion, transfer pricing has boosted the capital share for Ireland. This meant that the very low labour share in Ireland compared to other developed countries (where the labour share has also fallen) is mainly due to transfer pricing. This is not at the cost of labour (in Ireland) but reflects both the efficient and modern foreign sector in Ireland and transfer pricing from other countries to avail of Ireland's current low Corporation Tax.

3.3 Further Definitional Difficulties

A major difficulty is in defining both the labour and capital share. For labour, the share is computed by dividing gross labour compensation by gross value added at current basic prices. However, the measurement of value added is problematic outside the business sector. For example, the value of public administration is measured in national accounts as total labour costs and not as value added. Further, in mining and fuel production value added may fluctuate in line with world commodity prices.

A further issue is the aggregation of the top incomes into the labour share which includes capital in the form of share options. There are other capital sources like non-incorporated “partnership incomes” for the professions, which is dealt with by the CSO for Ireland.

The imputation of owner occupied housing in the national accounts is taken as capital though it is a major proportion of value added in the real estate/property sector.

Another complication is whether depreciation should be deducted from the capital share. This is a contested issue. It is separately identified in the national accounts and may be deducted or not. Depreciation or capital consumption at €16bn in 2010 in Ireland is a substantial proportion of the total capital share, being 30 per cent of the total of capital share of €54bn.

The issue of pensions is a complicating area. While pensions are a capital stock and this paper is examining flows, it can be argued that pensions should not be included. Yet the size of the funds, that pensions are seen as “workers capital” by some, perhaps erroneously, and the fact that they become incomes makes this a complicating issue which could affect the shares. Pensions might be considered by others for examination.

In conclusion, there are many issues around defining the components of both capital and labour which have been highlighted. Deeper analysis of each may alter the outcomes, but is unlikely to alter the overall conclusion that the labour share, however defined, has declined substantially internationally.

4. REASONS FOR THE DECLINE IN LABOUR’S SHARE

There are many reasons for the decline in the labour share of national income internationally and some overlap. While many economists attribute the bulk of the change as endogenous - as largely due to technology, most of the other drivers are due to policy changes.

4.1 Technological Change

Growth is driven by capital, labour and total factor productivity or technology. Many economists argue that the main driver in the shift in income share to capital from labour was largely due to technological change, that is, increased investment which led to higher returns to capital. In neo-classical economics, each factor of production is compensated according to its marginal productivity and thus the decline is the result of changes in the capital/labour ratio.

Indeed Bassanini and Manfredi in a study of 25 OECD countries over 28 years for 20 business sectors attributed 80 per cent of the shift as due to “capital augmenting or labour replacing technical change and capital deepening.” They attributed another 10 per cent to privatisation and the remaining 10 per cent to international competition. However, as they did not consider any other reasons, particularly institutional factors etc., the study was limited.

The European Commission also argues that technological change was the most important cause of the fall in the labour income share, but “the picture changed dramatically once a closer look is taken at the level of different skill types,” where the high skilled gained markedly from such change, medium less so and the low skilled lost substantially.

Lavoie and Stockhammer (2012) argue that the shift in national income was only partly due to technological change. They attribute much of the decline to changes in economic policies and in the institutional and legal environment which have been much more favourable to capital and high-end management over the past thirty years. In short, they argue that the wage shift is not largely endogenous.

They cite Onaran and Galanis (2012) who find that “the effects of an increase in the profit share on private excess demand is negative in a majority of countries” and Storm and Naastepad (2009) who examine labour market institutions in 20 OECD countries over 20 years, finding “that highly regulated and coordinated (‘rigid’)

institutions lead to higher productivity growth” (p21). A one per centage point increase in real wage growth leads to a 0.38 per centage point increase in labour productivity growth. Vergeer and Kleinknecht (2010/11) in a similar 20 year study confirmed this view of wages and productivity. Lavoie and Stockhammer conclude “Only when wages grow with productivity growth will consumption expenditure rise without rising debt levels” (p25). Hourly wages of average workers and US productivity grew in tandem from the end of the War to 1973, when a gap opened up.

Between 1979 and 2007, production did not become more capital intensive in the US. The capital to output ratio hardly moved – being 2.02 in 1979 and 1.99 in 2007, according to Mishel *et al.* This does not confirm the view for the US that capital intensity was not the key driver. Further, profits were rising and post-tax profits rose even further in the period. On the labour side, there had also been major improvements in human capital worldwide, which is reflected in the data, but only at the top of the educational pyramid.

Technology is a major driver of the decline, but other factors contributed substantially too.

4.2 Globalisation

Globalisation is a wide-ranging concept which is driven by rapid technological change and the policy of deregulation.

Technology drove globalisation with the internet revolution, instant, free global communications, and plummeting transport prices. Deregulation was both technologically and policy driven. Deregulation included labour markets and of capital, with the resultant financialisation of economies.

There were also increased intra-firm transfers, including transfer-pricing and the emergence of new markets (e.g. the re-incorporation of the many states of the Soviet Union after its collapse, of China and the emerging and developing countries into the market system).

There were also institutional factors which boosted globalisation such as the relative decline of nation states and the corresponding growth in the power of corporations, the decline of the countervailing power of trade unions and the relative stagnation in the political ideas of socialist and social democratic parties, which combined to reinforce the unwillingness of capital to engage in social dialogue in the way in which it was undertaken in the post-War period. Then, perhaps the threat of Soviet tanks in eastern Europe had focused minds on greater compromises with labour.

Growing international competition for mobile foreign direct investment by nation states has led to deregulation in many areas, lower direct taxes and in government action to curb trade union power.

4.3 Increased Domestic and International Competition

The benefits of trade are well recognised though there is a debate between those who advocate managed trade versus free trade. In general the barriers to trade have been reduced over the past forty years adding to increased competition. Many argue that free trade benefits richer countries which set the terms and this contributes to the labour share decline. Bassanini and Manfredi attribute only 10 per cent of the fall in labour share to international competition, outsourcing and offshoring and zero from increased domestic competition from entry deregulation. The global labour supply quadrupled 1980-2005¹⁵ after the opening up of Asia and eastern Europe, with most occurring after 1990. Most emerging country workers had been less educated but the supply of those with third level increased by 50% since 1980 to around 100m. This means greater competition from skilled workers for the West. There also has been a big expansion of immigration in the last 20 years in UK, Germany, Italy, US and Ireland. The UN forecasts that the world’s working age population will rise by a further 40 per cent by 2050. This means further competition and change.

4.4 The Impact of Financialisation

One of the major drivers of the decline in income share has been financialisation. This is “the process whereby financial markets, financial institutions and financial elites gain greater influence over economic policy and economic outcomes.”¹⁶ This global process began in the early 1980s with the deregulation drive led by the Reagan administration. The growing size and importance of financial institutions and transactions in the economy and in the life of citizens is part of the process.

¹⁵ IMF, 2007a, p162

¹⁶ Palley, 2007 p2

Kus views financialisation as several intertwined processes: (a) the growing share of financial sector in the economy; (b) the growing reliance of non-financial firms on financial activity as a source of revenue; (c) the emergence of new governance structures that see the firm as a bundle of tradable assets; (d) the increasing engagement of households with financial markets as consumers or seeking to generate income or sustain incomes (e.g. remortgaging homes); (e) the ending of the distinction between commercial banking and investment banking and the resultant large-scale consolidations. We would add (f) the emergence of new financial products, such as derivatives and the rise of securitisation as a source of liquidity and credit to banks; and finally (g) the emergence and then dominance of the new corporate governance of the firm of “shareholder value”, where executives take a short term view based on share performance, incentivising themselves with excessive remuneration and corresponding cuts for workers.

In the first study of the link between financialisation and income inequality using data from 20 OECD countries over 13 years to 2007, Kus finds a strong correlation. He finds inequality rose in the 20 countries and he developed a statistical model, with four indicators of financialisation to quantify the relationship between financialisation and inequity and he found that governments, welfare systems, trade unions and collective bargaining structures also strongly impact on income inequality.

Kus finds that “government policies aimed at promoting the growth and profitability of the financial sector are also likely to have had implications for inequality” and that trade union rights had been explicitly eroded in the promotion of the financial sector.

The long run effects of financialisation on growth are increased debt, increases in the profit share, a shift in income from workers, lower retained profits of corporations and changes in corporate behaviour, which together “tend to reduce long run equilibrium growth rate.”¹⁷ Palley shows how companies have moved from equity funding to debt financing in the US, where interest payments rose from 44 per cent in 1973 to 101.3 per cent of profits in 1989 and that the fall since 2005 to 36.3 per cent is due to the low interest rates since 2000 and the surge in profits. He shows that in the US, finance, insurance and real estate (FIRE), grew from 15.2 per cent of GDP to 20.4 between 1979 and 2005 but employment in FIRE did not grow much.

Others like the ILO¹⁸ found that in a panel regression controlling for competing factors, “the wage share is negatively correlated with financial globalisation and is stable and consistent across different specifications.”¹⁹ It said that “firms have adopted restrictive employment and wage policies to maximize the dividends distributed to shareholders. In this perspective, high returns on financial capital constitute a disincentive to invest in productive capacities.” It argues that tax reforms might be the best tool “to restore the proper incentives.”

4.5 The Reduction of Labour’s Bargaining Power through the Deregulation of Labour

Labour’s bargaining power has been greatly reduced by labour market deregulation and other factors. This has contributed substantially to the shift in the labour share to capital. Labour market deregulation is a wide area which includes de-unionisation, immigration, offshoring and outsourcing and active anti-union management policy.

Western and Rosenfeld found that the decline in organised labour explains a fifth to a third of the growth of inequality in the US, while controlling for education and other factors. The biggest driver of union decline was the growth of jobs outside union strongholds in manufacturing, construction, transportation, utilities and communications, combined with the rise of anti-union employers.

IMF (2007a) argues that the reason for the decline in labour’s share and increased capital accumulation was due to the ICT revolution which favoured skilled labour. It says “reforms” have been “generally in the direction of lowering the cost of labour to business and enhancing the flexibility of markets.”

However in another IMF publication, Berg and Ostry, concluded that “adequate bargaining power for labour can be important in promoting equity.”

¹⁷ Palley, 2007.

¹⁸ ILO, 2011.

¹⁹ Ibid, p61

IMF (2007b) places a lot of emphasis on technological change and also argues that higher taxes and social charges and unemployment benefits “hurt” the labour share. It points out that while globalisation reduces the labour share in advanced economies, cheaper imports compensate.

The ILO, its sister organisation, found that labour market regulation is an important determinant of the labour share of income since it affects the bargaining power of workers. Union density has a positive impact on the wage share of high-skilled and medium-skilled workers, which suggests that the effectiveness of trade unions is similar across these two skill levels, but the ability of unions to raise the labour share of low-skilled workers is weaker. It argues for “a comprehensive income generation strategy to arrest the long term decline in the labour share of income.”

Another ILO report (2012/13) argues for “internal rebalancing” to strengthen the institutions for wage determination. “Given the difficulty with organizing workers, particularly in the context of increasing labour market segmentation and rapid technological changes, more supporting and enabling environments need to be created for collective bargaining.” This is in contrast to the IMF and OECD.

Visser and Checchi (2011) argue that unions have been “an important force tempering inequality.” Checchi and Penolosa (2005) analyse the decline in the labour share of income in many countries and found that labour market institutions play an important role in determining the distribution of wages.

Immigration has an impact on wages, but trade is the bigger transmitter of globalisation than immigration because the latter is subject to many restrictions.

4.6 Offshore Outsourcing

Offshore outsourcing is where jobs are moved to different countries by companies, usually to lower labour cost economies, reducing the labour share as higher paid manufacturing moves offshore (Sweeney, 2006). It has been occurring for some decades, but in recent years, better paid manufacturing and also white collar work - in call centres, back office work, design and accounting - has been shifting, impacting on the labour share.

4.7 Sectoral Shifts in Employment

The idea that labour’s share of national income was stable at “two-thirds was considered a great macroeconomic ratio” is rejected by Young. He examined the share in sectors in the US and found it varied from less than 30 to well over 80 per cent in 35 sectors. Value added shares in manufacturing and agriculture fell while it rose in services.

Arpaia *et al.* found that the increasing weight of those sectors with lower labour shares and the widespread proportional reductions in self-employment has contributed to the decline. One reason for the reduction of labour’s bargaining power was due to sectoral shifts in employment from manufacturing to services, and from large units to smaller.

The sectoral shift in employment has been substantial with the decline in industry and manufacturing in particular, with many jobs moving to developing countries. In Ireland, industry’s share of total employment declined from 27 per cent in 1970 to 19 per cent in 2012 with services growing to 78 per cent from 43 per cent in the period (46% in 75).

4.8 Education and Skills

From all studies examined, it is clear that within the labour share, there was a radical shift in income share. Those with low educational attainment lost out and those with high skills (especially the professions) gained. In general, the most educated gained most. Thus technological change appears to be labour-replacing.

Within Europe, IMF (2007a) says “most of the decline can be attributed to the decline in the unskilled sectors” due to shift in output from unskilled to skilled and the within-sector share.

Overall, workers did not share in the growth of productivity in the past thirty years, but the professionals and well-educated did, and so did not see a decline in their income share.

Autor *et al.* argue that the rising earnings inequality in the US was not an “episodic event” but is likely to continue due to trade and outsourcing and show that the earnings of college educated workers rose rapidly and continuously since 1979 relative to low skilled.

4.9 Other Deregulation – Decline in Corporate Governance Standards

Changes in the way firms were run - in corporate governance - contributed to the fall in labour share and to the Crash of 2008. Heavily leveraged (and tax subsidised) buyouts and private equity investing financed by debt forced executives in real economy firms to be very aggressive and short-term in their strategies. Incentivised by extraordinary stock options “rewards,” managers were also facilitated by the erosion of what was once a countervailing force of union power.

Excessive executive pay, based on short-term objectives, wage cutting, a major shift to debt finance by firms and a focus on “shareholder value” sought and achieved increased profitability for many firms, albeit for a short time.

4.10 The Shift in Power from Sovereigns to Corporations

The sovereign state still and will continue to have considerable power in spite of globalisation. Yet political leaders do not fully understand this and often attempt to be overly “pro-business” which can lead to unintended outcomes which damage business, as financial deregulation did.

The growth of the power of corporations, while exaggerated,²⁰ does seem to diminish states and the mercantilist scramble for FDI by sovereign nations against each other, puts them at a disadvantage to large corporations.

4.11 Privatisation

Bassanini and Manfredi estimated that privatisation reduced the labour share by 10 per cent because newly privatised companies were more profit-orientated than state owned commercial firms. They argued privatised firms focused more on profits and cut workforces and labour costs where possible.

The figure of a 10 per cent shift in the labour share of national income from privatisation seems too high. The size of the commercial state sector in most countries (aside from central Europe) was not large enough to generate such a transfer.

Palcic and Reeves (2011) and Sweeney (2004 & 1990) found that commercial state firms in Ireland had been commercialised and made more profitable *in advance* of privatisation.

4.12 Conclusion on the Reasons for the Decline

In conclusion, the issue is too complex to attempt to attribute exact or even approximate weightings to each factor. Indeed some reasons may have been omitted and new ones are emerging, as other diminish.

While some economists have attributed fairly exact amounts to differing causes of the shift, it is difficult to make such calculations with any accuracy with limited data, when so many factors are unquantifiable and with rapid change. It seems that technological change, globalisation, labour market deregulation and financialisation have been the main drivers.

5. THE IMPLICATIONS OF THE DECLINE FOR THE ECONOMIES AND SOCIETIES

The main impact of falling labour share is growing inequality, between those at the top and those at the bottom. Within the labour share, the relative incomes of those with education and position rose. The main impact of the decline in the labour share on the economy is reduced demand.

In a major study, Dynan *et al.* found strong evidence that high income households do save more. The greater propensity to consume of the lower income groups are adversely impacted and this reduces demand. The decline in the labour share drives inequality which impacts adversely on economic growth.

As Salverda, Nolan and Smeeding (2011) point out “inequality is an important area of scientific interest; people feel strongly about it, and the linkage between inequality and inefficiency in economics.”

Many economists and the international agencies all argue that inequality must be addressed, though all have different views on how this should be done. OECD (2011) argues that rising inequality creates economic and social and political challenges, stifling upward mobility and finds intergenerational earnings mobility is low in Italy, UK, and US but much higher in the Nordics. The most powerful instrument is to reform the tax and

²⁰ The use of turnover instead of value-added to exaggerate the size of companies. Also, the state rescue of so many large banks in recent years demonstrates strong sovereign economic power.

benefits systems and it admits that “reductions in the top taxes on high incomes have played a significant part” having been reduced from 60 / 70 per cent in major OECD countries to 40 per cent in the late 2000s.

Atkinson and Piketty in their study of top incomes in 20 countries (including Ireland) over much of the 20th century find that top incomes rose sharply in English speaking countries but not in continental Europe or Japan. Inequality is impacting on growth, on social mobility, engendering disillusionment with politics and may affect democracy.

6. WHAT IS TO BE DONE

For some, there appear to be few remedies to the decline in the labour share, seeing it as the natural order, where the market determines resource allocation and policy is not so important. However, while markets are powerful institutions, they remain social constructs powerfully shaped by policy.

There are many remedies which can reverse the decline in labour share of income. Many could be undertaken by nation states while others require international cooperation.

The main areas of policy for reform are:-

1. Rebalance labour market institutions
2. Address taxation progressivity, evasion and avoidance
3. Radical reform of corporate governance and company laws
4. Improve labour market activation, social welfare and education.

1 - Much could be done to improve the position of labour without damaging economic efficiency or corporate wellbeing. Governments could restore some balance by developing efficient collective bargaining structures which would allow trade unions greater countervailing roles in governance of business, as in Germany with co-determination. All employers should be licensed in all countries and should adhere to basic human rights and social standards of each country, within ILO parameters. The international agencies should act on labour standards, on the basis of decent work, promoting respect for human and workers' rights. And for emerging economies, they should insist on freedom of association and the right to collective bargaining; the elimination of discrimination in respect of employment and occupation; the elimination of all forms of forced or compulsory labour; and, the effective abolition of child labour, especially in its worst forms.

2 - On taxation, Atkinson *et al.* argue strongly that progressive income taxation policies should be used to reduce inequality which is partly due to “an unprecedented rise in top incomes.” The rapid rise in top incomes in the past 30 years is partly due to the decline in tax progressivity. The current reforms to curb international tax evasion with action against tax havens, with strengthened international tax agreements are a start. The EU should move against all the tax havens and pursue coordination of corporate tax.

3 - Corporate governance should become a priority because it was at the heart of the Crash of 2008. There should be far greater financial disclosure, reform of the professions, of company law, of executive pay and of boards. Progress is being made in the regulation of banking.

4 - There is general agreement on this area but differing views on how to undertake reform.

7. CONCLUSION

There has been a secular decline in the labour share of national income in most countries and the decline in Ireland was particularly large. The measurement of both the labour and capital share is complex but it seems that whatever adjustments are made, the decline in the labour share has been substantial and appears to be continuing in virtually all countries including China.

It is difficult to know what the appropriate share should be. There may have been a shift in the share to capital which does reflect increased investment and technological change. However, it is clear from the foregoing examination that other factors also contributed substantially, the labour share declined and this has contributed to increased inequality in most countries.

There were issues around definitions of shares which were examined. These included adding the self-employed to employees as part of the labour share assuming the same incomes, transfer pricing, imputation of owner

occupied housing, accounting for areas outside business sectors and depreciation. Even with these difficulties in measurement, the decline is clear.

Over ten reasons for the decline were analysed but the main factors were (a) globalisation; (b) the reduction in labour's bargaining power (through de-regulation, sectoral employment change, migration, offshoring and weakened institutions); (c) financialisation; and, (d) technological change.

For Ireland, the labour share is exceptionally low and is largely due to transfer-pricing by MNCs. This does not mean that exceptional profits are being made at the expense of Irish labour, but rather that the profits reflect the transfer-pricing from other countries to avail of Ireland's currently low corporation tax. It also because the foreign-owned sector in Ireland is very modern and efficient, with some firms so dominant in their sectors that that they make very high profits.

While estimates may be made to attribute a weighing to each reason for the decline as some economists do, it is extremely difficult to make accurate estimates, due to the changing impacts of each over time, difficulties with data, the assumptions made and the overlap between drivers of the decline. There is agreement that the labour share of national income is declining.

Some hold that the growth in the capital share can largely be attributed to increasing technical change and investment and it largely reflects returns on that investment. While technology is one of the most important reasons for the decline, the issue is very complex as has been demonstrated. Thus the neo-classical argument that the increased return on capital reflects technology and increased investment is simplistic, ignoring too many reasons which have been driven by policies. Reforming these policies can restore the balance.

While there is concern on the decline of the labour share, little is being done to address the underlying drivers of the process. It may be that as incomes were rising overall, the cake was getting bigger, so the share was not so important. But with the stagnation in national income in many states for five years now and if Robert Gordon is correct in his view that economic growth is slowing and will slow down considerably, then the issue of the division becomes increasingly contested.

The attitudes of the IMF and OECD have been examined. Concern at the decline is expressed within these bodies, but in spite of the words, it is back to business as usual according to the Washington Consensus. "There is an overwhelming emphasis on fiscal consolidation, reduction of social expenditures as well as measures that would weaken the bargaining power and outcome for labor, and make it more difficult for government to promote growth and employment or reduce poverty and social exclusion" according to Weisbrot and Jorgensen in their analysis of the policy advice of the IMF to European Union countries in 67 Article IV agreements between 2008-2011.

In contrast, it was seen that the ILO does propose a comprehensive strategy to address the long term decline in the labour share of income.

If economic growth remains slow, then social cohesion will be under threat as median incomes remain stagnant while those at the top continue to rise. For most people, incomes are relative. Thus the decline in labour share has to become a mainstream policy issue for government

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DISCUSSION

Keith Walsh: I ask about the focus on the labour share of income, given that the share can fall as a result of changes in other factors but the underlying return can stay stable or even increase. If data are available, it would be interesting to track changes in both labour income and the labour share of overall income for Ireland.

Eithne FitzGerald: It might be worth looking to see to what extent the increase in the share of national income going to capital is linked to the secular rise in house prices (notwithstanding the recent bursting of a house price bubble) via the imputed rent figure and an upward-only review rent regime for commercial rents. For example, a house bought in Dublin in 1973 is now valued at roughly 4 times its cost price, adjusted for the CPI.

Bill Keating: I would like to congratulate the president on a very interesting paper. It would be difficult to disagree with his assertion that the low labour share in Ireland is largely down to transfer pricing. However, as transfer pricing is of its nature a hidden activity, it would not be possible to provide an estimate that excludes its effect. Of course, not all the examples of transfer pricing we read about are necessarily included in GDP. Many of these examples relate to companies registered but not tax resident in Ireland and likely to be excluded from GDP by CSO. It should, however, be possible to exclude the multinational sector in its entirety and derive an estimate of labour share for the indigenous sector. A rough estimate suggests to me that the labour share of national income derived in this fashion would be back in line with that shown for other countries in Figure 2 of the paper. There would still, of course, be a decline from the labour share in the 1970s and the upward trend from about 2000 to 2008 would remain. This no doubt owes much to the huge surge in employment and income in the construction sector over those years.

Nicola Timoney: The presentation clearly showed the decline of the labour share over a long time. Would the speaker comment on what the most recent data shows, for Ireland or other OECD countries?