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Towards a sustainable  
recovery: The case  
for wage-led policies

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# Foreword

**Dan Cunniah**

Director,  
Bureau for Workers' Activities  
International Labour Office

This issue of the *International Journal of Labour Research* addresses a central issue, if not the key issue for the labour movement, that of wages and what has happened to them over the past three decades.

It is clear that the combination of restrictive macroeconomic policies, trade liberalization and the financialization of corporate governance has drastically changed the landscape in which collective bargaining takes place. In the North “concession bargaining” has become a familiar concept, and in the South, the shift in the balance of power has meant that workers are not able to capture the hard-earned fruits of economic growth.

This new context, by weakening labour market regulation both de jure and de facto has profoundly eroded trade unions' ability to connect improvements in standard of living to productivity gains. This has resulted not only in increased wage and income inequalities and higher incidence of low pay, but also in an increasingly dysfunctional macroeconomic picture. As wages could not sustain aggregate demand as they once did, workers in several countries relied more and more on credit to maintain their standard of living, with the calamitous results that we all witnessed in 2008. Short of wage increases at home, growth strategies everywhere have become increasingly export-oriented.

Most of the contributions to this issue emanate from papers presented at an ACTRAV workshop held in May 2011 under the title “Wages, the crisis, and economic recovery”. The workshop brought together academic and trade union researchers, as well as ILO specialists, to take stock of wage developments and their consequences. But as the theme suggests, the workshop was not just retrospective in its outlook, it also sought to identify how wages could play a role in creating a sustainable exit of the current situation.

One of the main findings to emerge from the discussions is that wage-led growth economic strategies, far from undermining growth as is argued by mainstream economists, would on the contrary improve growth rates. This

is an important argument as it directly contradicts the current “competitiveness” policy orientation in much of the world – an orientation based on permanent wage moderation.

It is clear that such a recovery can only materialize if there is a global rebalancing of wages and productivity. This will not only require that trade unions intensify their efforts at the bargaining table and in pushing for better minimum wages, but that they fight to change the new global “rules of the game” that are diametrically set against them. In this area, as for others, collective action is a *sine qua non* condition to achieving any success.

Finally a fair warning to readers: this issue may not make for easy reading for most non-economists. But let me assure you that the effort is entirely worth it as the articles not only provide the analytical ground for responding to the arguments of mainstream economists, but also put forward an alternative based on sound evidence and credible analysis.

# Editorial

**Pierre Laliberté**

Editor

If a lot of attention has been deservedly given to the financial roots of the current economic crisis, the role of wages on the other hand has yet to get the consideration it merits both as a cause of the crisis as well as a solution to the current economic predicament. To help fill this gap, this issue of the *International Journal of Labour Research* is wholly dedicated to this topic.

The “stylized facts” about wage and income in the past quarter of a century are by now well documented: in a majority of countries around the world, low pay has become more prevalent, leading to an increase in wage (and income) inequality.<sup>1</sup> A key factor in this development has been the delinking of wages from productivity growth, a relationship which had been a hallmark of post-war era collective bargaining negotiations. At the macroeconomic level, these trends have manifested themselves in a secular decline in the share of national income that goes to labour, the so-called “wage share”. Again, this is a widespread development that touches even the so-called “winners” of the international trade game, such as China or Germany.

Wage and income trends have been such that even the OECD and the IMF have over the past decade tried to come to grips with developments that went against conventional expectations. Not too surprisingly, the main culprits these organizations identified are related to technological developments and education differentials. In a nutshell, since the 1980s, technological developments have increased the premium to education leading to greater differentials between the technology savvy and less educated workers. Since the cause is technological developments, something over which governments have no control, the only policy prescription left is to increase access to education and hope for the best.

Globalization is also seen as playing a role in the story by throwing unskilled workers into competition with each other, thereby keeping wage

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1. See ILO: *Global Wage Report* (Geneva, 2010).

increases for this group in check. However, since the OECD and the IMF typically see globalization as a technology-driven phenomenon and a good thing on the account of the efficiency it fosters, the solution again is for governments to invest in education and training to upgrade workers' skills and ensure that the losers in international trade can get back on their feet.

The contributors to this issue of the *IJLR* contest not only the theoretical premises of mainstream labour market analysis, but offer alternative explanations to the past wage trends. Using state-of-the-art econometric models, Stockhammer provides a different narrative for the decline in the wage share which is linked first and foremost to financial and trade liberalization, as well as decline in union density. In his view, technology plays no statistically significant role in the story. This is to say that far from being an "act of God", the decline in the wage share is to a great extent the result of policy decisions, and thus amenable to further policy developments.

Storm and Naastepad underscore how the shift in the primary objective of macroeconomic policy from full employment to inflation, nicely wrapped in the theory of the non-accelerating inflation rate of unemployment (NAIRU for short), was a central element in this development. However, by their account, if NAIRU-inspired policies were successful in introducing ever more flexibility in the labour market and weakening labour unions, they largely failed to deliver on their stated objectives: improved economic and labour market outcomes.

For Storm and Naastepad, as well as Palley and Stockhammer, the failure of the NAIRU model goes back to the theoretical premises of mainstream economics which treats wages essentially as a cost, but not as a generator of demand and even less as a vector of technological change. In time, this one-sided obsession has led to dysfunctional macroeconomic conditions in which private debt and exports had in some sense to make up for the growing "earnings gap" of workers, which in turn sowed the seeds of the financial crisis of 2007.

Kumhof and Ranci re make an original contribution to the discussion here as they present the first bona fide model that links income inequality to financial crisis. Their model, which allows for a struggle over wage and profit (and different spending behaviours on the part of workers and capitalists), shows how the outcome of this process has repercussions in the financial sphere. The research is all the more significant in that it emerges from the research "entrails" of the IMF. One can only hope that it will spark renewed interest within that institution in the issue of macroeconomic and financial effects or wage and income inequality.

Storm, Naastepad, Stockhammer and Palley make parallel cases for policies favouring growth through wages. All four agree that the crisis has demonstrated that the neoliberal model is spent. With large-scale unemployment in OECD countries, a more fragile financial sector and high level of household debt, growth through private indebtedness is pretty much a foreclosed avenue. As a consequence, nations that depended on credit-led consumption



in other countries to increase their exports also find themselves in a new predicament. Growth through competitive austerity will not work: a new paradigm is needed to lead us to sustainable growth.

Stockhammer makes a distinction between “pro-labour” policies and “wage-led regimes”. The former refer to policies regarding their effects on wages (increase in minimum wages, strengthening trade union rights, improving social protection, macroeconomic policies that aim for full-employment, etc.), while the latter refer to the structure of the economy itself.

An economic regime is a description of actual economic structures and institutions, including social security provisions, the financial system in place and the degree of openness of the economy. While the economic regime is influenced by various forms of government policy, it should be clear that the nature of the economic regime is not a choice variable for economic policy in any straightforward sense. It should not be understood as the outcome of policy strategy.

Stockhammer (but also Storm and Naastepad) makes the point that wage increases will have different economic outcomes depending on the kind of “regime” under which it takes place. Thus some countries are deemed “wage-led” and others “profit-led”, depending on this effect. While wage improvements typically increase consumption and often lead to increased investment and productivity (notably by pushing up the utilization of productive capacity), thus increasing aggregate demand, they also have a more negative effect if they reduce the profit rate and negatively influence net exports (exports minus imports). If a country is wage-led, an increase in the labour share should translate into faster growth while under a profit-led regime it would prove self-defeating. Conversely, pro-capital policies in a “wage-led” regime would be equally suboptimal.

A review of the literature shows that most countries or regions typically operate under “wage-led” regimes while a few, particularly small export-oriented countries, come more closely to the description of “profit-led”. And, of course, the whole world as an economic space is “wage-led”, in large part because it is a closed economy.

As Stockhammer observes, contrary to neoliberal claims pro-capital policies did not lead, over the past 30 years, to increased investments (and eventually wages) and consequently did not set an economic virtuous circle into motion. Ultimately, growth became dependent on finance-led consumption. In his view, the world now urgently needs to move to policies that will strengthen wages and provide a more sustainable basis for development.

Storm and Naastepad make a parallel argument on the need for wage-led growth policies, but put more emphasis on the productivity-enhancing effects of wage changes. In their view, higher wages tend to foster higher productivity growth, in part because of the pressure to introduce labour-saving innovation, but also because of improved social relations in the workplace. NAIRU-based models break down once you introduce these effects since, as they observe, “more regulation has a bigger impact on labour productivity

growth than on real wage claims and, hence, is associated with lower structural unemployment”.

In his article, Palley brings all the pieces together to put forward an ambitious plan for wage-led recovery. He shares the view that the current policy orientation is a recipe for failure as it will only further depress a world economy already short of aggregate demand. For this to happen, policy-makers need to get out of the current prisoner’s dilemma that has everyone going for “austerity cum competitiveness” policies and get on with policies that are optimal for all.

Re-linking wage and productivity increases through the facilitation of collective bargaining and the improvement of minimum wages is key to a wage-led recovery. Palley proposes the establishment of a global minimum wage (as a given percentage of each national median wage) to provide a common and meaningful floor for the world economy.

Of course, pivotal to any such recovery plan are pro-employment fiscal and monetary policies, as well as substantial reform of the current financial and trade international architecture. Palley also makes a plea for renewed action on the labour standards front as they constitute a key dimension of a new globalization paradigm.

This issue ends with an important cautionary tale about Greece as the proverbial canary in the coal mine for the labour movement, particularly in Europe. In his article, Kouzis shows how the fiscal crisis in Greece is being used to unleash further labour market deregulation and wage repression when it should be patently clear that wage developments were not the cause of that country’s economic ailments. Among the key architects of this scandalous yet familiar scenario, the European Commission stands out as being even more hawkish than the IMF..

It is clear that the European labour movement is at an important crossroads. The European Union project to which it lent credibility is fast in danger of becoming an albatross associated with austerity, economic stagnation and high rates of unemployment, particularly with young workers. Unless European unions are able to develop a coordinated response to the crisis through better synchronization of wage bargaining strategies, the establishment of some form of minimum wage floor, and a pro-active political campaign to reform the institutions of the EU away from their current austerity bias onto a genuine solidarity orientation, it is difficult to see how the notion of “social Europe” will ever be more than an empty slogan.

When the president of the Socialist International himself, along with other socialist governments, become the willing accomplices of liberal austerity plans that may well sacrifice a generation of young workers, one cannot help being overwhelmed by the profound vacuum of political leadership and the urgent need to put forward an alternative plan of action.

As the contributions in this issue carefully demonstrate, that alternative exists.

# Wage-led growth: An introduction\*

**Engelbert Stockhammer**

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\* The paper is part of the project “New perspectives on wages and economic growth: The potentials of wage-led growth”. The second section builds on joint work with Marc Lavoie. An earlier version of this paper was presented at the workshop “Wages and Economic Recovery”, held in May 2011 at the ILO. The author is grateful to the participants and to Hubert Kohler and Marc Lavoie for comments. The usual disclaimers apply.

The past decades have witnessed falling wage shares and a polarization of personal income distribution. Average wages and average labour compensation have not kept up with productivity growth. Functional income distribution has shifted at the expense of labour. In many countries personal income distribution has also become more unequal. By many measures income inequality is worse than at any time in the twentieth century. At the same time economic growth processes have become imbalanced. Financial crises have become more frequent; household debts have risen sharply; international imbalances have increased, with some countries relying excessively on export growth. This paper argues that the polarization of income distribution and the decline in the wage share play an important role in the generation of imbalanced and unequal growth, and that a pro-labour wage policy will form an important part of a policy package that generates a stable growth regime. A wage-led growth strategy is thus advocated.

The advocacy of a wage-led growth strategy has a long history. It has been articulated in reformist visions within the labour movement and was discussed under the heading of “underconsumption” in nineteenth century economics. The theory got a boost from the theories of effective demand developed by Keynes and Kalecki. The modern theoretical debates on wage-led demand were based on seminal papers by Rowthorn (1981), Dutt (1984) and Bhaduri and Marglin (1990). The policy-oriented concept of a wage-led growth strategy was prominently used by UNCTAD (2010).

The second section of this paper will provide a policy-oriented framework for the analysis of the interaction between distribution and growth. We will distinguish between distributional policies and economic regimes. Pro-labour policies aim at increasing wages, whereas pro-capital distributional policies aim at suppressing wage growth and increasing profit margins. The macroeconomic regime of a country is determined by the structural features of its economy, such as its openness to international trade, its financial system and the characteristics of its welfare state. We will distinguish between wage-led and profit-led economic regimes, or more precisely between wage-led and profit-led demand and supply regimes. In a wage-led regime, an increase in the wage share has positive effects that mean higher economic activity (in the short run) and faster accumulation of capital (in the long run), both through demand-side effects, or faster productivity growth on the supply side. By contrast, a profit-led economic regime would occur whenever a decrease in the share of wages or an increase in the profit margins of firms generate positive effects on the economy.

The third section investigates the causes of changes in income distribution, in particular the long-run reduction in the share of wages. The fourth section provides more details as to why an economy would exhibit a wage-led economic regime, looking both at supply-side effects, that is the relationship between the share of wages and labour productivity growth, and at demand-side effects. This section also has a summary of some recent empirical research,

providing the approximate size of some key effects on the demand side. The fifth section will classify the actual experience of key economies within this framework. In the era of neoliberalism, growth processes have become imbalanced, either relying on growing debt ratios or on persistent export surpluses. Two growth processes have emerged: *finance-led growth* (also called debt-led growth), where growth was fuelled by increasing household debt made possible by asset and property price bubbles and financial engineering (examples are Ireland, the United Kingdom, and the United States) and *export-led growth*, where the main engines of growth have been net exports (examples are China, Germany, and Japan). Both of these neoliberal growth processes have come with wage suppression. Finally, the sixth section highlights a wage-led growth strategy as a possible alternative. It combines pro-labour distributional policies with structural policies that are favourable to wage-led growth. It has the potential for an equitable and (economically) sustainable growth process.

### Distribution and growth: A conceptual framework

The relation between distribution and growth was at the centre of macroeconomic analysis in classical economics, but with the dominance of neoclassical economics in the twentieth century, issues of distribution have occupied a secondary place, since income distribution was assumed to be regulated by marginal productivity relations within a perfect competition model. In the following we offer a policy-oriented framework to analyse the relation between distribution and growth. We will contrast pro-labour and pro-capital distributional policies and wage-led and profit-led demand and supply regimes.

Income distribution is the outcome of complex social and economic processes, but governments influence it by means of social policy and labour market policy. We define pro-capital distributional policies as policies that lead to a decline in the wage share, and pro-labour distributional policies as policies that result in an increase in the wage share. Pro-capital distributional policies usually proclaim to promote “labour market flexibility” or wage flexibility, rather than increasing capital income. They include measures that weaken collective bargaining institutions, weaken labour unions, lower minimum wages, and weaken employment protection legislation.<sup>1</sup> Pro-labour policies are often referred to as strengthening the welfare state and labour market institutions and include strengthening collective bargaining (e.g. by extending the reach of bargaining agreements to non-unionized firms), strengthening labour unions, increasing unemployment benefits, and reducing wage and salary income inequalities.

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1. Here, and in the following, we assume that (effective) labour demand is inelastic (or upward) sloping (for empirical evidence see e.g. Rowthorn (1999)). Thus an increase in real wages will correspond to an increase in the wage share.

**Table 1. Pro-labour and pro-capital distributional policies**

	Distributional policies		Other factors
	Pro-capital	Pro-labour	
Policies	<ul style="list-style-type: none"> <li>• “Labour market flexibility”</li> <li>• Abolish minimum wages</li> <li>• Weaken collective bargaining</li> </ul>	<ul style="list-style-type: none"> <li>• “Welfare state”</li> <li>• Increase minimum wages</li> <li>• Strengthen collective bargaining</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in technology</li> <li>• Globalization</li> <li>• Financialization</li> </ul>
Results	<ul style="list-style-type: none"> <li>• Weak wage growth</li> <li>• Wage share ↓</li> <li>• Increased wage dispersion</li> </ul>	<ul style="list-style-type: none"> <li>• Rising real wages</li> <li>• Stable (or ↑) wage share</li> <li>• Decreased wage dispersion</li> </ul>	

Of course, there are also other factors influencing income distribution, such as technological changes, globalization, and financialization. These factors have recently played an important role, but we will not elaborate on them here because this section focuses on the interaction of distributional policies and economic regimes. We will revisit the determinants of income distribution in the following section.

Next we consider the economic structure. An economic regime is a description of actual economic structures and institutions, including social security provisions, the financial system in place and the degree of openness of the economy. While the economic regime is influenced by various forms of government policy, it should be clear that the nature of the economic regime is not a choice variable for economic policy in any straightforward sense. It should not be understood as the outcome of policy strategy. We will distinguish between wage-led and profit-led economic regimes. Furthermore, following conventional practice we will distinguish between demand-side (both in the short run and in the long run) and supply-side (long-run) considerations. The key demand-side variable is the level of aggregate demand, emphasized by Keynesian economists. The key variable for the supply side is productivity growth.

For our purpose, the question is, first, how aggregate demand reacts to a change in income distribution. These effects will be quite complex and are discussed in more depth in the fourth section. Here we will focus on extreme cases in order to illustrate our framework. Demand may be wage-led or profit-led. A *wage-led demand regime* means that an increase in the wage share leads to an increase in aggregate demand. The wage-led scenario may arise when higher wages lead to higher consumption expenditures (higher consumption sales may then also induce higher investment expenditures). Conversely, a *profit-led demand regime* means that an increase in the wage share leads to a decline in aggregate demand. Demand may be profit-led if investment is highly sensitive to a reduction in profit margins. High profitability (at a given rate of capacity utilization) may motivate firms to expand their productive capacity and increase investment.

Of course there are many factors other than income distribution that determine aggregate demand: monetary policy, fiscal policy, various shocks such

**Table 2. Economic structure: wage-led and profit-led demand and supply regimes**

		Demand regime	Supply regime
Economic structure	Profit-led	<ul style="list-style-type: none"> <li>• Investment very sensitive to profit margins</li> <li>• A lower wage share leads to higher investment</li> </ul> <p>A higher wage share leads to lower GDP and slower capital accumulation</p>	<p>Wage restraint leads to productivity-enhancing investment</p> <p>Higher real wage growth leads to slower productivity growth</p>
	Wage-led	<p>The propensity to consume out of wage income is higher than that out of profit income</p> <p>A higher wage share leads to higher GDP and faster capital accumulation</p>	<p>Wage growth has strong positive effects on labour effort and productivity-enhancing investments</p> <p>Real wage growth leads to faster productivity growth</p>
Other factors		<p>Other sources of demand:</p> <ul style="list-style-type: none"> <li>• Government fiscal and monetary policies</li> <li>• Financial factors: financial asset and real estate price bubbles</li> <li>• Exchange rate evolution and changes in world demand</li> <li>• Changes in world commodity prices</li> </ul>	

as spikes in oil price, the bursting of a stock market bubble, changes in real exchange rates, changes in the growth rate of trade partners, etc. Indeed, for most year-to-year changes, income distribution will only be a minor influence on the determination of aggregate demand, with other developments playing a more prominent role. However, if there are long-lasting, deep changes in income distribution as have occurred in the last quarter century, they will end up having a substantial role.

Finally, aggregate supply may also be wage-led or profit-led. The key summary variable for the supply side is labour productivity. Productivity will be profit-led, if an increase in wages discourages productivity-enhancing capital investment and, as a result, the growth of labour productivity slows down (most forms of technological progress require capital investment; this is called “embodied technological progress”). Increases in wage growth may have a positive effect on productivity growth, either if firms react by increasing productivity-enhancing investments in order to maintain competitiveness, or if workers’ contribution to the production process improves. This may be the case either because of improved workers’ motivation or, in developing countries, if their health and nutritional situation improves. This case is often called “the efficiency wage hypothesis”, but we may also call it “the Webb effect”, since a positive causal relationship going from higher real wages to higher productivity was already proposed by Sidney Webb (1912), one of the founders of the London School of Economics.

A *wage-led demand growth regime* is a stronger and more long-term concept than *wage-led demand*. While the latter simply implies that an increase in the wage share will lead to an increase in aggregate demand or in the rate

of capacity utilization, the former additionally requires an increase in investment expenditures and productivity growth. Over the long run it implies an increase in the rate of accumulation of the capital stock. In contrast, when an increase in the wage share implies a decrease in the rate of growth of the capital stock and of productivity growth, we then speak of a *profit-led demand growth regime*.

Table 3 puts the analyses of distributional policies and of economic structures together. For simplicity we do not distinguish between demand and productivity regimes, but only discuss the economic regime, i.e., we assume that demand and supply react in a similar direction to distributional changes. This allows us to gain insight in the likely growth dynamics of the different regimes and strategies. Between the two sets of distributional policies and the two economic structures, four different combinations are possible. These do have quite different properties. If pro-capital distributional policies are pursued in a profit-led economy, this will result in a profit-led growth process. Inversely, if pro-labour policies are pursued in a wage-led economy, this will result in a wage-led growth process. These are the two cells in the main diagonal in table 3. In both cases distributional policies and economic structures are consistent. However, if pro-capital policies are pursued in a wage-led economy or if pro-labour policies are pursued in a profit-led economy, this will result in stagnation, or more likely in practice, will result in unstable growth patterns as growth will have to rely on external stimulation.

Table 4 is useful in categorizing different political ideologies associated with the four different combinations. Take the first cell (pro-capital policies in a profit-led economy). This scenario corresponds to liberal ideology and what is often called the “trickle-down” effect: higher profits are said to lead to improved macroeconomic performance. Workers will eventually benefit from wage cuts as higher profit margins will lead to investment and growth and rewards will eventually trickle down to workers as well, in the form of higher employment rates and higher purchasing power. This scenario could be called “neoliberalism in theory”.

The cell that combines pro-labour policies with a wage-led economy summarizes what many economists (e.g. Marglin and Schor, 1990) regard as a key characteristic of the post-war era: the expansion of the welfare state (in advanced economies) which led to a golden age of growth. The next cell (pro-labour policies in a profit-led economy) could be called “doomed social reforms”. It is the scenario that neoliberals claim would occur if progressive

**Table 3. Viability of growth regimes**

		Distributional policies	
		Pro-capital	Pro-labour
Economic structure	Profit-led	Profit-led growth process	Stagnation or unstable growth
	Wage-led	Stagnation or unstable growth	Wage-led growth process



**Table 4. Actual growth strategies in the economic structure/distributional policies framework**

		Distributional policies	
		Pro-capital	Pro-labour
Economic structure	Profit-led	“Neoliberalism in theory”: supply-side policies will generate aggregate demand (“trickle-down theory”)	“Doomed social reforms” TINA
	Wage-led	“Actually existing Neoliberalism” – unstable and has to rely on exogenous growth drivers (credit-led growth)	Post-war social Keynesianism

social reforms were implemented. Margaret Thatcher’s famous dictum “there is no alternative” (TINA) makes sense in this cell. Some Marxists use a similar scenario to illustrate the futility of attempts to establish a more humane economy within the capitalist mode of production. Attempts to raise workers’ consumption or the wage share inevitably lead to a slowdown of the economy.

Finally, there is the combination of pro-capital policies in a wage-led economy. We will argue that this describes “actually existing neoliberalism”, where two decades of pro-capital distribution have resulted in a mediocre economic performance with a heavy reliance on a speculative financial sector or on external demand to achieve growth (see the fifth section below).<sup>2</sup> The following sections will summarize some of the available evidence to evaluate which scenario describes actual economies.

### Decline in the wage share: What are the causes?

In the last quarter of a century dramatic changes in income distribution have taken place. This refers to the personal distribution of income as well as to the functional distribution of income. Wage shares have fallen in virtually all OECD countries, with decreases typically being more pronounced in continental European countries (and Japan) than in the Anglo-Saxon countries. In the euro area the (adjusted) wage share has fallen from 72.5 per cent in 1982, to 63.3 per cent in 2007 (figure 1). Personal income distribution has become more unequal in almost all OECD countries (OECD, 2008), with the very top income groups increasing their income shares substantially in the Anglo-Saxon countries, in particular in the United States (Piketty and Saez, 2003; Atkinson, Piketty and Saez, 2011). In a multi-country study, Daudey and García-Peñalosa (2007) show that there is a positive correlation

2. Although some researchers would argue instead that reliance on free market mechanisms and more flexible labour markets have generated large increases in world real income over the last three decades (Balcerowicz and Fisher, 2006). But these authors forget to compare the last decades to the evolution of the 1950s and 1960s. For rich discussions of neoliberalism, see Harvey (2005) and Glyn (2006).

between changes in personal and functional income distribution. Overall, median real wage growth has clearly lagged behind productivity growth since around 1980. This constitutes a major historical change as wage shares had been stable or increasing in the post-war era.

This secular decline has led to a renewed interest in the determinants of the distribution of income in recent years, with major economic research institutions such as the OECD and the IMF publishing prominent studies. The OECD (2008) documents changes in personal income distribution. The IMF (2007a) and the European Commission (2007) investigate changes in functional income distribution, and the OECD (2007) analyses the wage elasticity of the labour demand function. The IMF (2007a) and the EC (2007) make a strong case that technological change has been the main cause of changes in functional income distribution, that globalization (of trade and production) has also played an important role and, finally, that changes in labour market institutions have played a minor role. Technological change is empirically measured as ICT (Information and Communication Technology) investment, or ICT services. The general thrust of the argument is in line with the neoclassical theory of income distribution, which regards distribution as essentially technologically determined.

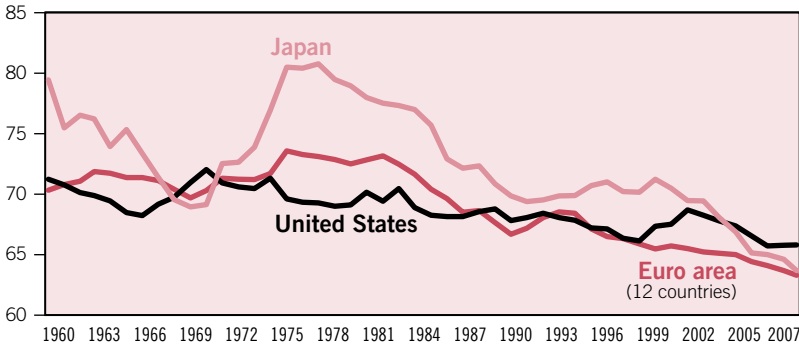
Globalization also features prominently in the debate. The standard trade-theory argument is built on the Stolper and Samuelson (1941) theorem, which states that the *abundant* factor will gain from trade liberalization. For northern countries, supposedly, this is capital whereas labour is abundant in developing countries that have recently entered the global economy, such as China and India. Globalization is thus supposed to benefit capital in the North, and labour in the South.<sup>3</sup>

While the Stolper-Samuelson argument describes a competitive long-run equilibrium, the political economy of trade approach highlights distributional effects of globalization in a bargaining setting. For example, Rodrik (1997) argues that trade liberalization (even among similar countries) will affect distribution and will benefit the more *mobile* factor, which will typically be capital. Unlike the Stolper-Samuelson approach, Rodrik's argument is set in a bargaining framework. The change in distribution takes place because of a redistribution of rents, not because of the equalization of factor

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3. The Stolper-Samuelson theorem assumes that firms have no market power and that neither capital nor labour are mobile; its effects take place through trade in competitive equilibrium. However, the recent period of globalization has been marked by an increase in capital mobility. "If capital can travel across borders, the implications of the theorem weaken substantially" (EC, 2007, p. 45). Moreover, classical international trade theory is unable to explain the actual pattern of trade, which takes place mostly among developed countries. According to standard trade theory it is not obvious why North-North trade should affect income distribution (assuming that relative factor prices are similar). Second, labour is not a homogenous input. While unskilled labour (in the north) may lose from globalization, skilled labour may indeed gain. If so, it is a priori not clear how the total wage share in the north should be affected.

Figure 1. Adjusted wage shares in the euro area, the United States and Japan, 1960–2007 (%)



Source: AMECO.

costs. Moreover, in the Stolper-Samuelson theorem one would expect distribution to change *after* production has been relocated. In contrast, Epstein and Burke (2001) argue that due to threat effects, redistribution can take place without changes in production locations.

While there are differences in the theoretical arguments, the empirical assessment is rather clear. All studies find substantial effects of globalization on functional income distribution. For example, the IMF concludes that “globalization is one of several factors that have acted to reduce the share of income accruing to labour in advanced economies” (IMF, 2007a, p. 161).

A third set of factors that influence income distribution is financial deregulation (or, more broadly speaking, financialization).<sup>4</sup> Financial deregulation has had two important effects on the bargaining position of labour. First, firms have gained more options for investing: they can invest in financial assets as well as in real assets and they can invest at home as well as abroad. They have gained mobility in terms of the geographical location as well as in terms of the content of investment. Second, it has empowered shareholders relative to workers. The development of a market for corporate control has aligned management’s interest to that of shareholders (Lazonick and O’Sullivan, 2000; Stockhammer, 2004). Rossmann (2009) illustrates this with reference to private equity funds, which buy firms by way of debt that is transferred to the firm. The surplus is siphoned to the private equity fund through dividend payments or fees. The restructured firms then are heavily burdened with servicing their debt and have little alternative to pursuing an aggressive cost-cutting strategy. For countries where data is available, the increase in dividend payout is well documented (Duménil and Lévy, 2001). Power, Epstein and Abrena (2003) document the increasing income share of rentiers.

4. Financialization refers to the increased influence of financial institutions and financial motives on non-financial activities.

So far, few econometric studies on changes in functional income distribution have included financialization variables. The ILO argues that “financial globalization has led to a depression of the share of wages in GDP” (ILO, 2008, p. 39), but does not provide evidence. Jayadev (2007) analyses the effect of financial openness and trade openness on the wage share in an econometric analysis covering up to 80 countries for the period 1970 to 2001. The openness variables are legal measures on openness. Capital account openness and trade openness are found to have negative effects on the wage share. Remarkably, the IMF (2007b), in a study on *personal* income distribution within countries has included foreign direct investment (FDI) stocks.

In a detailed study attempting to replicate and extend IMF (2007a) and EC (2007) studies, Stockhammer (2009) finds that the results for technological change are not robust, whereas the effects of globalization are confirmed. He then extends the estimation specifications to include a measure for financial globalization, and allows for different effects of trade union density in countries where trade union membership is a precondition for receiving unemployment benefits. He finds that financial globalization has strong effects and the organisational strength of labour unions has a robust effect.

### Economic effects of a declining wage share

While the previous section discussed the causes of the decline in the wage share, this section turns to its effects. It is standard in economic theory to distinguish between the demand-side and supply-side effects, where demand effects refer to changes in expenditures for a given productive capacity and technology, while supply-side effects involve changes in machinery and technology. The key summary variable for the supply side is (the growth of) labour productivity. We will follow the same distinction here, being understood, as was pointed out in the second section, that demand effects can spill over to the growth rate of capital accumulation.<sup>5</sup>

### Demand effects

What are the effects of change in the wage share on aggregate demand? Aggregate demand consists of private consumption expenditures, investment expenditures, net exports and government expenditures. In the following

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5. Mainstream economics regards demand effects as purely short-run effects as it considers the economy to be strongly anchored in a supply-determined equilibrium to which the economy will return. Keynes, who pioneered the analysis of demand formation, was rather sceptical of long-run analysis. Post-Keynesian economics, built on the works of Keynes, Kalecki and Steindl, highlights that aggregate demand plays a crucial role even in the long run.

section we focus on the reaction of the private sector and treat government expenditures as an exogenous policy variable.

A change in income distribution will have several effects on the components of demand that pull in different directions. First, consumption expenditures are likely to be a positive function of the wage share. Higher wages will typically lead to higher consumption expenditures because wage earners normally have a higher propensity to consume than recipients of capital income. This is because workers are typically poorer than capitalists (or other recipients of capital income). Furthermore, a large proportion of gross profits are saved by firms in the form of retained earnings. The size of this income distribution effect will depend on the difference in income between capital and labour, on the social security system, which influences savings rates, but also on other features such as house prices and capital gains on the stock market. Second, investment expenditures are likely to react negatively to an increase in the wage share, i.e., to a decrease in the profit share (for a given level of national income). From an intuitive point of view, a reduction in the profit share for a given level of national income implies that the profit margins of firms have gone down. Since expected future profits ought to be an important stimulant for investment, a reduction in profit margins, i.e., a reduction in the profit rate assessed at normal rates of utilization of capacity ought to have a negative effect on investment. The precise effect will depend on the structure and liquidity of the financial system and on what Keynes called the psychology of the investor, e.g. after a financial crisis firms may be reluctant to invest because of increased uncertainty. Third, net exports are likely to react negatively to increases in the wage share because, for a given exchange rate, the increase in the wage share will decrease profit margins and/or make exports less competitive abroad. The size of this effect will depend on the degree of openness of the economy and the types of products that the economy is importing and exporting.

The effects on the three aggregates thus pull in different directions. An increase in the wage share is likely to increase consumption, but decrease investment and net exports. The net effect is not clear a priori, but will depend on the relative size of these effects. If the consumption effect is stronger than the investment and net export effects then the overall effect is positive and the economy is in a wage-led demand regime. Conversely, if investment and net exports react more strongly, the overall effect of an increase in the wage share on demand is negative and the demand regime is called profit led. This distinction is based on the theoretical work of Bhaduri and Marglin (1990) and Blecker (1989).

Note that the model outlined above includes net exports. One country's exports are some other country's imports. This raises the possibility of a fallacy of composition: while each individual country can increase its demand by exporting more, not all countries can do so at the same time. The world economy as a whole is a closed economy. It is thus interesting to look at the domestic effect and the total effects (i.e., including net exports) separately.

The domestic effects only include the effects on consumption and investment and should be interpreted as a scenario when the change in the wage share affects all trading partners simultaneously. It can be thought of as a change in the world wage share.

Regarding the consumption behaviour, the saving differential between rich and poor is well established empirically. As an illustration, table 5 reports the savings rates for different income groups for Germany. In 1995, the bottom quarter of the income distribution had a savings rate of 7.3 per cent, whereas the richest quarter had a savings rate of 13.8 per cent. Savings rates clearly increase with income level. Germany experienced a dramatic increase in inequality in the last decades. This also affects different saving propensities. In 2007, the lowest quartile had a savings rate of 4.1 per cent whereas the richest quartile had a saving propensity of 15.8 per cent.

These models have recently inspired a rich empirical literature trying to identify demand regimes by econometric means. Table 6 gives an overview of the empirical results. These studies differ by the countries and time period covered, as well as by the method employed (for more extensive discussions see Hein and Vogel, 2008; Stockhammer and Stehrer, 2011) and are thus difficult to compare. Overall, the majority of studies find that domestic demand regimes tend to be wage-led, whereas international trade turns many economies into a profit-led regime.

To illustrate the orders of magnitude involved, table 7 summarizes the results for a large, relatively closed economy (the euro area) and for a small open economy (Austria), based on Stockhammer, Onaran and Ederer, 2009, and Stockhammer and Ederer, 2008, respectively. A 1.0 percentage point increase in the wage share would lead to an increase in consumption by 0.37 (percentage points of GDP) in the euro area and 0.36 in Austria. Investment would decline by 0.07 and 0.15 per cent respectively. Domestic demand is wage-led in both cases (by 0.30 in the EU12 and 0.21 in Austria). The net export effect is  $-0.09$  in the EU12, but  $-0.39$  in Austria. The total demand regime is thus wage-led in the EU (a 1.0 percentage point increase in the wage share leads to a 0.21 percentage point increase in demand), but profit-led in Austria ( $-0.18$ ).<sup>6</sup>

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6. While I consider these values plausible, other researchers disagree. Naastepad and Storm (2006/7) tend to find much higher investment effects and much lower net export effects. These results are based on single-equation estimators. Systems estimators tend to find stronger profit effects (Barbosa-Filho and Taylor, 2006; Flaschel and Proano, 2007). My experience is that the consumption effect is rather reliable, though often rather small in Anglo-Saxon countries. Investment effects are usually very sensitive to the exact specification of the estimation equation. This is probably because profits and demand are highly correlated and investment is a highly pro-cyclical variable itself. The net export effect depends on assumptions about the exchange rate. Several early studies did not allow for globalization to affect the wage sensitivity of exports. Two concluding comments on the literature need to be made: first, the simultaneity issue between distribution and demand lurks unresolved in the background. Second, the set of control variables controlling for other factors is rather limited in most estimations.

**Table 5. Savings rates by income group, Germany, 1995-2007**

	1995	2001	2007
1st quartile	7.3	5.4	4.1
2nd quartile	9.5	9.3	8.0
3rd quartile	11.3	10.1	9.0
4th quartile	13.8	13.1	15.8

Source: Stein (2011) based on SOEP (Socio-Economic Panel) data.

**Table 6. Econometric studies on wage-led and profit-led demand regimes**

	Domestic demand		Total demand	
	Wage-led	Profit-led	Wage-led	Profit-led
Euro area	SOE09		SOE09	
Germany	BB95, NS07, HV08, SHG11, SS11		NS07, HV08, SHG11	BB95
France	BB95, NS07, ES07, HV08, SS11		(SO04), NS07, HV08	BB95, ES07
Netherlands	NS07, SS11	HV08	NS07	HV08
Austria	SE08, HV08, SS11			SE08, HV08
United Kingdom	BB95, NS07, HV08	SS11	BB95, NS07, HV08	
Japan	BB95	NS07		BB95, NS07
United States	BB95, HV08, OSG12, (SS11)	NS07	BB95, HV08, OSG12	(SO04), NS07, BFT06

Note: References in brackets denote statistically insignificant results.

BB95: Bowles and Boyer (1995); BFT06: Barbosa-Filho and Taylor (2006); ES07: Ederer and Stockhammer (2007); HV08: Hein and Vogel (2008); NS07: Naastepad and Storm (2006/7); OSG12: Onaran, Stockhammer and Graf (forthcoming); SO04: Stockhammer and Onaran (2004); SE08: Stockhammer and Ederer (2008); SHG11: Stockhammer, Hein and Graf (2011); SOE09: Stockhammer, Onaran and Ederer (2009); SS11: Stockhammer and Stehrer (2011).

**Table 7. Effects on private excess demand (in percentage of GDP)**

	EU 12 (openness < 15 per cent)	Austria (openness > 50 per cent)
Consumption	0.37	0.36
Investment	-0.07	-0.15
Domestic sector	0.30	0.21
Net exports	-0.09	-0.39
Total effect	0.21	-0.18

Source: EU12: Stockhammer, Onaran and Ederer (2009); Austria: Stockhammer and Ederer (2008).

These results have important policy implications for regional economic integration. Take the euro area as an example. As elsewhere, wage shares have fallen drastically in the euro area. This has been encouraged by the European Commission, which has advocated a strategy of improving competitiveness for a long time (EC, 1995, 1996 and 1997). Indeed, many European countries have implemented “wage pacts” that combine wage restraint with other policy measures (Schulten, 2002). The results in table 7 illustrate an important economic difference between the euro area and its Member States.



While many Member States are small open economies, in which a wage restraint may boost demand via exports, the euro area as a whole is a large, relatively closed economy. Most of the trade of the Member States takes place within the euro area. A wage cut in the euro area will increase net exports, but domestic demand will shrink by more. Wage policy is thus in a prisoner's dilemma-type situation. For individual Member States wage restraint may be an attractive strategy, but if everyone pursues it, it will have negative effects. European wage coordination would, at least in principle, make it easier to overcome the prisoner's dilemma and internalize the externalities of wage agreements (Stockhammer, 2008; Hein and Truger, 2004). However, the differences in wage bargaining systems make this difficult in practice.

### Supply-side effects

On the supply side, the key question is how changes in the wage share or in real wages affect productivity growth (or, more broadly speaking, technological progress). Mainstream economists typically argue that competitive markets are most conducive to growth and, in the next step, argue for labour market (and product market) deregulation. Critical economists highlight the fact that labour market institutions cannot only have positive social effects as they help overcome market failures, but they also may have positive effects on economic growth because good labour relations will improve the propensity of workers to contribute to the production process.

Recently, this has inspired several empirical studies. Storm and Naastepad (2009) investigated labour market institutions in 20 OECD countries and found that relatively regulated and coordinated ("rigid") institutions led to higher productivity growth. Hein and Tarassow (2010) analysed the link between income distribution and productivity growth for six OECD economies by means of time series analysis and reported that higher profit shares have a negative effect on productivity growth. Vergeer and Kleinknecht (2011) performed a panel analysis for OECD countries from 1960 to 2004 and found that higher wage growth leads to higher productivity growth. They interpret this as implying that stronger labour market institutions lead to faster long-run growth. These studies face challenges in identifying the direction of causality and the distinction between short-run and long-run effects; and more research is certainly needed. However, it seems fair to conclude that the available evidence does not suggest that real wage growth has any negative long-run effect on labour productivity growth.

Wages have a dual function in capitalist economies. They are a cost of production as well as a source of demand. An increase in the wage share has several effects on demand and whether actual demand regimes are wage-led or profit-led is subject to an ongoing academic debate. Our interpretation of



the available evidence is that domestic demand regimes are likely to be wage led in most economies. In open economies, the net export effects may overpower the domestic effects and total demand in many individual countries may well be profit-led. However, countries trade among each other. Larger geographical (or economic) areas are therefore likely to be wage-led. The world economy as a whole is probably in a wage-led demand regime. There is comparatively less research on the supply-side effects of an increase in the wage share. However, there are several studies that find positive effects of wage increases on productivity growth, suggesting that the long-term effects of wage expansion are unlikely to be harmful.

### **Classifying recent growth regimes and strategies: Credit-led growth, export-led growth or wage-led growth**

Neoliberalism came with the promise that deregulation of goods markets, labour markets and financial markets would lead to higher growth and increased welfare. Higher inequality was to be accepted because it yields economic benefits. In our terminology, neoliberalism posited a strongly profit-led economic regime. But neoliberalism has failed to deliver on its promise. Growth rates in the allegedly over-regulated post-war era were higher than in the neoliberal phase. Deregulation did indeed generate increased inequality, but without much of the benefits that were supposed to come with it.

But if the world economy is indeed wage-led, how did neoliberal economies grow at all? Neoliberalism, in practice, has operated in the south-east cell of tables 3 and 4, pursuing a strategy based on pro-capital distributive policies, but within an essentially wage-led economic structure. Such a strategy will lead either to stagnation – or it has to rely on external factors for stimulating growth. Indeed, the latter is what has characterized the performance of what we might call “actually existing neoliberalism”. Instead of generating a robust growth path based on the profit-investment link, growth has relied on either financial bubbles/rising indebtedness (in short, finance-led growth) or on a mercantilist strategy based on export surpluses (Stockhammer, 2011; Horn and van Treeck, 2011). Boom-bust cycles driven by stock markets, property markets or capital flows have been a key feature of actually existing neo-liberalism: the Latin American crises of the 1980s and of the mid-1990s (the peso crisis), the EMS (European Monetary System) crisis (1992 to 1993), the South-East Asia crisis (1997 to 1998), the dot.com bubble burst (2000 to 2001), and the Great Recession of 2008 to 2009.

To understand this pattern one has to appreciate the central role of financial deregulation for the neoliberal growth model. Financial deregulation has allowed financial innovation and has given rise to speculative boom-bust cycles and, over long periods, to increasing debt levels for financial institutions and households. Booms on stock markets and property markets often attract

capital inflows that fuel the bubbles further (Reinhart and Reinhart, 2008). But the liberalization of capital flows also means that some countries will have to have current account surpluses and net capital outflows. International financial deregulation has thereby given rise to two symbiotic growth models: a credit-led growth model (with capital inflows) and an export-led model (with capital outflows). While growth has been driven by consumption growth fuelled by rising household debt in the Anglo-Saxon countries, and especially in the leading country – the United States, other countries have subdued domestic demand, including that arising from the government sector, and have heavily relied on net exports as the key growth engine.

While admittedly not all countries neatly fit this dichotomy of credit-led and export-led growth models, it is useful as it captures an important part of the dynamics behind the growing international imbalances and highlights that both models compensate for a lack of domestic demand. Both growth models have occurred in the centre as well as in the periphery. In particular in Europe the central countries (Germany and its smaller cousins) have features of export-led growth, whereas the peripheral countries within the euro zone have had credit-led growth. Table 8 gives a stylized classification of important countries.

Two statistics will help substantiate the usefulness of the distinction in credit-led and export-led economies. First, table 9 gives the increase in household debt (as percentage of GDP) in major European economies and the United States (comparable data for Japan and China were not readily available). While household debt declined in Germany by 11.34 percentage points of GDP from 2000 to 2008, it grew by a modest 7.9 percentage points in Austria, and by well above 25 percentage points in the credit-led group. In

**Table 8. Growth models of actually existing neo-liberalism**

	Credit-led	Export-led
Centre	United States, United Kingdom	Germany, Austria, Japan
Periphery	Greece, Ireland, Portugal, Spain	China

**Table 9. Increase in household debt 2000 to 2008 (as a percentage of GDP)**

Country	Percentage	Country	Percentage
Germany	-11.34	United States	26.00
Netherlands	32.83	United Kingdom	28.13
Austria	7.91	Ireland	62.72
		Greece	35.46
		Spain	33.84
		Italy	18.32
		Portugal	27.38

Source: Eurostat: Financial Flows and Stocks by Sector; USA: Flows of Funds; Ireland starts in 2001 instead of 2000.

**Table 10. International imbalances: current account as a percentage of GDP (2007)**

Country	Percentage	Country	Percentage
Germany	7.9	United Kingdom	-2.7
Austria	3.6	United States	-5.2
Netherlands	8.7	Greece	-14.5
Japan	4.8	Ireland	-5.3
China	5.2	Spain	-10.0
		Portugal	-9.4
		Italy	-2.4

Source: OECD.

the United States and the United Kingdom, it increased by 26 and 28 per cent respectively. In Greece, Portugal and Spain, household debt shot up by 35, 37 and 34 per cent respectively. In Ireland, it even grew by a staggering 63 per cent.

It turns out that those countries with rising household debt, with few exceptions, have also been the countries that ran current account deficits, whereas those with little change in household indebtedness have been the countries with current account surpluses.<sup>7</sup> In 2007, before the financial crisis, Germany and Austria had current account surpluses of 7.9 per cent and 3.6 per cent (of GDP) respectively, while Japan and China had current account surpluses of 4.8 per cent and 5.2 per cent. On the other hand, the United States and the United Kingdom had deficits of 5.2 per cent and 2.7 per cent, and Greece, Ireland, Portugal, and Spain had deficits of 14.5 per cent, 5.3, 9.4, and 10.0 per cent respectively.<sup>8</sup>

Actually existing neoliberalism has not led to a growth process via investment. Rather it has relied on other factors for growth. Rising household debt has temporarily made up for wage growth (Barba and Pivetti 2009) in the credit-led growth model; increasing trade surpluses have been the growth engine of a second group of countries, that have followed an export-led growth model. Both of these growth models are not sustainable. Financial bubbles eventually burst and debts have to be serviced and possibly repaid (for otherwise, bankruptcy occurs), while export-led growth relies on other countries to import, and leads to the impoverishment of the importing countries and growing international imbalances.

7. In a sense, this is not unexpected, since by identity, as pointed out in particular by the late Wynne Godley, domestic household net borrowing + corporate net borrowing + public borrowing = current account deficit.

8. With the exception of Ireland, current account positions and net export positions are similar. Ireland, in past decades, has had current account deficits, but net export surpluses. This is because of the large amount of repatriated profits, thus leading to a large discrepancy between GDP and GNP.

## Wage-led growth: a viable economic strategy

But there is an alternative to neoliberalism. If, as we have argued, the world economy (and, indeed, large countries and/or economic blocs) are indeed wage-led, then a wage-led growth strategy is a viable option. A wage-led growth strategy would have to combine pro-labour distributional social and labour market policies with a regulation of the financial sector.

Distributional policies that increase the wage share and reduce wage dispersion include increasing or establishing minimum wages, strengthening social security systems, improving union legislation and increasing the reach of collective bargaining agreements. All of these are against orthodox economic wisdom and, under the perceived pressure to reduce budget deficits, economic policy is recently moving in the opposite direction. However, in times of crisis and a lack of effective demand, what economies need is more state involvement, not less. A successful policy package to economic recovery will also have sustained wage growth as one of its core building blocks. Only when wages grow with productivity growth will consumption expenditures grow without rising debt levels.

To be successful, a modern version of a wage-led growth strategy will require a restructuring of the financial sector. The deregulated financial sector has fuelled speculative growth and resulted in the worst recession since the 1930s. If a repeat of the crisis is to be prevented, this will require managing international capital flows, a refocusing of the financial sector on narrow banking, the elimination of destabilizing financial innovations, and a higher fiscal contribution of the financial sector (e.g., in the form of a financial transactions tax).

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# Leveraging inequality\*

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The United States experienced two major economic crises over the past 100 years – the Great Depression of 1929 and the Great Recession of 2007. Income inequality may have played a role in the origins of both. We say this because there are two remarkable similarities between the eras preceding these crises: a sharp increase in income inequality and a sharp increase in household debt-to-income ratios.

Are these two facts connected? Empirical evidence and a consistent theoretical model (Kumhof and Ranci re, 2010) suggest they are. When – as appears to have happened in the long run-up to both crises – the rich lend a large part of their added income to the poor and middle class, and when income inequality grows for several decades, debt-to-income ratios increase sufficiently to raise the risk of a major crisis.

### Shifting wealth

We looked at the evolution of the share of total income controlled by the top 5 per cent of US households (ranked by income) compared with ratios of household debt to income in the periods preceding 1929 and 2007 (see figure 1). The income share of the top 5 per cent increased from 24 per cent in 1920 to 34 per cent in 1928 and from 22 per cent in 1983 to 34 per cent in 2007 (we used fewer years before 1929 than before 2007 because the earlier data were highly distorted by the First World War). During the same two periods, the ratio of household debt to income increased dramatically. It almost doubled between 1920 and 1932, and also between 1983 and 2007, reaching much higher levels (139 per cent) in the second period.

In the more recent period (1983–2007), the difference between the consumption of the rich and that of the poor and middle class did not widen as much as the differences in incomes of these two groups. The only way to sustain high levels of consumption in the face of stagnant incomes was for poor and middle-class households to borrow (see figure 2).

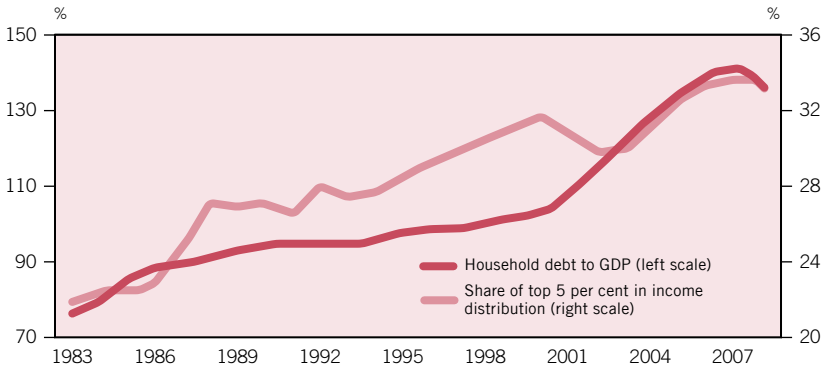
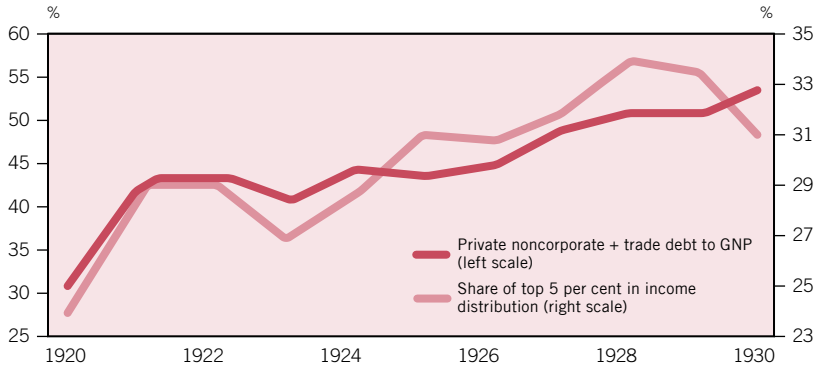
In other words, the increase in the ratios of debt to income shown in figure 1 was concentrated among poor and middle-class households. In 1983, the debt-to-income ratio of the top 5 per cent of households was 80 per cent; for the bottom 95 per cent the ratio was 60 per cent. Twenty-five years later, in a striking reversal, the ratio was 65 per cent for the top 5 per cent and 140 per cent for the bottom 95 per cent.

The poor and the middle class seem to have resisted the erosion of their relative income position by borrowing to maintain a higher standard of living; meanwhile, the rich accumulated more and more assets and invested in assets backed by loans to the poor and the middle class. Consumption inequality that is lower than income inequality has led to much higher wealth inequality.

The higher indebtedness of the bottom income group has implications both for the size of the US financial industry and its vulnerability to financial

**Figure 1. Lending disposable income**

As income inequality increases, the rich lend to workers, whose leverage increases.



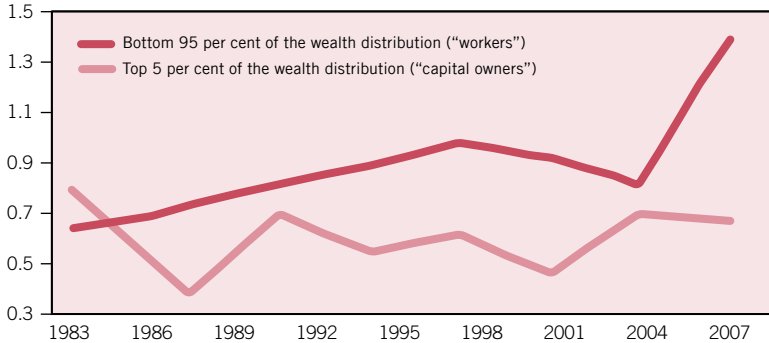
Note: Income excludes capital gains.

Source: US Department of Commerce, *Statistical Abstract of the United States* (top panel); Picketty and Saez, 2003 (income shares, bottom panel); and Federal Reserve Board, Flow of Funds database (debt to GDP).

**Figure 2. Increasingly indebted**

Workers have been borrowing more as capital owners lend from their rising disposable income.

Debt-to-income ratio



Source: Author's calculations based on model simulations.

crises. The bottom group's greater reliance on debt – and the top group's increase in wealth – generated a higher demand for financial intermediation.

Between 1981 and 2007, the US financial sector grew rapidly – the ratio of private credit to gross domestic product (GDP) more than doubled, going from 90 to 210 per cent. The financial industry's share in GDP doubled, from 4 to 8 per cent. With increased debt, the economy became more vulnerable to financial crisis. When a crisis eventually hit in 2007–08, it brought with it a generalized wave of defaults; 10 per cent of mortgage loans became delinquent, and output contracted sharply.

There are of course other possible explanations for the origins of the 2007 crisis, and many have stressed the roles of overly loose monetary policy, excessive financial liberalization, and asset price bubbles. Typically these factors are found to have been important in the years just preceding the crisis, when debt-to-income ratios increased more steeply than before. But it can also be argued, as in Rajan (2010), that much of this was simply a manifestation of an underlying and longer-term dynamic driven by income inequality. Rajan's argument is that growing income inequality created political pressure – not to reverse that inequality, but instead to encourage easy credit to keep demand and job creation robust despite stagnating incomes.

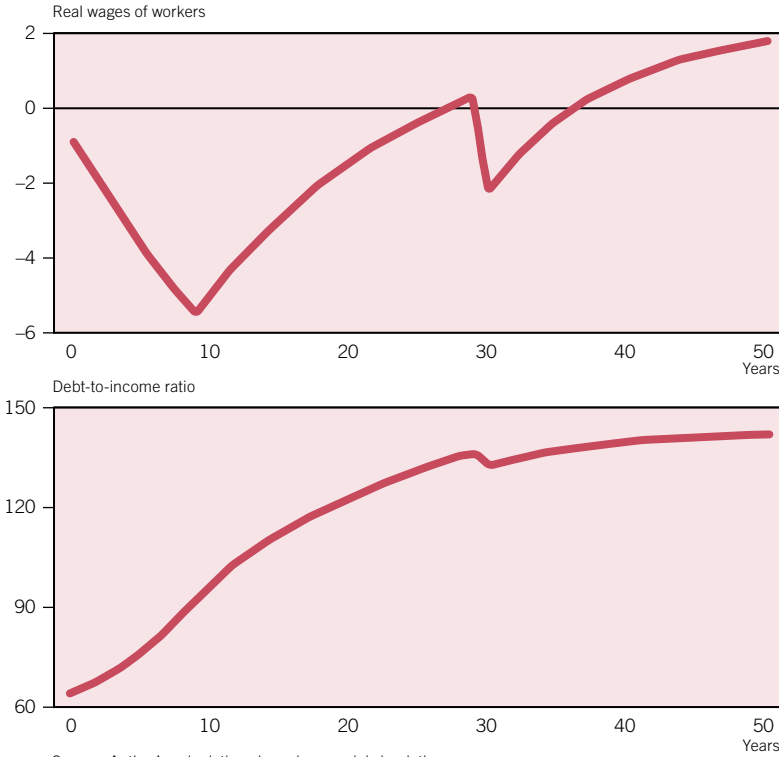
### Modelling the facts

An economic model can clearly illustrate these links among income inequality, leverage, and crises. Our model has several novel features that reflect the empirical facts described above. First, households are divided into one income group at the top 5 per cent of the income distribution (call them “capital owners”) that derives all its income from returns on the economy's capital stock and from interest on loans, and a second group composed of the remaining 95 per cent (“workers”), who earn income in the form of wages. Second, wages are determined by a bargaining process between capital owners and workers. Third, all households care how much they consume, but capital owners also care about how much capital – physical capital and financial assets – they own. This implies that when capital owners' income increases at the expense of workers, they will allocate it to a combination of higher consumption, higher physical investment, and higher financial investment. The latter consists of increased loans to workers – whose consumption originally accounts for a very high 71 per cent of GDP – giving them the means to consume enough to support the economy's production.

Our model can be used to show what happens after the economy experiences a lengthy shock to the distribution of incomes in favour of capital owners. Workers adjust through a combination of lowering their consumption and borrowing to limit the drop in their consumption (see figure 3). This gradually raises workers' debt-to-income ratio, which follows the pattern and

**Figure 3. Borrowing from Peter to pay Paul**

When workers' wages drop, they borrow more to maintain their consumption.



Source: Author's calculations based on model simulations.

magnitude documented in figure 2. Workers' higher debt is made possible by the lending of capital owners' increased disposable income.

More saving at the top and more borrowing at the bottom mean consumption inequality increases significantly less than income inequality. Saving and borrowing patterns of both groups spur a need for financial services and intermediation. As a result, the size of the financial sector roughly doubles. The rise of poor and middle-class household indebtedness begets financial fragility and a higher probability of financial crises. With workers' bargaining power, and therefore their ability to service and repay loans, recovering only very gradually, loans continue to increase and the risk of a crisis persists. When the crisis does occur – assumed here to materialize after 30 years – there are large-scale household debt defaults on 10 per cent of the existing loan stock, accompanied by an abrupt output contraction, as occurred during the 2007–08 US financial crisis.

The model points to a number of ways the increase in debt-to-income ratios in the pre-crisis period could be more pronounced than shown in figure 3. First, if capital owners allocate most of their additional income to consumption and financial investment rather than to productive investment,

debt-to-income ratios increase much more. The reason is that capital owners are willing to lend at lower interest rates, thereby increasing debt, and the capital stock is lower, thereby reducing output and workers' incomes. Second, if the rate at which workers' bargaining power recovers over time is close to zero, even a financial crisis with substantial defaults provides little relief: debt-to-income ratios continue to increase for decades after the crisis, and a series of financial crises becomes very likely.

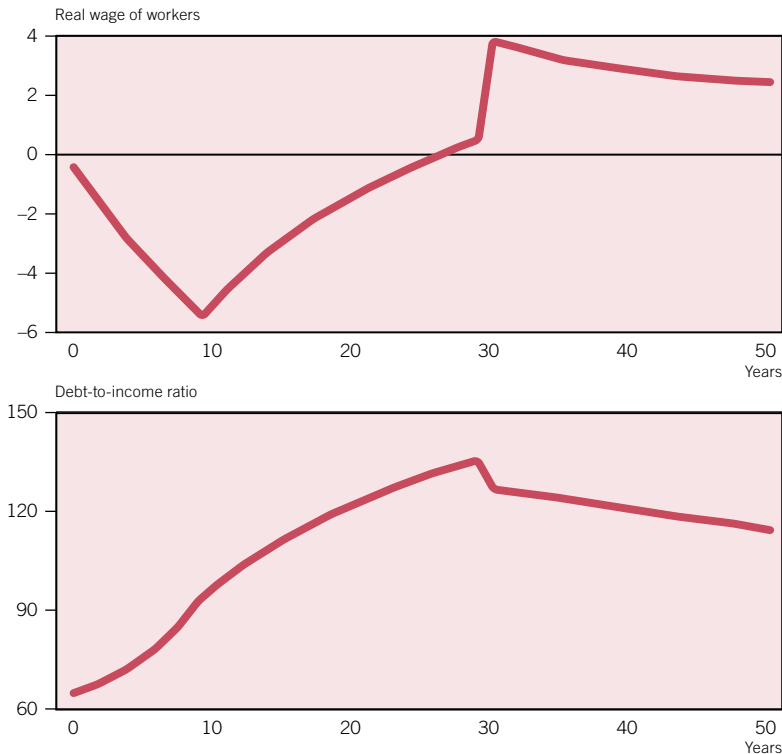
### Policy options

There are two ways to reduce ratios of household debt to income.

The first is orderly debt reduction. What we have in mind here is a situation in which a crisis and large-scale defaults have become unavoidable, but policy is used to limit the collateral damage to the real economy, thereby leading to a smaller contraction in real economic activity. Because this implies a much smaller reduction in incomes for any given default on loans, it reduces debt-to-income ratios much more powerfully than a disorderly

**Figure 4. Averting a crisis**

If workers' earnings are restored, they can pay off their debts.



Source: Author's calculations based on model simulations.

default. Still, a long-lasting trend toward higher debt-to-income ratios resumes immediately after the debt reduction, because workers continue to have a reduced share of the economy's income.

The second possibility, illustrated in figure 4, is a restoration of workers' earnings – for example, by strengthening collective bargaining rights – which allows them to work their way out of debt over time. This is assumed to head off a crisis event. In this case, debt-to-income ratios drop immediately because of higher incomes rather than less debt. More important, the risk of leverage and ensuing crisis immediately starts to decrease.

Any success in reducing income inequality could therefore be very useful in reducing the likelihood of future crises. But prospective policies to achieve this are fraught with difficulties. For example, downward pressure on wages is driven by powerful international forces such as competition from China, and a switch from labour to capital income taxes might drive investment to other jurisdictions. But a switch from labour income taxes to taxes on economic rents, including on land, natural resources, and financial sector rents, is not subject to the same problem. As for strengthening the bargaining power of workers, the difficulties of doing so must be weighed against the potentially disastrous consequences of further deep financial and real crises if current trends continue.

Restoring equality by redistributing income from the rich to the poor would not only please the Robin Hoods of the world, but could also help save the global economy from another major crisis.

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# The productivity and investment effects of wage-led growth\*

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## How we got into this mess

Economists and commentators, close to the financial sector, have portrayed the Great Recession as entirely unanticipated – a “Black Swan event” – and as a crisis *in* the capitalist system, but not *of* the system, which – with today’s knowledge – is argued to have been caused by a series of financial policy mistakes.<sup>1</sup> The implication of this view is that if these mistakes had not been made, there would have been no build-up of financial fragility, no increase in instability and no crisis. However comforting this view may be, in our view, the crisis can only be understood as part of a much wider picture, a trajectory which started with the financial deregulation and the establishment of a “flexible” labour market through the 1980s and 1990s, which weakened labour in relation to capital and resulted in a “wage squeeze”: a sustained fall in the share of wages in GDP and a sharp rise in the share of profits and top salaries and bonuses.<sup>2</sup>

Rising inequality is at the root of the crisis. On the one hand, low wages and increased inequality depressed aggregate demand and prompted monetary policy to react by maintaining low interest rates – cheap credit in turn allowed private household and corporate debt to increase (far) beyond sustainable levels. The flip side of the coin has been a dramatic rise in the real incomes and wealth of the top 10 per cent (and especially the top 1 per cent) of households,<sup>3</sup> which created superabundant liquidity in US financial markets, transforming them into unstable institutions, unable to self-correct, searching for high-return investments on an unprecedented scale, based on financial innovations.<sup>4</sup> Net wealth became overvalued, and high asset (house) prices gave the false impression that high levels of debt were sustainable. Financial markets collapsed, once inequality-driven imbalances and instabilities became too large. So although the crisis may have emerged in the financial sector, its roots are much deeper and lie in the wage squeeze that had been going on for almost 30 years. The period of recession and slow growth which the OECD economies now seem condemned to live through is thus rooted in the political economy of the past 30 years. Specifically, macro and labour market policies shaped by the theory of the non-accelerating

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1. A standard list includes the US Federal Reserve’s very loose monetary policy after the dotcom crash; the failure to regulate over-the-counter derivatives trade; the decision of the US Securities and Exchange Commission to let securities firms raise their leverage sharply; and the failure to restrain the sub-prime mortgage boom.

2. See Storm and Naastepad (2011) for evidence on the wage squeeze. That the crisis is systemic has been argued by Palma (2009), Palley (2009), Taylor (2011), and Irvin (2011).

3. Income inequality has increased remarkably in recent decades in the United States and in many other Anglo-Saxon OECD countries. See Atkinson, Piketty and Saez (2011), Dew-Becker and Gordon (2005), and Palma (2011).

4. Financial innovation has been mostly demand-pull: a global excess demand for securities was the driving force behind the derivatives’ boom, itself caused by the rapid accumulation of private wealth by the super-rich.

inflation rate of unemployment (NAIRU) must take a large part of the blame for unleashing, and at the same time legitimizing, a vastly unequal, and eventually unstable and unsustainable growth process.

NAIRU theory dominates macro-economic policy discussion, and so much so that further drastic deregulation of Europe's rigid labour markets and wage cuts, in the name of "increasing cost competitiveness", are widely argued to be the only way out of the recession – especially for the external debt-ridden economies of Greece, Ireland, Portugal, and Spain.<sup>5</sup> A typical newspaper clipping would read: "IMF urges further Spanish reforms", "Spain must follow its massive cuts in public spending with tough reforms in the labour market and far-reaching reform in pension provision, according to the International Monetary Fund" (*Financial Times*, 24 May 2010), with IMF economists claiming that the Spanish labour market is not working, that its "wage bargaining system, which hamstrings wage and firms' flexibility, is ill-suited to membership of a currency union". A recent IMF working paper (Jaumotte, 2011) claims that a full decentralization of wage bargaining ("thereby reducing excessive wage demands and allowing more wage flexibility") and a reduction of the employment protection of permanent workers would bring the Spanish unemployment rate (currently at 20 per cent) down by as much as 7 to 10 percentage points – with no further macro action required, and Spanish aggregate demand still in the doldrums of debt insolvency. Likewise, Greece faces a competitiveness problem (not a financial one): "the economy needs to be more competitive. This means pro-growth policies and reforms to modernize the economy [...]. It also means that inflation be reduced below the euro average, including by keeping wages and wage costs flat, so that Greece can regain price competitiveness."<sup>6</sup> The OECD follows suit and, in its recent *Going for Growth* report, calls for greater labour market flexibility – reduced employment protection, more decentralized wage bargaining, lower minimum wages, higher retirement ages, but lower pensions and lower labour taxes (OECD, 2011). It is a sad irony that a further squeezing of wages (raising profits and inequality) is seen as the remedy for the current crisis, which has been in large measure caused by falling wage

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5. The *post-crisis* NAIRU narrative goes as follows: Because the single European monetary policy was too loose for the rapidly growing southern European countries (and Ireland), low (ECB) interest rates drove up domestic demand, including imports, and growth, but also raised indebtedness (as credit was cheap). The growth boom in these economies induced rapid real wage growth that outpaced productivity growth – a trend reinforced by their rigid labour markets – and hence resulted in a loss of competitiveness, rising current account deficits and huge external debts. The post-euro growth model of southern Europe and Ireland was brought to an abrupt end by the financial crisis (but was not caused by it). Europe's crisis, therefore, is not a financial crisis but a deeper crisis of (lack of) price competitiveness caused by rigid labour markets. Hence, what is needed is a drastic reform of the labour market, as is for instance argued by an influential US think-tank (Dadush, 2010), and implied by the recent German-French proposal for a European "Competitiveness Pact" (Janssen, 2011).

6. Source: <http://www.imf.org/external/pubs/ft/survey/so/2010/new050910a.htm>

shares, rising profits and increased inequalities. NAIRU-based economics is so dominant that there seems to be a collective inability to conceive of alternatives to it. Why do economists experience such difficulty even imagining a different non-NAIRU economic system? How should we begin to conceive of an alternative set of policies to our common advantage? Perhaps we might start by pointing out one fatal weakness in NAIRU theory itself, namely its treatment of labour, and by showing how NAIRU theory breaks down once we allow for more realistic (and humane) theoretical foundations.

### The NAIRU model

The canonical NAIRU model consists of a wage-setting (WS) and a price-setting (PS) curve. The WS curve is derived from the wage bargaining process,<sup>7</sup> in which the bargaining power of (unionized) workers over money wage growth  $\hat{W}$  is assumed to depend on the rate of unemployment  $u$ , the exogenously given growth rate of labour productivity  $\hat{\lambda}$  (lettering a “hat” over a variable denotes its growth rate), expected future inflation  $\hat{P}^e$ , and  $z$  which is a (catch-all) variable that stands for all institutional and regulatory variables that affect the outcome of wage-setting.

$$\hat{W} - \hat{P}^e = \alpha_0 - \alpha_1 u + \alpha_2 \hat{\lambda} + \alpha_3 z \quad \alpha_0, \alpha_1, \alpha_3 > 0; \quad 0 \leq \alpha_2 \leq 1 \quad (1)$$

First, lower unemployment will augment union bargaining power and consequently wage demands by workers will be higher; hence  $\alpha_1$  has a negative sign. This wage setting relation between unemployment and (expected) real wage growth is drawn in figure 1 as the downward-sloping WS curve. According to (1), wage-setters are further assumed to build the underlying productivity growth into their real wage claims, with their share in productivity growth being dependent on the (perceived) state of the labour market, and on the nature and extent of labour market regulation.<sup>8</sup> Last, by convention, a higher  $z$  (e.g. higher unemployment benefits, more strict employment protection legislation or other pro-worker labour market interventions) reflects a strengthened bargaining position of workers which increases real wage growth demands at a given unemployment rate, hence  $\alpha_3 > 0$ .

The PS curve indicates the rate of real wage growth consistent with the price-setting behaviour of firms – the latter is usually based on assuming

7. “Microeconomic foundations” are provided by Carlin and Soskice (2006) and Forslund, Gottfries and Westermark (2008).

8. In terms of (3), any *endogenous* change in labour productivity growth does affect the NAIRU if  $0 < \alpha_2 < 1$ ; only if  $\alpha_2 = 1$ , and productivity growth is fully reflected in real wage growth, there is no impact – but this latter case is empirically not realistic (Rowthorn, 1999). Empirical evidence indicates that  $\alpha_2$  takes a value of about 0.5.

oligopolistic competition in product markets. Specifically, firms set prices as a mark-up over unit labour cost. If we assume a constant mark-up rate, we get equation (2), expressed in growth rates:

$$\hat{p} = \hat{W} - \hat{\lambda} \quad (2)$$

Re-arranging equation (2), we obtain the PS curve (2''):

$$\hat{w} = \hat{W} - \hat{p} = \hat{\lambda} \quad (2'')$$

Real wage growth, denoted by  $\hat{w}$ , has to equal labour productivity growth in a long-run steady state, because only then both inflation and the distribution of income across wages and profits are constant. If labour productivity growth is exogenous, (2'') implies that price-setting decisions determine the real wage growth paid by firms. This price-setting relation is drawn as the horizontal PS-curve in figure 1. The real wage growth implied by price setting is constant, equal to labour productivity growth (which is assumed exogenous), and therefore independent of the unemployment rate.

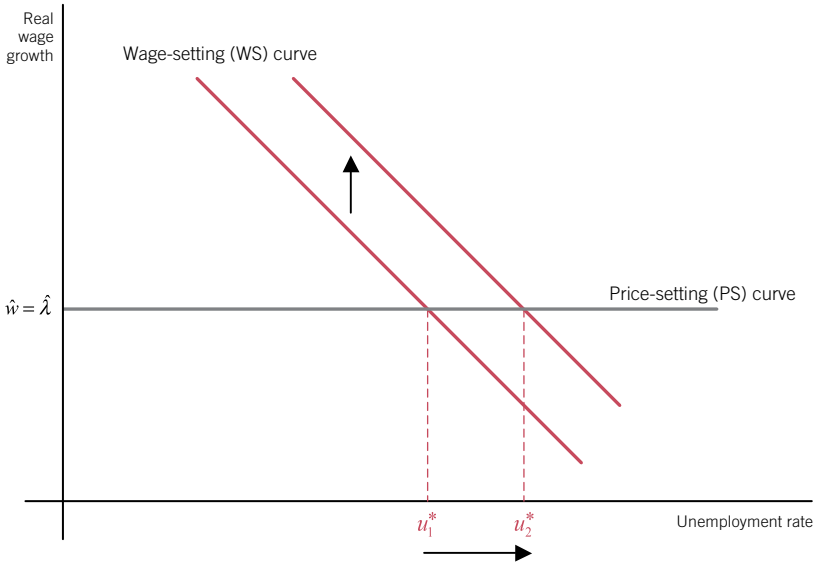
Equilibrium in the labour market requires that real wage growth demanded be equal to the real wage growth warranted by price setting. In figure 1, equilibrium is given by the point of intersection between the WS-curve and the PS-curve, with equilibrium unemployment or the NAIRU being  $u^*$ . If we assume that inflation expectations equal actual inflation or  $\hat{p}^e = \hat{p}$ , and next combine (1) and (2''),  $u^*$  is given by:

$$u^* = \frac{\alpha_0 - (1 - \alpha_2)\hat{\lambda} + \alpha_3 z}{\alpha_1} \quad (3)$$

The NAIRU is – in essence – a macroeconomic disciplining device to curb workers' wage claims, bringing them back in line with exogenous labour productivity growth, so as to maintain firm profits. NAIRU-equation (3) generates straightforward and powerful results.

First, increased regulation (a higher wage-push factor  $z$ ) increases the real wage growth *demanded* by workers at a given unemployment rate. Graphically, this shifts up the wage-setting curve from  $WS$  to  $WS'$  as in figure 1. The NAIRU moves up from  $u_1^*$  to  $u_2^*$ . With more powerful unions, the system needs a higher structural rate of unemployment to stabilize inflation and bring wage demands back in line with the preordained wage share implied by firms' price setting. The *key employment policy* lesson of NAIRU doctrine therefore is that labour markets should be deregulated, welfare states trimmed down, and the institutional wage bargaining position of unions weakened, so as to reduce real wages (relative to productivity) and improve firms' profitability. This would lead to increased investment, reduced unemployment (especially of the lower-skilled) and improved macroeconomic performance. It follows that there exists an inescapable trade-off

Figure 1. More labour market regulation and the NAIRU



between growth and equity; the price to pay for higher employment is a low-pay sector.

Second, its key *macro policy* implication is that governments and central banks should *not* try to promote full employment, because efforts to push the unemployment rate permanently below the NAIRU will fail, as doing so will generate only accelerating inflation (not growth). Macro policy may *temporarily* lower actual unemployment, but this will strengthen the bargaining power of wage setters, leading to higher wage claims and setting off a process of (accelerating) wage-push inflation (because firms raise prices to maintain profits). The inflation, in turn, will undermine demand (which is supposed to depend negatively on prices) and raise unemployment until the equilibrium rate of unemployment is reached again. Demand will adjust itself to the “natural” level of output, corresponding to the NAIRU, either passively through the so-called “Pigou” or real balance effect,<sup>9</sup> or, alternatively, more actively through a policy-administered rise in interest rates by the Central Bank.<sup>10</sup> Hence, the implication of equation (3) is that policy should focus *exclusively* on the labour market (and not on aggregate demand and investment). Persistently high unemployment and weak growth thus reflect a deliberate policy choice to maintain egalitarian institutional arrangements, even though this creates sclerotic and dualistic labour markets and helps the “insiders” but hurts the unemployed “outsiders”.

9. See Taylor (2011) for a critique of the Pigou effect.

10. We note that in the latter case, actual unemployment is determined by how large the Central Bank *thinks* the NAIRU is.

## A critique of the NAIRU

We are certainly not the first to criticize the NAIRU approach. There exists, for one, a sophisticated econometric literature which critically assesses the empirical evidence produced by the mainstream NAIRU literature.<sup>11</sup> For another, there exists a theoretical literature criticizing the structural assumptions of the NAIRU model, including the absence of money illusion (implied by the assumption that  $\hat{p}^e = \hat{p}$ ), the neglect of fundamental uncertainty about future events, the absence of information asymmetries (between workers and firms), a constant mark-up rate, the neglect of hysteresis, and the general absence of non-linearities and multiple equilibria.<sup>12</sup> Without taking anything away from such structural critiques, we believe that a deeper critique can be made. Even if we accept the NAIRU model and its assumptions, we argue that the NAIRU model's view on the roles played by (real) wages and labour in OECD countries is one-sided and neglects their major alternative role: wages also provide *macroeconomic benefits*, chiefly in terms of increased demand, higher labour productivity growth and more rapid technological progress. Taking these benefits into account, the impact of higher wages on firms' profitability becomes ambiguous – because higher wages at the same time reduce and raise profits. If these opposing effects of higher wages cancel each other out, and profitability is not (or not significantly) affected, there is no reason why equilibrium unemployment would change in response to the wage increase – the NAIRU claim breaks down.

To illustrate this point, let us consider the profit rate – defined as the ratio of profits to (invested) capital – which can be shown to depend upon the following three proximate determinants:<sup>13</sup>

- *the real wage rate*: the higher the real wage, the lower is the profit share and hence the lower is the profit rate;
- *labour productivity*: higher labour productivity raises the profit share (with an unchanged real wage rate), and hence the profit rate increases; and
- *capacity utilization or demand*: the higher the demand, the higher is the profit rate.

Using this decomposition, we can ask: how do higher (real) wages affect the profit rate? The answer is not straightforward. Clearly, the profit rate declines in response to higher real wages, but this is just the *direct* impact. Higher

11. Thorough assessments showing that the empirical evidence in support of the NAIRU model is not statistically robust, and often contradictory are: Baker et al. (2005); Howell et al. (2007); and Baccaro and Rei (2005).

12. Major references include: Eisner (1997); Galbraith (1997); Ball (1999); Karanassou and Snower (2004); and Arestis, Baddeley and Sawyer (2007).

13. This decomposition is available from the authors upon request.

wages also have significant offsetting *indirect effects* on profitability, which operate through capacity utilization and labour productivity.

If the economy is *wage-led*, demand and capacity utilization increase in response to higher (real) wages, and this raises profitability, in turn inducing higher investments by firms. Capital accumulation also increases in response to the growth in aggregate demand (the Keynesian accelerator effect). The result is a sequence of rounds of demand growth and increases in utilization and hence in the profit rate. In addition, the new investments result in higher labour productivity, which also is good for profits. First, the newly installed equipment embodies the latest state of production technologies and is therefore more productive than older vintages of capital stock. Second, the increase in demand, caused by higher wages, leads to an economy-wide deepening of the division of labour as well as more rapid learning-by-doing (in firms), which are processes that eventually get reflected in higher labour productivity growth. In both explanations, higher demand growth is associated with higher labour productivity growth – this positive link is known in the literature as the Kaldor-Verdoorn relation.

There is one more reason why higher real wages are associated with higher labour productivity. This explanation goes back at least to Karl Marx, who argued in *Capital* that high wages lead to a labour-saving bias in innovation and technological progress – because only labour-saving technological progress, which he identifies with rising labour productivity, ensures the reproduction of a positive economic surplus. Higher wages thus stimulate capital deepening, drive inefficient firms off the market and encourage structural change, increase the proportion of high-skilled workers in the labour force, and, in general, promote labour-saving technological progress. Marx's idea of wage-cost induced technological progress has gone through various incarnations including: Hicks (1932), Kennedy (1964) and, more recently, Foley and Michl (1999) and Funk (2002).<sup>14</sup>

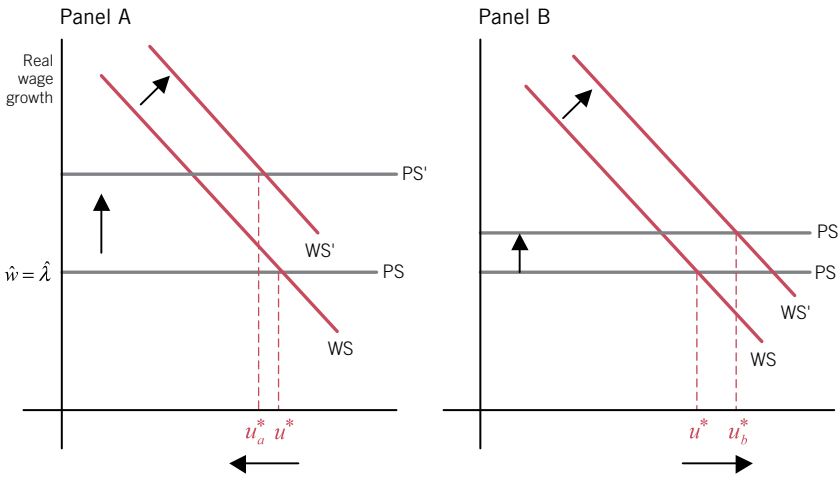
To determine the total effect of higher wages on profitability, we must take into account *these profitability-raising impacts* of higher wages through higher demand and capacity utilization and more rapid labour productivity growth. Figure 2 illustrates what may happen to the NAIRU if these effects of higher wages are taken into account. Assume that the real wage rate increases – for example due to more extensive labour market regulation. The wage-setting curve shifts up from *WS* to *WS'*. But now the price-setting curve also shifts up due to higher labour productivity growth, which comes about *directly and indirectly* because of the increased wage rate. Steady-inflation unemployment may rise or fall, or remain roughly unchanged – in the latter

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14. It also has an important contemporary analogy in the view of climate economists that “steady pressure from [...] a high carbon price [...] would [...] unleash the decentralized power of capitalist [...] inventive genius on the problem of researching, developing, and finally investing in economically efficient carbon-avoiding alternative technologies” (Weitzman, 2007, p. 723).



**Figure 2. More labour market regulation and higher real wage growth may either reduce (panel a) or raise (panel b) the NAIURU**



case, the conclusion must be that labour market interventions (causing higher wage demands) are not a cause of unemployment at all. If productivity growth rises very strongly (and the *PS* curve shifts up considerably), the NAIURU falls as in panel A; but if the productivity growth response is rather weak, equilibrium unemployment increases as shown in panel B. The productivity and profitability effects of higher wages are neglected in conventional NAIURU theory. This error of omission could be forgiven if it turns out empirically that the impact of higher wages on productivity is negligibly small. However, our empirical investigation (see below) suggests that it is not small: panel A is the relevant one, not panel B. It follows that the conventional wisdom that more regulation *must* lead to higher equilibrium unemployment, is false.

### Further critique

Standard NAIURU accounts treat workers' motivation, work intensity, and hence labour productivity, as *exogenous* to the nature of a country's system of industrial relations. This is not realistic, however. Driving home a simple point: an industrial relations system based on shared values and based on cooperation and coordination (rather than conflict), which relies on the "carrot" and not on the "stick" (Gordon, 1994), is conducive to productivity growth in two major ways. First, workers, who typically have more (tacit) knowledge of how the job is best done than their supervisors or their engineers, more easily accept and contribute to (radical) technological change, because they feel safe that their jobs are not at risk as a consequence of the resulting productivity growth and because they view the productivity gain sharing as being fair; as a consequence, they eschew their narrow self-interest in favour of a broader "public

spirited” form of behaviour (Lorenz, 1992). Second, because significant employment security (in combination with a compressed wage structure) provides workers with insurance against (ex ante) wage risk (Agell, 1999), workers will invest more in education, which has a strong positive impact on productivity growth. Likewise, as argued in the firm-specific human capital model (Auer, Berg and Coulibaly, 2005), firms invest more in training, when employment protection is stricter, labour taxes are high and average job tenure is long.

Productivity improvements in general depend crucially on the cooperation of workers and upon their tacit knowledge, ideas and suggestions, which will be withheld if workers feel their jobs are at risk as a consequence. This is an important paradox: the more “rigid” (using the conventional label) is the industrial relations system, the more flexible and open to technological progress is the social organization of production.<sup>15</sup> This means that the more cooperative are the social relations of production, the more strongly workers will reciprocate firms by providing higher productivity – and the higher will be the rate of productivity growth. Our findings (reported in Storm and Naastepad, 2011) suggest that more regulation has a bigger impact on labour productivity growth than on real wage claims and, hence, is associated with lower structural unemployment. Our world resembles figure 2 (panel A): more regulation means higher wage growth claims (the WS curve shifts up) but even higher productivity growth (the PS curve shifts up even more), and the result is a lower NAIRU.

### Empirical evidence

We argue that any change in the wage rate, any change in aggregate demand (and capacity utilization), or any reform of labour market regulation affects labour productivity, and this, in turn, necessarily influences profitability as well as the NAIRU. How important are these effects? What does the empirical evidence tell us? We can summarize the preceding discussion in terms of the following productivity-growth equation:

$$\hat{\lambda} = \beta_0 + \beta_1 \hat{x} + \beta_2 \hat{w} + \beta_3 z \quad \beta_0, \beta_2, \beta_3 > 0; \quad 0 < \beta_1 < 1 \quad (4)$$

where  $\hat{x}$  is real GDP growth. We claim that the coefficients are positive and statistically significantly so. Evidence on the coefficients is provided in tables 1 to 3.

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15. The argument is that worker cooperation and commitment depend on the trustworthiness of the employers in honouring their commitments to long-term employment and fair productivity sharing. The most solid foundation for this kind of trust, as Lorenz (1992) has eloquently argued, is that labour is able to *enforce* those commitments. This, in turn, requires an institutional and regulatory environment which offers legal protections to workers’ rights.

The most comprehensive study on coefficient  $\beta_1$  – which captures the impact of demand on productivity growth – is McCombie, Pugno and Soro (2002), who review 80 empirical studies and conclude that the overwhelming majority of these studies – irrespective of the differences in econometric methods and data employed – find a causal link from demand growth to productivity growth. Table 1 lists ten more recent studies which confirm their conclusion. The (simple) average value of  $\beta_1$  for the group of OECD countries is 0.46; estimates for individual countries are quite close to the OECD average.

Table 2 summarizes recent findings on the impact of real wage growth on labour productivity growth – coefficient  $\beta_2$ . The statistical evidence assumes that causality runs from wage growth to productivity growth, which appears reasonable in view of the fact that wage growth mostly follows from an institutionalized process of bargaining (as in NAIRU theory) and therefore “leads” movements in aggregate labour productivity, as autonomous real wage pressures drive profit-seeking firms to increase labour

**Table 1. Estimates of the impact of (investment) demand growth on productivity growth**

Study	France	Germany	Netherlands	United Kingdom	United States	Nordic countries	OECD countries
McCombie, Pugno and Soro (2002)							0.3–0.6
Cornwall and Cornwall (2002)							0.5
Leon-Ledesma (2002)							0.64–0.67
Knell (2004)	0.43			0.53	0.43	0.40–0.76	
Naastepad (2006)			0.63				
Angeriz, McCombie and Roberts (2009)							0.50–0.67
Crespi and Pianta (2008)							0.27–0.38
Hein and Tarassow (2010)	0.54	0.43	0.45	0.23	0.11		
Storm and Naastepad (2009)						0.31	0.39–0.46
Alexiadis and Tsagdis (2009)							0.43–0.49
Vergeer and Kleinknecht (2010–11)							0.24–0.37
Simple average (standard deviation)	0.49 (0.08)	0.43	0.54 (0.13)	0.38 (0.21)	0.27 (0.23)	0.45 (0.19)	0.46 (0.12)

Notes: McCombie, Pugno and Soro (2002): average of 80 empirical studies; Cornwall and Cornwall (2002): based on data for 16 OECD countries (1960–89); Leon-Ledesma (2002): for 18 OECD countries (1965–94); Angeriz, McCombie and Roberts (2008): for European regions (1986–2002); Crespi and Pianta (2008): data cover 22 manufacturing and ten service industries in France, Germany, Italy, the Netherlands, Portugal and the United Kingdom (1994–2000); Alexiadis and Tsagdis (2010): based on data (1977–2005) for 109 EU12 regions; Storm and Naastepad (2009): OLS estimates using five-year average data for 20 OECD countries (1984–2004); and Vergeer and Kleinknecht (2010–11): panel data results based on annual data for 19 OECD countries (1960–2004).

**Table 2. Estimates of the impact of real wage growth on productivity growth**

Study	France	Germany	Netherlands	United Kingdom	United States	Nordic countries	OECD countries
Rowthorn (1999)	0.11– 0.24	0.33– 0.87	0.24– 0.44	0.25– 0.60	0.13– 0.28	0.10– 0.54	0.24– 0.30
Nymoer and Rødseth (2003)						0.50	
Naastepad (2006)			0.52				
Carter (2007)							0.60
Hein and Tarassow (2010)	0.31	0.32	0.33	0.25	0.36		
Storm and Naastepad (2009, 2011)							0.29
Vergeer and Kleinknecht (2010–11)							0.31– 0.39
Simple average (standard deviation)	0.24 (0.10)	0.46 (0.20)	0.43 (0.13)	0.34 (0.12)	0.28 (0.11)	0.41 (0.13)	0.38 (0.15)

Notes: Rowthorn (1999): data are from his Table 2, panel (b); Nymoer and Rødseth (2003): for the four Nordic countries (1965–94); Carter (2007): based on data for 15 OECD countries (1980–96); Storm and Naastepad (2009): OLS estimates using 5-year average data for 20 OECD countries (1984–2004); and Vergeer and Kleinknecht (2010–11): panel data results based on annual data for 19 OECD countries (1960–2004).

**Table 3. Estimates of the impact of labour market regulation on productivity growth**

Study	Period of analysis	Independent variable	Estimated coefficient
Nickell and Layard (1999)	1976–99	<ul style="list-style-type: none"> <li>• EPL</li> <li>• Replacement ratio</li> <li>• Total tax rate</li> <li>• Benefit duration</li> </ul>	+0.09 Insignificant –0.03 Insignificant
Buchele and Christiansen (1999)	1979–94	Worker rights and labour–management cooperation index	+0.45
Scarpetta and Tressel (2004)	1984–98	EPL	Insignificant
Auer, Berg and Coulibaly (2005)	1992–02	Average job tenure	+0.16
OECD (2007)	1982–03	<ul style="list-style-type: none"> <li>• EPL</li> <li>• Minimum wage</li> <li>• Unemployment benefits</li> </ul>	–0.02 +0.17 /+0.20 0.15
Autor, Kerr and Kugler (2007)	1976–99 (US data)	Dismissal costs	Positive
Dew-Becker and Gordon (2008)	1980–2003	EPL	+0.23
Bassanini, Nunziata and Venn (2009)	1982–03	EPL	–0.14
Acharya, Baghai and Subramanian (2010)	1970–02	Dismissal law index	+0.26
Storm and Naastepad (2009, 2011)	1984–04	Labour market regulation (factor score)	+0.16

Notes: Macro studies: Nickell and Layard (1999); Buchele and Christiansen (1999); Dew-Becker and Gordon (2008), and Storm and Naastepad (2009–11). Industry-level studies: Scarpetta and Tressel (2004), Auer, Berg and Coulibaly (2005), OECD (2007), Autor, Kerr and Kugler (2007), and Bassanini, Nunziata and Venn (2009). Firm-level study: Acharya, Baghai and Subramanian (2010).

productivity by means of labour-saving technological progress.<sup>16</sup> Long-run evidence for 19 OECD countries (1960–2004), provided by Vergeer and Kleinknecht (2010–11) shows that  $\beta_2$  varies between 0.31 and 0.39. Our own findings for 20 OECD countries during 1984–2004 indicate that  $\beta_2$  is about 0.3 (Storm and Naastepad 2009, 2011). Estimates of  $\beta_2$  for individual economies including France, Germany, the Netherlands, the Scandinavian countries, the United Kingdom, and the United States are consistent with the (simple) average value of 0.38 for the group of OECD countries, which means that an increase in real wage growth by 1 percentage point is associated with an increase in productivity growth by 0.38 percentage points.

Table 3 presents findings on the impact of labour market regulation on productivity. On the whole, studies using industry data suggest that regulation, if other factors are held constant, has a *positive* (statistically significant) impact on productivity growth; for example, using 3-digit ISIC industry data for five countries (France, Germany, India, the United Kingdom and the United States) during 1970–2002, Acharya, Baghai and Subramanian (2010) find a statistically significant positive association between the strictness of a country's dismissal laws and its rate of economic growth.<sup>17</sup> *Macroeconomic* examinations of the effect on productivity growth of labour market regulation (controlling for capital intensity growth) find that coefficient  $\beta_3$  is positive indeed; such examinations include the early study for 15 OECD countries (1979–94) by Buchele and Christiansen (1999), our own survey (Storm and Naastepad, 2009) of 20 OECD countries (1984–2004), and the macro study by Dew-Becker and Gordon (2008), for 15 European countries (1980–2003), which concludes that “two of the policy variables (the replacement rate of unemployment benefits and an index of employment protection legislation) have significant direct positive effects on productivity growth ...”

Likewise, investigations of establishment data generally find that labour productivity rises substantially following a strengthening of employment protection as a consequence of both capital deepening and compositional shifts in labour quality (e.g. Autor, Kerr and Kugler, 2007) for US firms (1976–99).<sup>18</sup>

16. Marquetti (2004), using data for the US economy over the 130-year period 1869–1999, finds unidirectional Granger causality from the real wage to labour productivity.

17. Bassanini, Nunziata and Venn (2009) conclude, using industry data, that the *net effect* of labour market regulation on *aggregate* labour productivity growth is negative. But their conclusion is not strong because their empirical approach suffers from limitations and the impact of regulation on aggregate productivity growth is basically imputed – not estimated.

18. There is also a mountain of studies on human-resource management and industrial relations, which unambiguously suggest that secure, permanent employment contracts, stable employer–employee relationships characterized by low labour turnover, and a corporate culture in which risk taking and learning are actively encouraged and there is substantive worker involvement in decision-making, are important for innovation and productivity performance. See Levine and D'Andrea Tyson (1990), Appelbaum et al. (2000), Hailey (2001) and Storey et al. (2002).

What do these findings on the productivity (and investment) effects of *higher wages* imply for the profit rate – and ultimately for unemployment? To answer this question, we begin by noting that a 1 percentage point increase in real wage growth reduces profit rate growth one-to-one by 1 percentage point. But this is only the *direct effect*. As we have argued, higher wage growth has offsetting macroeconomic effects on profitability:

- (a) it raises demand and utilization, and
- (b) it speeds up labour productivity growth – directly by inducing labour-saving technological progress and indirectly through higher demand.

However, these impacts of higher wage growth depend critically on how “strongly” aggregate demand responds to wage growth, whether it is *strongly* or *weakly* wage-led. *Strongly* wage-led economies can be found in Europe’s Nordic economies (Storm and Naastepad, 2011); here, a 1.0 percentage point rise in real wage growth raises aggregate demand growth by as much as 0.8 percentage points. In contrast, France, Italy, the Netherlands and Spain, and the European Union as a whole appear to be cases of *weakly* wage-led economies (Storm and Naastepad, 2006/7; Stockhammer, Onaran and Ederer, 2009). Here, a 1.0 percentage point rise in real wage growth raises aggregate demand growth by only 0.25 percentage points.

The more strongly wage-led an economy is, the larger will be the profitability-raising effects of higher real wage growth.<sup>19</sup> Consider first impact (a) we find that a 1.0 percentage point increase in real wage growth *raises* profit rate growth *through higher demand* by 0.13 and 0.37 percentage points in weakly and strongly wage-led economies, respectively. Consider next impact (b) the *total* impact of higher real wage growth on profit rate growth through labour productivity growth. We find that productivity growth increases by 0.47 percentage points in weakly wage-led economies, and by 0.59 percentage points in strongly wage-led ones. Taken together, this means for the weakly wage-led economies that a 1.0 percentage point rise in real wage growth reduces profit rate growth by about 0.4 percentage points (i.e.  $-1\% + 0.13\% + 0.47\%$ ). Higher wage growth hurts profitability but less than proportionally so. For strongly wage-led economies we find – perhaps remarkably – that the impact of a 1.0 percentage point rise in real wage growth on profit rate growth is about zero (i.e.  $-1\% + 0.37\% + 0.59\%$ ).

What these admittedly stylized estimations show and what the NAIRU approach fails to recognize is that higher wages do not always automatically, and one-for-one, hurt profitability, kill investment and stifle productivity growth if the economy is wage-led (as is true for most European economies)

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19. The numerical derivations of these effects are available from the authors. We assume that the wage share equals 0.50, not unrealistic for the EU countries (Stockhammer et al., 2009), capacity utilization is 80 per cent and coefficients  $\beta_1 = 0.5$  and  $\beta_2 = 0.4$ .

and if higher wages are sufficiently productivity–growth–enhancing (as our evidence suggests). This conclusion is critical: it shows that there is a *basis for a cooperative (wage-led) capitalism*, in which there is no, or only a limited trade-off, between egalitarianism and economic growth or technological dynamism – quite unlike the zero-sum “conflicting-claims” version of profit-led capitalism *presupposed* by the NAIRU approach. Profitability – defined as the *profit rate* – need not fall (and shareholders are as well-off as before) as the wage share rises and distribution becomes more egalitarian. This may hold true even for weak wage-led economies, if governments and monetary authorities provide sufficient macro-policy support, e.g. if a low long-term real interest rate underpins investment growth, which by contributing to faster labour productivity growth helps raising the profit rate. However, cooperative wage-led capitalism faces one inherent problem: lack of employment growth. Higher real wage growth likely leads to bigger increases in productivity than in output growth, which implies that employment growth declines. While this deeper problem may lose importance in the near future (due to the ageing of Europe’s labour force), a more pro-active approach is to cut annual working hours (as in the 1960s) and/or to expand, often essential, public-sector (tax-financed) employment in health, education and environmental protection (“green jobs”) – what Lowe (1988) aptly called “planned domestic colonization”.

Conventional NAIRU economics does not allow any of these productive and egalitarian options to be pursued. Rather, NAIRU policy-makers focus single-mindedly on condition (2’), noting that it is not satisfied: real wages grow more (by 1.0 percentage point) than productivity (which increases by between 0.47 and 0.59 percentage points), thus causing the *profit share* to fall and leading to (some) extra inflation. Accordingly, the NAIRU policy response would be to raise the interest rate, reduce demand growth, and create the additional unemployment needed to stabilize inflation. But depressing (investment) demand means depressing productivity growth – and hence a vicious circle is created in which unemployment must rise even higher to reduce wage growth down to the (endogenously) lowered rate of productivity growth. Not only much unnecessary unemployment will be created, but productivity growth and technological dynamism in general suffer. If stopping inflation is really that important, the alternative approach to meeting condition (2’), would be to try and increase productivity growth – by additional expansionary fiscal and/or monetary policy. If effective, there would be no need whatsoever for a higher NAIRU. It is high time to wake up to the reality that the NAIRU claim does not hold water and is socially excessively costly. Let us conclude by outlining, on a postage stamp, the implications of our argument for economic recovery.



## Wages and economic recovery

The NAIRU “remedy” – real wage cuts and further deregulation of OECD labour markets – will not create the conditions for a viable, sustained economic recovery but is a recipe for prolonged stagnation – the reasons being twofold.

First, with households, firms, and governments burdened by debts, stagnant wages mean lacklustre demand and growth, as there is no longer an escape route through borrowing. The only available source of demand appears to be exports – and each OECD country is now trying to cut wages more than its trading partners are doing, in the hope to improve international cost competitiveness, boost exports, and kick-start the recovery process. These mercantilist attempts will backfire however – not only because the fallacy-of-composition argument applies (not everyone can engage in this), but also because OECD (and EU) export demand is not very sensitive to relative unit labour costs.<sup>20</sup> Policies to improve cost competitiveness by depressing wages (as in the wage-led eurozone) will cause domestic demand to contract while having limited effect on (net) exports. One does not need to be a rocket scientist to foresee a period of slow, or no, growth and persistent high unemployment.

Second, the standard remedy reduces productivity growth and slows down technological progress – as we have argued. Cutting the real wage does not improve the profit rate when autonomous demand is declining at the same time, and hence it will unlikely give a boost to investment demand. Further labour market deregulation will not only increase inequalities, but also depress productivity growth, thus reducing profitability. Weak investment demand, stagnant (or declining) consumption, and sluggish export growth, combined with the debt overhang, introduce a deflationary bias and create a non-negligible risk of debt deflation. “Perhaps”, as John Maynard Keynes (1919, p. 238) once wrote, “it is historically true that no order of society ever perishes save by its own hand.” European and US policy responses to the Great Recession are in more than one way self-destructive. We need to change course. But how?

First, as Tony Judd (2010) aptly reminds us, the task of the State is not just to pick up the pieces when an under-regulated economy bursts apart, it is also to contain the effects of immoderate gains and to intervene when markets and private interest so obviously do *not* come together to collective advantage. Judd presents a pragmatic case in favour of regulation, cooperation, and coordination – for which we see a macroeconomic basis – and singles out growing

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20. This lack of empirical relationship between the growth in unit labour costs and export growth is known in the literature as Kaldor’s paradox (Kaldor, 1978). For recent evidence on this paradox, see Fagerberg (1996), Carlin, Glyn and Van Reenen (2001), European Commission (2010), Storm and Naastepad (2009 and 2011), and Felipe and Kumar (2011). The real problem of Greece, Portugal, Italy and Spain is one of lack of *non-price* competitiveness.



inequality as the cause of many social and economic pathologies – just as we see greater inequality as the root of the crisis. “We need to learn to *think* the State again”, he writes (Judt, 2010, p. 199). We believe this is possible only if we free ourselves from NAIRU theory and consider which “social-productivist” interventions best fit our collective purpose. This may sound not very exciting, but it remains a crucial exercise: as Keynes observed, ideas are powerful and it is extremely difficult to escape from old modes of thinking.

Second, our finding that higher wages do have important investment and productivity impacts, and do not harm profitability one-for-one, provides a direction in the road to recovery. It indicates that macroeconomic performance can be improved by “social pacts” to protect wages as well as profits, jobs as well as technological progress, and egalitarian outcomes as well as international *non-price* competitiveness. Such pacts should entail:

1. A fair sharing of the gains of labour productivity growth and technological progress between business and labour;
2. An allowance for high enough profits to stimulate investment; and
3. A commitment to providing employment security both at the level of the firm and as a (full-employment) macroeconomic strategy.

Put differently, regulation, coordination and cooperation pay off in terms of a macro performance superior to that of zero-sum “conflictual” systems – as is illustrated by Europe’s wage-led Nordic economies (Storm and Naastepad, 2011). However, these pay-offs can only materialize and there can only be a real recovery if the ideas of lenders and the ideas of borrowers for the purpose of genuine capital investment are brought together. In fact, what Keynes (1931, pp. 145–146) wrote concerning the recovery of the Great Depression, is as true for us today:

A wide gulf [...] is set between the ideas of lenders and the ideas of borrowers for the purpose of genuine capital investment. [...] there cannot be a real recovery, in my judgment, until the ideas of lenders and the ideas of productive borrowers are brought together again. [...] Seldom in modern history has the gap between the two been so wide and so difficult to bridge.

What it means is a drastic tightening of regulation of financial capital, not just to control its speculative and manipulative excesses, but also to direct it to financing productive investment, turning shareholders into more committed investors (Lazonick, 2009; Palma, 2009; Wade, 2009). The rationale for imposing constraints on capital has to be understood as a socially legitimate form of “self-restraint” in Adolph Lowe’s (1988) profound sense of term: a constraint that we all accept because it enhances public freedom or self-governance in other, non-financial, segments of our livespace. Otherwise, reform will ultimately prove unsustainable.

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# The economics of wage-led recovery: Analysis and policy recommendations

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The financial crisis of 2008 and the Great Recession have morphed into a jobs crisis that most forecasts predict will persist for years given current policies. This paper argues for a wage-led recovery and growth programme which is the only way to remedy the deep causes of the crisis and escape the jobs crisis.

The International Labour Organization (ILO) recently documented the scale of the problem in its report *Global Employment Trends 2011: The challenge of a jobs recovery* (ILO, 2011). Global unemployment in 2010 was 205 million, 27.6 million higher than in 2007. The global unemployment rate was 6.2 per cent versus 5.6 per cent in 2007. As shown in table 1, the situation is even worse in the developed economies of the OECD where the unemployment rate averaged 8.3 per cent in 2010 versus 5.7 per cent in 2007. In the euro area it was 9.9 per cent versus 7.4 per cent in 2007, and in the United States it was 9.7 per cent versus 4.6 per cent in 2007.

These patterns reflect the fact that the epicentre of the Great Recession was the United States, and the aftershocks of the financial crisis have been felt most strongly in Europe. The developing world has gotten off relatively lightly compared to past global recessions, for two reasons. First, the commodity price boom has continued. Second, many emerging market economies had deep crises between 1997 and 2001 so that credit had already contracted and they were not exposed to the credit bust.

In of themselves these unemployment numbers would pose an enormous challenge. However, that challenge is amplified because the global economy appears to be experiencing “jobless recovery” in that GDP and world trade have recovered without a matching recovery in employment. This extends a pattern that first appeared in the US economy after the recession of 1990.

### Wage stagnation as an obstacle to recovery

The bad labour market situation undermines the bargaining position of workers, and jobless recovery means real wages have considerably lagged productivity growth in the industrialized economies since 2009. After having been hit by unemployment, workers are therefore taking a second hit from suppressed wage growth that looks to persist into the future. That in turn threatens to slow and possibly undermine recovery.

The economics behind this threat is simple. The recession was caused by a tremendous adverse demand shock triggered by the financial crisis, the first effects of which were felt in the second half of 2007. Now, the industrialized economies are afflicted by a condition of severe demand shortage as evidenced by the large output gaps shown in table 1. For the entire OECD area the output gap has jumped from 1.7 per cent in 2007, to minus 3.5 per cent in 2010. The important feature is not the absolute measure of the gap (which can be quite contested according to concepts of full employment), but the



**Table 1. Unemployment rates and output gaps in the OECD (per cent)**

	OECD	Euro area	United States
Unemployment rate 2007	5.7	7.4	4.6
Unemployment rate 2010	8.3	9.9	9.7
Change 2007–10	2.6	2.5	5.1
Output gap 2007	1.7	1.4	1.3
Output gap 2010	–3.5	–4.1	–3.4
Change 2007–10	–5.2	–5.5	–4.7

Source: OECD (2011).

swing which is equal to 5.2 per cent of output. That swing is not contested and it is predicted to continue over the next several years.

Wage stagnation aggravates the problem of demand shortage. First, the propensity to consume out of wage income exceeds the propensity to consume out of profit income because wage income is concentrated in lower income households that have a relatively higher propensity to consume.<sup>1</sup>

Second, wage stagnation promises to make the task of household sector debt deleveraging more difficult, thereby extending the duration of deleveraging, with its attendant negative impacts on consumption, aggregate demand, and output.<sup>2</sup> In the United States, this could contribute to a continuing high household mortgage foreclosure rate that will further impede the housing market's recovery.

Third, there is a danger that wage stagnation combined with continuing productivity growth could increase unemployment as demand fails to keep pace with output expansion. This fits with Alvin Hansen's (1932) technological theory of unemployment, developed in the Great Depression.

### Wage stagnation as a long-term structural problem

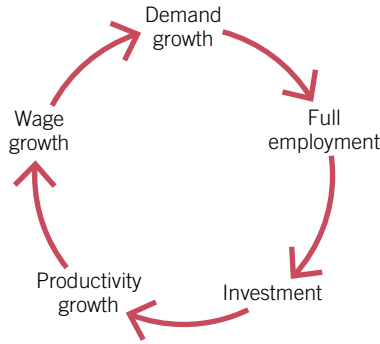
Not only does wage stagnation pose an immediate obstacle to economic recovery, it is also part of a deeper problem that lies at the root of the economic crisis. Failure to remedy the problem of wage stagnation will therefore leave unresolved the deep structural problems that caused the crisis and that risk locking the global economy into an orbit of stagnation. The danger is not that there will be renewed financial crisis, but rather the global economy will face a future of stagnation without shared prosperity.

This argument about the role of wage stagnation and income inequality in fermenting the crisis has been developed in Palley (2009a). The argument is that the roots of the financial crisis trace back to a faulty neoliberal

1. For a theoretical explanation of this consumption pattern, see Palley (2010a).

2. For an analysis of the economics of household deleveraging, see Palley (2010b).

**Figure 1. The 1945–80 virtuous circle growth model**

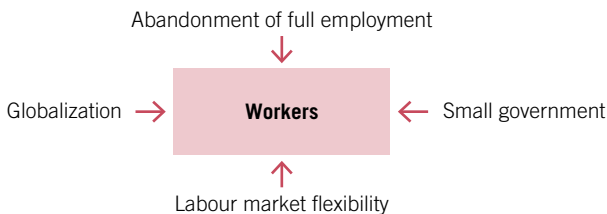


macroeconomic paradigm that was implemented globally after 1980, the fulcrum of implementation being the US economy. The new paradigm instituted a new growth model that relied on debt and asset price inflation to drive demand in place of wage growth. However, this model slowly cannibalized itself by undermining income distribution and accumulating debt, so that the economy needed larger speculative bubbles to grow. That eventually created need for a huge bubble that only housing could provide, but when that bubble burst it pulled down the entire economy because of the massive debts incurred over the course of the bubble.

From 1945 to 1980 the United States economy was characterized by a “virtuous circle” Keynesian growth model built on full employment and wage growth tied to productivity growth. This model is illustrated in figure 1 and its logic was as follows: productivity growth drove wage growth, which fuelled demand growth and created full employment. That provided an incentive for investment, which then drove further productivity growth.

This virtuous circle model was visible in one form or another everywhere – in Argentina, Australia, Brazil, Canada, Europe, Japan, Mexico, much of Latin America, and the United States. However, after 1980 it was replaced by a neoliberal growth model, the key features of which were: (1) abandonment of the commitment to full employment, and (2) severing of the link between wages and productivity growth. Before 1980, wages were the engine of demand growth. After 1980, debt and asset price inflation became the engines of demand growth.

**Figure 2. The neoliberal policy box**



The effect of the new neoliberal model was to weaken the position of workers; strengthen the position of corporations; and un-cuff financial markets to serve the interests of financial and business elites. As illustrated in figure 2, this new paradigm can be described as a neoliberal policy box that fences workers in and pressures them from all sides.

Globalization puts workers in international competition via global production networks and trade, creating job insecurity and downward wage pressure. The “small government” agenda attacks the legitimacy of government, pushes persistently for deregulation regardless of dangers, opposes updating regulation, and places wage pressure on public sector workers. The labour market flexibility agenda attacks unions, labour market supports (e.g. the minimum wage), unemployment benefits, employment protections, and employee rights. Lastly, abandonment of full employment reflects changed monetary policy priorities, with concern with full employment being replaced by low inflation targeting.

The neoliberal policy box was implemented on a global scale, in both the North and the South. That multiplied its impact, and it is why the Washington Consensus that was enforced by the IMF and the World Bank was so toxic. Reflecting the times, the model was adopted in one form or another in Australia, Canada, Europe, Latin America, and the United States.

Globalization is especially important for understanding the East Asian, Latin American, and United States experiences with the new paradigm. For the United States, globalization initiated a period of policy disregard for trade deficits combined with a willingness to shift manufacturing production to emerging market economies, first to Mexico and subsequently to China. For US policy-makers, globalization was not about creating a global market, but rather about creating a global production zone.

Emerging markets constituted the other side of the United States’ engagement with globalization and they focused on export-led growth. Mexico exemplifies the Latin American experience. Before 1980 Mexico had its own virtuous circle Keynesian growth model, centred on import-substitution based industrialization. In the mid-1980s that model was abandoned and Mexico shifted to export-oriented neoliberalism in which demand growth was to come from foreign direct investment in production facilities that would export to the United States.

The problem now is that the neoliberal growth model has imploded and is exhausted, which means it cannot be revived. Financial reform may stabilize the economy, but it does not help the economy escape the pull of stagnation resulting from the destruction of income and demand generation process and the burden of accumulated debts.

The logic of the Keynesian virtuous circle growth model and the metaphor of the neoliberal policy box are useful because they illustrate what has gone wrong. They are also indicative of what needs to be done to remedy the situation.

**Figure 3. Repacking the neoliberal policy box**



Continuing with the box metaphor, the challenge is to repack the box as illustrated in figure 3. This involves:

1. Taking workers out and put corporations and financial markets in;
2. Replacing corporate globalization with managed globalization;
3. Restoring the commitment to full employment;
4. Replacing the neoliberal anti-government agenda with a social democratic agenda; and
5. Replacing neoliberal labour market flexibility with solidarity-based labour markets.

All of these policies are discussed in greater detail below. There are several policy propositions that follow from the above analysis.

**Proposition 1:** The economic crisis is a crisis of demand. It is not a crisis of costs or profitability, and profits are at near-record levels. That means policy that focuses on the supply side and aims to increase profitability by squeezing wages risks deepening the problem by further worsening income inequality.

**Proposition 2:** The policy box metaphor highlights the multi-sided nature of the policy challenge. Policy-makers need to implement a fully consistent set of policies that encapsulates the entirety of the economy because the economy is a system. Piecemeal policy will be far less effective. Over the past three decades wages and employment have increasingly been talked of exclusively in terms of labour market policy, reflecting the triumph of Friedman's (1968) natural rate hypothesis and the dismissal of Keynesian macroeconomics. The box makes clear that good wage and employment outcomes are the product of coherent macroeconomic and microeconomic policy and rest on all dimensions of economic policy.

**Corollary 1:** Proposition 1 has important implications for the ILO. The argument that labour market outcomes depend exclusively on labour market policy has been used to limit the remit of the ILO to just labour market policy. The box shows why the ILO has a much broader policy interest, including a direct and immediate interest in the domestic and international policies of central banks and finance ministries. It also has an interest in the

policies of the IMF and the World Bank because all of these policies affect wage and employment outcomes.

**Proposition 3:** Globalization means there is an international dimension to the policy problem that requires coordination. As with piecemeal policy, policy that is implemented on a purely national basis will be far less effective and may even be ineffective.

**Proposition 4:** The broad policy architecture entailed by a “repack the box” programme fits all countries, but specific additional policies will be needed for particular countries and regions. Though there is considerable commonality of problems, countries have been integrated into the global economy differently. Addressing those differences requires additional country- and region-specific measures.

### The economics of wage-led recovery

The Keynesian virtuous circle rests on the theory of wage-led economics which is fundamentally different from that guiding orthodox economics. Given that orthodoxy dominates policy thinking, this helps explain why policy-makers have pushed policies that have promoted wage stagnation and why they are opposed to wage-led recovery.

Orthodox economics, which provides the basis for the neoliberal policy box, argues that increased real wages reduce employment. The argument rests on two assumptions:

- A.1) Firms are not demand constrained in goods markets.
- A.2) Firms' labour demand schedules are a negative function of the real wage so that higher real wages reduce labour demand.

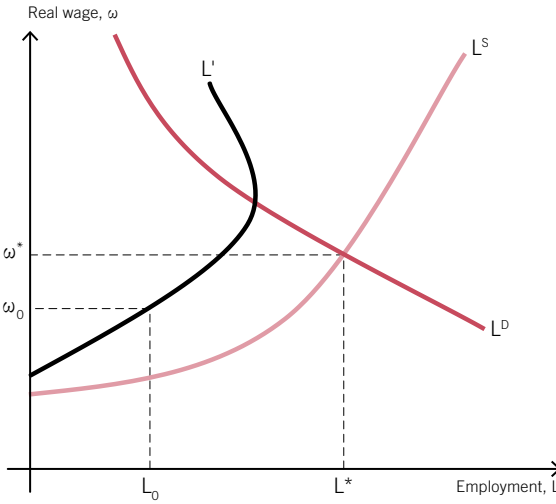
Given these assumptions, policies that increase real wages will reduce labour demand, employment, and output.

Wage-led macroeconomics derives from Keynesian economics which rejects orthodox analysis. In the Keynesian view, increased real wages can increase employment. This logic is based on two alternative assumptions:

- B.1) Firms are constrained by shortage of demand in goods markets.
- B.2) An increase in the wage share of aggregate income that goes to worker households increases aggregate demand because worker households have a higher propensity to consume. Given this, increased wage incomes increase employment by relaxing the demand constraint on firms.

The logic of Keynesian wage-led economics is illustrated in figure 4 which shows a conventional labour market diagram in which the labour demand

**Figure 4. The economics of wage-led employment**



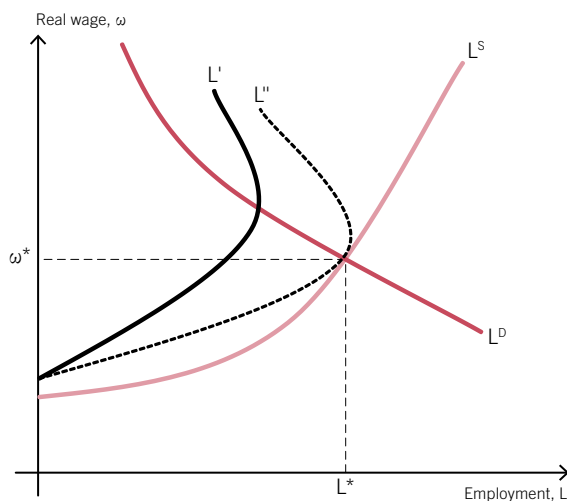
schedule ( $L^D$ ) is a negative function of the real wage, and labour supply ( $L^S$ ) is a positive function of the real wage.<sup>3</sup> Full employment occurs with the real wage – employment pair denoted  $(L^*, \omega^*)$ , corresponding to the intersection of the labour demand and supply schedules. Actual employment is constrained by the effective labour demand schedule denoted  $L'$ . This effective demand schedule is given by:

$$L' = f^{-1}(D(\omega, A, X)) \quad f^{-1}D > 0, D\omega > < 0 \quad (1)$$

$f^{-1}$  = inverse of the aggregate production function,  $D$  = aggregate demand,  $\omega$  = real wage,  $A$  = vector of exogenous variables affecting aggregate demand, and  $X$  = vector of policy variables affecting aggregate demand.

The effective labour demand schedule is backward bending, reflecting the fact that increases in the real wage initially increase demand by increasing consumption spending. However, increased real wages can also reduce the profit rate, causing reduced investment. At some point this latter effect may come to dominate causing the constrained labour demand schedule to bend back. Given an initial real wage of  $\omega_0$ , the policy challenge is to move the economy to full employment ( $L^*$ ).

3. Figure 4 is constructed using a conventional unconstrained labour demand schedule based on the marginal product of labour. In addition to questioning the claim that firms are unconstrained by demand in goods markets, post-Keynesian economists also contest marginal productivity theory's rendering of the unconstrained labour demand schedule.

**Figure 5. The wage-led recovery policy challenge**

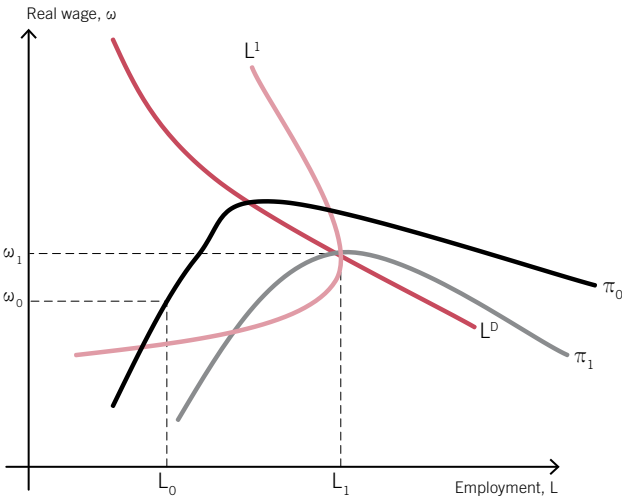
Current US economic conditions have output demand being severely depressed for a number of reasons, including high levels of household debt, low levels of household wealth owing to the house price collapse, and modest investment spending due to excess capacity. Consequently, the constrained labour demand curve is far to the left of full employment and there is a need for policy to both raise wages and shift the demand curve right.<sup>4</sup>

The challenge of wage-led recovery is illustrated in figure 5. The goal is to reach full employment ( $L^*$ ). To do this policy must shift the effective demand constraint ( $L'$ ) to the right ( $L''$ ) and increase wages to  $\omega^*$ . This illustrates the multi-dimensional of wage-led recovery. One dimension is to raise wages (i.e. move along the effective labour demand schedule). A second dimension is policy measures to increase demand (i.e. shift the effective labour demand schedule right).

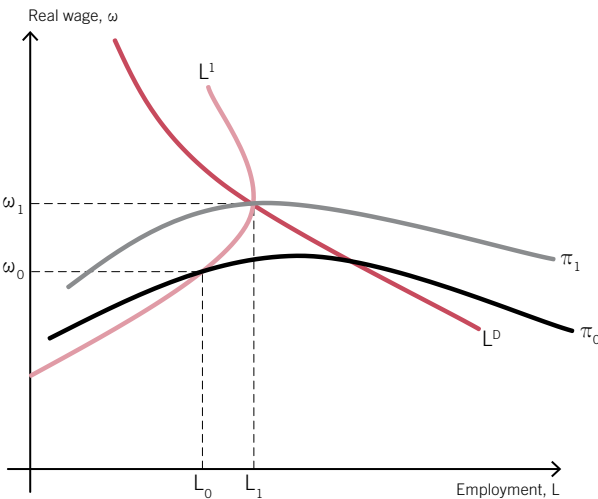
The Keynesian economic logic of wage-led recovery is clear. However, there are two possible cases, and their consideration helps explain some of the political problem. Figure 6 shows the labour demand schedule, the effective labour demand schedule, and two iso-profit contours. This figure corresponds to the case of a strongly wage-led economy in which higher real wages increase employment and output, and they also increase business profits. By increasing real wages from  $\omega_0$  to  $\omega_1$  policy-makers can raise

4. Figure 4 provides a static analysis describing the determination of employment and it illustrates how wage-led recovery works. Wage-led growth requires a dynamic analysis in which employment and output conditions impact investment, capital accumulation, and growth.

**Figure 6. A strongly wage-led economy in which wage increases benefit both workers and business ( $\pi_0 < \pi_1$ )**



**Figure 7. A weakly wage-led economy in which wage increases benefit workers but not business ( $\pi_0 < \pi_1$ )**



employment from  $L_0$  to  $L_1$ . That shifts employment to a higher iso-profit contour ( $\pi_1 > \pi_0$ ) so that business benefits. If business is enlightened, it should support such policy.

Figure 7 shows the case of a weakly wage-led economy. In this case, higher real wages increase employment but lower profits. Increasing real wages from  $\omega_0$  to  $\omega_1$  raises employment from  $L_0$  to  $L_1$ . However, it also shifts employment to a lower iso-profit contour ( $\pi_1 < \pi_0$ ) so that business has a rational reason to oppose such policy because it lowers profits.



A second obstacle to wage-led policy is public economic misunderstanding. The assumption of a negative relationship between real wages and employment is the core of orthodox neoliberal economics. That assumption is extremely appealing because of its apparent commonsensical logic when considered from an individual firm perspective. Individual workers know that if wages are too high at a particular firm that can render the firm uncompetitive. Lowering wages can increase the firm’s competitiveness, and that logic is extrapolated to claim that lower wages everywhere will increase total employment.

Such logic may reflect a fallacy of composition. What is true for an individual firm may not hold for an industry or the economy as a whole. The reason is wage reductions at the sector level may reduce aggregate spending so that aggregate employment falls by more than the increase in employment in the sector with lowered wages and prices.

A third obstacle to wage-led policy is the effects of globalization. Globalization has made economies more open, measured in terms of exports and imports as a share of GDP. In such conditions, wage reductions in one country may make that country more competitive and increase its employment. However, for the global economy as a whole it can reduce employment by reducing global aggregate demand.

Such outcomes resonate with Joan Robinson’s (1947) construct of “beggar-thy-neighbour” macroeconomic policy. Globalization aggravates this problem by encouraging countries to go down the sub-optimal path of the wage reduction because each believes it can gain global market share. However, when all pursue such a strategy, all may lose.

Such an outcome corresponds to a prisoner’s dilemma and is illustrated in table 2. Each country has an incentive to cut wages, hoping the other raises wages. As a result they all cut, but that produces the worst pay-off. The best pay-off is if both countries raise wages, but that requires coordinated policy. This illustrates how globalization makes wage-led policy more difficult. A policy that would have worked before on a go-it-alone national basis now needs international coordination to succeed. That is a hard task and a high hurdle.

Lastly, the simple model of wage-led recovery can be used to illustrate how wage stagnation risks creating unemployment in the presence of technological advance. This is the problem of technological unemployment identified by Alvin Hansen (1932) which was mentioned earlier. It is illustrated in

**Table 2. The prisoner’s dilemma and international economic cooperation**

		Country B	
		Cut wages	Raise wages
Country A	Cut wages	-5, -5	10, -10
	Raise wages	-10, 10	5, 5

**Figure 8. Alvin Hansen technological unemployment**

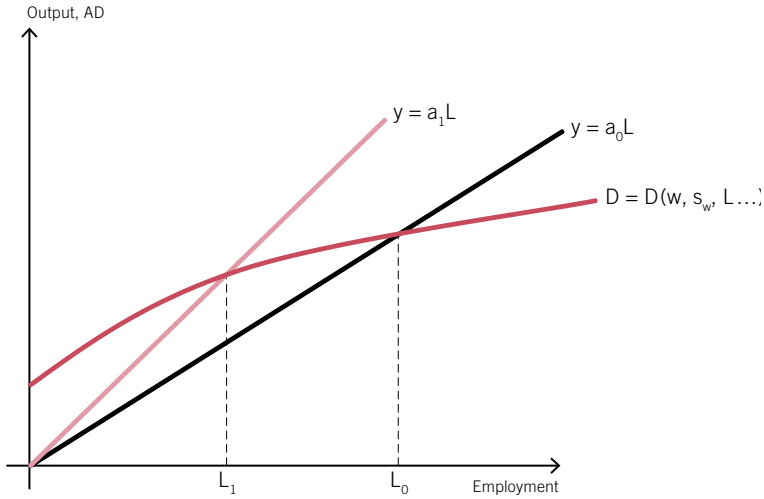


figure 8. Improved technology increases labour productivity ( $a_0 < a_1$ ) and rotates the production function ( $y = aL$ ) counter-clockwise. If the real wage–productivity link is severed then aggregate demand may fail to increase. The result is reduced employment because less labour is needed to meet existing demand. The reduction in employment then triggers additional negative Keynesian expenditure multiplier effects on output and employment.

### Empirical support for wage-led economics

The real wage–employment relation is central to macroeconomics and macroeconomic policy. Orthodox theory says that relationship is unambiguously negative. Keynesian theory says it can be positive. The evidence supports a Keynesian view.

One critical source of support is the literature on employment effects of minimum wage increases. This literature is traditionally interpreted through the lens of microeconomics as the study of a particular policy. However, it is in fact one of the most significant tests of orthodox macroeconomic theory.

An increase in the minimum wage is a form of controlled experiment, as close as economics is ever likely to produce. Orthodox theory predicts that an increase in the price of labour should unambiguously reduce employment. Yet the results from minimum wage event studies are at best ambiguous on this matter. Where there are findings of negative effects they tend to be small quantitatively. Moreover, the seminal work of Card and Krueger (1994) actually reports positive effects – a straight plain contradiction of orthodox theory.

A second line of work that is of theoretical and policy significance is the work on employment effects of labour market institutions (such as unions, the minimum wage, employment protections, etc.). This line of research was kicked off by Nickell (1997) who ran pooled cross-country regressions and reported results largely consistent with orthodox thinking. However, Palley (2004a) reported fixed effect time series regressions that incorporated macroeconomic policy variables (particularly the interest rate) and controlled for country trade openness. Those findings overthrow the conventional wisdom almost entirely. Unions, unemployment insurance benefit duration, and employment protections do not increase unemployment. Coordinated wage bargaining reduces unemployment. Macroeconomic factors, such as the real interest rate and rate of disinflation (which proxies the macro policy stance), are the overwhelming determinants of the unemployment rate. These findings have been largely corroborated by Howell et al. (2007) and Stockhammer and Klar (2011).

A third line of empirical research supportive of the wage-led Keynesian paradigm comes from the wage-led versus profit-led growth literature. This is a macroeconomic literature that estimates single equation reduced form models and seeks to identify the effects of changes in the functional distribution of income on consumption, investment, and output growth. For most economies the finding is they are wage-led so that a shift in the distribution of income toward wages has a positive effect on growth.

A downside of the literature is that it uses simple single equation models that may be prone to omitted variables bias. However, to the extent that the models do not control for economic openness, they do not control for demand leakage effects and that may tend to create a negative bias against finding economies are wage-led. Interestingly, Hein and Vogel (2008) report that the medium and large economies (France, Germany, the United Kingdom, and the United States) are wage-led but smaller open economies (e.g. Austria and the Netherlands) are profit-led. This finding may reflect that smaller economies have a more difficult time capturing the full benefits of wage increases, which instead spill out for the benefit of other economies as discussed above. However, the fact that large economies are found to be wage-led is supportive of the theoretical and policy case for wage-led economics.

### **A policy framework for wage-led recovery and growth**

The above examination of the theoretical foundations of wage-led macroeconomic policy explains the aggregate demand benefits of higher wages, as well as pointing to the need for demand stimulus at a time of demand shortage. It also highlights the need for international policy coordination for wage-led recovery and growth policy to work in an era of globalization. The Keynesian virtuous circle–neoliberal policy box explanation of the Great Recession

highlights the problem of the ruptured link between productivity growth and real wage growth.

Viewed in this light, policy-makers have both a conventional short-run demand management problem and a long-run structural rebuilding problem. The short-run task is to stimulate demand so as to fill the demand shortfall and establish recovery velocity. The long-run task is to rebuild the income and demand generation process by restoring the wage–productivity growth link. Moreover, these short-run and long-run policies must be pursued at both the national and international level in consistent fashion.

In past recessions policy-makers merely had to jumpstart the economy. In the current recession, wage-led recovery requires policy-makers simultaneously jumpstart the economy and rebuild the system. One without the other will fail. Stimulus without structural rebuilding will mean recovery is unsustainable, while structural rebuilding without stimulus will leave the economy trapped in stagnation and unable to achieve recovery velocity.

Wage-led recovery combines macroeconomic stimulus with structural reform, particularly regarding labour markets. Table 3 illustrates the macro–micro policy mix required for wage-led recovery and contrasts it with the mix being recommended by orthodox policy.

From a wage-led perspective, at the micro level there is need to rebuild labour market institutions to reconnect wages and productivity growth. At the macro level there is need to maintain an expansionary stance to offset the shortfall of private sector demand relative to potential output.

This contrasts with the orthodox perspective which argues for further labour market deregulation, fiscal austerity, and meaningful tightening of monetary policy. The claim is further labour market flexibility is needed because the financial crisis is the equivalent of a shock that has increased structural unemployment, and the orthodox response to such unemployment is to deregulate and make labour markets more flexible by weakening worker bargaining power and protections (see, for example, *The OECD jobs study: Facts, analysis, strategies*, 1994). Fiscal austerity is needed to reduce budgets in light of growing public sector debts that are argued to portend future fiscal crisis. Lastly, meaningful tightening of monetary policy is needed to head off incipient inflation. The orthodox policy programme is therefore the polar opposite of a wage-led recovery programme.

**Table 3. Wage-led versus orthodox policy mix**

		Micro policy	
		Rebuild labour market	Flexibilize labour market
Macro policy	Expansionary	Wage-led policy	
	Contractionary	Orthodox policy	

## The national dimension of wage-led economic policy

With regard to employment, orthodox economics tends to focus exclusively on labour market policy. Keynesian economics emphasize the demand dimension of the employment problem, which means policy extends far beyond just labour market concerns. The key elements of a national Keynesian wage-led growth programme are as follows:

### *1. Rebuild the wage–productivity growth link*

Rebuilding the wage–productivity growth link is the cornerstone of a wage-led programme. This requires increasing union density and union wage bargaining coverage, and implementing and maintaining a robust minimum wage. The significance of the empirical work on labour market institutions (Palley, 2004a; Howell et al., 2007; Stockhammer and Klar, 2011) is that it rejects claims that such measures increase unemployment. Instead, their impact is on the distribution of income.

The minimum wage is also important. The evidence shows it may even positively impact employment (Card and Krueger, 1994) and US data show it has a positive ripple effect on wages that reaches through the second decile of the wage distribution (Palley, 1998; Wicks-Lim, 2006).

### *2. Substantial, smart, sustained fiscal stimulus*

There is need for fiscal stimulus that should be “substantial, smart, and sustained” because of the extent of the private sector demand shortfall indicated by output gaps. A significant proportion of the budget deficit will be closed automatically as recovery takes hold. Where structural deficit measures indicate risk of unsustainable deficits, this is often due to specific factors (e.g. medical costs in the United States) or lowered tax rates rather than surging government expenditures.

The need for fiscal stimulus provides an opportunity for public investment spending that can create jobs, increase future productivity, and increase quality of life. In the United States, federal transfers to state and local governments can help avoid a new wave of job losses centred on state and local government. This may also hold for other countries.

To the extent that tax cuts are used to stimulate demand they should be targeted at low- and middle-income families who have a higher propensity to consume. However, increasing after-tax wage income is not a solution for the underlying pre-tax wage problem.

Most importantly, policy-makers must resist premature fiscal austerity which will only aggravate the structural demand shortage, thereby undermining growth and worsening the budget outlook. To the extent there are long-term budget deficit concerns, the solution is to grow the economy, not

to contract it. Where the long-term fiscal outlook is problematic due to specific causes such as excessive medical costs and medical inflation, the solution is to improve efficiency in the production of medical services, and not to impose generalized fiscal austerity. The latter will only deepen the slump and further stress tax revenues, without fixing the underlying budgetary problem.

### *3. Refocus monetary policy on full employment*

Monetary policy also has an important role to play, both with regard to recovery and maintaining the wage-productivity growth link. Expansionary monetary policy is needed to stimulate demand. However, longer-term policy must recommit to full employment which is a necessary background for workers to have wage bargaining power.

As part of realigning monetary policy, policymakers should abandon the theory of the natural rate of unemployment (Friedman, 1968) that asserts monetary policy has no impact on employment outcomes, and thereby encourages a focus on ultra-low inflation targeting. There is a Phillips curve trade-off between inflation and unemployment because inflation helps grease the wheels of sector labour market adjustment. That trade-off is backward bending (Akerlof, Dickens and Perry, 2000; Palley, 2003a) and policy-makers should aim for an inflation target consistent with the minimum sustainable rate of unemployment. That inflation rate is at the inflection point where the Phillips curve bends backwards. In the United States it is probably associated with an inflation rate of 3 to 5 per cent.

With regard to emerging market and developing economies, the Phillips curve is a less useful construct. Instead, there appears to be a trade-off between inflation and growth. Anwar and Islam (2011) report a non-linear trade-off whereby inflation has a diminishing positive effect on growth up to 8 per cent inflation; no effect on growth between 8 and 17 per cent; and an increasing negative effect on growth above 17 per cent inflation. The implication is that policy-makers in most emerging market and developing economies are targeting, either explicitly or implicitly, too low an inflation rate.

### *4. Financial market regulation*

Part of the agenda of taking workers out of the box is to put financial markets and corporations back in. That requires both financial regulation and strengthened corporate governance, policy features that are not conventionally identified as part of a wage-led economics.

The financial crisis revealed the instability of the system created over the past 30 years and there are good reasons for rebuilding financial regulation to restore economic stability. Working families have a direct interest in this because they incur the costs of crisis via job loss and ensuing economic

stagnation. However, there are additional reasons for financial regulation because finance should serve the needs of the real economy.

With regard to specifics, financial market regulation should limit speculation, increase transparency, and enable central banks to address asset price bubbles and preserve financial stability. To this end, market participants should be subject to position limits and margin requirements when deemed appropriate. In the absence of a compelling case otherwise, all financial trading should be channelled through clearing houses. Financial institutions should also be subject to balance sheet requirements that can be adjusted at the discretion of policy-makers. Such requirements include liquidity requirements, capital requirements, and leverage restrictions. Financial transactions taxes also have a place, both as a means of limiting destabilizing speculation and of raising revenue.

Finally, monetary authorities should implement asset-based reserve requirements (ABRR) that can facilitate monetary policy and growth (Palley, 2003b, 2004b). Trying to manage the economy with just interest rates and an inflation target, leaves the economy exposed to financial excess. That is the lesson of the last decade. Inflation targeting must therefore be supplemented by quantitative balance sheet controls implemented via ABRR.

ABRR extend margin requirements to a wide array of assets held by financial institutions. Financial firms have to hold reserves against different classes of assets and the regulatory authority sets adjustable reserve requirements on the basis of its concerns with each asset class.

ABRR provide a new set of policy instruments that can target specific financial market excess, leaving interest rate policy free to manage the overall macroeconomic situation. They can help prevent asset bubbles by targeting over-heated asset categories, and they are particularly good for targeting house price bubbles since they target the issue of new mortgages. They can also be used to encourage investment in areas deemed strategically or socially important by imposing low (or even negative) reserve requirements on finance directed to such activities. For all of these reasons they should be part of the monetary and regulatory policy tool kit serving a wage-led growth programme.

### *5. Reforming corporate governance and accountability*

With regard to corporate governance there is need to restrict managerial power which has been used to extract excessive managerial pay and has twisted corporations to adopt excessively short term horizons. That tends to favour financial engineering over real investment, which is bad for growth, jobs, and wages.

With regard to specifics, policy should seek to enhance shareholder control; use the tax system to discourage excessive managerial pay and short-term incentive pay that promotes speculation and myopic business management;



limit unproductive corporate financial engineering (particularly stock buy-backs); and provide representation for other stakeholders in corporations.

Corporations are the fulcrum of economic activity and are therefore critical for wages and employment. Though not generally perceived in this way, that makes their governance critical for wage-led policy. The right to incorporate and the benefit of limited liability are constructs of law. The laws behind these rights are intended to advance public welfare, which means corporate activity should advance the public's welfare. That should be the litmus test for issues regarding corporate governance and accountability.

### *6. Tax reform*

Tax reform can also contribute to a wage-led recovery, particularly in the United States. One contribution, discussed earlier in connection with fiscal policy, is to ensure any tax relief strengthens aggregate demand at minimum budget cost. A second contribution is to restore tax progressivity that has been eroded over the last three decades. In addition to adjusting income tax rates, this can be done by reducing tax expenditures that often have a regressive incidence, and by eliminating preferential treatment given to capital income (dividends and capital gains) relative to labour income (wages and salaries).

A third contribution is to abolish "job taxes" that link taxes to jobs. In the United States, that means finding other ways of paying for social security and unemployment insurance in place of wage taxes and mandated employer contribution. It also means changing the United States' system of health-care financing which is structured as a job cost, albeit privately paid for under the current system.

Lastly, corporate tax reform is important. Tax codes should be reformed to eliminate tax provisions (such as deferral of taxes on foreign profits) that promote off-shoring jobs and investment. There is also a case for scaling back corporate income taxes, but only as part of a package that increases tax progressivity and eliminates tax favouritism for capital income. Taxing corporations gives them an incentive to move: instead, government should tax the owners who receive the profits.

### *7. Trade deficits and external balance*

Another critical area for policy is trade deficits and external balance, which is particularly relevant for the United States' economy. This is implicitly an international problem as one countries surplus is another's deficit.

Since the employment effects of trade deficits are felt nationally trade deficits have significant ramifications for the viability of wage-led policy. If trade deficits are too large they risk undermining wage-led recovery. This can be understood through the metaphor of a bathtub. Aggregate demand, via



higher wages and expansionary fiscal and monetary stimulus, is being poured into the tub. However, that demand is leaking out through the plughole of the trade deficit. Moreover, it is not just demand that leaks out, but also jobs and investment due to off-shoring.

The current global trade imbalance problem is due to exchange rate failure, the pursuit of export-led growth strategies, and the dynamic of corporate globalization. That means it must be resolved by internationally coordinated policy, and how to do so is discussed below. However, three cautions are in order. First, if it is not resolved, national wage-led policies are likely to be undermined for the reasons discussed earlier. Second, since one country's trade deficit is another's surplus, some countries benefit from trade deficits. That makes the problem inherently conflictive. Third, because of the negative national economic effects of large trade deficits, failure to address the problem will promote tendencies to international economic conflict as evidenced by recent language about "currency wars".<sup>5</sup>

### Globalization and the international dimension of wage-led economic policy

In the pre-globalization era it might have been possible for countries to pursue "go-it-alone" national wage-led recovery and growth programmes. However, in the era of globalization those possibilities are greatly reduced because of increased spending leakages on imports, financial leakages, investment leakages via foreign direct investment, and job leakages via off-shoring of production. That means national wage-led recovery and growth strategies must be accompanied by an international strategy that reinforces national policy.

Both the neoliberal policy box and the theoretical analysis of wage-led economics emphasize the significance of globalization, which has been a critical development of the past 30 years. One effect of globalization has been to intensify wage competition by putting workers in international competition. Initially, this was perceived as a North–South issue, but there is now growing recognition that it is a South–South concern as emerging market economies compete for export shares and foreign direct investment (Blecker, 2000; Palley, 2003c; Blecker and Razmi, 2010).

A second effect of globalization has been the creation of a global pattern of trade and production marked by massive North–South trade imbalance,

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5. Brazilian Finance Minister Guido Mantega was quoted in *The Financial Times* on 27 September 2010 as saying: "We are in the midst of an international currency war, a general weakening of currency." His comments reflect concern at the upward appreciation of the Brazilian real caused by China's pegged exchange rate, the Federal Reserve's policy of quantitative easing, and the structural problems afflicting the euro.

excessive US consumption, and export-led growth in the South. Neoliberal globalization has therefore integrated economies in a particular way that has further amplified wage competition and also produced unsustainable trade balances. China has played a key role in this new structure, and in some ways it might even be more accurate to talk of the current structure as one of “China-centric globalization”.

A third effect of globalization concerns policy, and here there have been two impacts. First, globalization has rendered national policies that were previously effective and feasible, less effective and less feasible. Second, it has aggravated adverse policy competition between countries by creating prisoner’s dilemma structures of the sort discussed earlier.

The implication is there is need for international economic policy reform aimed at reversing all of these features. That policy should diminish wage competition, restore sustainable trade balance, create space for national policy, and promote policy coordination among countries. Absent that, national wage-led growth strategies will be much less effective, and governments may be discouraged from even trying them.

### Reforming the architecture of globalization

The starting point for international reform that promotes wage-led growth is the global financial architecture. The real economy cannot work without finance, as the crisis showed. However, different financial structures produce different real economic outcomes. The current neoliberal designed financial architecture (of unmanaged exchange rates and unrestricted financial capital flows) has promoted the neoliberal version of globalization with its attendant effects of wage competition, unsustainable trade balances, and policy competition. That calls for a new financial architecture.

A first international financial reform concerns exchange rates. The current system of unmanaged exchange rates has proved incapable of delivering sustainable current account balances across countries. It has also proved susceptible to exchange rate manipulation by countries seeking to enhance their international competitiveness, the poster child being China. Now, the system is degenerating further as more and more countries seek to prevent their currencies from appreciating, which threatens destabilizing competitive devaluation.

The solution is to adopt a system of globally managed exchange rates that targets approximate current account balance. The exact details of the system involve technicalities beyond the scope of this paper but the goal is clear – an exchange rate mechanism that fosters sustainable trade balances.<sup>6</sup>

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6. See Palley (2007, pp. 38–39) for the details of a proposed system of exchange rate management.

That includes reasonably sized deficits, but not trade imbalances of the magnitude seen over the past 15 years.

In addition to this structural challenge, there is an immediate short-run challenge which is to get China (by persuasion or sanction) to significantly revalue its dollar-pegged exchange rate. China's exchange rate policy is exerting a deflationary impact on the entire global economy by draining demand from other economies, which hampers their recovery and growth. It also prompts other emerging market economies (particularly in East Asia and South-East Asia) to under-value their exchange rates to stay competitive with China and avoid loss of exports, loss of foreign direct investment, and deindustrialization. To be effective, global wage-led policy needs both system change and the cooperation of China.

A second financial reform concerns capital flows and capital controls – or what the IMF is now terming “capital flow management techniques”. Unstable capital flows were a critical ingredient in the financial crises of the 1990s and early 2000s, and that problem remains unresolved. Indeed, one reason for the current crisis is the earlier experience of unstable capital flows drove many countries to pursue export-led growth policies that produced trade surpluses and enabled accumulation of foreign reserves. This speaks to the need for capital controls to be made a legitimate and standard part of the policy tool chest.<sup>7</sup>

### Labour standards

A second area of reform concerns the need for global labour standards. The global economy is beset by demand shortage and a big part of that demand shortage is the worsened income distribution of the past 30 years. Part of that worsening is attributable to globalization that has placed workers in international competition without labour market protections. This has put downward pressure on wages everywhere, undermining wage development in both the mature industrialized economies and the emerging market economies. The clear implication is solving the demand shortage and encouraging a shift to domestic demand-led growth needs a new structure of competition that allows wages to rise with productivity. Strict globally enforced labour standards are central to this required new structure of competition.<sup>8</sup>

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7. Palley (2009b) provides an overview of the economic rationale for capital controls. Palley (2005) examines the economic theory behind Chilean-style capital controls based on unremunerated reserve requirements, and Palley (1999, 2001) examines the economics of the Tobin tax on foreign exchange dealings.

8. For a comprehensive discussion of the economics of labour standards, see Palley (2004c).

## A global minimum wage system

Another measure that can remedy the global demand shortage and rebuild the connection between wages and productivity growth is a global minimum wage system. That does not mean imposing United States' or European minimum wages in developing countries. It does mean establishing a global set of rules for setting a country's minimum wage.

The minimum wage is a vital policy tool that provides a floor to wages. This floor reduces downward pressure on wages, and it also creates a rebound ripple effect that raises all wages in the bottom two deciles of the wage spectrum (Palley, 1998; Wicks-Lim, 2006). Furthermore, it compresses wages at the bottom of the wage spectrum, thereby helping reduce inequality. Most importantly, an appropriately designed minimum wage can help connect wages and productivity growth, which is critical for building a sustainable demand generation process.

Traditionally, minimum wage systems have operated by setting a fixed wage that is periodically adjusted to take account of inflation and other changing circumstances. Such an approach is fundamentally flawed and inappropriate for the global economy. It is flawed because the minimum wage is always playing catch-up, and it is inappropriate because the system is difficult to generalize across countries.

Instead, countries should set a minimum wage that is a fixed percentage (say 50 per cent) of their median wage – which is the wage at which half of workers are paid more and half are paid less. This design has several advantages. First, the minimum wage will automatically rise with the median wage, creating a true floor that moves with the economy. If the median wage rises with productivity growth, the minimum wage will also rise with productivity growth.

Second, since the minimum wage is set by reference to the local median wage, it is set by reference to local economic conditions and reflects what a country can bear. Moreover, since all countries are bound by the same rule, all are treated equally.

Third, if countries want a higher minimum wage they are free to set one. The global minimum wage system would only set a floor: it would not set a ceiling.

Fourth, countries would also be free to set regional minimum wages within each country. Thus, a country such as Germany that has higher unemployment in the former East Germany and lower unemployment in the former West Germany could set two minimum wages: one for former East Germany, and one for former West Germany. The only requirement would be that the regional minimum wage be greater than or equal to 50 per cent of the regional median wage. Such a system of regional minimum wages would introduce additional flexibility that recognizes wages and living costs vary within countries as well as across countries. This enables the minimum wage

system to avoid the danger of over-pricing labour, while still retaining the demand side benefits a minimum wage confers by improving income distribution and helping tie wages to productivity growth.

Finally, a global minimum wage system would also confer significant political benefits by cementing understanding of the need for global labour market rules and showing they are feasible. Just as globalization demands global trade rules for goods and services and global financial rules for financial markets, so too labour markets need global rules.

### Reform of trade agreements

A fourth and final international policy area in need of reform concerns trade agreements, and their impacts on national policy space. Here, the problem is the gradual stripping away of policy space via imposition of limits on national policy sovereignty. One area where policy has been weakened is intellectual property rights. A second area concerns the right of international investors to sue governments in international arbitration panels. These and other restrictions on sovereign policy need to be reversed, and the architecture of future trade agreements should incline to increase national policy space rather than shrink it.

### Conclusion

The bedrock of a wage-led policy approach is to rebuild the link between wages and productivity growth. That requires reconfiguring national and international economic policy so as to change the character of competition and restore worker bargaining power. This must be accompanied by expansionary macroeconomic policy that fills the current demand shortfall so as to push the economy on to a recovery path. Both sets of measures are necessary. Expansionary macro policy (i.e. fiscal stimulus and easy monetary policy) without restoration of the wage-productivity link will not produce sustainable recovery and may end in fiscal crisis. Restoration of the wage mechanism without expansionary macro policy is likely to leave the economy stuck in the orbit of stagnation.

Strategically, there are therefore two tasks. First, there is need to jump-start the economy, which is the rationale for expansionary policy. Second, the economy must be restructured to make recovery sustainable, which is why a wage-led growth program is essential. Piecemeal policy implementation will be far less successful, especially in a world of globalization.

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# The impact of the crisis on labour relations and collective agreements in Greece

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The labour market measures recently adopted in the context of the crisis affecting Greece are both a continuation of changes implemented since the early 1990s and a deepening of their logic. They consist of a whole array of measures to deregulate labour law and are being implemented as part of a reform agenda aimed at increasing flexibility, on the pretext of improving the competitiveness of the Greek economy by reducing labour costs.

Many labour flexibilization initiatives have already been implemented over the past two decades. However, the hardest ones had been temporarily put aside, awaiting a more favourable moment for their adoption. Indeed, despite the successive, complementary legislative interventions of the past 20 years, which have increased the prevalence of atypical, flexible work, there were always particularly influential economic interest groups, from both outside and inside the country, which insisted that the Greek labour market had remained rigid and which, consequently, pressed quite strongly for it to be made even more flexible.

The economic crisis resulted, at the end of 2009, in unprecedented levels of public deficit and public debt (130 per cent of GNP). This led the government to sign the memorandum on the support for the Greek economy with the “troika” of the European Union (EU), the European Central Bank (ECB) and the International Monetary Fund (IMF). The labour market policies advocated by these organizations are well known, pressing as they do for the freeing up of markets and of the conditions under which waged labour operates. First, the European Union, starting with the 1993 White Paper on growth, competitiveness and employment, has pushed a policy of radical reform of the European labour market through reduced wage costs as its main chosen means of achieving these objectives.

This policy has been confirmed, repeatedly and persistently, by the EU institutions over the whole of this period and up to the present day. Within this framework, the European Commission kept Greece under constant pressure to bring in measures promoting wage reductions and increased labour flexibility. Second, the role of the ECB has been decisive in the establishment of a wage austerity policy imposed on the eurozone countries by the Stabilization Pact and accompanied by tight control of developments around the three criteria for the operating conditions of monetary union. Third, the “rescue” operations by the IMF have been typically characterized by an extreme neoliberal orientation leading to the deregulation of the societies concerned.

In this context, the signing of the memorandum, accompanied by a 110 billion euro loan (plus the 90 billion from the second memorandum) creates all the conditions for imposing radical economic and social change in Greece. In fact, the changes provided for in the memorandum rules constitute more than 90 per cent of the measures adopted over the past 13 months in the labour relations field.

## Main characteristics of the labour market in Greece

The Greek labour market has traditionally been characterized by a policy of low wages. At the end of 2009, before the memorandum was implemented, the average gross annual wage was 28,200 euros, corresponding to 85 per cent of the average EU-27 wage or 72.2 of the average EU-15 wage (81 per cent in terms of purchasing power), placing Greece in thirteenth position among the eurozone countries (see table 1). Meanwhile, unit labour costs in Greece are 71.6 per cent of the eurozone average (see table 2).

Nonetheless, in terms of competitiveness, the Greek economy is in bottom place within the EU-15, alongside Portugal, and Greece's unemployment is the second highest, after that of Spain. But return on capital in Greece is almost double that recorded for the EU-15. Low pay causes many wage earners (1 in 3) to increase their working hours (overtime) or take a second job (1 in 5). Moreover, 15 per cent of wage earners are on the gross minimum wage of 740 euros, and even before the crisis, 20 per cent of wage earners were part of the "700 euro generation", a badly paid category comprised mainly of young workers. Nevertheless, the new situation that is emerging with the crisis is leading to the creation of new labour categories, such as the "500 euro generation" and others, representing those among Greek wage earners who are on less than 500 euros a month.

The present crisis provides a useful pretext for reinforcing flexibility, which is already quite strongly developed within the Greek labour market.

**Table 1. Annual average wage in Europe in euros, 2009**

Netherlands	50,273
Denmark	48,521
Belgium	48,232
Ireland	46,237
France	44,324
Austria	44,292
Finland	41,577
Sweden	37,922
Italy	37,422
United Kingdom	34,702
Germany	34,181
Spain	33,671
Greece	28,186
Cyprus	24,464
Portugal	20,115
Czech Republic	14,295
Slovakia	13,256

Source: Ameco.

**Table 2. Unit labour costs in Europe, 2009 (Germany = 100 per cent)**

Denmark	147.9
Netherlands	138.6
Austria	121.5
Finland	118.8
Belgium	118.1
France	112.5
Ireland	107.2
Italy	104.4
Sweden	104.0
Germany	100.0
United Kingdom	96.4
Spain	92.9
Greece	88.2
Cyprus	84.3
Portugal	83.1
Czech Republic	61.0
Slovakia	51.6

Source : European Commission.

Indeed, at the beginning of the crisis and before the memorandum, there were already 450,000 unemployed, i.e. 9 per cent of the active population. In addition there were, according to official figures, 700,000 flexible workers, of whom 350,000 were on temporary contracts (12 per cent) and 280,000 on part-time contracts (6 per cent). A further 300,000 workers were either bogus self-employed or in the grey zone between dependent and independent work – in practice, a subordinate job. At the same time, according to estimates by the relevant services of the Labour Ministry, there were almost 800,000 undeclared workers, the majority of whom (70 per cent) were of Greek nationality and the rest were immigrants, mostly undocumented.

When it came to breaches of labour law, a very widespread phenomenon, Greece topped the table within the eurozone. That is why, well before the crisis, the phrase “medieval labour conditions” was already widely used.

Thus, even before the crisis, one could see the results of two decades of policies aimed at strengthening the competitiveness of the Greek economy by reducing wage costs and making work more flexible. And yet, the main contributory factors in the increased competitiveness of the Greek economy (introduction of new technologies, modernization of business organization, upgrading of vocational training) have never really been among the options favoured by business leaders.

The modifications made to labour law under the growing influence of the theory and practice of flexicurity throughout this period paved the way for the deregulation of the protective aspect of industrial legislation, even if this development resulted in new regulatory derogations. Thus the emergence of the idea of second-class, third-class or even fourth-class workers, due to massive pressure on the content of contract-based labour, heralded an era of general labour downgrading.

### **Trade unions and wage setting by collective agreement**

Unionization rates in Greece are low. According to estimates, only 28 per cent of wage earners are unionized. The majority of these (55 per cent) work in the public sector, where union density ranges from 60 to 90 per cent. On the other hand, the unionization rate in the private sector is relatively low, never exceeding the 15 per cent threshold. Structurally, the trade union movement is unified, with all political and ideological currents represented within the same unions. Nonetheless, the different wage statuses applying to private sector workers and to civil servants have led to the creation of two separate confederations – the GSEE (General Confederation of Greek Workers), representing wage workers in both the private sector and public enterprises, and the ADEDY (Civil Servants’ Confederation), representing civil servants.

Wage setting is based on collective agreements, the system for which was reformed in 1990 by Law No. 1876, which has greatly contributed to the modernization of the framework for negotiations and collective agreements in Greece. This system, which has been in force for the past two decades, operates through the linkage of different levels of agreement (the inter-occupational, sectoral, occupational and enterprise levels), the principle being that the agreement most favourable to the particular worker will apply. The right to take part in negotiations and to sign collective agreements is, on the labour side, granted solely to the trade union organizations – more precisely, to the unions that are the most representative at the level being bargained for. This exclusivity accorded by Greek law to unions as regards collective labour rights also applies to other fields. In fact, the right to call a strike is also the exclusive preserve of trade unions. Consequently, all types of non-union, or wildcat strikes are illicit.

The minimum wage (currently 740 euro gross) is set by the inter-occupational agreement covering all wage earners (100 per cent) in the private sector and the public sector wage earners – except civil servants, whose salaries are set not by collective bargaining but by law.

Collective agreements at the level of sectors or occupations can be made to cover all of the workers, through an extension procedure, if the signatory for the employers provides more than half of the jobs in that sector or occupation. Through this procedure, which is recognized by the Labour Ministry, 85 per cent of private sector wage earners are covered by the two types of collective agreement.

At the enterprise level, the agreements apply to all the workers, but only enterprises that employ more than 50 workers are entitled to sign such agreements. According to the data available, some 4,000 private sector enterprises enjoy this right, out of the 900,000 firms registered in Greece. And yet, only 150 of them have signed collective agreements since 1990, when the law came into force. This is because there are too few enterprise-based unions. As a result, trade unions are noticeably absent from the actual workplaces. Their presence is the precondition for the signing of collective agreements within enterprises.

If the negotiations end in stalemate, the Mediation and Arbitration Service has the last word. Mediation is the first stage and if it succeeds, that is if it secures the unanimous approval of the parties to the dispute, its outcome is converted into a collective agreement. Otherwise, arbitration is the last available procedure for breaking the deadlock. The two parties also have the right, if they so agree, to proceed directly to arbitration, without going through the mediation procedure first.

By law, any labour relations issue can be settled by collective agreement, mediation or arbitration, except matters relating to social security, which are governed directly by the State. However, this broad competence is to be restricted, under very recent regulations, as far as the arbitration procedure is concerned.

## First measures aimed at the public sector

The measures adopted during the crisis period, as well as those taken within the framework of the memorandum, affect wage earners as a whole.

The first measures, in the midst of the crisis, apply to the public sector, with a large number of interventions targeting the pay of civil servants and public enterprise workers, coupled with major staff reduction measures and plans for privatizations on an unprecedented scale.

The public sector is the first field selected for the implementation of the labour relations reforms. This choice, imposing as it does a downgrading of working conditions in the public sector, is designed to further a third objective, after the privatization of a large number of public enterprises, namely to reduce the number of workers right across the public sector. The ultimate aim is to restrict or abolish the rights of public sector employees, and the gains made by them, as their pay status is better protected than in the private sector. As part of this drive, the Greek State has been inciting reactions rooted in “social automatism”. To push its policy through, it is pitting one category of wage earners against the other – private sector workers against public sector employees. The latter are regarded as the privileged class among wage earners and are also accused, wrongly, of being the main cause of the ballooning public deficit. This objective is closely linked to that of bringing about a convergence between the two different statuses, but through a levelling down of wage labour in general. At the same time, the measures taken against the “privileged” public workers have helped to create a fatalistic outlook among private sector workers, thus limiting the protests when, later on, particularly harsh measures were announced concerning their own future. Moreover, the gains made by public sector workers are often held up as an example by the private sector unions when setting out their demands for improvements in the working conditions of the wage earners they represent.

The most important measures adopted so far in relation to the public sector are as follows:

- Major cuts to 13th and 14th month salaries across the public sector, resulting in their virtual abolition as they now add up to just 1,000 euros per year.
- Abolition of the 13th and 14th month salaries throughout the public sector for those on gross monthly salaries of more than 3,000 euros.
- A two-stage, across-the-board pay cut (of 7 per cent and 3 per cent) in public enterprises.
- A two-stage reduction (by 12 per cent and 8 per cent) in civil servants’ bonuses.
- A pay freeze and the annulment of any collective arrangement that runs counter to pay policy.

- Reductions of up to 50 per cent in the number of workers on fixed-term contracts.
- The introduction of a 1:5 ratio between new hirings and departures.
- An increase in weekly working time from 37.5 to 40 hours.
- Annulment of the internal regulations and collective agreements in force in the public transport sector.

These measures have cut pay by up to 25 per cent in the public sector, on the pretext of reducing the public deficit, but they have yet to show outcome results that would justify the depth of both the sacrifices they have demanded as well as the negative social and economic consequences that have already been observed.

In the framework of the memorandum, further measures are expected shortly to cut pay and staff in the whole of the public sector. These policies will be facilitated by the introduction of a new 1:10 ratio between hirings and departures in 2011, the dismissal of the remaining fixed-term employees, a large number of privatizations (55 of some of the biggest and most profitable public enterprises) and the scrapping of 75 public bodies. These measures are currently under way. They pose the threat of immediate unemployment for many workers in these two types of enterprise. This is part of a 25 per cent reduction in staff across the public sector as compared to staff numbers in 2010. Finally, according to ADEDY estimates, public sector workers' purchasing power declined by almost 25 per cent over the short period from March 2010 to February 2011.

### The modifications to labour law

Now it is the private sector's turn, with a wave of measures aimed at reducing labour costs through increased flexibility in atypical and part-time work, wage setting, working hours and dismissals. The new reforms are leading, among other things, to the deregulation of the two main pillars of labour law. These are the system of protection against dismissal and the system of collective bargaining and agreements through the competent wage-setting institutions.

The contents of the regulatory measures concerning changes in the field of labour relations at the individual and collective levels, which are leading to the transformation of Greek labour law into a labour flexibility law, are as follows:

#### (a) *Flexibility of the dismissals system:*

- A major reduction in the amount of compensation payable in case of dismissal, by reducing the length of notice required (maximum period of notice reduced from 24 months to six). Through this measure,

compensation for dismissal is reduced to the equivalent of 18 months' pay for the longest-serving employees.

- Giving firms the possibility of paying dismissal compensation in many small instalments.
- Ending entitlement to dismissal compensation during the first 12 months of a permanent employment contract, a change justified by an increase in the maximum trial period from two to 12 months.
- An increase in the rate of collective dismissals from 50 per cent up to 150 per cent, by raising the number of individual dismissals per month from four to six in enterprises with 20–150 employees, and from 2 per cent to 5 per cent in enterprises employing more than 150 workers. It should also be noted that in small enterprises with fewer than 20 employees, which make up 99 per cent of private sector enterprises and employ 60 per cent of wage earners, dismissals are free and unlimited. Moreover, under Greek law, the dismissal of workers employed on permanent contracts does not require, and has never required, any justification.

Measures that facilitate dismissals in the midst of a crisis are accelerating the rise in unemployment in a country where unemployment benefits are equal to 55 per cent of the minimum wage, are payable for a maximum of 12 months and are not governed by the level of the previously earned wage.

*(b) Flexibility of types of work:*

- Increasing the maximum duration of fixed-term contracts from two to three years;
- Extending the maximum length of temporary work from 12 to 36 months;
- Extending the maximum period of short-time working (a three-day or four-day week) from six to nine months in a given year;
- Reducing the cost of part-time work by abolishing the bonuses paid for overtime and for cases where the working day is less than four hours;

*(c) Flexibility of working hours:*

- A 20 per cent reduction in the cost of overtime.
- A trend towards annualizing working times in order to suit the enterprises' needs, with the possibility of exceeding eight hours of work per day for a maximum of six months during a one-year period without paying overtime, compensating instead through reduced working hours at other times. Under the draft law, collective arrangements for the adaptation of working times may be agreed, as well in small enterprises with fewer than 20 employees, between the employer and trade unions representing one-fifteenth of the staff. So these agreements need to be signed by just two



“representatives” in order to become binding on the rest of the staff. These measures foster a stigmatization of the collective, given the unions’ refusal to sign agreements resulting in negative consequences for working conditions and for the workers’ social life.

*(d) Flexibility of the wage-setting system:*

- A three-year pay freeze in the private sector.
- Changes to the system of collective bargaining and agreements, as well as to the procedures for resolving collective disputes if negotiations reach a standstill. These are analysed in the following section.

### Changes to the collective agreement system

The changes to the collective bargaining system are being implemented through the introduction of a new kind of agreement, the so-called “special” enterprise collective agreement. What should be emphasized about this type of agreement is that its contents may be unfavourable for the workers in comparison to those of sectoral or occupational agreements. It should also be distinguished from another type of collective agreement, the enterprise-level agreement, whose contents, under the law of 1990, are always favourable, contrary to those at a more general level. As the measure establishing the special agreement introduces considerations of employment maintenance and strengthening the enterprise’s competitiveness, it is contributing to undermine the principle that the agreement that is most favourable to the worker should be the one applied. What is more, it is leading to the deregulation of the collective bargaining system and the breaking of the links between the different levels of collective agreement. And it is encouraging the signing of agreements that are destroying the wage-earner cohesion ensured by the central agreement and are creating the conditions for illicit competition among enterprises in the same sector.

The development of these special agreements also poses a threat to the procedure for extending sectoral agreements to the whole of the sector concerned. This prospect is the alternative that was chosen regarding the maintenance of this extension, which is itself under threat from the memorandum. Although the number of special agreements at the enterprise level is limited so far, wages have undergone a quite substantial reduction – due to individual agreements signed under the threat of dismissal, made all the easier by the recent measures, to the replacement of full-time contracts with part-time ones, and to the imposition of a shorter working week. These practices have increased considerably over the past two months (by 200 and 22 per cent respectively).

The legal provisions of the memorandum also provide for the possibility of signing a collective agreement that does not respect the general minimum wage (subminimum wage). For the moment, there are no more

specific provisions for implementing such a measure. Nonetheless, two new regulations on the payment of wages below the minimum threshold have been adopted. First, provision has been made for new and first hiring of young people aged 16–24, under an annual apprenticeship contract, to be at a pay rate equal to 80 per cent of the minimum wage. It should be noted that apprenticeship contracts and work experience placements are forms of employment that are already abused by employers in the private and even the public sector. In addition, very recent legislative measures make it possible to take on young people aged under 25 (first employment contract) at a wage equivalent to 80 per cent of the sectoral, occupational or inter-occupational minimum wage, by means of individual agreements and quite independently of the conclusion of collective agreements that contain derogations.

The deregulation of the collective agreement system is having the effect of reducing the role of central negotiations and, consequently, reducing the central unions' influence on wage setting and the regulation of working conditions. These measures should be seen in addition to the others that are aimed at trade unions and are paving the way for the neoliberal doctrine of individualizing wages and labour relations in general.

The new measures are also restricting the role of the Mediation and Arbitration Service. This and other changes are strengthening the employers' position. The measures entail limiting the role of arbitration purely to issues concerning the basic pay rates at each bargaining level. So the arbitrators' competence for institutional matters (working hours, allowances and bonuses) is being withdrawn. In future, the risk is that these issues will become the subject of endless negotiations without producing any commitments from the employer side. This measure will weigh heavily on labour relations, particularly their non-economic aspects.

Finally, the new measures provide for the abolition of collective bargaining autonomy in civil transport enterprises, with the new pay framework being imposed by the State. It will then re-establish negotiating procedures in the years to come, but starting from a lower wage base. This policy is the pilot for a model to be applied in all the public enterprises, thus adding one further element to the deregulation of labour relations in the public sector.

## Conclusion

The changes to the collective agreement system, right in the middle of the crisis, have been well coordinated with the whole set of measures designed to achieve a strong, brutal reduction of wage costs. According to Labour Ministry estimates, private sector wage costs have been cut by 15 per cent in just one year. In any case, the measures that are about to be applied, and those involved in the next implementation phase of the memorandum rules, will lead to pay cuts, in the economy as a whole, of up to 30 per cent.

The new Greek labour market landscape that is being mapped out for the future is characterized by the devaluing of work and the erosion of earned income (already by 15–25 per cent, just over the past 15 months). These developments are linked to the dizzying increase in precarity and unemployment which, on official figures, has risen from 9 per cent to 16.5 per cent in the space of two years. That would mean 820,000 unemployed, but highly credible estimates suggest that the real unemployment rate is more like 20 per cent and will certainly rise even higher by the end of 2012. This rate is characteristic of the current social situation. During the first months of 2011, the number of people in work was, for the first time in decades, smaller than the non-active population. At the same time, unemployment benefit (which is a set amount, not linked to the recipient's last wage and not exceeding 55 per cent of the national minimum wage) has been granted to only 45 per cent of the unemployed. It remains one of the lowest in Europe.

The unprecedented rate of enterprise closures (120,000 in the course of one year, the great majority of which were small or medium-sized) is itself a factor in the acceleration of the fall in the employment rate (by 35 per cent), which, even before the crisis, was markedly far removed from the European average (15 per cent).

In parallel, rising unemployment and labour precarity are leading many Greeks to emigrate. According to reliable estimates, 150,000 emigration applications were reported in the midst of the crisis. This development is a major drain on the country's productive strengths, which consist mainly of a highly qualified labour force.

As regards content, the changes to the Greek labour market are not new to Europe. However, the fact that so many labour deregulation measures have been taken within such a short space of time does represent a particularly negative turning point. Also, Greece is a country whose social state is not sufficiently developed to be able to cushion the social shockwaves that are now being felt. In 2010, 22 per cent of the population were living below the poverty threshold.

It should also be noted that the measures adopted during a crisis are not being presented as temporary interventions and solutions. On the contrary, they are designed to last. They correspond to a doctrine that is being presented as a magic formula for raising the competitiveness of the Greek economy. But in fact, they are heading down the very road that led to the devastating failures in this area over the past few decades. Indeed, despite the deregulation measures that have accompanied a strong, brutal reduction in wage costs, the Greek economy has, over the past 12 months, dropped ten places in the competitiveness league table.

At the same time, the policy followed within the memorandum framework is leading to an unequal distribution of income in Greek society, to the detriment of labour and of the worst-off social groups. The rise in unemployment and labour precarity, as well as the cuts in wage costs and earned incomes, have been followed by the closure and disappearance of hundreds

of thousands of small and medium-sized enterprises and by privatization plans on an unprecedented scale. The only ones likely to benefit from these trends are the well-to-do, who can escape the harmful effects of the current crisis. Among others, big groups of national and multinational enterprises are emerging as the winners from this situation.

This new economic and social landscape leaves room for the growing domination of a new culture as regards the content and operating rules of wage labour. This new image affects a large part of the active population, and more particularly the younger generation who have been hit hardest by the changes. Their rather high unemployment rate (42 per cent), and their precarity as regards employment, rights and wages are the major characteristics of this group, and are helping to shape and impose new practices on the labour market. In turn, these practices are translating into a new working-class culture characterized by minimal rights. The “700 euro generation”, a phrase that well describes the precarious, badly paid labour status of most young workers, was a great topic of debate in recent years. But now it is giving way to the “500 and 400 euro generation”.

At the same time, demands for collective rights are on the wane. In fact, just like in Europe as a whole, unionization rates have fallen sharply over the past two decades. The waves of privatization that are being put into effect will have a major impact on the Greek trade union movement. Its main strengths lie in the public enterprises, where the most dynamic unions are active. Moreover, the unions are also under threat from the deregulation of the system of collective bargaining and agreements, and this is impacting on the roles of the general confederation and sectoral federations who are signatories to the central agreements. On the other hand, the new regulations are introducing enterprise agreements that contain derogations from sectoral agreement provisions. This will foster the presence of the employers’ associations at the enterprise level.

Finally, the increased unemployment and the broadening of the labour precarity phenomenon are further blows against trade unionism. The low unionization rate among young people, which has been noted for a number of years now (less than 10 per cent for the under-30s), is a phenomenon that will be reinforced in years to come, given the new trends in the Greek labour market. This negative image of trade unionism raises many questions about the future of the trade union movement, threatened as it is by the changes in the labour landscape, and the direct and indirect attacks emanating from neoliberal theories and policies, but also its own mistakes, weaknesses and inadequacies.

The recent Greek example is a trial run, using the crisis as a pretext, for a systematic bid to bring about convergence between the European labour framework and that of the Third World. Greece is serving as a laboratory for policies that replicate the European model and its new objectives as set out in the Euro Plus Pact. These objectives are introducing the institutionalization of wage austerity into Europe. They could well lead the old continent up some new economic and social blind alleys.

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