

Public Profit Sharing

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I. INTRODUCTION

What a striking contrast: month after month countries such as the USA, Great Britain, and the Netherlands, which all suffered from high unemployment in the eighties, report new labour market records, while others like France, Germany, Italy and Spain continuously suffer from high unemployment rates in the range of 8–12%, with the prospect of only a small decline in the years to come (cf. OECD 2001). These countries have no reason to turn off the red alert sign.

The reason for this divergence is seen in the existence of rigid labour market institutions in many European countries that are characterized by strong regulatory constraints and collective bargaining arrangements that limit the ability of firms to adjust employment and wages in the face of changing market conditions. Recent empirical research tried to identify the main factors causing high unemployment in Europe¹. First of all, there is common sense about the crucial role of trade unions. The more powerful they are, the more successfully they can raise wages and the more they can press governments to sustain strict employment protection laws and generous welfare benefit systems. However, as the Dutch example shows, unionized labour markets need not necessarily go along with high unemployment. If trade unions are willing to co-operate with employer organisations and the government on a nationwide level, labour market performance can be improved substantially. The second factor is the generous welfare system most European countries have created and sustained. The overall tax burden on labour to finance their welfare systems has created huge

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1. See, e.g., Nickell (1997), Elmeskov et al. (1998), Nickell and Layard (1999) and Daveri and Tabellini (2000).

distortions that, in combination with other labour market distortions, cause unemployment. Though the short-run effects are generally significant and often long lasting, empirically, it turns out that the long-run effects of labour taxes on unemployment are small in some countries but are reported to be large in others (see Daveri and Tabellini 2000, Reutter 2001). The huge expenditures of the welfare state also contribute significantly to unemployment: generous welfare benefits reduce the cost of becoming unemployed and increase the upward pressure on wages from trade unions.

Many economists thus recommend far-reaching deregulation of the labour market and limiting trade union power to allow wages to adjust downwards. However, these proposals often neglect the fact that labour market institutions have evolved to smooth out the consequences of other market imperfections. For instance, in an uncertain world, job security legislation as well as collective bargaining can provide workers with insurance against labour income risk – insurance that is not provided by insurance markets (cf. Agell 1999, 2002).

Moreover, collective bargaining has become the main institution where rent-sharing rules are set and distributional conflicts between labour and capital are settled. In Germany, for instance, collective bargaining – the so-called ‘*Tarifautonomie*’ – is a constitutional right of employer and employee organisations to negotiate labour contracts without undue governmental interference. This constitutional status allows labour organisations to make these negotiations the forum where the sharing rules for the domestic product between labour and capital are determined, the main distribution key being the wage rate. Restricting or eliminating these constitutional rights of the labour organisations will not be possible without risking social unrest and increasing conflicts between workers and employers. It is thus not very surprising to find strong resistance from trade unions combined with little political pressure to actually reform the German labour market institutions: the *Tarifautonomie* is sacrosanct for politicians of almost all German parties. For many European countries the picture is pretty much the same. Insider workers, represented by their trade unions, have successfully defended their income positions in the last three decades and will continue to do so, even at the expense of a growing number of unemployed².

To be *successful*, a labour policy measure must reduce labour cost. To be *politically feasible*, it must be Pareto improving in the sense that it makes neither workers nor capital owners and shareholders worse off compared to the status quo. Feasibility, however, does not imply that a policy measure will actually be implemented. Actual policy making depends much more on the expectations of the political agents. Given the power of both employer organisations and the

2. For a political economy explanation see Saint-Paul (1996, 1997).

trade unions in most European labour markets, political feasibility constitutes a necessary but not sufficient condition for a policy measure to be implemented. The aim of this paper is thus to present a politically feasible proposal to reduce unemployment in the sense that labour costs can fall *without* fundamentally altering the current income position of workers and shareholders.

As long as the income position of workers is mainly determined by the wage rate, any reduction in labour cost will make workers worse off. Hence, it is necessary to untangle workers' income from the wage rate. This can be achieved, in principle, by introducing *profit sharing* of workers that has been discussed in Germany in the fifties and sixties (cf., e.g., Krelle, Schunck and Siebke 1968) and has been promoted later again by Martin Weitzman (1983, 1985): by substituting profit income for wage income, the wage rate and thus labour cost can be reduced without actually affecting the workers' income. Applying Weitzman's proposal of a 'Share Economy' to unionized labour markets, Pohjola (1987) and Anderson and Devereux (1989) showed that if trade unions and employer organisations bargain over both wages and the profit share of workers, employment would rise. Full employment can be achieved if the wage rate is set equal to the marginal cost of labour³. This would maximize the surplus that can be shared between shareholders and workers.

Several drawbacks, however, reduce the attractiveness of profit sharing. Holmlund (1989) and Layard and Nickell (1990) showed that the long-run effect of profit sharing might be negligible or even zero. If profit sharing increased employment in the short run, the reservation wage of workers would increase. This in turn would lead trade unions to demand higher wages – a mechanism similar to the long-run mechanism that shifts the labour tax burden to workers. Furthermore, profit sharing may not be at all favourable for trade unions. Though it will increase the total income of workers it will benefit the unemployed, who will find a new job at the expense of the insider because the profit per worker is declining in the number of workers. If only insiders received profits shares – as proposed by Sinn (1999) – their expected income would rise. However, it would remain unclear as to what extent this compensated for the additional income risk insiders would have to bear instead: the more risk-averse workers are, the less likely it will be that profit sharing will be introduced at a sufficiently large scale.

Private profit sharing may therefore not work. However, there is another possibility to untangle the workers' income position from the wage cost. As the government takes away a substantial amount of wage income, why not substi-

3. Profit sharing can actually be considered as a device to introduce efficient bargaining as suggested by McDonald and Solow (1981).

tute profit shares for labour taxes or social security contributions that the government receive instead of reducing the net-of-tax wage rate, which the workers receive? Such a *public profit sharing* would leave workers with the same certain take-home income – thus eliminating the disadvantage for insiders of lower income and/or of higher labour income risk – while reducing labour cost and thus promoting employment. This paper shows how a public profit sharing scheme can be implemented to alleviate unemployment both in the short run and – in combination with complementary policy measures – in the long run. Moreover, the paper elaborates on the conditions that must be satisfied to make the introduction of public profit sharing a Pareto-improving and therefore politically feasible policy measure.

The following Section II describes the basic idea of a public profit sharing scheme for the benchmark case of a constant net-of-tax wage rate. Section III then discusses the implications public profit sharing may have on wage negotiations between trade unions and firms, both in the short run and in the long run. To estimate the magnitude of the potential employment effects generated by the introduction of public profit sharing, Section IV calibrates the reform proposal for Germany and relates its findings to the empirical literature on how tax rate changes affect unemployment. Section V discusses complementary policy measures, which ensure profit sharing to be successful even in the long run. Section VI concludes.

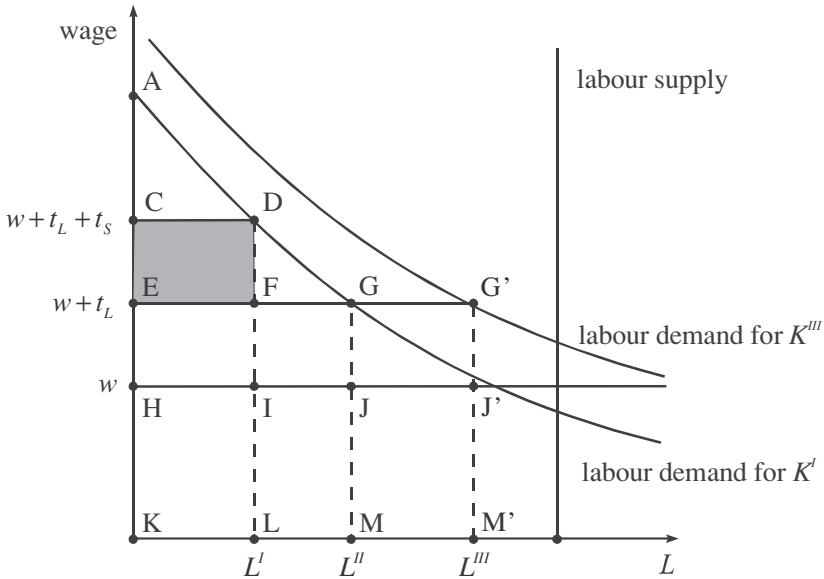
II. REFORMING THE UNEMPLOYMENT INSURANCE: A GRAPHICAL EXPOSITION

We consider an economy where the net-of-tax wage rate w is fixed at a too high level so that involuntary unemployment exists. Unemployment is even worsened as the gross wage rate exceeds the net-of-tax wage rate by the sum of the labour tax rate t_L and the social security contribution t_s , i.e., the gross wage rate is given initially by $w + t_L + t_s$. *Figure 1* represents the aggregate labour market of the economy and shows the initial equilibrium. The downward sloping curves indicate the marginal value product of labour input for given capital stocks and thus represent the labour demand curves. Profit maximization implies that the gross wage rate equals the marginal value product of labour. Point D thus indicates the economy's initial equilibrium with the initial employment level L^I and the capital stock K^I (which determines the locus of the marginal value product of labour curve). The area ADLK below the marginal value product of labour curve gives domestic product. It can be split into several components. Capital income is rK^I . Denoting profit income by π^I , the triangle ADC measures the

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sum of capital income and profit income $rK^I + \pi^I$. The gross payroll is given by the rectangle CDLK. It can be further split into the net-of-tax wage income HILK, tax revenues EFIH and social insurance contributions CDFE.

Figure 1
The Employment Effects of Public Profit Sharing



Now consider the introduction of a public profit sharing scheme. In a first step, the social security contribution rate t_S is reduced to zero while the net-of-tax wage rate is held constant⁴. At the initial employment level L^I , this will reduce the revenues from social security contributions by CDFE. To compensate for this loss in revenues, the firms have to grant the social security agency a profit share λ . As the profit increases to $\pi^I + \text{CDFE}$, this profit share λ is determined by the full-compensation requirement (at given employment level), i.e., $\lambda = \text{CDFE} / (\pi^I + \text{CDFE})$.

Following the proposal by Sinn (1999), public companies can offer the social security agency preference shares, publicly quoted companies can assign

4. The assumption of a constant net-of-tax wage rate serves as a benchmark case only; it will be dropped in the next section when wage negotiations are introduced into the model.

proprietary interest, and unincorporated firms can offer interest-bearing claims entitlements⁵. The benefit entitlements of workers are unaffected by the change in how the social security agency finances the social insurance system: as before, health insurance is provided independently of income, old-age pensions and unemployment benefits will be based on (net) wage income and the duration of employment.

Economically, the introduction of public profit sharing can be interpreted as an introduction of a profit tax. However, it differs from a profit tax in two respects. Firstly, public profit sharing comes along with an increase in the profit tax base due to the elimination of the social security contributions: at a given employment level, public profit sharing thus does not affect private profits at all. Secondly, profit sharing does not require that all firms have to accept the same profit share. The profit share requires a rule such as revenue neutrality for a given level of employment. Such a rule can then be implemented on a firm or industry level in exactly the same way as discussed with respect to private profit sharing.

As long as the factor input levels remain constant, income distribution does not change. The social security agency receives CDFE, firm owners receive π^I , capital owners rK^I and workers HILK. If social security contributions are fully tax deductible, the introduction of public profit sharing does not affect tax revenues either.

However, the gross wage rate falls from $w + t_L + t_S$ to $w + t_L$ and the firms will hire more workers. At given capital stock K^I employment will rise to L^{II} . As capital income remains constant at rK^I , the profit income of shareholders rises by $(1 - \lambda) \cdot \text{DGF}$ and the revenues for the social security system rise by $\lambda \cdot \text{DGF}$. In addition, tax revenues rise by FGJI and the net-of-tax wage bill rise by IJML so that domestic income increases. Involuntary unemployment implies that the utility of workers exceeds the utility of being unemployed. Therefore all new workers benefit while the incumbent workers are not worse off. Moving from L^I to L^{II} is therefore Pareto improving.

As factors are price complements, the lower gross wage rate leads to an increase in capital demand and the capital stock will rise. Assuming K^{III} to be the new equilibrium capital stock, the labour demand curve will shift outwards, causing a further rise in the employment level to L^{III} .

Both revenues of the social security system and tax revenues increase – the former by at least by $\lambda \cdot \text{DGF}$, the latter by FG'J'I⁶. The introduction of the pub-

5. For alternative specifications of the profit share see Schares (1994).

6. When the capital stock increases, it is not possible anymore to deduct the change in profits from *Figure 1*. However, the increase in profits for a given capital stock, indicated by the triangle DGF, denote the minimum increase in profits.

lic profit sharing system will thus generate a budget surplus that widens the scope for additional employment policy measures. For instance, the government can reduce the labour tax rate. This would induce a further increase in profit income, labour income and tax revenues and would thus lead to a further Pareto-improving increase in domestic income.

The results derived so far crucially depend on the assumption that the net-of-tax wage rate remains constant after the introduction of a public profit sharing scheme. However, both the reduction of social security contributions and the subsequent reduction of the labour tax rate as well as a lower unemployment rate may lead trade unions to demand higher net-of-tax wage rates. To analyse potential feedback effects on the net-of-tax wage rate we have to see how public profit sharing will affect wage negotiations between trade unions and firms and analyse the circumstances under which the result, derived in this section, will prevail.

III. PUBLIC PROFIT SHARING AND WAGE NEGOTIATIONS

The introduction of a public profit sharing scheme may affect wage negotiations between the trade union and the firm in two ways. Firstly, changes in the tax structure may affect the power of trade unions to set the negotiated wage rate above market-clearing wage. This effect hinges on the impact, public profit sharing has on the labour demand elasticity⁷. Secondly, changes in the tax structure may affect the outside option for the trade union and influence wage negotiations in this way.

To analyse the two channels through which public profit sharing might affect wage negotiations, we assume that the objective of the trade union is to maximize its members' net-of-tax income. The net-of-tax income of a working member equals the net-of-tax wage rate w . If a trade union member is laid off, however, the net income is determined by its outside options. With a probability

7. The following arguments are based on the so-called 'right-to manage' model in which the net-of-tax wage rate is determined in wage negotiations between a small trade union and a firm. After an agreement about the wage rate is reached, firms unilaterally determine the employment level (for a formal treatment of the public profit sharing scheme, see the discussion paper version, Schöb 2001). The 'right-to-manage' approach reflects the observation that in most European countries over three-quarters of the workforce earn wages that are covered by collective bargaining in which trade unions and employer organisations agree upon wages only and (in many cases explicitly) delegate the right to determine employment to the firms (cf., e.g., Oswald 1993).

equal to the country's unemployment rate she will become unemployed, in which case she receives unemployment benefit payments. With a probability equal to the employment rate, she will find another job at an expected net-of-tax wage rate that equals the average net-of-tax wage rate in the economy. Note that a small trade union cannot affect the domestic unemployment rate and thus considers the outside option for its members as exogenously given.

*1. Public Profit Sharing Scheme Affects
the Labour Demand Elasticity*

When the social security contribution rate is lowered, the labour demand elasticity may change. This has consequences on the wage negotiations. If labour demand becomes less elastic due to the reduction of the social security contribution rate, fewer workers will be fired when the net-of-tax wage rate increases, while the benefits for those employed remain the same. It becomes therefore more profitable for the trade union to demand a higher wage rate. By contrast, if labour demand becomes more elastic, the opportunity cost of a wage increase rises and will moderate trade unions.

The crucial parameter that determines the extent to which the change in the social security contribution rate affects the labour demand elasticity is the elasticity of substitution between labour and capital. If substitutability between labour and capital is low, i.e., if the elasticity of substitution is below one, the cost share of labour decreases when the social security contribution rate or the labour tax rate are lowered. A lower cost share of labour implies that a one percent increase in the negotiated wage rate induces a smaller increase in total cost and, consequently, a smaller fall in output. This will lead firms to lay off fewer workers, i.e., labour demand becomes less elastic. This strengthens the bargaining position of the trade union while the firm, by contrast, will oppose wage increases less strongly as profits will fall at a lower rate. The situation is reversed if the substitutability between labour and capital is high, i.e., the elasticity of substitution is above one, and the cost share of labour increases.

The consequences for a public profit sharing scheme therefore depend on the technology available in the economy. If the elasticity of substitution is unity, which is the case for a Cobb-Douglas production function, the cost share of labour is independent of the tax structure. In this case a reduction of the social security contribution rate lowers the gross wage rate at the same rate. Thus, the graphical analysis of the previous section perfectly describes the mechanism of a public profit sharing scheme if wages are determined in wage negotiations and the technology is Cobb-Douglas.

If the elasticity of substitution exceeds unity, the gross wage rate falls even more and the employment effect is strengthened. Only if elasticity of substitution is below unity, the fall in the gross wage is smaller, as a reduction in the social security contribution leads to an increase in the net-of-tax wage. Nevertheless, irrespective of whether the net-of-tax wage rate increases or not, the introduction of a public profit sharing scheme always results in a higher level of employment as long as part of the cut in tax rates result in a reduction of the gross wage rate. As profits decrease in factor prices, profits will increase and so will domestic income. For the short run with a fixed reservation wage, we can thus summarize:

PROPOSITION 1: If wages are determined in wage negotiations with the reservation wage being fixed, public profit sharing reduces unemployment and increases domestic income.

An increase in profits does not imply, however, that the profit income of shareholders increase when the public profit sharing has been introduced. As long as the net-of-tax wage rate does not increase, the profit will certainly increase in employment as profits for any given employment level are not decreasing. If, however, the net-of-tax wage rate increases, it turns out that at any given employment level the shareholders' profit income will be lower, the higher the profit share of the employment agency is. Hence it is not clear *a priori* whether public profit sharing – although it is increasing in employment – is Pareto improving when the elasticity of substitution between labour and capital is low.

2. Public Profit Sharing Affects the Trade Union's Outside Option

From the viewpoint of a single trade union, the reservation wage is exogenously given. However, profit sharing will reduce unemployment in the short run and thus improve labour market conditions. As the unemployment rate falls, the possibility of finding a job increases. This will raise the reservation wage and will lead trade unions to demand higher net-of-tax wage rates. For the special case of a constant replacement ratio, i.e., unemployment benefits are proportional to the net-of-tax wage rate, Layard, Nickell and Jackman (1991) show that a change in the labour tax rate or the social security contribution rate does not change the unemployment rate in the long run.

With respect to the introduction of a public profit sharing scheme the immediate conclusion is: public profit sharing fails to raise employment in the long run. However, the implications for the distribution of income are dramatic. This

can be seen from inspecting *Figure 1* again. There, the employment level remains at L^1 and the gross wage rate remains constant. However, the workers' net income increases by CDFE in the long run because what they paid for social security before the introduction of the public profit sharing they now receive as net-of-tax wage income. By contrast, as profit income and capital income has not changed either, and public revenues are the same as before the public profit sharing scheme, the profit income that accrues to shareholders is reduced by the amount CDFE. This may be summarized in a second proposition.

PROPOSITION 2: If unemployment benefits are proportionate to the net-of-tax wage rate and wages are determined in wage negotiations, public profit sharing will have no long-run effect on employment but change the income distribution in favour of labour income.

This result, however, crucially depends on the assumption of a constant replacement ratio. Theoretically, this assumption may be questionable for two reasons. First, Blanchard and Katz (1999) argue that the income of the unemployed does not consist of unemployment benefit payments only but also of non-market income, and that the replacement ratio is homogenous of degree zero in the wage rate and the non-market income. If the social security contribution drives a wedge between labour income and non-market income, the replacement ratio would decline and, consequently, the long-run employment effect would remain positive – though smaller than the short-run effects.

Second, although unemployment benefits are often paid in proportion to the wage rate (cf. MISSOC 1998), other additional welfare transfers are often cut if the unemployment benefit payments rise. For low-qualified workers in particular, the assumption of constant total public benefit payments is more realistic than the assumption of a constant replacement ratio. The long-run employment effect will be positive as long as there is some fraction of the reservation wage that does not vary proportionately with the net-of-tax wage rate.

Even if the employment effect remains positive in the long run, it becomes doubtful that shareholders may not benefit as the introduction of public profit sharing will allow the trade unions to force the shareholders pay part of the bill. As firms will anticipate the long-run consequences on profits they will strongly object to the introduction of a public profit sharing scheme, as they demand at least as high profits as before. There is thus an inherent time consistency problem of any public profit sharing scheme: trade unions would benefit from public profit sharing even if the net-of-tax wage rate remains constant. However, they could gain even more if they raise the net-of-tax wage rate *after* the profit sharing scheme has been introduced. As this is only possible at the cost of share-

holders, public profit sharing can be Pareto improving only if shareholders need not fear net-of-tax wage increases. We will come back to this issue in Section V.

IV. ESTIMATING THE EMPLOYMENT EFFECT

To exemplify the effects public profit sharing might have, this section provides some estimates for the long-run employment effects of transforming the German unemployment insurance contributions into public profit shares. The contributions to the mandatory German unemployment insurance system currently equal 5.4% of the gross wage including employers' contribution to the social security system. In our thought experiment, the unemployment insurance contributions will be replaced by a public profit sharing scheme that guarantees that the German employment agency (Bundesanstalt für Arbeit) receives the same revenues if employment stays constant.

In what follows, we present four estimates as shown in *Table 1*. The first two estimates show the results of calibrating the model presented above to the case where the trade union credibly commits itself not to take advantage of the introduction of a public profit sharing scheme, i.e., we consider the case of a constant net-of-tax wage rate. To calculate the pure substitution effect of the 5.4% reduction in the gross wage (Estimate I), we assume an aggregate labour demand elasticity for constant output of 0.38 as estimated by Flaig and Rottmann (1998) for the German manufactory sector – an estimate that is close to a 'best guess', as most empirical estimates show a constant-output elasticity in the interval of [0.15; 0.75] (cf. Hamermesh 1993, p. 135).

Changes in the social contribution rates affect those 28 millions German workers who pay social security contributions. Hence, the change in employment must be related to these workers instead of the whole workforce. It turns out that employment due to the pure substitution effect of eliminating the unemployment insurance contributions will rise by about 570.000. As 100.000 new jobs lead to a reduction of official unemployment by roughly 70.000, the substitution effect thus results in a reduction of the standardized unemployment rate (= 8.0% in 2000, cf. OECD 2001) by 1.2 percentage points (at given labour tax rate).

Table 1

Estimates of the Long-Run Effects of Public Profit Sharing

	Estimate I	Estimate II	Estimate III	Estimate IV	
	Pure substitution effect	Substitution effect & cost reduction effect	Nickell and Layard (1999)	Daveri and Tabellini (2000)	
				lowest	highest
Initial budget surplus in billion Euro	7.8	21.8	10.8	13.3	24.0
Change in the gross wage rate	-6.4	-9.7	-6.9	-7.4	-10.4
Change in the unemployment rate	-1.4	-5.8	-1.6	-2.2	-5.6

The introduction of the public profit sharing scheme raises public revenues as discussed in Section II. We abstract from any additional revenues for the employment agency due to higher profits and focus on the additional tax revenues and the reduced expenditures only, which are equal to 19 430 Euro per year per worker (cf. Bach and Spitznagel 1998). We also abstract from additional tax revenues and savings from those taking up jobs without having been officially unemployed before. The initial total budget surplus of a 1.2 percentage point reduction in the unemployment rate is 7.8 billion Euro. As a one-percentage point reduction of the labour tax rate reduces tax revenues by roughly 7.7 billion Euro, revenue-neutral cuts in the labour tax rate would allow the government to reduce the labour tax rate by 1.2 percentage points. In connection with the elimination of the unemployment insurance contributions this sums up to an overall reduction of the gross wage rate by 6.4 percentage point. The pure substitution effect of the tax rate cuts thus finally leads to a reduction in the standardized unemployment rate by 1.4 percentage points, down to 6.6%. These results are reported as Estimate I in *Table 1*.

The second estimate takes account of the cost reduction effect. Due to lower labour costs, the total cost of production decreases by 3.7 percent (assuming a cost share of labour of 2/3). For an output demand elasticity of equal to one, this would lead to an initial increase in employment by 1.6 million, which is equivalent to a reduction of the unemployment rate by 3.2 percentage points. This in turn would result in an initial total budget surplus of 21.8 billion Euro, which allows the government to reduce the labour tax rate by 5.1 percentage points. A revenue-neutral rebate would thus reduce gross wages by a total of 9.7 percentage points. This would result in the creation of 2.9 million new jobs, which is equivalent to a more than 70% reduction of current unemployment.

These two calibrations assume a constant net-of-tax wage rate. It might be illustrative to contrast these results with some empirical estimates about the long-run effects changes in the labour tax wedge have on unemployment. Nickell and Layard (1999) regress the log unemployment rate on the total labour tax wedge (among a variety of controls) in a cross-country study with 20 OECD countries over two five-years periods⁸. Using their tax coefficient, a revenue-neutral introduction of a public profit sharing scheme would reduce the gross wage rate by a total of 6.9 percentage points and would result in a fall of the unemployment rate in the long run by 1.6 percentage points, from the current 8% to 6.4% (see Estimate III in *Table 2*).

Daveri and Tabellini (2000) come to different results. They show that the effects of tax rate changes on unemployment differ between three groups of OECD countries. While they did not find any significant effect for countries like the US, Japan or the Scandinavian countries, the tax wedge effect is more pronounced than reported in Nickell and Layard (1999) in countries like Australia, Belgium, France, Germany, Italy, the Netherlands and Spain. They regress the standardized unemployment rate on the effective tax rate on labour income and report a labour tax coefficient between 0.29 and 0.54 (see their *Table 9*, p. 75). Applying their lowest and highest estimate for this group of countries would indicate a long-run reduction of the unemployment rate in the range of 2.2 to 5.6 percentage points (Estimate IV)⁹.

A comparison of the results suggests that, indeed, the pure substitution effect that determines the minimum employment effect provides a lower bound for the estimate of the overall employment effect. Even without considering the cost reduction effect, unemployment can be reduced by 17.5%. Taking the effects of tax rate changes the empirical literature has found, we can expect an even stronger effect on employment.

V. IMPLEMENTING PUBLIC PROFIT SHARING

The last section suggests that public profit sharing can reduce unemployment substantially. However, as pointed out before, there might be only limited scope for public profit sharing to actually become a strictly Pareto-improving measure and hence politically feasible. Any increase in the net-of-tax wage rate is asso-

8. Their tax coefficient of 0.027 (see their *Table 15*, p. 3053) must be multiplied with the unemployment rate to obtain the change in the unemployment rate when the tax wedge decreases by one percentage point.
9. Reutter (2001) finds a long-run effect of labour taxes similar to the lower estimate of Daveri and Tabellini by using German time series data from 1971 to 1991.

ciated with redistribution from profit income to labour income. It is therefore necessary to apply complementary policy measures that ensure public profit sharing to be Pareto improving even in the long run. This section discusses policy options for establishing public profit sharing as a Pareto-improving device in the long run. One possibility is to embed public profit sharing into a ‘compact for employment’. This may be called the Dutch model. Alternatively, the government can tighten unemployment benefit regulations to force trade unions into continuous long-run wage moderation.

1. *The Dutch Model*

In 1982 the Dutch employers’ federation and the trade unions agreed upon working time reduction and wage moderation. Even though it officially was a bilateral agreement it has actually been a tripartite agreement as the government committed itself at the same time to reduce budget deficits and to reform the social security system. This so-called *Wassenaar Agreement* marked a change in the labour relations in the Netherlands and proved that corporatist institutions are not necessarily sustaining labour market rigidities. The Dutch model has become a synonym for a corporatist system

‘with consultation, co-ordination and bargaining over all important issues of socio-economic policy between union federations, employer federations and the government’ (Hartog 1999, p. 484).

A public profit scheme could be implemented within such a tripartite agreement (cf. Schöb 2000). In the first step the labour organisations agree on an upper ceiling for the *net-of-tax* wage rate or its growth path, respectively. This ceiling does not impose any true constraint on the trade unions as it only ensures that trade unions cannot take advantage of public profit sharing by raising the *net-of-tax* wage rate, which they won’t do without the introduction of public profit sharing. Fixing the *net-of-tax wage rate* guarantees the effectiveness of tax policy measures as the whole tax incidence then falls on the producer: a one percentage point reduction in the social security contribution will result in a one percent reduction of the wage cost. The government in turn will abolish the unemployment insurance contribution rate and will finance the unemployment benefit payments via public profit shares. Furthermore, the government commits itself to using any budget surplus to further reduce the labour tax rate and thus promote further job creation¹⁰. Such a compact for employment can be ex-

10. For the superiority of reducing labour taxes instead of, e.g., source-based capital taxes when the *net-of-tax* wage is constant, see Koskela and Schöb (2002).

pected to reduce the unemployment rate in the range of -1.4 to -5.8 percentage points as indicated by the Estimates I and II in the previous section. As argued above, these estimates are calculated for the case where the net-of-tax wage rate is fixed.

2. *Complementary Policy Measures*

If co-operation is not possible, the introduction of public profit sharing alternatively requires additional policy measures that guarantee its economic efficiency and help increase the probability of gaining political consent. The previous analysis shows that the reservation income of the trade union members is crucial for the determination of both the efficiency and distributional consequences of introducing public profit sharing. The government must therefore consider complementary policy measures that ensure that the reservation income does not rise in the long run.

All policy measures, which lower the replacement ratio, will increase the employment effect of public profit sharing while reducing the undesired distributional consequences at the same time. Such policies may comprise the lowering of unemployment benefit payments, the shortening of the unemployment benefit duration, the tightening and stricter enforcement of eligibility rules or the extension of workfare schemes. All these policy measures would reduce the wage pressure due to the introduction of public profit sharing. The Estimates III and IV of the previous section present the lower bound of the expected employment effect since the estimates are based on empirical results that control for any changes in the outside option.

Looking at any of these policy measures in isolation, it is clear that they would be strictly opposed by the trade union, as it would make its members worse off. However, if these measures are introduced in conjunction with public profit sharing, the latter will compensate the workers via a lower unemployment rate. Trade union members' will not be worse off as a reduction of the replacement ratio comes along with greater job security and a higher probability of finding a new job when laid off. Embedding public profit sharing in a broad-based labour market reform thus promises a much higher impact on employment than the empirical estimates quoted above suggest. And it can do so without making any side worse off.

VI. CONCLUDING REMARKS

Public profit sharing aims at reducing the wedge that labour taxes and social security contributions have created between the private and social cost of labour by substituting a non-distorting revenue-raising device for a distortionary revenue-raising device. The stronger the effect of reducing the tax wedge is on the gross wage, the stronger the employment effect will be. As our analysis suggests, the employment effect will be substantial if this can be achieved by either heading for a co-operative solution within a compact for employment or by embedding public profit sharing into a broad set of policy measures which ensure the reform to be both efficient in curing unemployment and Pareto improving – a prerequisite for political feasibility.

The incentive effects of a public profit sharing scheme are very much the same as those of a private profit sharing scheme. However, there are some distinct advantages of a public profit sharing scheme. By introducing private profit sharing as suggested by Weitzman (1983, 1985), incumbent workers who accept a reduction in their net-of-tax wage rate for a profit share would lose income if the firm hired more workers. Although a private profit sharing scheme where only insiders receive profit shares – as proposed by Sinn (1999) – could avoid this fall in the incumbent workers' income, they would still be exposed to income risk and it is not clear *a priori* whether the increase in expected income could compensate for bearing additional income risk. Insiders who dominate trade union policy are very likely to impede any private profit sharing scheme.

By contrast, incumbent workers would be indifferent to public profit sharing if they faced no unemployment risk (due to, e.g., seniority rules etc.) but would welcome public profit sharing if it reduces their risk of becoming unemployed. Income risk is borne entirely by the public sector, which could easily consolidate idiosyncratic shocks between sectors and intertemporal shocks between booms and busts. There is thus no reason for trade unions to object to the introduction of public profit sharing. Of course, to avoid changing the long-run distribution of income, public profit sharing requires either co-ordination between the government and the labour organisation or implementation within a broad-based labour market reform. But trade unions should be more than happy to give guarantees to shareholders that public profit sharing will not weaken their income position in the long run or to accept any complementary policy measures that provide these guarantees.

High unemployment has persisted in some European countries for nearly three decades now. It is frequently argued that many countries are still reluctant to undertake the necessary labour market reforms because the medicine prescribed

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'is bitter and hard for many countries to swallow, especially insofar as it appears to raise concerns about equity and appears to threaten some of the rents and privileges of insiders' (Elmeskov et al. 1998, p. 242).

Improving labour market efficiency, however, allows the government to increase the cake that has to be divided between workers and shareholders. Thus there is – at least theoretically – scope for Pareto-improving labour market reforms. To describe labour market reforms as a necessarily bitter and hard to swallow medicine implicitly assumes that the governments lacks a sufficient number of policy instruments to deal with both efficiency and equity considerations. This papers argues – in line with Orzag and Snower (2000) – that this trade-off is no exogenous constraint on policy making and identifies public profit sharing as at least one promising policy instrument to boost employment without affecting existing income positions negatively. Indeed, public profit sharing can benefit all parties who are directly or indirectly affected by the labour market outcome.

The implementation of such a policy requires politicians to be open to new ideas and willing to experiment with a new type of employment policy. Whether a public profit sharing scheme can be successfully implemented in the political process, however, does not depend on whether it is improving the positions of political actors with respect to the status quo. Rather it depends on whether it is an improvement compared to alternative scenarios any party may expect. The best conceivable world for shareholders, of course, is a deregulated labour market as in the USA and the UK. By contrast, trade unions may be in favour of the introduction of a public profit sharing scheme but may refuse to accept any complementary measures. Both scenarios would imply that the existing distribution alters. Given the power of both employer organisations and the trade unions in most European labour markets, this will not happen. Thus, as long as any side insists on the fulfillment of its respective maximum demands, fundamental labour market reforms will be blocked. This is what we observed in many European countries for the last two decades. The alternative to a labour market reform that takes account of the political constraints will then be that unemployment will continue to remain at a pervasively high level.

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SUMMARY

Many countries suffer from persistently high unemployment rates. The scope for labour market reforms is often limited to measures that hurt neither shareholders nor workers. This paper develops a policy proposal, which allows the government to reduce wage costs without changing the income positions as determined in the process of wage negotiations. It is shown that the introduction of public profit sharing, i.e., substituting profit shares for social security contributions, can boost employment both in the short run and the long run. Calibrating the model and comparing the results with recent empirical findings about the impact of labour taxation confirm the theoretical findings.

ZUSAMMENFASSUNG

Viele Länder leiden unter anhaltend hoher Arbeitslosigkeit, da arbeitsmarktpolitische Massnahmen im politischen Prozess meistens nur dann Aussicht auf Erfolg haben, wenn sie weder Arbeitnehmer noch Aktionäre gegenüber dem Status quo schlechter stellen. In der vorliegenden Arbeit wird ein Reformvorschlag entwickelt, der es der Regierung erlaubt, die Lohnkosten zu senken, ohne diejenigen Einkommenspositionen zu verändern, die sich aus den Lohnverhandlungen zwischen Unternehmen und Gewerkschaften ergeben. Die Arbeit zeigt, wie die Einführung einer öffentlichen Gewinnbeteiligung durch den Ersatz der Beiträge zur Arbeitslosenversicherung durch staatliche Gewinnanteile die gesamtwirtschaftliche Beschäftigung kurz- und langfristig deutlich erhöhen kann. Die an die theoretische Analyse anschliessende Kalibrierung des Modells unter Einbeziehung jüngerer empirischer Analysen zur Wirkung von Lohnsteuern auf die Beschäftigung bestätigt die theoretischen Ergebnisse.

RÉSUMÉ

Nombreux sont les pays qui souffrent de façon persistante d'un taux de chômage élevé. En outre, les réformes du marché du travail se doivent souvent d'être consensuelles, de manière à ne léser ni les travailleurs, ni les actionnaires. Dans cet article, une proposition de politique économique est présentée, qui possède l'avantage de réduire les coûts du travail sans affecter les revenus déterminés lors des négociations salariales. Il est montré que l'introduction d'un partage du *profit public*, substituant les cotisations de sécurité sociale par des parts de profit, peut augmenter le niveau de l'emploi à court et à long terme. Après calibrage du modèle, les résultats empiriques obtenus confirment les conclusions théoriques.