

TAX LEVEL AND TAX INTERNALIZATION EFFECTS ON UNION WAGE
BARGAINING**

BY

L.F.M. GROOT*

Summary

High taxes and generous social benefits are often blamed for causing unemployment. The conventional view is that if taxes on labour are (too) high, jobs will be lost and that generous social benefits will exert an upward pressure on unions' wage claims. In the case where unions co-ordinate their wage bargaining strategy, this need not be the case. A simple model is used to illustrate the effects of the tax rate level and tax internalization on unions' wage bargaining strategy. A high marginal tax rate along with endogeneity of the average tax rate shifts the union's trade-off between wages and employment in favour of the latter. These shifts may have contributed to the success of the so-called 'polder model' or 'tulip model' of the Netherlands.

Key words: tax internalization, trade unions, unemployment, wage bargaining

1 INTRODUCTION

In the seminal article of Calmfors and Driffill (1988), the absence or presence of the internalization of the negative external price effects of wage bargaining produced a hump-shaped curve, with the degree of centralization of wage bargaining on the horizontal axis and real wages (unemployment) on the vertical axis.¹ The same phenomenon was also briefly explained (*ibid.*, section 5.3, p. 39) under the heading of 'Fiscal externalities': 'Large unions realize that the real after-tax gains of nominal wage rises are reduced as taxes are raised when spending on unemployment benefits increases and the tax base shrinks.' In other words, in a situation of centralized wage setting, not only the negative effects of higher nominal wages on overall labour demand and prices are taken into account, but also the effect of rising unemployment and higher social expenditures on the tax rate. However, taking into account the tax internalization effect on union bargaining

* Correspondence to Loek Groot, Dept. of Political Science, OZ Achterburgwal 237, 1012 DL Amsterdam, The Netherlands. E-mail: groot@pscw.uva.nl.

** I wish to thank Lex Borghans, Marga Peeters and two anonymous referees for helpful comments on earlier drafts.

¹ The main thrust of the article is to empirically test the hypothesis that 'both heavy centralization and far-reaching decentralization are conducive to real wage restraint, whereas intermediate degrees of centralization are harmful' (*ibid.*, p. 15).

strategies comprises only half of the story. There can also be an important mitigating effect on gross wages arising from the *level* of the tax rate.² The purpose of this paper is to address the combined influence of the *tax level* and *tax internalization* effects on union wage bargaining and to elaborate on the conditions which are required for these effects to become operative.

This article proceeds as follows. Section 2 discusses the distinction between the tax level and tax internalization effects and outlines the conditions under which these effects are operative. In section 3 a simple analytical model is presented in order to see whether it makes any difference if the unions treat the tax rate as an endogenous variable or not. Section 4 discusses the relevance of both effects in explaining the alleged success of the polder model in the Netherlands. Conclusions can be found at the end.

2 TAX LEVEL AND TAX INTERNALIZATION EFFECTS

The strength of the tax level effect (henceforth TLE) depends, as its name indicates, on the level of the tax rate. The higher the tax rate (t), the higher the required gross wage increase (dw) for a given increase in the net wage (if the latter increases by one Euro, then $dw = 1/(1 - t)$). Since labour demand depends negatively on the level of gross wages, the cost, in terms of employment loss, of a strategy aiming at higher net wages is higher, the higher the tax rate. To illustrate, suppose the marginal tax rate is at an extremely high level of, say, 90%. To raise the net wage by one Euro per hour, unions have to demand a gross wage increase of ten dollars per hour. However, this gross wage increase will significantly reduce the demand for labour, probably to such an extent that it is in the interest of unions to adopt a strategy of wage restraint in order to raise the level of employment by means of a 'wage restraint-induced' increase in labour demand. Summarizing, the higher the (marginal) tax rate, the stronger the inclination of unions to mitigate wage claims in the bargaining process.

The mitigating effect of tax internalization (TIE) on wages operates through the link with the social security system. A lower employment level due to overall wage growth increases the number of persons receiving social benefits, leading to higher overall tax rates (for given benefit levels), which in turn reduces the rise in net wages as a result of higher gross wages.³ The TIE does not work under decentralized wage setting, therefore gross wages will be lower, and employment

2 Hersoug (1984) and Hersoug et al. (1986) address the effect of the tax rate level on wage bargaining, to wit the effect of changes in tax parameters on negotiated wages, but not the effect of tax internalization. Tax rates are assumed to be exogenous: 'When the wage contracts are negotiated, the tax schedule of the year in question has already been decided by the Norwegian Parliament, and is thus known to the parties' (Hersoug et al. (1986), p. 406).

3 Or the other way around, as formulated by Calmfors and Driffill (ibid., p. 39): 'It is still the case that an increase in employment requires a reduction in the real product wage (the pre-tax nominal wage deflated by the output price). But as employment increases, the tax base (the value of GDP in

higher, under centralized wage setting compared to those under decentralized wage setting.⁴

The common link between the TLE and TIE is the potential mitigating influence on gross wage demands by unions, but there are some differences between the two. These differences determine whether, and to what extent, unions' trade-off between wages and employment is shifted towards the latter. Firstly, the working of the TLE is independent of the degree of wage bargaining centralization (or the extent of co-ordination between unions). The strength of the TLE is equally powerful for a monopoly union representing all workers in the economy as it is for separate unions each representing a minority of workers, say the workers of a particular branch of industry. Since both face the same (sector or industry-specific) labour demand curve, the loss in employment due to higher gross wages is independent of whether these wage increases are obtained by a nation-wide organized union or a branch-wide union representing only the workers of a particular sector.

In contrast to the TLE, the degree of centralization is of crucial importance for the working of the TIE. For a small union, representing only a minority of workers, it is not rational to take into account the effect of higher gross wages on the overall level of employment and hence on the tax rate. This is only likely to occur if the degree of centralization or co-ordination is high,⁵ with the monopoly union and a unionization rate of 100% as the limiting case. The monopoly union will take into account the fact that higher economy-wide wages reduce the overall level of employment and successively increase unemployment, social security outlays and ultimately, probably with some time lag, the tax rate. Therefore, the TIE mechanism of wage restraint stated by Calmfors and Driffill only refers to the case where the degree of centralization of union power is high.

Secondly, it is the level of the *marginal* tax rate that is relevant for the TLE,⁶ whereas the rise in the *average* tax rate is what matters for the TIE. Indeed, Ge-lauff (1995, p. 73), briefly referring to what is here labelled as the TLE, states that 'A higher marginal tax and premium rate of employees... reduces workers' marginal utility of wages and lowers the wage rate. With a higher marginal tax and premium rate, a one percent higher gross wage rate yields less net income.

the case of a uniform income tax) grows and expenditure on unemployment falls. This induces a fall in the tax rate which tends to offset the fall in the net consumption real wage (the after-tax consumption real wage).'

4 'The conclusion is that the internalization of tax effects is likely to lower real wages under centralization substantially compared to decentralization. Income taxes on workers break the symmetry between maximum centralization and maximum decentralization...' (*ibidem*). The absence or presence of tax internalization explains why the level of real wages is higher at the left side (decentralization) compared to the right side (centralization) of the hump.

5 In this respect, the degree of coverage is also an important variable.

6 A broader term for the TLE in the union bargaining literature is the effect of tax progression (essentially increasing marginal tax rates) on wages and employment.

Hence the bargaining parties are better off when they reduce the wage rate and increase employment. So even when the average tax rate is high, a low marginal tax rate means that it is still attractive for unions to aim at higher gross and net wages. Also note that with the TIE it does not matter whether the government finances public expenditure by means of high marginal tax rates in the lower, middle or high income tax brackets. What matters for a centralized union representing all workers, or for unions which co-ordinate their strategies, is the concomitant rise in the average tax rate following a wage increase, which determines the part of negotiated gross wages that ends up as net income in workers' pockets.

Finally, there is a difference regarding the interaction with the social security system. The TIE implicitly assumes that when wages increase, the (average) tax rate also rises. The causal effect here is that higher gross wages reduce employment and increase unemployment, giving rise to higher social security spending, which in turn has to be financed by higher tax rates. However, this is not necessarily the case. The government may choose to cut back the level of social benefits in order to keep tax rates constant if, as a result of higher negotiated wages, the tax base shrinks. For the TLE, however, it is irrelevant whether the marginal tax rates are high due to generous social benefits, high spending on defence, or large government outlays for infrastructure or education.

3 A SIMPLE MODEL ILLUSTRATING TAX LEVEL AND TAX INTERNALIZATION EFFECTS

Apart from the type of model (e.g., 'right-to-manage,' Nash bargaining, efficient bargaining), the wage bargaining outcome is determined by the reservation wage of workers. The reservation wage is defined as the wage level below which workers do not wish to supply labour. The reservation wage is therefore an important determinant of the outcome of the bargain. There are two variables that may influence the reservation wage. The first is the level of social benefits,⁷ and the higher these benefits, the better the fall-back position of workers, and hence, the higher the unions' wage claims.⁸ Secondly, the reservation wage may vary with alternative wages in the non-union wage sector and also with the state of the labour market. If union members have easy access to employment in the non-union wage sector, the reservation wage will be close to the level of the prevailing wage rate in that segment of the labour market. Since in the Netherlands almost all workers are subject to collective wage agreements, I do not include a

⁷ Or more generally, both the level of benefits and the conditions of entitlement.

⁸ According to Siebert (1997, p. 52): 'It is already generally true that in wage negotiations, trade unions pay attention to the level of unemployment only to some extent and only with a time lag. But if the unemployed are more-or-less protected by governmental schemes, trade unions have a reduced incentive to consider what sort of impact wage rises will have on unemployment. In a way, the wage cartel shifts the burden of its behavior to a third party – the government or the taxpayer.' Clearly, this line of reasoning neglects the importance of the TIE on wage bargaining (see section 2).

non-union wage sector in the model. To simplify matters further, I assume a single proportional tax rate (no tax allowances and no tax progression),⁹ that social benefits (social assistance, unemployment, sickness and disability benefits) are linked to the average gross wage, and that the unions' utility function¹⁰ has two arguments, *net wage income in excess of the (fall back) social benefit* and the *number of workers* employed at the negotiated wages:

$$U = [(1 - t)w - kw]L \text{ with } L = L(w). \quad (1)$$

Equation (1) states that the unions' utility (U) is equal to the difference between *net wages* ($(1-t)w$) and the *social benefit* (kw), multiplied by the level of employment (L). Obviously, the unions face a trade-off here. A higher negotiated gross wage (and therefore a higher net wage) leads to a lower level of employment consistent with that wage and *vice versa*. Workers who do not succeed in finding employment receive a social benefit. However, besides this direct impact on employment from the negotiated gross wage level (w), there is an important indirect effect on the tax rate (t). To illustrate this, consider the balanced budget equation:

$$twL = kw(L_0 - L) + Gw. \quad (2)$$

Equation (2) states that tax revenues (the LHS) are equal to social security outlays, which is the level of the social benefit (a fraction k of the average gross wage level) times the number of unemployed (equal to the total labour force L_0 minus employment), plus all other government expenditures (proxied by Gw). These other government expenditures (e.g., on education, health, defence, infrastructure, etc.) are assumed to vary proportionately with the size of the government sector (G measures the number of public servants) and the average gross wage level.¹¹ Equation (2) can be rewritten as:

$$t = \frac{k(L_0 - L) + G}{L}. \quad (3)$$

9 For a detailed analysis of the impact of tax allowance and tax progression on union behaviour, see Koskela and Vilminen (1996). They find that in all popular models of trade union behaviour, tax progression is good for employment. Basically, this result is due to the TLE referred to above in section 2, since they hold tax revenues of the government constant.

10 Several alternative approaches can be found in the literature. Simons (1944) assumes that the unions try to maximize per capita income; Rosen (1970) and Menil (1971) assume that the union tries to maximize the wage bill in excess of the wage bill at competitive market clearing wage rates. In a seniority model, the only argument in the union utility function is the net wage.

11 So assuming that wages in the public sector follow the overall wage increase in the private sector.

The tax rate depends positively on the generosity of social benefits (represented by k) and on the size of the government sector (G), and negatively on the level of employment. Given k and G , union behaviour indirectly determines the tax rate through the effect of gross wage increases on the employment level. When unions take into account the effect of wage increases on the employment level and hence on the tax rate, they have equation (3) in mind, which expresses that a declining employment level pushes the tax rate upwards.

The relative strength of the TLE and TIE can now be derived by taking the total derivative of union utility U , which is the function $U(w, L(w), t(L(w)))$. Assuming that k and G are fixed, maximizing (1), subject to the labour demand constraint ($L(w)$), requires (subscripts denote partial derivatives):

$$dU = 0 = U_w dw + U_L L_w dw + U_t t_L L_w dw . \quad (4)$$

The first two terms on the RHS of (4), the net wage effect (NWE) and the employment effect (EE), together comprise the TLE, while the third term is the TIE. Differentiating equation (1) accordingly gives:¹²

$$\frac{dU}{dw} = (1 - t - k)L + (1 - t - k)wL_w + (t + k)wL_w . \quad (5)$$

The first term on the RHS of (5), the NWE, indicates that as the gross wage increases, union utility increases by the net wage differential $(1-t-k)$ times the number of workers. The second term, the EE, measures the effect on employment of a gross wage increase ($L_w < 0$). The loss in union utility is measured by the lower number of workers who receive the net wage differential. The third term, the TIE, represents the effect of a gross-wage-increase-induced rise in the tax rate on union utility. At the optimum combination (w^* , L^*), the sum of the three effects is equal to zero. Therefore, the absolute size of the NWE will always be greater than the absolute size of either the EE or the TIE because the latter two, which are negative, must together compensate the positive NWE. Note that the NWE and EE are weak, and the TIE is strong, if the tax rate and the social security parameter are high: part of a gross wage increase is taxed away, social benefit recipients also benefit, and government expenditures will rise significantly due to the link between social benefits and other government expenditures to gross wages. The TLE and TIE thus work side by side: a high (marginal) tax rate means that large increases in gross wages result in a small increase in net wages, while at the same time a high share of the public sector (social security and other government expenditures) leads to a significant rise in the tax rate when gross wages increase.

12 Using (3), $(kL_0 + G)/L = (t + k)$; $t_L = -(kL_0 + G)/L^2$.

Using this simple model, it is easy to see what a difference the presence or absence of the TIE makes. If unions assume the tax rate to be exogenous, and the labour demand elasticity ε is defined as $L_w w/L$, then their objective is to maximize U according to:

$$\frac{dU}{dw} = 0 = U_w + U_L L_w = (1 - t - k) (1 + \varepsilon) L, \tag{5'}$$

so $\varepsilon = -1$, compared to (see equation (5), but now rewritten as):

$$\frac{dU}{dw} = 0 = ((1 - t - k) + \varepsilon) L,$$

where the tax rate is assumed to be endogenous, giving $\varepsilon > -1$. The crucial difference is that (co-ordinating) unions that take the tax rate to be endogenous are prepared to exhibit wage restraint beyond the point where the labour demand elasticity is (minus) unity. The unions' perceived tax endogeneity creates a shift towards wage restraint in return for higher employment. This is shown in Figure 1 where two iso-utility curves are drawn, one corresponds to unions' utility where the tax rate is taken to be exogenous and the other corresponds to utility when an endogenous tax rate is assumed.

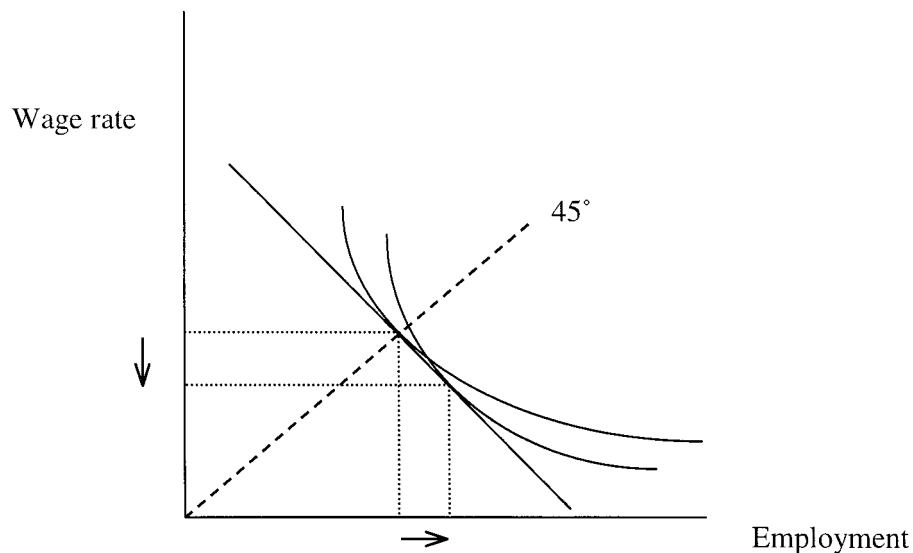


Figure 1 – Optimum wage and employment levels with and without tax internalization (the arrow indicates the tax internalization effect).

Perceived tax endogeneity entails greater willingness of the unions to trade-off wages against employment, because part of the gross wage reduction is compensated for by a cut in tax rates, so the utility curve is steeper than it would be in the absence of the TIE. In other words, unions are willing to trade-off a larger gross wage reduction in return for the same increase in employment along the iso-utility curve *vis-à-vis* the case where the TIE is not taken into account.

4 TWO INTERPRETATIONS OF THE SUCCESS OF THE POLDER MODEL

The impact of tax level and tax internalization effects, and notably the absence or presence of the latter, on wage bargaining may be relevant in explaining the alleged success of the polder model in the Netherlands. Employment growth between 1983-1999 in the Netherlands was the highest among all OECD countries, while the annual real wage increase in this same period was less than in any other OECD country (see OECD (1999)). In what follows, I will address the question of whether the success of the polder model in the last two decades (continuing employment growth, modest real wage increases, a steadily decreasing budget deficit, boosting profits, and the maintenance of rather generous social benefit standards), can be explained by either the working of the TLE or the TIE, or both. I deliberately ignore alternative explanations.

According to the TLE version, Dutch trade unions have each independently¹³ decided to adopt a wage-restraint policy due to relatively high marginal tax rates. In the Netherlands, the bulk of workers, including the median and average wage earners, face a marginal income tax rate of 40 or 50% (only 3% of all taxpayers have to pay the highest marginal tax rate of 60%). If so, unions must have valued the net wage gain of approximately half the gross wage increase for those workers who remain employed as less than the employment loss due to the increase in gross wages.¹⁴ Whether this is the case or not depends upon the labour demand elasticities in different sectors of trade and industry. The effect of wage moderation on employment growth is strong if the elasticity of labour demand is high (a realistic assumption in a very open economy such as the Netherlands). Therefore, we would expect a stronger tendency towards wage restraint in sectors of the economy with the highest labour demand elasticities (e.g., the tradables sector). This is confirmed by Lever and Werkhoven (1996, p. 101) who found that the export shares in manufacturing industries exert a statistically significant downward pressure on sectoral gross wages. Moreover, the largest trade unions (FNV and CNV) in the Netherlands pretend that they also represent the interests

13 As argued above, the mitigating effect of the marginal tax rate on gross wages does not depend on the degree of centralization of wage bargaining or union power.

14 I use gross wage increases as a shorthand for wage increases exceeding labour productivity growth and changes in consumer prices.

of the unemployed, which makes it more difficult for unions' representatives to 'sell' significant gross wage increases as long as unemployment is still high.

This interpretation has some important drawbacks. Firstly, if a continued policy of wage restraint is successful in enhancing the level of employment, then in time (marginal) tax rates may decline, causing unions to have a renewed interest in demanding gross wage increases. In other words, a TLE-induced policy of wage restraint will only continue as long as the marginal tax rate remains high. Therefore, the rational response for the government in this case is not to lower marginal tax rates across the board, because of lower spending on social security and higher tax revenues due to a broader tax base, but to keep marginal tax rates high, e.g. to raise the level of the tax allowances, or to raise government expenditures on infrastructure, education and health care, or to quickly reduce the accumulated public debt. As argued in section 2, it is the marginal rather than the average tax rate that determines the TLE. The marginal tax rate for the middle income tax bracket has not been much reduced since 1982, despite the impressive increase in the employment-population ratio since then. In fact, the higher tax revenues have been used to reduce the budget deficit, to finance additional governmental spending, to raise tax exemption levels, and to broaden income tax brackets. Salient in this respect is the fact that the marginal tax rates are to be reduced across the board in the tax reform of 2001.¹⁵

Secondly, the higher the marginal tax rate, the stronger the unions' incentive to aim at improving non-wage elements of the labour contract, e.g. working time reduction, better conditions of employment, schooling programs, early retirement schemes, sabbatical and parental leave, etc. Since these non-wage improvements go largely untaxed, one may expect that unions, facing high marginal tax rates, will adjust their list of demands. Although working-time reduction was one of the elements of the 'Social Accord of Wassenaar' in 1982, this shift in strategy from wage towards non-wage improvements has only started recently.

Finally, the main weakness of the TLE version is not that it is difficult to say whether a marginal tax rate of 50% is high enough to deter unions from demanding gross wage increases higher than labour productivity growth rates, but that in other European countries, like the Nordic countries, marginal tax rates are comparable to those in the Netherlands while wage moderation in these countries is much lower. We have not yet heard of a 'fjord model' in Norway or a 'lake model' in Sweden and Finland. Moreover, it does not explain why unions in the Netherlands have only adopted the policy of wage restraint from 1982 onwards, and not before. One might argue that the bad state of the Dutch economy in the beginning of the 1980s urged the parties involved to co-ordinate their policies in order to internalize externalities and overcome free-rider behaviour, but for the

15 The cutback in marginal tax rates is much higher in the higher and middle income tax brackets (from 60 to 52%, and from 50 to 42%, respectively) than in the lower income tax bracket (from 36.35 to 36 or 32%).

TLE to work no such co-ordination is required. This brings us to the question of whether the TIE can be held responsible for the success of the polder model.

A benevolent interpretation of the tax internalization version is as follows. The wages of nearly 85% of all employees in the Netherlands are subject to collective wage agreements, even though the unionization rate is much lower.¹⁶ This is mainly due to a legal extension of wage bargains struck between employers and unions for almost all workers, set by the Minister for Social Services and Employment. Following the argument expounded in the previous sections, the mitigating influence of the TIE on wage demands by unions will only occur if the degree of co-ordination or centralization is high. However, the Netherlands are classified by Calmfors and Driffill (1988, p. 18) in the upper-middle group, that is, in between the countries classified as centralized or decentralized.¹⁷ So if one wants to uphold the TIE version, some reasons have to be given as to why the unions in the Netherlands¹⁸ may have co-ordinated their wage bargaining and behaved as if they were centralized and why the TIE was only operative in the 1980s and 1990s, and not before.

According to Visser and Hemerijck (1997), the success of the polder model rests to a large extent on a concerted strategy of wage moderation by unions, employers organizations and the government (the three parties or 'social partners' in this tripartite consultation process), laid down in the foundational 'Social Accord of Wassenaar' in 1982. Since then the Dutch system of industrial relations has moved in the direction of a 'dual bargaining system,' whereby 'frame' agreements set the pace for bargaining at the level of sectors and firms. At that time, in the middle of a recession, unemployment reached an all-time high, together with a steadily rising government budget deficit. It was clear to all parties that something had to be done to change the direction in which the economy was moving. The outcome of this informal agreement was to pursue a policy of wage restraint, which, if successful, was expected to be followed by employment growth and reductions in the tax burden imposed on workers. This policy of wage restraint is one of small steps, continued for a long period of time. In return for the unions' voluntary imposed restriction on wage demands, employers, besides

16 The unionization rate (number of union members divided by the number of employed workers) was 33% in 1980 and 26% in 1993 (see Klandermans and Visser (1995)).

17 Soskice (1990, 44), however, classifies the Netherlands (and Germany) among the more centralized countries because 'the incorrect assumption by Calmfors and Driffill [is] that the level of co-ordination is the same as the formal level at which bargaining takes place. The industry is the main formal level of bargaining in Germany and the Netherlands... But in neither Germany nor the Netherlands is it true that bargainers believe that they have no effect on bargains in other industries, and that no co-ordination takes place across industries. Co-ordination in both countries is across industries, at least tacitly.'

18 There are roughly four unions: FNV (65%), CNV (20%), MHP (9%), and AVC (6%) with the percentages in parentheses indicating their shares in the total number of union members. Source: CBS (1996).

expanding employment, would accommodate other union requests (e.g., working-time reduction, additional schooling and early retirement programs). The government must try to maintain social benefit standards, while at the same time reduce the tax burden for citizens. Implicit in this mutual exchange is the view that modest wage increases will stimulate employment growth, which in turn lowers the number of people receiving welfare benefits, lowers tax rates, and helps to sustain the welfare arrangements as well.

The informal agreement about the future course for the Dutch economy may have committed all parties to this mutual exchange, and it may have led to the result that different unions have exhibited wage restraint by virtue of co-ordinating their wage bargaining strategies. The legal extension of collective wage agreements for workers and employers not involved in the collective wage bargaining strengthened this reconciliation of opposing interests, since the hidden threat is that it will not be applied when sectoral wage increases are too excessive. To summarize, although as a rule the level at which wage bargaining takes place is at the industry or sector level, the co-ordination (especially the broad contours and upper boundaries which unions have chosen to abide in consenting to the 'frame agreement') takes place at the national level. Together with the legal-extension instrument for collective wage bargains, the comprehensive index of centralization is high for the Netherlands. Moreover, the co-ordinated effort of wage restraint is facilitated by the fact that the Netherlands is a small economy, in which all representatives of the parties involved will meet again and again. Also, in a small open economy, the potential employment effect of a continued policy of wage restraint is higher than in a large and relatively closed economy, which may also help to align parties with opposing interests. This might be sufficient to let the TIE do its work.

This interpretation also has its drawbacks, although less stinging than those compromising the TLE. Firstly, if the TIE was present during the period of high employment growth and modest real wage growth (1985-1999), one would expect a fall in the average tax burden as a result of lower social security spending and a broader tax base.¹⁹ This is only the case after 1988. However, one has to keep in mind that the budget deficit declined from 9% in 1983 to less than 3% in 1997, reaching a position of surplus in 1999 onwards. If the budget deficit had remained at its 1983 level, the average tax burden would have declined much faster. Moreover, the decline in the official unemployment rate was more or less compensated for by a rise in the disability and sickness rates, and the employment growth was to a large extent concentrated among people who were not formerly on welfare, in particular women and graduates from school.

19 The TIE does not necessarily lead to a fall in the average tax burden. However, the argument here is that before 1982 the TIE was not operative, whereas it played a role after the Social Accord of 1982. If this is true, one would expect, sooner or later, a fall in the average tax burden.

Secondly, the TIE is only effective if the government does not lower social benefits in response to high or rising unemployment. However, the social benefit levels have fallen sharply (-20%) between 1983-1994 compared to the average net wage level. To cut back benefit levels at a given unemployment level allows the government to reduce the tax burden, but this cannot be attributed to the working of the TIE, which unions are subject to. Reducing the generosity of the social benefits is unrelated to the TIE because the TIE is only concerned with lower tax rates due to lower negotiated gross wages. Following this line of reasoning, one may be tempted to conclude that the government's social policy of moderate welfare retrenchment might have actually led to less wage moderation than would have been the case with the opposite policy, that of raising social benefits. However, this would carry the message too far. In the model, wage dispersion was not taken into account. Raising the social benefit level compared to net wages (leading to higher replacement ratios) would have a significant adverse effect on labour supply, especially among low-wage workers. A policy of higher social benefits is therefore unlikely to improve the employment record in the long run, since sooner or later labour supply will act as a constraint.

In summary, it is difficult to conclude from these casual observations that either the TLE or TIE, or both, have contributed to the favourable development of the Dutch economy in the last two decades. However, granted that in the wake of the 'Social Accord of Wassenaar' centralized or co-ordinated wage bargaining was the rule, the *prima facie* case for the TIE seems to be stronger than that for the TLE. The model also showed that the moderating influence of tax internalization is strong if the share of the public sector (including both the welfare system and the number of workers employed in the public sector) is high, which is the case in the Netherlands.

5 CONCLUSION

The polder model is mainly about the behaviour of and co-ordination between unions, especially their willingness to trade-off wages and employment, the co-ordination between unions and employers, and the interaction between the overall labour market performance and the government's fiscal and social policy. The prevailing view among unions, employers, and government over the last two decades in the Netherlands is that 'wage restraint is good for employment.' However, this, by itself, does not explain why the Dutch unions exercised wage restraint, while unions in other countries did not. When comparing Dutch economy empirical data with data for other OECD countries, it is difficult to conclude that there is a strong mitigating influence of the tax level and the tax internalization effect on unions' wage claims during the 1982-1999 period. In this period real-wage growth was far less than in other OECD countries and employment growth much higher.

When relating the results from the simple theoretical model with the Dutch experience, difficulties arise. Both the mitigating tax level effect and tax internalization effect on unions wage demands are quite demanding in their (implicit) assumptions. Regarding the tax level effect, it is not clear why other countries with similar marginal tax rates did not show wage moderation. Moreover, it does not explain why wage moderation started in the 1980s and not before. The tax internalization effect requires a dominant union, or unions that co-ordinate their strategies, and a willingness by unions to exchange net income for employment (perhaps the most crucial component) as necessary ingredients.

The potential mitigating effect of taxes on wage demands has far-reaching implications for optimal government policy. For instance, an across the board reduction of marginal tax rates, as proposed in the tax reform 2001, is not the best policy. This is because lower marginal tax rates make it more attractive for unions to attain higher net wages by means of demanding higher gross wages. It would be better to raise the level of the tax allowance, or the equivalent tax credits in the new tax system, and keep marginal tax rates unchanged. However, even then there will be a tendency in the long run for the success of the polder model to contain the seeds of its own decline. A continued policy of wage restraint, resulting in growing employment, higher participation rates, and declining average tax rates may in the long term weaken the tax internalization effect, and if labour shortages arise it is likely that the unions will drop the policy of wage restraint. If so, the policy of wage moderation is a temporary expedient, a way of recovering from a situation of high unemployment, and it is unlikely to be a permanent phenomenon.

REFERENCES

- Calmfors, L. and J. Driffill (1988), 'Bargaining Structure, Corporatism and Macroeconomic Performance,' *Economic Policy*, 6, pp. 14–61.
- Gelauff, G.M.M. (1995), *Taxation, Social Security and the Labour Market: An Application. General Equilibrium Model for The Netherlands*, Helmond, Wibro.
- Hersoug, T. (1984), 'Union Wage Responses to Tax Changes,' *Oxford Economic Papers*, 36 (1), pp. 37–51.
- Hersoug, T., K.N. Kjaer, and A. Rodseth (1986), 'Wages, Taxes and the Utility-maximizing Trade Union: A Confrontation with Norwegian Data,' *Oxford Economic Papers*, 38 (3), pp. 403–423.
- Klandermans, P.G. and J. Visser (eds.), 'De vakbeweging na de welvaartstaat,' Assen, Van Gorcum.
- Koskela, E. and J. Vilmunen (1996), 'Tax Progression is Good for Employment in Popular Models of Trade Union Behaviour,' *Labour Economics*, 3 (1), pp. 65–80.
- Lever, M.H.C. and J.M. van Werkhoven (1996), 'Insider Power, Market Power, Firm Size and Wages: Evidence from Dutch Manufacturing Industries,' *Labour Economics*, 3 (1), pp. 93–107.
- Menil, G. de (1971), *Bargaining: Monopoly Power versus Union Power*, Cambridge, MIT Press.
- Organisation for Economic Co-operation and Development, *Employment Outlook 1999*, Paris, OECD.

- Rosen, S. (1970), 'Unionism and the Occupational Wage Structure in the United States,' *International Economic Review*, 11, pp. 269–286.
- Siebert, H. (1997), 'Labor Market Rigidities: At the Root of Unemployment in Europe,' *Journal of Economic Perspectives*, 11 (3), pp. 37–54.
- Simons, H.C. (1944), 'Some Reflections on Syndicalism,' *Journal of Political Economy*, 52, pp. 1–25.
- Soskice, D. (1990), 'Wage Determination: The Changing Role of Institutions in Advanced Industrialized Countries,' *Oxford Review of Economic Policy*, 6 (4), pp. 36–61.
- Visser, J. and A. Hemerijck (1997), '*A Dutch Miracle: Job Growth, Welfare Reform and Corporatism in the Netherlands*', Amsterdam, Amsterdam University Press.

