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An experimental investigation of wage taxation and unemployment in closed and open economies ☆

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Abstract

We investigate experimentally the economic effects of wage taxation to finance unemployment benefits for a closed economy and an international economy. The main findings are the following. (i) There is clear evidence of a vicious circle in the dynamic interaction between the wage tax and unemployment. (ii) Employment is boosted by budget deficits but subsequent tax rate adjustments to balance the budget lead to employment levels substantially lower than theoretically predicted. (iii) A sales risk for producers due to price uncertainty on output markets appears to cause a downward pressure on factor employment. For labor the wage tax exacerbates this adverse effect.

JEL classification: C90; D50; E24; F41

Keywords: Experiments; International economics; Wage taxation; Unemployment

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1. Introduction

For more than two decades now unemployment has figured prominently on the political and economic agenda of many industrialized countries. Although a great number of theoretical and empirical studies exists and many proposals have been made, there is no consensus yet on how to solve the unemployment puzzle (Oswald, 1997).[1]

Welfare state arrangements and the accompanying tax burdens are generally considered as an important factor fostering unemployment. Using European economies as an example, Snower (2000) points out that these arrangements were established under economic fair-weather conditions. Once the weather started to deteriorate they more and more resembled quicksand. Rising unemployment led to higher social transfers, producing higher taxes on a shrinking tax base, which in turn negatively affected employment: "And so the cycle continues" (Snower, 2000, p. 44).

Indeed, quite a few studies point at a positive feedback effect of general taxes and labor taxation (the tax-wedge) on unemployment. Good examples for this group of studies are Tullio (1987) and Daveri and Tabellini (2000). The former author presents an analysis of long-run consequences of tax and public debt increases in Europe and concludes that "tax-financed growth in government expenditure (...) has caused unemployment" (Tullio, 1987, p. 769). In a similar vein, the latter authors provide empirical evidence that in Europe high labor costs are a main cause for high unemployment rates and that these high labor costs are mainly due to high taxes on labor.

Whereas the mentioned studies clearly suggest the possibility of a vicious circle others contest its significance as a cause of unemployment. According to Oswald (1997): "Contrary to conventional wisdom, high unemployment does not appear to be primarily the result of overly generous benefits, trade union power, taxes, or wage inflexibility" (p. 14); and, more specifically: "Payroll taxes alone are uncorrelated with the pattern of unemployment across nations" (p. 8). Consistent with this view, OECD (1990, Annex 6.A) does not find any significant long-run influence of the total tax wedge on labor costs and by implication on employment. Similarly, Gruber (1997) reports that a pay-roll tax reduction of 25 percentage points, which took place in Chile in the early eighties of the last century, had only negligible effects on employment.

Thus, notwithstanding a great number of empirical investigations,[2] the literature seems still undecided regarding the actual vicious nature of labor taxation. Consequently, Nickell and Layard (1999), summarize very cautiously that "the balance of the evidence suggests that there is *probably some* overall adverse tax effect on unemployment and labor input." (Nickell and Layard, 1999, p. 3060; emphasis added). This may not be surprising in view of the many difficulties researchers face in the field concerning the adequate specification of an econometric model dealing with the complexity of full-scale economies and the serious lack of data (see e.g. Nickell and Layard, 1999; Nickell et al., 2005).

From this perspective, it seems worthwhile to make use of a relatively novel, complementary approach: Laboratory experimentation, which is also empirical but allows

[1]See also Economic Policy (1997, p. 217) and Nickell et al. (2005).

[2]For further evidence see, e.g. Elmeskov et al. (1998), European Commission (1994), Nickell and Layard (1997), Pissarides (1998), Sørenson (1997). For a relatively early theoretical study showing the possibility of a "*crowding-out-effect* with massive unemployment", see van Praag and Halberstadt (1980).