WELFARE COST OF HIGHER TAX RATES: 
AN EMPIRICAL LAFFER CURVE FOR THE NETHERLANDS 

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1 INTRODUCTION 

Adam Smith states in The Wealth of Nations: ‘high taxes, sometimes by diminishing the consumption of the taxed commodities, and sometimes by encouraging smuggling, frequently afford a smaller revenue to government than what might be drawn from more moderate taxes’ (Book V, chapter II).1 This quotation describes the nucleus of the mechanism underlying the so-called Laffer curve: at high tax-rates there is a great chance that tax revenues will fall after a rise in tax-rates. 

As people don’t like to pay taxes, they will undertake actions in order to minimise the amount of taxes paid. Such behaviour can be legal (tax avoidance) or even illegal (tax evasion). It is not, of course, confined to the taxes on (consumer) goods to which Adam Smith refers but is found likewise in respect of income taxes (falling labour supply, tax deductions, working in the black economy). The motive behind evasive behaviour is that taxation means a welfare loss for economic agents. It not only directly affects disposable income; on top of the burden of the payable tax comes the so-called excess burden, the welfare cost caused by substitution processes as a result of changed relative prices. 

Such substitution processes entail a shrinking tax-base. Depending on the intensity of this reaction (measured by the level of the elasticity of substitution), total tax revenues will either rise or fall when the tax rate goes up; enter the Laffer curve. The Laffer curve and the welfare cost of higher taxes are central to this article. 

The subject of this article is the welfare cost of taxation as such. The possible contribution to social welfare of government spending (e.g. public goods) - financed by tax revenues - is well recognized, but is beyond the scope of this article. This article considers only the impact of taxation on the allocation decisions of households.

* The authors wish to thank Professor F.W. Rutten, J. van Sinderen and other colleagues at the Directorate for Macro-economic Policy of the Ministry of Economic Affairs for their stimulating support and critical remarks. J. Hulsman translated the original Dutch draft. 

1 Quoted by D. Fullerton (1982).
The overall picture of the welfare cost of taxation can be obtained by analyzing the effects of a tax measure in the context of a general equilibrium model. Research in this field has been done especially by Fullerton, Shoven and Whalley, following in the footsteps of Harberger.² Keller has developed a comprehensive equilibrium model for The Netherlands. The models developed by Fullerton et al. and Keller are in some respects rather detailed.³

Stuart, and to a lesser extent, Hansson, have returned to a more simple approach. A simple equilibrium model with two sectors (a formal and an informal one) serves for estimating the welfare cost of taxes on labour and the Laffer curve. Fullerton (1982) also presents an estimation of the Laffer curve, based on a small general equilibrium model. The research of Stuart and Hansson concerns the United States and Sweden.⁴

This article presents the results of a similar study for the Netherlands. The model used is in close resemblance to Stuart (1981).

2 THE MODEL STRUCTURE

2.1 The Basic Model

The private sector of the economy is represented by one household which produces goods and services in the market sector and in an informal sector. The activities in the (formal) market sector are taxed, while those in the informal sector are not. The latter include housekeeping activities in and around the home, child-care etc., do-it-yourself and voluntary work. Any labour performed in the black economy, generating income that can be spent in the market sector, is left out of consideration in this study. Production in both sectors is described via two production functions, whereby capital stock is assumed to be constant. Hence production is related only to the labour input (sector 1 is the market sector, A, B, a, b are parameters, further notation is obvious):

\[ Y_1 = AL_1^a \]
\[ Y_2 = BL_2^b \]

The amount of labour time that can freely be allocated is limited, of course, being the total available time less the time needed for sleep, etc. and leisure.

\[ L = L_1 + L_2 \]

² Harberger (1962).