



## INVITATION

to the public defence to obtain the  
academic degree of

**DOCTOR OF  
ECONOMIC SCIENCES**

by Tino Berger

**“Identifying and Explaining  
Structural Unemployment”**

Promotor :  
Prof. dr. Gerdie Everaert

Co-promotor  
Prof. dr. Freddy Heylen

**Tuesday May, 6th, 2008  
at 17.00h**

**Room Rector Vermeylen  
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Onderbergen 1 – 9000 Ghent



**Faculteit  
Economie en  
Bedrijfskunde**



## Summary of the thesis

### Doctoral Jury

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The high and persistent unemployment in Europe is one of the biggest challenges for policymakers and labour economists in recent times. Starting at historically low levels in the post World War II period, the rate of unemployment has increased from the mid 1970s to an average level of 9% in both Europe and the US in the mid 1980s. In the aftermath, the labour markets on the two sides of the Atlantic went into completely different directions. While the high level still persists in Europe, the US managed to recover to a low level of unemployment. This thesis is an attempt to explain unemployment from a macroeconomic perspective. It particularly aims at disentangling unemployment into structural and cyclical component. It then investigates factors that drive structural unemployment and the contribution of individual factors.

Chapter 1 and 2 focus on the identification of structural unemployment by estimating the equilibrium rates and the corresponding gaps of three important macroeconomic variables, i.e. output, inflation and unemployment using aggregated data for the us and the euro area. Particular attention is given to model specification and the effects of unemployment persistence on the estimation of structural unemployment. It is concluded that the increase in European unemployment since the early 70s is driven by structural factors. Although cyclical shocks are very persistent, unemployment adjusted to an increased equilibrium rate. In the US however, the degree of unemployment persistence is considerable lower. The estimate of structural unemployment for the euro area in chapter 2 is much smoother than earlier estimates in the literature. We believe that this is the results of accounting for persistence effects, i.e. allowing unemployment to adjust even when inflation has stabilised. The obtained estimates of equilibrium unemployment can therefore be interpreted as a measure of long-run structural unemployment. The policy implication is that expansionary policy can reduce medium-run unemployment due to the persistence in the labour market. In the long-run, however, unemployment can only be reduced by changing labour market institutions which determine structural unemployment. The remaining chapters focus on the explanation of structural unemployment.

We find that existing data of labour market institutions covering the period 1960-1995 are not cointegrated with unemployment in a panel of 20 OECD countries. This implies that applying standard regression technique such as OLS or GLS leads to spurious results. However, this does not mean that there is no relation between structural unemployment and observed labour market institutions. We believe that the missing cointegrating relationship is caused by the presence of unobservable factors in structural unemployment and/or measurement errors in labour market institutions data. In chapter 4 and 5 we therefore propose to use an unobserved component approach in which the missing variables are captured by the Kalman filter. Specifically, we use this model to estimate the impact of labour taxes on unemployment in a panel of 16 OECD countries which are grouped according to their wage-setting institutions. Labour taxes are found to have a moderate impact in continental Europe while the effect is statistically insignificant in the Nordic and Anglo-Saxon countries. Further, by focussing on asymmetry, we find a positive impact of increasing labour taxes in the European and Nordic countries and no impact of decreasing labour taxes on unemployment in these two country groups.

### Curriculum vitae

Tino Berger was born on January 29, 1978 in Bernau, Germany. He studied Economics in Essen, Germany and Birmingham, England. In 2003 he obtained the his MSc in Money, Banking and Finance at The University of Birmingham and graduated at Essen University in 2004. He then started his PhD in October 2004 at Ghent University under the supervision of Prof. Dr. Gerdie Everaert. Tino's research focus is on applied time-series econometrics. His research has already resulted in the publication of two peer-reviewed papers. Various aspects of his research have also been presented at international conferences.