



NÁRODNÁ BANKA SLOVENSKA  
EUROSYSTEM

CHAPTER 13

# ECONOMIC RESEARCH

13





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The role of economic research at Národná banka Slovenska is to study relationships in detail, focusing on the Slovak Republic and the euro area. This particularly involves applied research whose findings may be used in setting NBS's policies or as technical support for other institutions formulating Slovakia's economic policies. Primary areas where economic research at NBS is concentrated include economic development modelling. Other important areas are monetary and fiscal policies, the labour market and financial stability.

Results and findings from economic research are published as reviewed working papers, financial stability reports and policy or occasional papers. In 2008, 10 research papers were published on the NBS website, including two financial stability reports, seven working papers and one policy paper. In addition, each financial stability report includes appendices analyzing special topics (e.g. the real estate market or impacts of the financial crisis). A short description of the published studies is shown in Box 1.

Further regular activities are research department seminars, which are usually organized every week. Approximately once a month, external guests are invited to speak. The most prominent external lecturer in 2008 was Professor David N. DeJong of the University of Pittsburgh, who gave presentation entitled "Structural Guidance for Policymaking: The Past, Present, and Future Directions".

In the area of econometric modeling and forecasting, Národná banka Slovenska is working continuously on the research and development of new tools to support forecasting and macro-economic analyses. At the end of 2008, a new structural model started to be utilized, enhancing analytic tools currently being used for some elements which had as yet not played a role in developing forecasts, as well as an analysis of

economic development scenarios. Implementing such a model brought, above all, a better and more detailed view of the economy's demand side, while allowing factors in supply-side economic development to be surveyed. At the same time, this model allowed Národná banka Slovenska to be incorporated in full into the ESCB's common forecasting process. Work on both existing and new instruments will also continue in 2009.

Like other activities of NBS, research is gradually acquiring an international character. In 2008, a representative of Národná banka Slovenska began participating in discussions among Heads of Research of ESCB central banks. Meetings are usually held once a year with the aim of coordinating ESCB research activities, making data and economic publications available and providing information about common research projects.

During the year, Národná banka Slovenska joined two expert groups which had been established in the Eurosystem. The first is the Wage Dynamics Network (WDN), composed of economists from the ECB and the national central banks in the EU who are focusing on a detailed study of the features and causes of wage dynamics and their implications for monetary policies in European countries. The group's September meeting presented a study on wage inflexibilities.

With Slovakia's entry into the euro area, the country was also invited to join the Household, Finance and Consumption Network (HFCN). This group is composed of statistics-gathering experts, statisticians and ECB economists and experts from the national central banks in the Eurosystem and the statistical offices of some countries. The group's mandate includes implementation and determining financial position and household consumption expenses.



Box 1

WORKING PAPERS PUBLISHED IN 2008

**WP 1/2008 Juraj Zeman and Pavol Jurča: Macro Stress Testing of the Slovak Banking Sector**

In this paper, the authors estimate the impact of a simulated slowdown in the Slovak economy on the Slovak banking sector. They also evaluated, using a vector error correction model, the impact of the slowdown on interest rates and exchange rates, taking into consideration the indirect impact of interest rate and foreign exchange risk via possible worsening of the financial situation of debtors. The results suggest that even a significant slowdown of the GDP growth would not substantially threaten the Slovak banking sector, provided that the response of the monetary policy would be adequate. Given the current portfolio of the Slovak banking sector, this monetary policy would have a positive impact on the Slovak banking sector through the interest rate channel. The shocks to GDP growth that would be left without relevant response in other factors might represent a more noticeable threat.

**WP 2/2008 Michal Benčík: Methods for Detecting Disequilibrium in the Real Economy of the Slovak Republic**

This paper presents nine selected methods for computing disequilibrium in the real economy and applies them to the Slovak Republic. Eight of the methods are used to compute relative output gap and one of them to compute a composite index of disequilibrium. The results of all the methods indicate that the economic development of the Slovak Republic in 1996 to 2006 can be split into three separate stages: disequilibrium growth with an expansive economic policy till the end of 1998, followed by contraction and consolidation from 1999 till 2002 and gradual acceleration of growth from 2003 onwards.

**WP 3/2008 Tibor Lalinský: Competitiveness Factors of Slovak Companies**

The author has studied competitiveness factors of top Slovak companies using a questionnaire survey. Results imply that companies are

aware of the key role of the customers. Due to the stress on production modernization and wide use of information and communication technologies they successfully place their products on foreign markets. However, the final customers are out of their reach. The most important are intracompany factors, particularly company management and cost reduction. High impact was identified also for EU membership and energy costs. Scheduled euro adoption in Slovakia is perceived as a source of competitiveness increase. Companies start to realize the necessity of transition to a higher level of competitiveness based on innovation. Threats arise from potential deepening of labor market disequilibrium.

**WP 4/2008 Mária Marčanová and Ľudovít Ódor: Effective Aggregate Tax Burden in Slovakia**

The paper identifies some weaknesses of the commonly used methodology of macroeconomic tax burden and proposes an alternative solution, which is directly applied to Slovak data. The study identifies two key shortcomings in the standard methodology. The first weakness is the definition of taxes and social security contributions, which also includes, for example, taxes paid by the government to its own pockets. The second problem is related to the definition of GDP, which contains indirect tax and also the added value of the general government, which enters the tax quota denominator. The study concludes the private value added in Slovakia is taxed at approximately 27%.

**WP 5/2008 Michal Benčík and Sandra Tatterská: The Impact of the Euro Introduction on the Banking Sector**

This paper analyses balance sheets and profit and loss accounts of the EU banking sector, identifying profit factors and quantifying the effects of euro introduction. Possible impacts on the Slovak banking sector resulting from euro introduction are quantified as well. During the whole estimation period the profits were a function of the share of bank assets in



### Box 1 – continuation

GDP and the long term interest rate. The introduction of euro was followed by an autonomous drop in banking profits, compensated by emerging positive effects of openness and changes in the ratio of financial investment to GDP. The effects of euro introduction were positive for the Belgian banking sector, mixed in the Netherlands and temporarily negative for the rest of analyzed countries. In Slovakia, with respect to a high degree of openness, rather positive effects are expected, though these might also be negative in the case of unfavorable developments in openness and the ratio of financial investment.

#### **PP 1/2008 An Analysis of Convergence in Slovakia**

At the start of 2008, Slovakia had successfully completed its road towards meeting the Maastricht criteria and fulfilled the essential conditions for the euro to be introduced on 1 January 2009. This study continues a series of regular analyses regarding convergence and assesses both nominal and real convergence of the Slovak economy with the EU average, emphasizing results from the past 12 months. In addition, the analysis discusses developments in the Baltic States and examines fulfillment of the Maastricht criteria in the euro area countries once the euro was introduced. The study also includes an assessment of long-term inflation in Slovakia.

#### **WP 6/2008 Sandra Tatierská: ULC Dynamics of Euro Area Countries and Slovakia in the Long Run**

This paper analyses the ability of national nominal unit labor costs (ULC) of the euro area countries to converge to the weighted average of the EMU and in the case of Slovakia also to the weighted average of V4 countries. Co-integration between individual and average nominal ULC indices was examined. A significant co-integration with the euro area was detected for almost all countries, including Slovakia. This is an important criterion for sustaining the competitiveness of a country without an exchange rate mechanism.

#### **WP 7/2008 Pavel Gertler a Matúš Senaj: Downward Wage Rigidities in Slovakia**

Recognizing the scope of wage rigidity is especially important when setting policies after introduction of the euro and the loss of monetary policy instruments. The aim of the study is to assess the extent of wage rigidities in Slovakia. In the first part, the authors applied methodology proposed by Holden and Wulfsberg with data on industrial level, analyzing both old and new EU Member States. In case of Slovakia, however, it is difficult to interpret results obtained from sectoral data. Therefore the authors analyze individual wage data of Slovak firms in the second part of the study. They conclude that the extent of wage rigidities is relatively small and thus employers are able to adjust total compensation per working hour relatively flexibly.