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Private Consumption and Cyclical Asymmetries in the Euro Area

Experience after the establishment of EMU shows that the behaviour of private consumers differs considerably among member countries and that average and marginal propensities to consume are fairly heterogeneous. In particular, there are clear differences between Germany and the rest of the euro area. These asymmetric consumption functions may be responsible for cyclical divergences within the currency area. The following paper presents an econometric analysis of the available data.

Private consumption is the dominant component of aggregate demand in all member countries of the euro area. The analysis and forecast of cyclical developments therefore require a deeper understanding of the determinants and the dynamic behaviour of private consumption. This applies not only to the aggregate level of the euro area. Asymmetric consumption functions across member countries may be responsible for cyclical divergences within the currency area. As a further consequence, the common monetary stance by the European Central Bank (ECB) incurs different macroeconomic responses across member countries within the union. This may lead to problems in the process of monetary policy decision-making as the common union-wide nominal interest rate may no longer suit the cyclical conditions in all member countries.

Against this background, this paper estimates the macroeconomic consumption functions in the euro area – at the aggregate level as well as at individual country levels. Particular attention is devoted to differences between Germany on the one hand and the group of remaining euro area member countries on the other. More than a decade after the establishment of the Economic and Monetary Union (EMU), sufficient data allow for a detailed econometric investigation. Furthermore, the impact of the recent international financial and economic crisis on the macroeconomic consumption functions in the euro area is analysed.

The list of previous empirical evidence is surprisingly short, in particular with respect to the evidence for individual member countries or member country groups. Empirical analyses typically focus on aggregate consumption functions for the euro area and investigate whether changes in financial or housing assets affect private consumption. Country-specific consumption patterns have not received much attention. This is somewhat surprising, as preliminary empirical evidence shows that Germany and the group of other euro area member countries differ perceptibly in their consumption behaviour. In their 2008/09 report, the German Council of Economic Experts identified considerable differences between Germany

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and the rest of the EMU. Figure 1 illustrates these differences with respect to the developments of output and private consumption after the establishment of the EMU. In direct comparison, German growth was relatively weak in the early years of the monetary union but strengthened considerably in the second half of the last decade. Real private consumption in Germany remained basically unchanged for most of the period and effectively decoupled from output developments from 2005 onwards. In the other euro area countries, in contrast, both consumption and output rose at a similar pace.

The development in the context and aftermath of the international financial and economic crisis of 2008/09 also differs. While the crisis initially led to a stronger decline in German output, the German economy has performed much better than the rest of the euro area afterwards. The level of private consumption remained remarkably robust in this period. In the other euro area countries, in contrast, private consumption and output show a similar pattern over time, whereby consumption displays somewhat lower volatility. Overall and based on an initial approximation, Germany and the other EMU member countries have shown very different behaviour since the establishment of the EMU.

In Germany, private consumption has been quite weak relative to GDP, and private savings have been relatively high by international standards. These intra-union differences in consumption and savings behaviour contribute to imbalances in the balance of payments within the euro area. While other indicators such as unit labour costs and price competitiveness surely also play a role, it is likely that asymmetric consumption and savings behaviour contributed to imbalances within the euro area. Rebalancing within the euro area, i.e. reducing structural imbalances between export-led economies with current account surpluses (such as Germany) and economies with current account deficits (Italy, Spain, Greece, Portugal and Ireland) also requires an understanding of cross-country differences in private consumption and savings behaviour.

Data and Descriptive Statistics

We use quarterly seasonally adjusted data from the IMF International Financial Statistics. Consumption is measured at constant prices as real private consumption of households. Income is measured by using real GDP at constant prices, using the same base year 2000. Greece entered the EMU only in 2001, and thus we only have data from 2001 onwards. Time series for Ireland were only available up to 2007. We thus exclude both Greece and Ireland from the euro area aggregates in order to prevent discontinuities in the aggregate time series. In general, it would be preferable to estimate alternatively the relationship between consumption and disposable household income. Unfortunately, internationally comparable data on private disposable income are not readily available.

Figure 2 shows that average consumption shares differ substantially across the euro area. While Greece consumes about 70% of its GDP, Irish consumption amounts on average to only 40% of its GDP. Most countries, including Germany, have a consumption share between 50 and 60%. The evolution of the consumption share also differs: many countries, such as Luxembourg, the Netherlands, Austria and Germany, experience decreasing shares of consumption in GDP, whereas countries like Portugal show a growing proportion of GDP being spent on consumption. Figure 2 also reveals that consumption shares within the EMU do not converge but rather seem to diverge over time. The same holds if we look at the maximum and minimum consumption shares. Even though the consumption share was nearly constant at the aggregate EMU level, the maximum and minimum shares widen, especially at the end of the time horizon.

The differences in average consumption shares suggest that the contributions of private consumption to demand and output growth also differ across the euro area member countries. Figure 3 shows the country-specific growth performance in the euro area in the period before the financial crisis (1999 to mid-2008). Bearing in mind that these differences are based on average yearly growth rates over a longer time span, the differences are consid-