

Fundamental Aspects of Net External Assets

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A non-technical summary

The project examines static and dynamic aspects of net external assets (NEA) for countries and U.S. states. NEA constitute a fundamental macroeconomic variable which is closely related to the process of globalization.

My project can be divided into four parts. In the first part, I regressed NEA/GSP on GSP (gross state product) per capita in the sample of 51 U.S. states and observed a significantly negative relationship. There was, however, practically no significant relationship between NEA/GSP and SPI (state personal income) per capita. The relationship between NEA/GSP and total GSP was positive but insignificant. There was a negative but practically insignificant relationship between $|NEA|/GSP$ and total GSP (we could expect that larger economies have lower $|NEA|/GSP$). I observed a strongly significantly negative relationship between the growth of NEA and the growth of GSP (or SPI) per capita. The states which were becoming indebted grew rapidly – capital inflows were plausibly used for productive investment. There existed a tendency for β convergence and σ convergence of NEA/GSP in 1977-1992.

For countries, NEA/GDP tended to depend significantly positively on real GDP per capita. Thus, poor countries have a tendency to be net debtors. This observation can be explained theoretically by Stone-Geary preferences (people in poor countries try to escape from low levels of consumption that are close to the subsistence level of consumption to avoid low utility) or by myopic preferences. The relationship between NEA/GDP and total GDP was positive but significant only in some cases. The relationship between $|NEA|/GDP$ and total GDP was negative and typically significant. Theoretically, larger economies are less open to international capital flows and should have lower $|NEA|/GDP$. The growth of NEA/GDP depended relatively strongly significantly positively on the growth of real output per capita. This result is puzzling – it indicates that capital inflows were associated with low output

growth. This important observation questions the efficiency of international capital flows. I observed a very weak tendency for β convergence and a strong tendency for σ divergence of NEA/GDP in the 1970-1987 period.

The above results of the regressions for U.S. states and countries are described in the paper “On the Statics and Dynamics of Net External Assets” (co-authored with Andrea Tóthová).

The second part of my project concerned the problem of measurement of NEA (data quality) and the connection between international capital flows and rates of return on capital. I observed that the NEA data which are based on the cumulated CA are more strongly correlated with NFI (net factor income from abroad) than Sinn’s balance-sheet estimates of NEA. Thus the CA-based estimates of NEA are more reliable (frequently, there are very large differences between alternative estimates of NEA). I used a similar test to assess the quality of the international investment position (IIP) data of the IMF. I observed that the given NEA estimates are of comparable quality as CA-based estimates. A few of the IIP data of the IMF are plausibly wrong – they differ considerably from CA-based data and the NFI test strongly favors the CA-based data.

Using the data of World Bank (1994), I constructed a database of the cumulated CA (relative to initial GDP) in time periods 1970-1974, 1975-1979, 1980-1984, and 1985-1989 for a large number of countries. I studied how the cumulated CA depends on domestic rates of return on physical capital. Theoretically, the given relationship should be negative – countries with high rates of return should have capital inflows. However, I observed no significantly negative relationship if rates of return on physical capital were approximated by ratios of human to physical capital or by real discount rates. This result is puzzling and questions the efficiency of international capital flows.

The results of this second part of the project are included in the paper “On the Measurement of Net External Assets and the Association between the Current Account and Rates of Return on Capital.” The paper is submitted to *Empirical Economics*.

The third part of my project involved a construction of NEA estimates (relative to gross state product) for 8 regions and 51 U.S. states in the 1977-2001 period. I computed these estimates using property-type components of gross state product and state personal income (see Duczynski, AER, June 2000). I adjusted the resulting estimates for aggregate consistency – the sum of NEA estimates for states (or regions) should equal the overall position of the United States. I discovered some flaw in my previous AER estimates – these estimates should ideally be re-scaled by a factor of 0.81. I provide the resulting NEA/GSP estimates in an Excel file. A more extensive description of this research is provided in my paper “Distribution

of Net External Assets in Regions and States of the U.S.A.” In that paper, I present NEA/GSP estimates for 1980, 1990, and 2000. I identify the largest creditors (Florida) and debtors (Alaska, Louisiana, New Mexico, Texas, Utah, and Wyoming). I observe relatively large disparities in NEA/GSP positions of individual states. The given database could definitely be used in future research. I may continue in this research in the future, when new data on gross state product and state personal income are available.

The fourth part of my project includes a simple discussion of a cyclical character of the current account (CA). These results are summarized in my note “On the Cyclical Behavior of the Current Account: Evidence from Developed Countries.” Theoretically, the CA measures a change in NEA. I find that the CA was procyclical in most cases. Neo-Keynesian models provide some prediction for a countercyclical behavior of the current account since imports are a positive function of GDP. My results are inconsistent with these models.

To summarize, my project has addressed a number of important aspects of net external assets. Some of my results, namely the database of NEA/GSP for U.S. regions and states, can be used in future research.