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Abstract

The paper contributes to the economic policy debate of whether it is foreign demand or ‘world-beating’ price competitiveness driving German exports and investigates econometrically the determinants of German exports to countries in- and outside the European Monetary Union (EMU) for the period 1995 to 2014. The long-term relationship between real exports, foreign activity and the real effective exchange rate is estimated in an error correction framework.

The results show that German exports are very sensitive to foreign activity. Germany has benefited from growth dynamics of its trading partners and high income elasticities of demand for German exports suggest strong non-price competitiveness. With regard to exchange rate effects, we do not detect a significant impact of the real exchange rate on intra-EMU exports. However, our estimations provide a stable relationship between the real exchange rate and extra-EMU exports.

Introduction

Since the early 2000s German exports and net exports have grown persistently, generating huge current account surpluses. These surpluses have added to immense current account imbalances within and outside the EMU.

Debate on the causes of current account imbalances and the German export miracle

- **price competitiveness** and diverging unit labour costs (ULC) in the EMU
- **non-price factors, domestic expenditure** and foreign demand dynamics

Stockhammer 2011; Stockhammer/Onaran 2012; Flassbeck/Lapavistas 2013; Sinn 2014; IMF 2017

Danninger/Joutz 2007; Storm/Nastepaad 2014; Schröder 2015; Horn/Watt 2017

policy proposals:

„inflationary rebalancing“
(Stockhammer/Onaran 2012)

policy proposals:

macroeconomic policy mix including golden wage rule (Horn/Watt 2017)

austerity and “open devaluation”
(Sinn 2014)

“industrial restructuring and upgrading” in the European periphery, co-financed by core countries (Storm/Nastepaad 2015)

Aim and Relevance

Aim of the Analysis

To shed some light on the determinants of German exports for the period from 1995 to 2014. Following a few early studies, the paper distinguishes exports to EMU and to non-EMU countries to account for differences in demand patterns and in exchange rate effects on German exports (Stahn 2006; Stephan 2005).

Why is it relevant?

- Detecting the roots of German export success in an environment of increasing and persistent trade and current account imbalances since the early 2000’s.
- Analysing the contribution of the real exchange rate based on relative ULC or the Consumer Price Index (CPI) to German exports to the two trading regions.

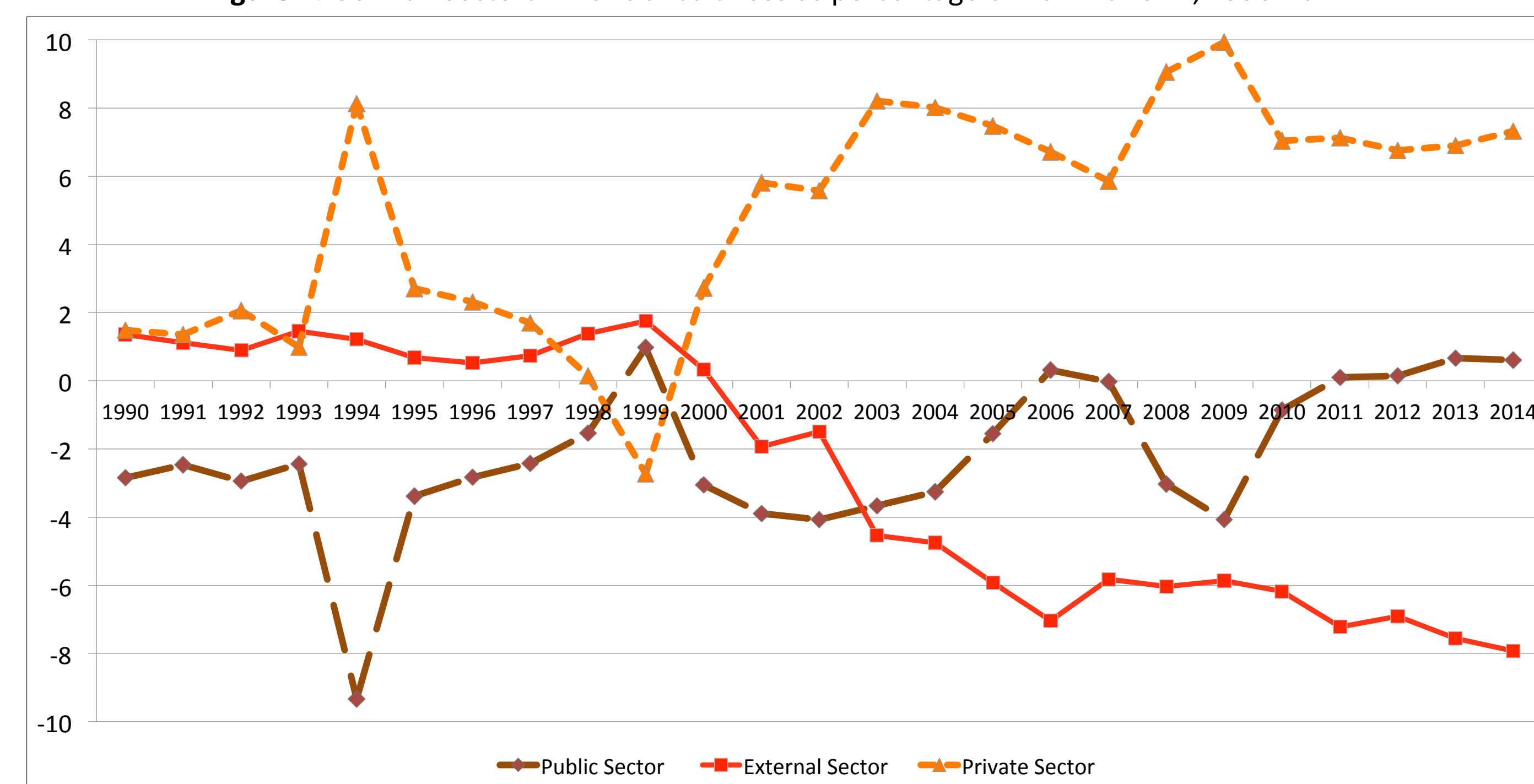
Data and Methods

- Data: quarterly time series; seasonally adjusted; sample: 1995 Q1 to 2014 Q1
- European Commission (AMECO), German Federal Statistical Office, IMF, OECD, World Bank
- Including 23 trading partners with a share in German exports of at least 1% plus five EMU member states with a share of less than 1% (status as of 2014).
- We calculate indicators for macroeconomic imbalances of Germany and its aggregated intra- and extra-EMU trading partners to evaluate and compare their economic performances for the period from 1995 to 2014.
- For the econometric analysis we use we use error correction models to estimate the long-run relationship between German real exports, foreign activity (GDP, gross fixed capital formation) and the real effective exchange rate based on relative ULC or the CPI and the nominal effective exchange rate. (Engle/Granger 1987; Hassler 2004).

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Figure 1. German sectoral financial balances as percentage of nominal GDP, 1990-2014.



Source: AMECO Database, European Commission (2015), own calculations.

Table 1. Macroeconomic indicators for imbalances, average growth rates, 1995-2014.

	Germany	EMU	Extra-EMU
Real GDP growth, % ¹⁾	1.31	1.64	2.73
Growth contribution of net exports to nominal GDP growth, percentage points ²⁾	0.44	0.21	0.10
Net exports as share of nominal GDP, % ¹⁾	3.65	2.50	1.19
Growth of nominal unit labour costs, %	0.76	1.69	3.28
Inflation (growth rate of CPI), %	1.49	1.95	3.70
Growth rate of the nominal effective exchange rate, %	0.07	0.15	-0.88
Growth rate of the real effective exchange rate, (CPI-based) % ³⁾	-0.92	0.01	0.47

Source: OECD (2015), IMF (2015), World Bank (2015) from Macrobond; own calculations;
Note: Greece weights since 2000; ¹⁾ 1995-2013; ²⁾ extra-EMU 1996-2014; ³⁾ excluding Romania and Russia; Brazil since 1996.

Empirical Findings

- Figure 1 shows the characteristic development of a country that has been following a neo-mercantilist growth strategy since 2000: huge net savings of the private sector and a negative financial balance of the external sector.
- With respect to real GDP growth Germany has underperformed its trading partners. Its growth was highly dependent on exports and thus foreign demand.
- Our econometric results confirm this and are broadly in line with previous research. The income elasticities are very high, indicating strong non-price competitiveness. They do not differ much between the two regions.
- The exchange rate based on relative ULC or the CPI has no significant impact on German exports to the EMU.
- We find a stable relationship between German exports to the extra-EMU and the real effective exchange rate.
- However, we calculate that the real exchange rate only explains 12% to 25% of our predicted export growth to this region.

Conclusions – Implications

- German exports have benefited from **foreign demand dynamics** and high income elasticities reflect **non-price competitiveness** of German exporters, given their specialisation in technologically advanced and high-quality products.
- The **effect** of the **real exchange rate** on German exports is rather **limited** as compared to the impact of foreign activity. The focus on price competitiveness in explaining the German export miracle therefore seems unjustified.
- It is important to **consider** both **price** as well as **non-price** factors.
- A regional distinction can be useful to account for different exchange rate effects.

References

1. Danninger, S., Joutz, F. (2007): What explained Germany’s rebounding export market share?, IMF Working Paper 07/24, International Monetary Fund, Washington D.C.
2. Engle, R.F., Granger, C.W.J. (1987): Co-integration and error correction: representation, estimation, and testing, *Econometrica*, 55(2), 251-276.
3. Flassbeck, H., Lapavistas, C. (2013): The Systematic Crisis of the Euro – true causes and effective therapies, Studien der Rosa-Luxemburg-Stiftung, Berlin.
4. Hassler, U. (2004): Leitfaden zum Testen und Schätzen von Kointegration, in: Gaab, W. Heilemann, U. and J. Wolters (eds), *Arbeiten mit Ökonometrischen Modellen*, Heidelberg: Physica-Verlag, 85-115.
5. Horn, G., Watt, A. (2017): Wages and nominal and real unit labour cost differentials in EMU, 2017 Fellowship Initiative Papers, Discussion Paper 059, European Commission, Brussels.
6. Sinn, H.-W. (2014): Austerity, Growth and Inflation: Remarks on the Eurozone’s Unresolved Competitiveness Problem, *The World Economy*, 37(1), 1-13.
7. Stahn, K. (2006): Has the impact of key determinants of German exports changed? Results from estimations of Germany’s intra euro-area and extra euro-area exports, *Economic Studies*, Discussion Paper 07/2006, Deutsche Bundesbank, Frankfurt a. Main.
8. Stephan, S. (2005): Modellierung von Mengen und Preisen im deutschen Außenhandel, Dissertation, Freie Universität Berlin.
9. Stockhammer, E. (2011): Peripheral Europe’s debt and German wages. The role of wage policy in the euro area, *Research on Money and Finance*, Discussion Paper 29.
10. Stockhammer, E., Onaran, Ö. (2012): Rethinking wage policy in the face of the euro crisis. Implications for the wage-led demand regime, *International Review of Applied Economics*, 26(2), 191-203.
11. Storm, S., Naastepad, C.W.M. (2015): Crisis and recovery in the German economy: the real lessons, *Structural Change and Economic Dynamics*, 32, 11-24.

Databases

1. European Commission (2015): Annual Macro-Economic Database (AMECO), May, Available at: https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco_en.
2. IMF (2015): International Financial Statistics, (IFS) International Monetary Fund, Washington D.C.
3. OECD (2015a): Main Economic Indicators (MEI), Organization for Economic Cooperation and Development, Paris.
4. World Bank (2015): World Development Indicators (WDI), World Bank Group, Washington D.C.

* To be published as IPE Working Paper 95/2018, Institute for International Political Economy, Berlin, forthcoming.