Essays on the Economics of Foreign Exchange and Development Finance

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Diplom-Volkswirt Oliver Gloede

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Abstract

Global economic activity and integration have been increasing dramatically over the past decades. Today, international integration is far deeper and embraces more dimensions than ever, such as migration, culture, infrastructure, security, and also economics. Thus, topics of internationalization, globalization, and development continue to create fascination and high interest in most research fields. This dissertation contributes to the on-going debate from an economic perspective. More specifically, this study comprises three works on the economics of foreign exchange and two studies on development finance.

The first chapter analyzes overconfidence of financial professionals with respect to their self-rating of their exchange rate expectations. The second chapter elaborates on heterogeneity of foreign exchange rate expectations. The third chapter provides an assessment of the effectiveness of central banks' foreign exchange interventions. The fourth chapter addresses the relationship between local financial development and welfare. The last chapter studies the impact of shocks on risk attitudes in two developing countries.

This dissertation enriches the debate on two fields in international economics, namely the economics of foreign exchange and development finance. The overall result of this thesis is that behavioral aspects matter for many dimensions of economic behavior. Exchange rate expectations appear to be biased with respect to wishful thinking and forecasters are overconfident. Risk attitudes are not as stable as usually assumed but depend on the past experience of shocks.

Keywords: foreign exchange expectations, overconfidence, central banks' foreign exchange interventions, financial development, risk attitudes.

Kurzfassung

Über die letzten Jahrzehnte hinweg sind globale Wirtschaftsbeziehungen und Integration dramatisch gestiegen. Heute ist internationale Integration weit durchdringender und umfasst viel mehr Bereiche, wie zum Beispiel Migration, Kultur, Sicherheitspolitik und Wirtschaft. Folglich kreieren die Themen, Internationalisierung, Globalisierung und Entwicklung, ungebrochen große Faszination und Interesse in den meisten Forschungsfeldern. Diese Dissertation trägt aus einer ökonomischen Perspektive zur laufenden Diskussion bei. Im Detail umfasst diese Studie drei Arbeiten im Bereich Wechselkurse und zwei zu Entwicklungsfinanzierung.

Das erste Kapitel analysiert Selbstüberschätzung von Finanzmarktexperten in Bezug auf deren Wechselkurserwartungen. Das zweite Kapitel handelt über die Heterogenität von Wechselkurserwartungen. Das dritte Kapitel bietet Ansätze für die Bewertung der Effektivität von Devisenmarktinterventionen von Zentralbanken. Das vierte Kapitel adressiert den Zusammenhang zwischen der Entwicklung von lokalen Finanzmärkten und Wohlfahrt. Das letzte Kapitel befasst sich mit dem Einfluss von Schocks auf Risikoeinstellung in zwei Entwicklungsländern.

Zusammengefasst bereichert diese Dissertation die Debatte in zwei Feldern der Internationalen Wirtschaftswissenschaft: Ökonomik der Wechselkurse und Entwicklungsfinanzierung. Als übergreifendes Ergebnis der Arbeit lässt sich zusammenfassen, dass behavioristische Aspekte in vielerlei Dimensionen von ökonomischen Entscheidungen relevant sind. Wechselkurserwartungen sind verzerrt in Bezug auf Wunschdenken und Prognostiker überschätzen ihre Fähigkeiten. Risikoeinstellungen sind nicht fix, wie häufig angenommen, sondern hängen von den vergangenen Schockerfahrungen ab.

Schlagwörter: Wechselkurserwartungen, Selbstüberschätzung, Wechselkursinterventionen von Zentralbanken, Entwicklung von Finanzmärkten, Risikoeinstellung.

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Introduction

Global economic activity and integration have been increasing dramatically over the past decades. Today, international integration is far deeper and embraces more dimensions than ever, such as migration, culture, infrastructure, security, and also economics. Thus, topics of internationalization, globalization, and development continue to create fascination and high interest in most research fields. This dissertation contributes to the on-going debate from an economic perspective. More specifically, this study comprises three works on the economics of foreign exchange and two studies on development finance.

The foreign exchange market is the largest market in the world, having an estimated turnover in 2010 of about four trillion USD - per day (BIS, 2010). Whether the motivation for agents to engage in the foreign exchange market is based on financial reasons, or goods and services trade, is largely irrelevant for the outcome: currency trade is a by-product of globalization as well as its catalyst. Thus, no matter whether one is interested in goods, services or financial markets, it is warranted to know more about the determination of exchange rate prices. One important driver are exchange rate expectations.

The first paper characterizes exchange rate expectations and scrutinizes the formation of exchange rate expectations making use of a particularly interesting data set from Thailand. Namely, it utilizes a business survey data set from the Bank of Thailand for exchange rate expectations of the THB/USD exchange rate. The so-called "Business Sentiment Index" of the Bank of Thailand provides individual foreign exchange rate expectations of the THB/USD exchange rate for about 600 firms over nine years. The research question in this paper addresses in particular heterogeneity of these exchange rate expectations in several dimensions. It is found that exchange rate expectations capture the appreciation trend and the cyclical component of the THB/USD very well, though they are biased on average. Focusing our analysis on the heterogeneity of exchange rate expectations, we find that they are heterogeneous on average and that they display a strong trend following behavior. Exchange rate expectations depend on both public fundamentals as well as on (private) individual expectations of fundamentals, where the former appear to dominate the expectation building process. We observe wishful thinking, i.e. exporters expect less appreciation of the domestic currency than importers.

The second paper makes a contribution to a related dimension by also utilizing data of exchange rate expectations. We analyze financial experts who submit their expectations and thereby we turn the focus towards an analysis of the market participants rather than the expectation. More specifically, we analyze how each financial expert perceives her forecast performance. This angle is particularly interesting since it opens the opportunity to study a behavioral bias of these experts, namely overconfidence.

In the second paper we also use exchange rate expectations, this time employing data from the German ZEW Financial Market Survey. To study overconfidence, we calculate hit rates as a measure of performance for all the individual forecasters in the panel. This is complemented with information about the self-rating of the forecasters with respect to their actual forecasting

performance. Based on this, we calculate a measure of overconfidence, which is the difference between self-rating and hit rate, both measured relative to the same peer group. From the results we can see whether financial market participants display the behavioral bias referred to as overconfidence. The forecasters in our sample show overconfidence on average, although to a moderate degree, including many cases of underconfidence. In analyzing this, we find that working experience is accompanied by less overconfidence. Function is also related to less overconfidence, such as being a fund manager and using fundamental analysis. The same effect is found for the attitude to herd, whereas recent success is associated with more overconfident professionals.

Turning the focus back on exchange rates we can observe that most foreign exchange regimes today are freely floating. This creates the possibility of large exchange rate misalignments and excessive exchange rate volatility. Policy makers try to dampen these adverse effects of exchange rates by foreign exchange interventions. However, this policy tool is not without cost because a central bank intervening in the foreign exchange market takes a stake in favor of a particular currency and against another. Thus, an evaluation of the effectiveness of this policy tool is highly useful.

The third paper provides both a literature review as well as a proposal on the adequate measurement of the effectiveness of foreign exchange interventions. I survey success measures of foreign exchange intervention effectiveness and review strategies of identification and related issues. A foreign exchange intervention can be considered to be effective if it results in a significant change of the exchange rate, a directional change of the exchange rate, or if it achieves to ease the speed of appreciation/depreciation. The identification of a causal relationship might be exacerbated due to confounding unobserved factors and reverse causality. Solutions are provided by the inclusion of other exchange rate determinants, the estimation of exchange rate counterfactuals, and the estimation of the central bank intervention function. Higher frequency, larger size, concerted interventions, and flexible exchange rates appear to ease the identification of the interventions' effect.

Due to the expansion in the outreach of globalization, differences in living standards across countries have become more and more transparent and urging. Questions arise on how households in developing countries are affected by the changes caused by economic development and, on a more general level, how people form decisions in their daily life. The last two papers address these issues and utilize data from the DFG project FOR 756 "Impact of shocks on the vulnerability to poverty: consequences for development of emerging Southeast Asian economies". The research group maintains an on-going panel household survey which has been conducted in Thailand and Vietnam in 2007, 2008, 2010, and 2011.

Descending to the micro level of the household, the paper uses the 2007 wave of the survey in order to compute an indicator of local financial development for Thailand to answer the question: if and how is financial development linked to household welfare? Our analysis focuses on two dimensions of household welfare: investment and consumption. The results show that

financial development is associated with a larger volume of productive investments and is also able to improve the financing of consumption. However, the effect of financial development on credit as an instrument to insure consumption risk is not supported. This finding implies that consumption smoothing is only weakly improved by larger financial development.

But it is not just interesting how the development of local financial markets interacts with the wellbeing of the households. A common observation is the vicious cycle of poverty and vulnerability. In particular vulnerable households are often more likely to suffer from shocks, which will then further increase their risk aversion as well as their propensity to engage in less risky activities, thereby making them less likely to leave the state of poverty and vulnerability. Thus, it is of essential need to understand how individuals make their decisions and policies have to be designed in order to enable them to leave poverty and vulnerability.

The fifth paper contributes to the understanding of the aforementioned vicious cycles. We use a survey item on risk attitude and analyze whether, first, a survey item of risk attitude is a valid measure of risk attitudes and, second, if and how shocks affect risk attitudes. The paper examines whether the experience of shocks helps in explaining individual risk attitudes. For convenience, individual risk attitude is often assumed to be time-invariant, although this is empirically misleading. For the design of policy measures it is a severe shortcoming that relatively little is known about the factors and circumstances by which risk attitudes may be systematically influenced. We contribute by measuring risk attitude via a simple survey item, compiled among about 2,000 households in Thailand and Vietnam each. The experience of negative unexpected shocks is indeed correlated with a lower degree of risk aversion, even when a large set of socio-demographic controls is used. This effect is significant in Thailand and Vietnam, whereas other variables tend to have diverse importance in the two countries. We corroborate the analysis by conducting an incentivized experiment to validate the risk measure and by considering the relation between risk attitude and risk behavior, i.e. the decision for self-employment and lottery purchases. Our findings indicate that in particular negative shocks are amplified in their impact by increased, and thus possibly excessive, risk aversion. Understanding the way how this unwanted amplifier works is crucial in breaking the looming vicious cycle.

Coming to the final conclusion, this dissertation enriches the debate on two fields in international economics, namely the economics of foreign exchange and development finance. The overall result of this thesis is that behavioral aspects matter for many dimensions of economic behavior. Exchange rate expectations appear to be biased with respect to wishful thinking and forecasters are overconfident. Risk attitudes are not as stable as usually assumed and depend on the past experience of shocks. This major finding encourages us to go beyond traditional assumptions, such as rational expectations, and to dig deeper in order to obtain a more comprehensive understanding of economic behavior.