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Essays on financial liberalization

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Conclusion

6.1 Introduction

This thesis has studied the relationship of financial liberalization with economic growth, income inequality and financial instability.

To set the stage for the analysis, three main research questions had been formulated in chapter 1. For reasons of convenience, I repeat them here:

1. What is the empirical evidence concerning the impact of financial liberalization on economic growth?
2. What is the impact of financial liberalization on income inequality?
3. How does financial liberalization relate to financial instability?

To answer the first question, a meta-analysis on the basis of 60 empirical studies has been carried out in chapter 2. The meta-sample consisted of 441 *t*-statistics of coefficients on the financial liberalization variable in growth regressions. The meta-analysis focused on explaining the variation in the *t*-statistics in terms of study-, data- and method-specific characteristics.

Question two has been investigated by means of theoretical and empirical analyses. Specifically, chapter 3 presented a simple model that studied the impact of financial liberalization on income inequality via banking sector efficiency and financial depth.⁵⁷ In the model, the incomes of savers and borrowers are affected differently by financial liberalization, leading to changes in income inequality. Chapter 4 provided an empirical assessment of the impact of financial liberalization on income inequality. The empirical approach was based on dynamic panel data models. A System GMM estimator has been used to deal with problems of measurement error and reverse causality.

To gauge the third research question, chapter 5 first described a simple model with a banking sector that features asymmetric information and financial liberalization policies. Banks observe project returns but not success probabilities, giving rise to a pooling equilibrium with potentially too much borrowing relative to the social optimum, which is interpreted as financial instability. The model then explores how changes in financial liberalization affect over-borrowing.

Financial liberalization increases over-borrowing via reduced borrowing cost and entry of risky entrepreneurs. Such a rise in over-borrowing due to financial liberalization is interpreted as rising financial instability. In the next step, an empirical assessment of the relationship between financial liberalization and financial instability has been conducted.

On the basis of the analyses carried out in chapters 2 to 5, the above questions shall now be answered.

This chapter proceeds as follows. Section 6.1 presents the answers to the main research questions of this thesis. Section 6.2 outlines important policy implications. Section 6.3 discusses limitations of the research and possibilities for future research.

⁵⁷ Banking sector efficiency refers to the wedge between the interest rate on deposits and the cost of borrowing. Financial depth relates to the size of the financial sector, i.e., the amount of credit.

6.2 Answers to the Main Research Questions

Answer to research question 1:

What is the empirical evidence concerning the impact of financial liberalization on economic growth?

The main answer to this research question is that, on average, there is a positive albeit weak effect of financial liberalization on economic growth. This result suggests that financial liberalization is not a panacea for achieving strong growth. Liberalization policies may perhaps be more successful if combined with other reform measures and/or institutional changes such as fiscal and/or monetary policies, and/or institutional changes focusing on regulating financial markets (Kose et al. 2010). Empirical research on the growth effects of such combinations of policies is, however, hardly available.

Next, for the majority of the variables that may help explain the variation in the t -statistics we do not find significant results. There are two exceptions though. First, in many of our specifications, studies using data from the 1970s generate a statistically less significant relationship between financial liberalization and growth (i.e., they report lower t -statistics). This could mean that financial liberalization was less effective in this decade. Second, studies taking into account a measure of the level of financial depth report smaller t -statistics. This outcome suggests that in countries with less developed financial systems, financial liberalization has more value in terms of stimulating economic growth. The mentioned results remain valid after having carried out a large number of robustness checks, including a test for publication selection bias.

Answer to research question 2

What is the impact of financial liberalization on income inequality?

In chapter 3, the key channel for the effect of financial liberalization on income inequality is the interest rate on deposits. If this interest rate increases disproportionately compared to the (absolute) fall in the cost of borrowing, inequality tends to decline because the income gain of savers (who are poorest)

exceeds that of borrowers. This outcome is more likely if financial depth is either large, or improves with financial liberalization.

On the basis of the model, the following two predictions have been formulated. First, the effect of financial liberalization on income inequality depends on the level of financial depth (recall that financial depth was assumed to be constant in this case). The second prediction was that income inequality decreases unambiguously, if financial liberalization leads to both greater banking sector efficiency and financial depth. Importantly, this finding rested on the assumption that financial liberalization improves financial depth such that borrowing cost do not change.

These two predictions have been examined empirically in chapter 4. Specifically, estimated Gini coefficients, as a proxy for income inequality, have been regressed on measures of financial liberalization and further control variables. To test if the impact of financial liberalization on income inequality depends on financial depth, an interaction term between these two variables has been included. The main finding was that the direct effect of capital account liberalization is to increase income inequality. However, this effect tends to decrease with financial depth. In particular, it was found that above a private credit-to-GDP ratio of 25 percent, capital account liberalization reduces income inequality. Especially developing countries are characterized by very low levels of financial depth. Thus, in these countries capital account liberalization is more likely to increase income inequality.

Reserve requirement liberalization did not appear to have a significant impact on income inequality.

Taken together, the findings of chapters 3 and 4 suggest that capital account liberalization only reduces income inequality in countries with a high level of financial depth, i.e. mainly in developed economies. This means capital account liberalization potentially leads to more income inequality in most developing countries.

Answer to research question 3***How does financial liberalization relate to financial instability?***

The theoretical model of chapter 5 has shown that financial liberalization leads to more borrowing by risky entrepreneurs with low project success probabilities. As the number of risky entrepreneurs who borrow increases, the average project success probability declines. However, such a decline need not imply a rise in over-borrowing, defined as a situation in which projects that are too risky relative to the social optimum are being financed. Owing to declining borrowing cost, borrowing by risky entrepreneurs might actually be socially optimal. However, if borrowing by risky entrepreneurs is not desirable from a social point of view, over-borrowing ensues. Such over-borrowing due to financial liberalization was interpreted as rising financial instability. Thus, in the theoretical model the impact of financial liberalization on financial instability was found to be ambiguous. The main reason for this ambiguity was that both the equilibrium project success probability and the socially optimal success probability may decline.

Given the described ambiguous theoretical prediction, an empirical analysis was conducted in order to shed further light on the liberalization-instability nexus. The empirical analysis was based on new financial instability data, measured as the amount of impaired loans in total loans, over the period 2000 to 2009. Financial liberalization was proxied by the financial reform index due to Abiad et al. (2010). The estimation results suggest that financial liberalization did not increase financial instability. But it was found that more financially liberalized countries experienced a sharper increase in impaired loans in the year 2009.

In sum, these results imply that financial liberalization does not necessarily render banks more instable; only during a crisis period, it might be associated with more financial instability.

6.3 Policy Implications

The number of largely liberal financial systems has risen considerably since the 1970s. Given the degree of global market integration, there is no reason to assume that this trend will be reversed any time soon.

The research contained in chapters 2 to 5 of this thesis has shown that no simple statements about the effects of financial liberalization on economic growth, income inequality and financial instability can be made. To put it differently, the direct effect of financial liberalization seems to be ambiguous in general. As it is often the case, the effect is dependent and conditional on other factors. In this thesis, these other factors centered around financial depth (chapters 2 to 4) and economic crises (chapter 5). In other words, even when the intentions behind financial liberalization are the same across countries, they will be reached differently and with varying degrees of success because economic conditions are not the same. Especially the channels through which financial liberalization unfolds are central as they can help devising better policies. From this perspective, the findings of this thesis provide some clear lessons.

Chapters 2 to 4 have highlighted the general relevance of financial depth for the impact of financial liberalization on economic growth and income inequality.⁵⁸ Concerning economic growth, financial liberalization appears more likely to promote growth in countries with low financial depth. Concerning income inequality, it was found that a financial liberalization of the capital account tends to raise income inequality in countries with low financial depth. These results suggest that financial liberalization is a mixed blessing for developing countries: it may foster economic growth at the expense of income equality.

In the case of developed countries, financial liberalization probably will not enhance growth, but it might lead to a more equal distribution of income. This seems to be positive. But one should realize that (both in developing and developed countries) financial liberalization may render the financial system more unstable. Thus, during economic downturns such as the 2008/09 crisis, the positive effects of financial liberalization could fade away.

⁵⁸ The reader may recall the difference between financial liberalization and financial depth. Whereas financial liberalization refers to policies that aim at improving banking sector efficiency, financial depth relates to the size of the financial sector, i.e. the amount of credit.

The findings imply that even if it is assumed that financial liberalization policies are pursued to increase economic growth and reduce income inequality, it may not be the case that both these goals will be achieved in the end. In the case of developing countries with low levels of financial depth, other policy measures may be adopted in order to correct the negative effect of financial liberalization on income inequality. Developed countries that are characterized by high levels of financial depth potentially gain less from financial liberalization in terms of economic growth. However, income inequality tends to go down in these countries. A more equal distribution of income could have positive effects on economic growth (see, e.g., Berg et al., 2012). Thus, although there might be no direct effect of financial liberalization on economic growth, there could be an indirect one through reduced income inequality.

6.4 Discussion and Directions for Future Research

Some research limitations are to be mentioned. The theoretical model of chapter 3 abstracted from several, potentially important mechanisms concerning the impact of financial liberalization on income inequality. The model assumed that there is a positive link between financial liberalization and financial depth. However, adverse selection models have shown that this need not be the case. In these models, the effect of financial liberalization on financial depth is ambiguous, which means that financial liberalization could undermine financial depth. How such a negative relationship plays out on income inequality merits further investigation. Another limitation of the model in chapter 3 was the assumption that the change in financial depth is such that borrowing cost remain constant. This is a very strong assumption since in reality we may expect adjustments in the amount individuals can borrow, as well as in the cost of borrowing. Nevertheless, this assumption allowed us to determine the impact of financial liberalization on equilibrium income inequality.

The empirical analysis carried out in chapter 4 has its limitations, too. The Gini coefficient is a special summary measure of income inequality that does not permit statements about which parts of the income distribution are affected by capital

account liberalization. This might be important information for policymakers though. Moreover, future research could try to use measures of inequality that better reflect developments in capital income because the estimated Gini coefficients used in the empirical analysis of chapter 4 provide only a partial picture of income inequality. Especially in highly developed countries income inequality might actually be higher owing to trends in capital income.

The research contained in chapters 3 and 4 suggests that future studies on financial liberalization and economic growth should consider income inequality as a relevant transmission mechanism of financial liberalization to economic growth.

Concerning the impact of financial liberalization on financial instability studied in chapter 5, two main limitations are worth mentioning. First, the model did not consider loan defaults. Second, while the theoretical model could trace two specific channels through which financial liberalization affects financial instability, the empirical approach did not capture these channels explicitly.⁵⁹ Therefore, future empirical research could further delve into the channels of financial liberalization using bank-level data.

Despite these limitations, the analyses provided in this thesis are considered as relevant contributions that enhance our understanding of financial liberalization. As indicated, the described limitations provide interesting possibilities for future research.

The message that emerges from the analytical and empirical research of this thesis is that financial liberalization is not a simple engine for economic growth. There is no clear evidence for a growth enhancing effect of financial liberalization. Moreover, policymakers who want to liberalize their financial sectors should be aware of the effects of financial liberalization on income inequality, and also financial instability.

⁵⁹ These two channels are decreasing the cost of borrowing and entry of more risky borrowers.