Three Essays on Re-Thinking of Determinants of International Flows into Selected Developing Countries

Abstract

Capital flows and remittances (hereafter international flows) may bring tremendous benefits for recipient economy: Generating external resources for domestic investment and increasing consumption is a simple pattern of those benefits. Besides the positive effects, the international flows may bring many threats. Flowing excessively they can expose the recipient economy to various risks, including domestic exchange rate appreciation, over consumption and investments and incautious bank lending, etc., which result in aggravating financial stability, lifting domestic inflation, and market bubbles, etc. The most devastating effect on an economy comes from the capital flows reversal. Indeed, the recent patterns of high volatility of capital flows have sparked political and economic debate on destabilizing, rather than positive effects, of capital flows on economic growth and financial stability.

During last two years emerging countries have faced periodical surges of international inflows in the wake of a strong economic recovery following the 2008 global financial crisis. These surges pose a challenge to policymakers on the smooth allocation of foreign capital to minimize risks for the domestic economic system. In turn, the escalating sovereign crisis in Europe raises the threat of a sudden stop and even adverse international flows reversal due to high exposure of financial systems of emerging economies to the European market. Thus, understanding possible drivers of international flows markets is prime for further research.

The economic factors that drive international flows to developing economies are unclear. The literature underlines that country fundamentals cannot fully explain the factors that determine capital flows. At the same time, external factors alone are forceless, as well. Even together, “pull” and “push” factors do not provide a clear understanding of international flows.

What are the drivers of international flows? What makes them flow excessively or stop abruptly? We address these questions and many others in our dissertation.

This dissertation thesis consists of three essays on re-thinking of the determinants of capital and remittances flows into selected developing countries. Giving priority to Central Asia, which has been largely untouched by research interest, our thesis starts from the very narrow issue of testing determinants of remittances inflows into two Central Asian countries and the Philippines, and then proceeds with examining broader issues concerning determinants of international flows into developing countries by taking into account whole flows composition (i.e., disaggregated by its individual components). Therefore, by the order from the simple to the complicated, this dissertation ends with a comprehensive discussion on whether determinants, which have been found to be essential, would also emerge being behind surges or stops of international flows.

T**he first chapter,** ***Determinants of remittances flows into selected developing countries: Incomparable comparison?*** describes for the first time remittances flow behavior into two Central Asian countries, Kyrgyzstan and Tajikistan. Examining whether country specific, e.g., stage of economic development, would play a role in conditioning the amount of remittances, we also included the Philippines that differs from Kyrgyzstan and Tajikistan, into the set of selected countries that constitute the most remittance dependent countries not only in the region, but also the world. Our empirical analysis was premised on the gravity model of bilateral remittances flows of 19 country pairs.

The main object of our study is as follows:

- To prove our theoretical assumption that the external factors play a more prominent role for remittances flows into developing countries.;

- To analyze whether remittances flows into proposed Central Asian countries would emerge to be driven by altruistic or self-interest motives;
- To confirm the existence of country specifics in the explanation of remittances behaviour.

To investigate the main drivers behind remittances streamline we employed the set of external (pull) and internal (push) factors, which are based on existing knowledge revealed to be the most important for remittances inflows into developing countries.

By taking a detailed empirical look through the gravity model into the bilateral data of remittances flows and applying the OLS fixed effect estimation to the equation of the proposed set of variables the empirical results of our study confirmed:

- The greater power of external factors compared to internal factors in explanation of remittances inflows to the developing countries.
- The existence of country specific effects that convincingly explain different effects of the same set of selected economic variables for remittances flows into proposed countries.
- Remittances are driven by pure investment motives at least into selected Central Asian countries, when enhancing of economic activity and increasing of interest rates in a home country enlarge remittances inflows, which may be substantially offset in response to elevating of the home country's political risk.

In more detail, consistent with our expectations, we found that remittances sent home either to the Philippines or to selected Central Asian countries have a significant positive relationship with the level of migrant's disposable income in a host country. Migrants' skills exposed statistical significance for remittances sent from developed OECD countries, which apply a skills selective immigrant policy. The difference in motives behind the propensity to remit gives various explanation power to the same set of variables depending on a migrant's home country. Regression results suggest that remittances flows are driven mostly by investment motives, especially those sent from developed countries.

The contribution of this study is as follow: To the best of our knowledge, no study has been conducted on the determinants of remittances flows into Kyrgyzstan, and only a few papers exist on the nature of remittances into Tajikistan. Thus, this paper contributes to the existing literature by filling the gap of studies on the Central Asian countries, and by constructing the first bilateral data for Kyrgyzstan and Tajikistan as receiving countries and the top seven sending countries for 1993-2010. In addition, this study is the first attempt to employ calculated individual migrant' disposable income (not its proxy) to the analysis of possible determinants of remittances flows into selected developing countries.

The main purpose of **the second chapter, *Determinants of Capital flows and remittances: What determines composition of international flows?*** was:

- To define the key determinants of a given type of international flows into developing countries by taking into account the whole flows composition. For this purpose, a sample of 17 developing countries from different regions and with different levels of development were selected.

- To examine the interaction between different types of international flows; whether a particular type of flows would emerge significant in conditioning another type due to existing complementarity or substitutability between them.

The main findings of this study are summarized as follow:

1. *External factors as determinants of international flows:* Our empirical results confirmed that economic activity in advanced economies is one of the main drivers forcing a major part of international flows toward developing countries.
2. *Internal factors as determinants of international flows:* Indicators of economic activity

(i.e., business cycle) in developing countries, level of financial and trade openness, exchange rate regime, domestic nominal and inflation rates, as well as domestic consumption are commonly significant across international flows but with a different sign of influx.

3. *Findings on property of individual components of flows:*

- Our results confirmed that FDI flows to the less financially open economies that report considerable growth and less developed institutions. In this light, the example of China is more than confirmative.
- PI equity, similar to FDI, flows to the growing economies, but specifically to countries that have higher observed exchange rate flexibility, sound macroeconomic stability, and greater trade and financial openness.
- In turn, PI debt and bank loans inflows, which arise in response to pulling excessive liquidity out of developed economies by seeking higher investment returns, flows to developing countries that implement more liberalized capital controls and higher nominal interest rates.
- Our study reveals that the share of working remittances increases in total international flows on the effect of higher domestic nominal interest and moderate inflation rates. Furthermore, the results show that the size of remittances inflows is greatly influenced by business cycles, either in the home or host countries. All of these properties explicitly expose the investment nature of remittances.
- In the case of ODA inflows, economic fundamentals of advanced economies play the most essential role. Our study reveals that the share of ODA in total inflows to developing economies builds up in response to the improving economic conditions in industrialized economies.

4. *Interaction between international flows:*

- Our empirical results exposed complementarity between FDI and PI debt flows, which in turn enhance bank loan flows to developing countries. The study provides evidence of possible substitution effect between FDI and PI equity flows. Our results also revealed the substitution effect between PI equity and bank loan flows.
- Additionally, once again underlining the investment nature of remittances, the empirical findings confirmed complementarity remittances, PI debt and bank loan flows.
- Our study provides evidence of the dominance of the ODA share over remittances in total international inflows under certain economic conditions.

This study contributes to the existing literature in several ways by: (1) developing the Demand and Supply Model with specifications different to those developed by Mody and Taylor (2004); (2) filling the gap in the lack of study on determinants of remittances through taking the view on remittances as an alternative part of capital flows; (3) adding a new study to handle bunch of research papers on exploring factors, which determine international flows composition, and on interaction between different types of flow; (4) employing for the first time the Dynamic Panel GMM System estimation method developed by Arellano and Bond in 1991 and modified by Arellano and Bover in 1995 to the Demand and Supply Model of the international flows; and finally by (5) exercising a wide range of economic variables, which some of them have been used for the first time as potential determinants of the international flows.

In the third chapter, *Extraordinary cases of international flows movement in the selected emerging Asian countries: Surge and Sudden Stop. A role of the key determinants,* we focused on whether the determinants, which we found to be essential for international flows in our previous study, would play a significant role in either a surge or a sudden stop of individual components of international flows into three selected developing countries: the PRC, the

Philippines, and Thailand from 1995 to 2010. In the form of an analytical overview, by employing the event analysis, we try to find possible relationship between surge or sudden stop and economic condition that a country was undergone or/and policy that a country imposed (e.g., capital control, exchange rate regime, etc.) before an extraordinary flows movement.

This study contributes to the literature by: (1) introducing a new definition and methodology of identifying surge and stop that totally differs from those represented in previous studies; (2) bridging gap in literature on the surge and stop phenomena by taking a look into composition of international inflows; and (3) providing the first look into inside of the phenomena of surge or sudden stop of working remittances inflows.

The result of this study, based on the event analysis of the three selected Asian countries experience, affirmed the findings obtained in our previous study (Chapter 2).

Additionally, our results affirmed a major role of those determinants, which are proved to be essential for international flows, in the occurrence of either a surge or a sudden stop of individual components of international flows from 1995 to 2010.

It is worth noting that our results of identification surges and stops are consistent with the actual number of those surges and stops that selected developing countries experienced in past, and thus confirming the consistency of our approach.

Moreover, our identification results show that those surge and stop of total net inflows reported in other related studies (since they report cumulative reducing or increasing in total amount of net inflows) do not necessarily mean the real presence of either surges or stops in either some particular components or in all components of flows at the same time. But, as our study shows, that while one type of flow can experience a steep reversal, another type can experience a bonanza under certain economic and political conditions, which may be adverse for one but favourable for another type of flow, thus determining whole flows composition.

This is also very important to highlight that despite widely proved resilience of remittances as well as its less volatility compared to private capital flows, the findings of this study revealed several episodes of surge and sudden stop of remittances flows that once again confirmed its investment nature.

Additionally, our study exposed that not each surge ends by its large reversal. There is should be a chain of adverse external or/and internal factors, which event not compulsory relate to the surge itself, but at some point of time, they happen coincidently that finally lead to steep cutback of international inflows.

As to conclude, the empirical findings of this dissertation are valuable because they provide unique insights of international flows by: (1) taking a comprehensive look into its nature through the Gravity Model of the first bilateral data of remittances flows into selected Central Asia countries and through the Demand and Supply Model of international flows into selected developing countries; (2) exercising a carefully selected set of economic variables; and (3) taking into account the whole flows composition. We believe that the findings of our study will bring us more closely to the understanding of the drivers behind international flows, and thus would be useful for policymakers to establish a mechanism of effective managing the composition of flows depending on internal economic needs and to find solutions to reduce adverse implication of the flows volatility. Additionally, the new methodology of identifying episodes of surge and stop of the individual flows' components, which we proposed in the last chapter of this dissertation, would also be useful for further application.