CAPITAL ACCOUNT LIBERALIZATION
AND FINANCIAL DEEPENING: DOES THE PRIVATE
SECTOR MATTER?

Mohamed Trabelsi and Mondher Cherif

CAPITAL ACCOUNT LIBERALIZATION AND FINANCIAL DEEPENING: DOES THE PRIVATE SECTOR MATTER?

Mohamed Trabelsi and Mondher Cherif

Working Paper 980

February 2016

Send correspondence to:
Mohamed Trabelsi
Université de Reims Champagne Ardenne (URCA), Reims, France
mohamed.trabelsi@univ-reims.fr

Abstract

This study tests, using cross-sectional and Generalized Method of Moments (GMM) dynamic panel estimation techniques, the effect of freeing cross-border financial transactions on financial sector development for a sample of 90 developed and developing countries over the period 1975-2009. The papers also tests if the effect of financial integration on financial deepening depends on some other prerequisites in the economy either for developed or developing countries. The main results of the paper are the following: First, in developing countries financial integration is not found to lead to higher financial development unless a set of prerequisites are already in place. Second, to have successful capital account liberalization in developing countries, there is a need to develop the institutional environment and the private sector as prerequisites. Third, the effect of freeing cross-border capital flows on economic growth is found to depend on the same prerequisites in these countries.

JEL Classification: F36, F43

Keywords: Financial deepening, capital account openness, institutions, private sector, economic growth.

ملخص

تختبر الدراسة، وذلك باستخدام تقنيات تقدير لوحة ديناميكية مستعرضة (GMM)، تأثير تحرير المعاملات المالية عبر الحدود في تنمية القطاع المالي لعينة من 90 من البلدان المتقدمة والبلدان النامية خلال الفترة 1975-2009. تختبر الورقة أيضـــا ما إذا كان تأثير التكامل المالي على التعميق المالي يعتمد على بعض المتطلبات الأســـاســـية الأخرى في الاقتصـــاد ســـواء في البلدان المتقدمة أو النامية. النتائج الرئيسية لورقة ما يلي: أولا، في البلدان النامية لم يتم العثور على التكامل المالي الذى يؤدي إلى تنمية مالية أعلى إلا من خلال مجموعة من الشروط الأساسية الموجودة بالفعل. ثانيا، كى يكون تحرير حسـاب رأس المال في البلدان النامية ناجحا ، هناك حاجة إلى تطوير البيئة المؤسسية والقطاع الخاص والمتطلبات الأساسية. ثالثا، وجدنا أن تأثير تحرير رأس المال عبر الحدود التدفقات على النمو الاقتصادي يعتمد على شروط مسبقة في هذه البلدان.

1. Introduction

The recent international financial crisis has elicited a large debate on the conundrum of financial integration. In fact, despite the widespread belief that more financial and capital inflows could play a fundamental role in increasing growth and welfare, the crisis has shown to what extent not only developing economies but also developed ones are vulnerable to the openness of financial markets. Nevertheless, despite the severity of the crisis, these economies do not seem to have completely abandoned financial integration as a strategic policy. Overall, the debate is still being concentrated on the crucial question how to continue with integrated financial markets while a movement that restricts cross-border capital flows may actually be getting underway in some countries.

The basic (neoclassical) economic literature on freeing financial capital movements across borders points out that an economy could benefit from such policies as it offers the opportunity to achieve higher returns on savings, to diversify country specific-risk and to borrow funds at favorable interest rates. However, a more set of contributions that has received a great deal of attention recently focuses more on the nexus between free capital mobility and the development of financial markets. More specifically, the recent analysis highlights the fact that financial integration promotes the development and efficiency of domestic financial markets through a number of channels.

According to the neoclassical approach, capital account liberalization is likely to contribute to the development of the domestic financial sector through an improvement of *efficiency*. In this regard, Summers (2000) writes " … *to the extent that international financial integration represents an improvement in financial intermediation, …[perhaps] because institutions involved in the transfer of capital across jurisdictions improve efficiency with which capital is allocated, it offers a potentially significant increase in economic efficiency"* (p.3)*.

In the same vein, there is a large body of theory pinpointing that the presence of foreign intermediaries in the local financial system improves its *efficiency* through: (*i*) alleviating adverse selection and moral hazard issues (Stulz, (1999)); (*ii*) the introduction of new international standards as well as financial innovation and technologies that are likely to enlarge the scope of financial services (Summers, (2000); Klein and Olivei (2008); and (*iii*) improving the quality of loans as in more open economies governmental influence on the banking sector is weaker (Prasad, Rogoff, Wei and Kose, (2006)). In Turn, improved efficiency may promote domestic savings and create favorable conditions to attract more foreign financial capital that would allow financial intermediaries to reap further significant gains in efficiency and economies of scale.

The empirical literature based on country, cross-sectional and dynamic panel studies is not very supportive of the fact that the presence of foreign banking institutions is likely to raise competition in the domestic financial sector (Claessens, Demirguc-Kunt and Hiuizinga (2001)) and (Levine (2001)). Moreover, this presence is even seen to be detrimental to local banks in poor countries (Detragiache, Gupta and Tressel (2006)). In contrast, for stock markets the evidence seems to corroborate the notion that equity market liberalization increases *efficiency*. In this respect, Levine and Zervos, (1998)), using a sample of 16 emerging markets, found that the stock market gets larger and more liquid following the equity market reform.

It is worth noting that a number of contributions also found that freeing capital flows' movements helps developing the *overall financial sector*. In this regard, De Gregorio (1999) was among the first to highlight the importance of international financial integration in promoting domestic financial markets, and economic growth, accordingly. Chinn and Ito (2002) empirically tested the relationship between capital controls and the development of the stock market activity using cross country regressions for a sample of 105 countries over the period 1970-1997. The results suggest that the link between financial openness and financial development is detectable only in an environment characterized by developed institutions and a legal framework. In the same vein, in Chinn and Ito (2006), freeing capital accounts is likely to spur equity market development only when a threshold of institutional development is reached. Klein and Olivei (2008) also show that to have a significant increase in financial deepening level in the aftermath of capital account liberalization, developing economies need a constellation of economic, legal, and social institutions.

Eichengreen, Gullapalli and Panizza (2011) have analyzed, the effect of capital account liberalization on industry value added growth after controlling for the presence of financial crises, the development of domestic financial markets and the strength of institutions. Their findings suggest that although financial openness has positive effects on the growth of financially dependent manufacturing firms, this is only in countries that succeeded to avoid the bad effect of financial crises and that also have strong institutions and well developed financial systems, which are mainly high income countries. In other words, in economies with weak accounting, rule of law and creditor rights, external financial reforms have not produced the expected beneficial effects.

This study is an attempt to shed more light on this issue by studying the effect of freeing cross-border financial transactions on financial deepening for a sample of 90 developed and developing countries over the period 1975-2009. We use for that cross-sectional and the generalized method of moments (GMM) dynamic panel estimation techniques to test the nature of this relationship either for developed or developing countries and if the effect of financial integration on financial sector development depends on some other prerequisites in the economy.

The main results of the paper are the following: *First*, in developing countries financial integration is not found to lead to higher financial development unless a set of prerequisites are already in place. *Second,* to have successful capital account liberalization in developing countries, the empirical investigation highlights a need to develop the institutional environment and the private sector as prerequisites. *Third*, the effect of financial integration on economic growth also depends on the same preconditions in these countries.

The rest of the paper is structured as follows: section 2 presents the methodology and variables used in the empirical investigation while section 3 is reserved for the empirical results. The robustness checks are presented in section 4. Section 5 discusses the effect of financial integration on economic growth. Finally, section 6 concludes the paper with some policy recommendations.

2. Methodology, Variables and Data

2.1 Methodology and variables

As the focus of this paper is on the possible role of capital account liberalization on the development of the financial sector, we proceed to an investigation of the determinants of

financial deepening where a proxy of financial integration is present among the regressors. With the absence of a theoretical setting that provides a clear identification of these determinants, we use the specification represented by the following equation:

$$FD_{i,t} = \alpha + \beta \, KAL_{i,t} + \delta \, X_{i,t} + \mu_{i,t} + \lambda_{i,t} + \varepsilon_{i,t}$$
(1)

Where $FD_{i,t}$ represents the level of financial development for country i in year t, $KAL_{i,t}$ is a variable that refers to capital account liberalization that took place in country i in year t. $X_{i,t}$ represents a vector of explanatory variables, μ_i is a country- specific effect, λ_t is time specific effect and $\varepsilon_{i,t}$ is an error term.

The empirical literature relative to the finance and growth nexus highlights the fact that it is difficult to capture the extent of financial intermediation in a country by one single indicator. For that, we use two indicators to measure the financial development level: the first one is the ratio allocated to the private sector to GDP (henceforth (CPY)). It is an indicator of financial intermediary development that has widely been used in the empirical literature[1], focusing on the credit issued to the private sector from that allocated to the public entities. It focuses specifically on the role of financial intermediaries in providing funding to the private entrepreneurial sector, which makes this sector more appropriate in measuring financial activity only in bank-based financial systems (De Gegorio and Guidotti, (1995)).

The second ratio that is used in measuring financial intermediation activity is the ratio of the money stock M_2 to GDP (henceforth (M2Y). It is a standard indicator in measuring financial deepening as it reflects the whole size of financial intermediary sector (Mckinnon (1973), Shaw (1973) and King and Levine (1993) and Levine et *al*. (2000)). The money stock M_2 refers to liquid liabilities consisting of currency outside the banking system augmented with demand and interest bearing liabilities of financial intermediaries. The liquid liabilities to GDP ratio raises the issue of being less convenient to the financial intermediation approach due to Gurley and Shaw (1955) where a large component of the monetary aggregate is used for transaction purposes instead of funding productive investments. The data relative to the two measures of financial development ((CPY) and (M2Y)) are extracted from from the World Development Indicators (WDI) of the World Bank (2012).

For the capital account liberalization indicator, we follow those used in previous investigations as we use a *de facto* measure of capital account openness developed initially by Chinn and Ito (2006) and generally known with the acronym *KAOPEN*. It is an index based on binary dummy variables that generates codes on the restrictions on external accounts of one country reported in the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER)*. More specifically, *KAOPEN* is the first principal component of four binary series (k_i, $i = 1,…, 4$). The variable k_1 provides information on the existence of multiple exchange rates while k_2 and k_3 indicate the existing restrictions on current and capital account transactions, respectively. Finally, k_4 is informative of the requirement of the surrender of export proceeds. In addition, for capital controls, Chinn

---

[1] See for example Levine (1997).

and Ito use the share of five year window where controls on capital account are not effective ($SHAREk_{3,t} = ((k_{3,t} + k_{3,t-1} + k_{3,t-2} + k_{3,t-3} + k_{3,t-4})/5)$.

The constructed index for capital openness is therefore the principal component of k_{1t}, k_{2t}, $SHARE_{3,t}$ and k_{4t} where the index ($KAOPEN_t$) takes higher values when the economy is open to cross-border capital flows. For that Chinn and Ito (2008), in order to insist on financial openness instead of controls, have reversed the binary variables so that they are equal to one if restrictions are non-existent and zero if not. To get the data relative to *KAOPEN* we used the updated index of Chinn and Ito (2011).

Besides capital account liberalization measures, we also introduce a set of control variables represented by the vector X_i. We find first in this vector the variable *Trade* measured by the sum of exports and imports to GDP (*Trade* = (Exports + Imports)/GDP). The rationale behind this is that higher ratio of openness to trade might be associated with high levels of financial development. The level of financial development at the beginning of the period CPY_i for the case of credit to the private sector measure and $M2Y_i$ for financial deepening proxy) and the inflation rate (*INF*) are also included as regressors to control for omitted variable bias. The data relative to all these variables included in X_i are excluded from World Bank (2012)

In addition, two other dummy variables are included, where the first one takes the value of one if the country experienced a banking crisis during the studied period and zero otherwise. The second variable is equal to one if the economy witnessed a currency crisis during the same period and zero if the variable banking crisis (*BANKING*) is a dummy variable takes the value 1 if the country witnessed a systemic banking crisis during the period 1975-2009 and zero otherwise. According to Laeven and Valancia (2012), the banking crisis is seen as systemic if "*two conditions are met: (1) Significant signs of financial distress in the banking system (as indicated by significant bank runs, losses in the banking system, and/or bank liquidations) (2) Significant banking policy intervention measures in response to significant losses in the banking system*" (Pp: 4).

When the two conditions are met, this corresponds to the beginning of the crisis. The policy intervention is considered if at least "*three out of the following six measures have been used (1) extensive liquidity support (5 percent of deposits and liabilities to nonresidents); (2) bank restructuring gross costs (at least 3 percent of GDP); (3) significant bank nationalizations; (4) significant guarantees put in place; (5) significant asset purchases (at least 5 percent of GDP); (6) deposit freezes and/or bank holidays*", (Laeven and Valancia (2012), Pp: 4). The data set relative to periods of banking crisis is extracted from Laeven and Valancia (2012) [2].

The variable currency crisis takes the value 1 if the economy witnessed a currency crisis and zero if not. According to a part of the literature, the currency crisis happens when the local currency observes significant depreciation (Calvo and Reinhart (1999) and Gerber (2002)) generally defined at the level of 20% within ten trading days (Brüggemann and Linne (2002). However, a large part of the literature takes into consideration the intervention of the Central Bank in terms of *interest rate* to make the local currency attractive to investors and in the *foreign exchange market* to seek the stabilization of the

---

[2] Laeven and Valancia (2012) created the database on systemic banking crises between 1970 and 2007.

domestic currency demand and price variation. All these factors are included in an index called the exchange market pressure (EMP), which is a weighted average, of the depreciation rate of nominal exchange rates, the percentage change in international reserves and the change of the real interest rate. A crisis is identified if the EMP index exceeds a particular threshold equal to the EMP mean plus its standard deviation multiplied by a weight[3]. The dummy variable on crisis episodes is collected from Glick and Hutchisson (1999).

The empirical literature has highlighted the crucial nature of institutions in financial reform implementation and given the importance of efficient institutions as pre-requisites for high financial development levels and successful financial reforms[4] we add also some proxies of institutional development in equation (1). The included measures are Government stability (*Govstab*), the corruption in Government (*Corrupt*), Law and order (*Laword*), the degree of Accountability (*Account*) and finally the quality of bureaucracy in the economy (*Bureauc*). These measures are extracted from the *International Country Risk Guide* database (ICRG) (2010).

The first proxy of institutions, namely Government stability (*Govstab*), is defined according to ICRG as the government's ability to achieve the announced plans and its capacity to be maintained in office. The Government stability index ranges between the values 1 and 12, where the lowest value (1) indicates a weak government that is not able to last and the highest level (12) refers to a strong Government able to carry out its program.

The second measure is corruption defined by ICRG (2010) as "*special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans.*" The presence of generalized corruption in the economy is disastrous and may push foreign investors experiencing difficulties in conducting business effectively to withhold of or even withdraw investments. The ICRG corruption index ranges between 0 and 6 with 6 being the lowest corruption and 0 the lowest one.

The Law and Order (*Laword)* measure reflects the strength and impartiality of the legal structure as well as the popular observance of the law. The Law and Order variable is measured separately and each sub-component is ranging between 1 and 3. This means that, in a country enjoying a strong judicial system where the law comes as a first consideration because of effective sanctions power, the ICRG Law and Order index takes the a high rating equal to 6. Regarding the range, the index is ranging as before, between 0 and 6 where low values refer to the use of illegal ways to settle claims.

The fourth measure of institutional development is Democratic Accountability (*Account*) defined according to ICRG (2010) as "*a measure of how responsive government is to its people, on the basis that the less responsive it is, the more likely it is that the government will fall, peacefully in a democratic society, but possibly violently in a non-democratic one.*" Data range between 0 and 6 where higher values are attributed to better democratic accountability.

The last institutional indicator is the bureaucracy quality (*Bureauc*) that tends to absorb shocks and to avoid major policy revisions after a change of Government. The ICRG

---

[3] See for more details Kaminsky and Reinhart (1996) and Eichengreen, Rose and Wyplosz (1996).
[4] See La Porta, De Silanes, Shleifer, & Vishny (1997) for more details.

bureaucracy index varies between 0 and 4, where the highest value is attributed to countries with the required skills that allow no interruptions and breaks in public services. In these countries, "*the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training.*" However, in high risk countries with an index close to 0 "*a change in government tends to be traumatic in terms of policy formulation and day-to-day administrative functions.*"

2.2 Descriptive data

In Tables 2a-2b-2c we report data relative to the different variables and for various groups of countries. The data report specifically the means, standard deviations, maximum and minimum values, units of the different variables. Table 3a-3b-3c display also the correlation coefficients between the key variables presented in equation (1). We find two proxies of financial development (*CPY* and *M2Y*), financial openness index (*KAOPEN*), trade openness index (*TRADE*), the inflation rate (*INF*) and an index of institutional quality.

However, since we have different proxies to gauge the level of institutional development in equation (1) (i.e., Government Stability, Corruption, Law and Order, Accountability and Bureaucracy), we use for correlation coefficients an aggregate index to measure the institutional quality defined as the sum of the five indices presented before. As the first indicator ranges between 1 and 12 and the last one is scaled from 0 and 4 and remaining indicators are between 0 and 6, the theoretical range between of the aggregated index is 0 to 34. This last index may offer as a better measure for institutional quality as it embraces all aspects of institutional environment (Baltagi, Demetriades, & Law (2009)). This aggregate institutional index seems to pose, nevertheless, a statistical problem in the case of developing countries because of the differences in the measures' scale in one country that would provide high levels of quality of bureaucracy and corruption yet with a high scale of law and order. Nevertheless, the high correlation across the institutional variables in the case of developed countries makes the aggregate institutional index a relevant measure as it offers the same information.

The analysis of Tables 2b and 2c shows that for the entire period 1975-2009 the financial development measures (quasi liquid liabilities to GDP (*M2Y*) and the credit to the private sector (*CPY*)) are on average higher in high income countries (compared to middle income ones). The capital account openness also follows the same trend as the *KAOPEN* index and ranges in average between 1.29 in developed economies and -0.17 in developing ones. The data also displays that the average level of private investment ratio to GDP (*PIY*) is still low in developing economies (15.37%) while it stands at a high of 17.28% in the case of developed countries. In terms of real growth, the performance seems to be higher on average in developing countries (3.53%) while it stands only at 3.03% in high income countries despite a higher investment ratio equal to 23.05% compared to middle income countries and lower fluctuations in growth rates (1.35). For the institutional indicators, a close inspection of the proxies reveals maximum scales for the proxies in many high income countries while for middle income countries the data shows improving levels over the same period but still below those achieved in high income countries (7.42 for Government Stability; 2.62 for Corruption, 3.09 for Law and Order; 3.67 for Accountability and 1.9 for Bureaucracy).

As for the correlations coefficients (Tables 3a; 3b and 3c) the evidence displays a considerable relationship in high income countries between the financial development

proxy (*CPY*) and capital account liberalization indicator (*KAOPEN*) (0.99) but when it comes to Quasi-liquid liabilities (*M2Y*) the coefficient turns to be negative (-0.68). Nevertheless, for middle income countries, the coefficients show less empirical evidence of correlation between the variables of interest as they range between -0.009 and 0.37.

3. Empirical Results

This section reports the results of estimating equation (1) using cross-sectional regressions and dynamic GMM estimations for a sample of 90 countries over the period 1075-2009. It provides many tests of the financial development and openness nexus and discusses the sensitivity of the results to the different proxies for the variables of interest. It also offers a deep analysis of the relationship for the case of middle income countries compared to high income economies.

3.1 Cross-sectional results

Table (4) provides results of cross-sectional regressions of the determinants of financial deepening using (*CPY*) and (M2Y) as dependent variables for the whole sample. The results point to a significant relationship between the financial development indicator and capital account liberalization as the coefficients are significant at standard confidence levels. Nevertheless, it's worth noting that such a preliminary result, despite its importance, might be misleading, and it needs to be scrutinized with more details because of the heterogeneity of the sample.

We thus split the set of countries into two sub-samples according to the level of income: high and middle income countries. Table (5) displays regressions of the same equation (1) for the sub-sample of middle income countries. The coefficients of the variable *KAOPEN* are no longer significant either with *CPY* or *M2Y* as dependent variables and various proxies of institutional development. This means that the significant and substantial effect found using the entire sample in Table (4) might be influenced by the case of developed countries that have experienced successful external reforms that took place as early as the sixties.

Moreover, in developing countries where the liberalization of capital account is not achieved partially/totally, there is a low likelihood of coming up with a significant effect on the deepening of the financial sector. Many of these countries (from Asia and Latin America) have liberalized their capital accounts during the eighties but reintroduced restrictions on cross-border capital flows in the nineties after periods of financial distress that have triggered episodes of real fluctuations (Malaysia, Thailand and Indonesia) whose severity was felt during the Asian financial crisis in the late nineties.

When the regressions are carried out for high income countries (Table (6)), the relationship turns out to be positive and significant at standard confidence levels especially if the private credit is used to proxy financial deepening. This result is not surprising as they are more financially liberalized and most of them have opened up their capital accounts across a long period that started in the early sixties.

This result has also been confirmed when we achieved the same regressions for more financially liberalized economies (MFL), defined as those with a financial openness index

(*KAOPEN*) above the median level[5]. Most of these MFL countries are also high income countries and few countries of the upper middle economies according to the World Development Indicators (WDI) of the World Bank. Thus, the positive and significant coefficients of *KAOPEN* at standard significance levels in Table (7) provide support to the results of Table (6) and to the hypothesis of interest. The reform of capital account is likely to have a positive effect on the state of the financial sector only in developed economies where the pre-requisites are already in place such as developed institutional environment, stable macroeconomic framework and developed private business sector.

In Table (8), we run cross-sectional regressions for the less financially liberalized economies (LFL), where the *KAOPEN* index is lower than the median equal to 0.103. The estimated coefficients seem to confirm the results of Table (5), as the (LFL) economies correspond almost to the same sample of middle income countries. Moreover, when the ratio of credit to the private sector is used as a dependent variable, no equation presents a significant coefficient (equations (1)-(6)) and only equation (8) enters with a positive and significant coefficient when M2Y is the explained variable.

 The rest of the variables included as regressors do not yield interesting results, especially in the case of the variable *Trade,* where the coefficients are not significant in all specifications either for middle or high income countries. This outcome seems to be acceptable in developing economies where trade openness is unlikely to deliver financial sector development unless financial openness is achieved (Rajan and Zingales (2003)). Moreover in Rajan and Zingales's view, simultaneous and deep reform of *both* capital account and trade is the only way to achieve financial market development. In addition, banking and currency dummies are also not significantly correlated with financial development proxies at standard confidence levels in the different tables. Finally, the different proxies of institutional environment tend to confirm the positive and significant correlation between financial sector and institutional development in high income and more financially liberalized countries (Tables (6) and (7)). This means that in these economies characterized by lower corruption, higher government stability and a strong judicial system, the financial sector is likely to be developed. Nevertheless, in middle income countries, where the institutional environment is not working in an optimal way due mainly to high corruption and weak states and judicial systems in many countries, its effect on the financial system is not likely to be significant as is shown in Table (5) (equations (3)-(6)).

All in all, the above empirical results are supportive of a positive effect of external financial reforms on financial sector development only in high income countries. The absence of a significant effect in middle income countries may be accounted for either by the state of the empirical approach and/or the nature of the nexus which might not be necessarily linear. Specifically, the cross-section approach generally used in tackling such issue suffers from the fact that it does not convey any information on the liberalization process (Edison, Levine, Ricci, & Torsten (2002)) and if the country backtracked or not by reintroducing new regulations regarding its capital account. This means that variations over time and

---

[5] The median level is equal to 0.103 and is calculated based on the KAOPEN average index for each country over the period 1975-2009. The Most Financially Liberalized countries (MFL) are those having a *KAOPEN* index higher than 0.103 across the period 1975-2009. For Low financially Opened countries (LFL), the index should be lower than 0.103, accordingly.

within a given country of capital account openness and financial sector development indicators are not taken into consideration.

3.2 GMM estimations

To overcome these limits of the cross-section approach, we use following Levine, Loayza, & Beck (2000), dynamic panel (GMM) techniques and we restrict the empirical analysis to the case of middle income countries, as in Arteta, Eichengreen and Wyplocz (2001) and Klein (2005), in order to detect the nature of the relationship between financial deepening and capital account liberalization in these countries. The dynamic panel data form of the initial model that tests the effect of capital account reform on financial development is derived from equation (1) as follows:

$$FD_{i,t} = c + \alpha\, FD_{i,t\text{-}1} + \beta\, KAL_{i,t} + \delta\, X_{i,t} + \mu_{i,t} + \lambda_{i,t} + \varepsilon_{i,t}$$
$$(2)$$

The inclusion of the lagged dependent variable among the explanatory variables implies the existence of a correlation between the regressors and the error term.

To eliminate the time-invariant country specific effects, we take the first difference of Equation (2), as follows:

$$\Delta FD_{i,t} = \alpha\, \Delta FD_{i,t\text{-}1} + \beta\, \Delta KAL_{i,t} + \delta\, \Delta X_{i,t} + \Delta\mu_{i,t} + \Delta\lambda_{i,t} + \Delta\varepsilon_{i,t}$$
$$(3)$$

Where Δ is the first difference and $FD_{i,t\text{-}1}$ is the lagged dependent variable. The estimation of equation (3) requires using a GMM panel estimator that uses instruments to deal with the endogeneity of the explanatory variables and the correlation between the error term ($\Delta\varepsilon_{it} = \varepsilon_{i,t} - \varepsilon_{it\text{-}1}$) with the lagged dependent variable ($\Delta FD_{it} = FD_{i,t\text{-}1} - FD_{i,t\text{-}2}$).

The estimation of the empirical model requires, following Arellano and Bover (1995) and Blundell and Bond (1998), a GMM panel estimator that combines the regressions in differences with those in levels. It is known as a system GMM estimator, where we combine the regression in differences with the estimator in levels. This approach has the advantage to improve the efficiency (Blundell, Dearden, Goodman, & Reed, (2000)).

The validation of the instruments in the GMM system approach is made using Hansen test of over-identifying restrictions[6]. We use also the autocorrelation test AR(2) for second order autocorrected disturbances in equation (3) and the null hypothesis corresponds to no autocorrelation. We use these two tests generally to check the consistency of the system of the GMM estimator. The panel used in this section is composed of 90 countries split into low, high and middle income countries according to the criteria of the World Bank. The data are averaged across 7 sub-periods (1975-1979, 1980-84, 1985-89, 1990-94, 1995-99, 2000-2004, and 2005-2009) in order to avoid cyclical patterns of the data.

Tables (9) and (10) report the results of dynamic-panel estimations with the same used above as proxies of financial development (i.e., namely the ratio of credit to the private sector to GDP and the ratio of liquid liabilities to GDP) and Chinn and Ito's Index of financial openness. The estimations carried out for middle income economies show that

---

[6] Hansen J-test statistic is asymptotically χ^2 and the degree of freedom is equal to the degree of over-identification $j\text{--}k$.

the coefficients of capital account liberalization proxy are not significant for either private credit or liquid liabilities at standard confidence levels and with different measures of institutional environment. These results are also similar to those obtained using the cross-sectional approach and tend to confirm the absence of a significant effect of freeing cross-border capital flows on the development of the financial sector in the case of middle income countries.

At a first glance, the absence of a significant effect of external financial reforms for middle income countries is not surprising if we know that most of them are featured by poor quality of institutions and serious macroeconomic imbalances before capital account liberalization. Furthermore, the fact that in high income countries estimations confirm that freeing capital movements is beneficial to the financial sector might suggest that financial reforms cannot produce their expected positive effects unless some conditions are in place. Such conditions could explain, to a large extent, the failure of certain experiences to capitalize on the change in policies (Stiglitz (2000)).

In light of this result, one solution to find a meaningful relationship between financial sector development and capital account reform in middle income countries is to focus on the pre-requisites that could have a direct bearing on the nexus. In other words, we look for identification of the factors that could have a direct bearing in the effect of freeing cross-border capital flows on financial sector development. In fact, as Developing countries are still featured by weak institutional environment and less low involvement of the private sector in economic activities, liberalizing capital account movements cannot produce the expected positive effects on the financial sector unless developed institutions and a dynamic private sector are in place.

For that, and to put the conditional effect of institutional variable in the empirical model, we introduce, first, in the set of regressors an interactive variable calculated as the product of financial openness proxy and one proxy of institutional development. A positive and significant coefficient of this interactive variable means that the effect of freeing capital movements is conditional on the level of institutional development in the society. In other words, it is not possible to achieve successful external financial reform unless developed institutions are in place. In this context, Stiglitz (2000) wrote, "*It has become increasingly clear that financial and capital market liberalization done hurriedly, without first putting into place an effective regulatory framework was at the core of the problem. It is no accident that the two large developing countries that survived the crisis and continued with remarkably strong growth in spite of a difficult global economic environment were India and China, both countries with strong controls on these capital flows.*"

Table (11) displays GMM estimations with this new interactive variable with different institutional proxies. The results display positive and significant coefficients at the standard level of confidence of the interaction variable either with *CPY* or *M2Y* as dependent variables. This result means that the effect of capital account liberalization on financial development is contingent on the level of institutional development in middle income countries.

The second pre-requisite that is highlighted in this paper is the private sector in the economy. To underline the conditional effect on the financial sector development in the empirical model, we replace the financial openness index by an interactive variable equal

to *KAOPEN* multiplied by the ratio of the private sector investment to GDP. The expected sign of this last variable should be positive and means that without a developed private entrepreneurial sector able to transform capital inflows into innovating projects that are able to transform the financial sector through raising the demand for new financial services.

Tables (13) and (14) summarize the different GMM regressions with the second interactive variable among the same explanatory variables. The findings seem to corroborate the importance of the private sector activity for an economy's ability to reap the benefits of capital account liberalization since the estimated coefficients are positive and significant at standard significance levels. A country has more chances to have a developed financial sector following a deep reform of capital account if the private sector is large enough so that his contribution to the investment effort is substantial.

4. Robustness Analysis

The robustness checks are carried out using two additional measures of capital account openness, which are the indices suggested by Lane and Milesi-Ferretti (2006) and Miniane (2004). Indeed, Lane and Milesi-Ferretti (2006) constructed another financial openness measure using data on international assets for 147 countries (henceforth (LMF)). The index is the ratio of the sum of total external assets and total external liabilities to GDP ((Assets + Liabilities)/GDP). A high value of this indicator is a synonym of increasing capital mobility. Nevertheless, it is worth noting that for some economists, this indicator is considered as the financial counterpart of the trade openness indicator generally calculated as the ratio of the sum of exports and imports to GDP ((Exports + imports)/GDP).

The second indicator was elaborated by Miniane (2004) based on specific IMF data. In fact, his indicator is based on the Fund's Annual Report on Exchange Rate Arrangements and Exchange Restrictions where a disaggregated index of capital account restrictions for 13 different categories has been published since 1996. Miniane (2004) extended the IMF's disaggregated index to go back to 1983 for a set of 34 countries and he thinks that his index is more accurate than the IMF's one. In our estimates, the Miniane's index (henceforth (MINIANE)) is reversed so that high values correspond to more capital mobility.

Table (15) displays GMM estimates using Lane and Milesi-Ferretti's ratio (LMF). The first regression shows that the interactive variable (LMF*PS) is positive significant at the 1% and 10% risk levels, respectively, which seems corroborating the above results with Chinn and Ito's index. This coefficient is also comparable to the one found in the above regression using (Kaopen*PS) though being a bit higher. The coefficients of the interactive variable also remain positive and significant even with the second proxy of financial development (M2Y) and the only exception is when we include LAWORD variable in equation (3) as a measure of institutional development (Table (16)). These results provide support, other things being equal, to the importance of the private sector in developing countries as a pre-condition for enhancing the role of external financial reform in economic activity.

The second measure used for robustness checks is the one suggested by Miniane (2004) and the key results using this proxy in the new interactive variable are displayed in Table (17). The regressions tend to confirm the conditional effect of capital account liberalization on financial development in developing countries where the private sector seems to play a pivotal role. The coefficients of the interactive variable (MINIANE*PS) are all positive and significant at the 1% confidence risk level in Table (17) within all specifications

represented by equations (1)-(5). Furthermore, the regressions show higher values of the coefficients representing the conditional effect compared with the above coefficients as they range between (+0.01) and (+0.013). Part of the reason might be that Miniane's index covers a sample with more Upper-middle income countries that have been implementing successful capital account reforms with an active participation of the private sector. This result holds particularly for countries like South Korea, Turkey and Chile where the ratio of private investment in percentage of GDP witnessed a qualitative jump that brought it above the level of 15%.

The fact that the private sector significantly holds as a pre-requisite for freeing cross border capital flows in the estimations with different indices of capital account liberalization seems to indicate an important degree of robustness. This result suggests that the presence of a structured entrepreneurial sector, in countries willing to liberalize their capital flows, is likely to provide more opportunities to foreign investors and more deposits to the financial sector in the economy.

5. Capital Account Liberalization, Financial Development and Growth

The above empirical investigation focused on the nexus between financial integration and the development of the financial sector, holding constant a set of other possible contributory factors. As long as financial sector development is highlighted by the literature as a significant determinant of economic growth, it would be interesting to test the relationship between economic growth and capital account liberalization for developing countries.

There is a widespread literature on the effect of financial integration on real economic activity. This literature is summarized by two polar sides that bring tighter advocates and proponents of freeing cross-border capital flows. On the one hand, we have those defending the hypothesis that financial integration has positive effects on economic growth (Rodrik (1998)) and on the other hand those who challenge that presumption (Edwards (2001)).

In the empirical literature, many investigations have highlighted the effects of capital account reforms on real activity through enhancing financial activity. Ranciere et *al*. (2006) found, for a sample of 60 countries during the period 1980-2002, that the direct growth gains following financial and capital account reforms outweigh the negative indirect effects of frequent financial crises. For Bekaert et *al*. (2005), equity market liberalization is beneficial for economic growth and emerging equity markets specifically could reap the benefits of deep reform of the market, as it allows greater portfolio diversification, risk-sharing enhancement and higher market liquidity.

On the other hand, the evidence shows a number of studies supporting the fact that freeing cross-border capital flows could increase banking sector instability, international capital flight and risk of speculative attacks. In this context, Kraay (1998) for example, using a sample of 117 developed and developing countries, reports no significant evidence of ties between financial openness indicators and economic growth. In the same vein, Demirgüç-Kunt and Detragiache (1998) and Eichengreen and Leblang (2003), report detrimental effects of financial reform on growth. However, in the case of developing countries, Prasad, Rogoff, Wei, & Kose (2007) argues that the causal relationship between financial openness and real growth remains vastly controversial and that the evidence conducted with cross-country and dynamic panel data estimations provided support to this presumption.

In a nutshell, the theoretical and empirical debate regarding the effect of freeing capital movements on economic growth is still unsettled and our investigation is an attempt to shed more light on this issue.

Table (19) displays the results of the estimates where the dependent variable is the logarithm of real GDP per capita and the independent ones are the same as in equation (3) but the capital account liberalization proxy is interacted with the ratio of the private investment to total investment (PS). The estimated coefficients of this latter interactive variable show that the effect of freeing cross border capital flows on economic growth depends on the presence of a developed private sector in the economy. At first glance, this result is not surprising, keeping in mind the previous regressions and their highlighting of the role of the private sector in the nexus between financial development and capital account liberalization. Indeed, without a dynamic entrepreneurial sector able to transform the available funds in the financial sector into profitable projects, reforming the capital account would not be able to produce the expected positive effects in developing countries.

In terms of policy recommendations this result might be interpreted as a direct call to decision makers to strengthen the role of the public sector in the economy through enhancing and developing the business climate. The empirical literature and the different international experiences have shown that higher growth is achieved only in countries with a developed entrepreneurial sector and high levels of private investment. More specifically, in countries where there is an easy access to finance and developed institutional infrastructure, the private sector is found to be more dynamic and innovative in terms of investment. Developing countries could not reach higher levels of investment and growth, accordingly, unless the private sector benefits from notable incentives.

6. Conclusion and Policy Recommendations
Motivated by the lack of extended empirical literature on the effect of capital account liberalization on the development level of financial markets, this paper attempts to shed more light on this topic by examining the effect of freeing cross-border capital flows on financial sector development for a sample of 90 *high* and *middle-income* countries during the period 1975-2009 using cross-sectional as well as well dynamic panel (GMM) techniques.

By and large, the findings are supportive of a non-linear relationship between external financial reform and financial development in the case of middle income countries. Specifically, the empirical evidence based on cross-sectional and dynamic panel (GMM) regressions displays significant and positive relationship only in the case of developed countries while in either developing or less financially opened economies the regressions turn out to be insignificant.

Further investigation for developing countries shows that the effect of liberalizing cross-border capital flows on financial sector development depends on the quality of institutions. This means that opening up the capital account in these economies would not be beneficial unless a developed institutional environment is already established and working. This result is also on line with literature that emphasizes the role of institutional quality's ability in mobilizing financial resources for capital accumulation and accordingly real growth.

Moreover, the relationship is also found to depend on the importance of the private sector in the economy. In other words, if financial openness is not underpinned by a large and

dynamic private entrepreneurial sector that is able to transform the incoming capital flows into highly productive investments, it would not be possible to reap the benefits of liberalization on the financial sector and consequently on real activity.

By and large, the key policy implication that can be drawn from this empirical investigation is that capital flows are not always a blessing. Where economies are not prepared enough in terms of institutional environment and the private sector, freeing cross-border capital flows may not have the expected positive effects on financial activity and accordingly economic growth. Therefore, it is important for policy makers in developing countries to promote efficient and strong institutions. This should include deep and significant reforms of courts and financial rules that are likely to strengthen creditor and property rights, contracts' enforcement and justice transparency. All these reforms will promote capital inflows and lead to better risk-sharing.

It follows from our results that the private sector is also highlighted as a prerequisite for successful capital account reform in developing countries. In this regard, promotion of the business sector that leads to the development of private investment is highly recommended. The evidence has shown that in high financially liberalized countries that have achieved high real growth, the contribution of the private sector in terms of investment was substantial either in attracting foreign capital inflows or in the promotion of local financial markets. This is particularly proper for policy makers looking for sustaining economic growth.

References

Arellano, M., & Bover, O. (1995). Another look at instrumental variables estimation of error-component Models. *Journal of Econometrics, 68*, 29–51.

Arteta, C., Eichengreen, B., & Wyplosz, C. (2001). When Does Capital Account Liberalization Help More Than It Hurts? NBER Working Paper No.8414.

Baltagi, B. H., Demetriades, P. O., & Law, S. H. (2009). Financial Development and Openness: Evidence From Panel Data. *Journal of Development Economics*, 89:285–296.

Bekaert, G., Harvey, C., & Lundblad, C. (2005). Does financial liberalisation spur growth? *Journal of Financial Economics, 77*(1), 3-55.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel-data. *Journal of Econometrics*, 115–143.

Blundell, R., Dearden, L., Goodman, A., & Reed, H. (2000). The returns to higher education in Britain: evidence from a British cohort. *Journal of Econometrics* , 110: F82–F99.

Brüggemann, A., & Linne, T. (2002). Are the Central and Eastern European Transition. *Bank of Finland, Institute for Economies in Transition, BOFIT*.

Calvo, G. A., & Reinhart, C. M. (1999). *When Capital Inflows Come to a Sudden Stop: Consequences and Policy Options.* Retrieved from Calvo, G. A., & ReinhaAvailable at http://www.puaf.umd.edu/faculty/papers/reinhart/imfbook.pdf.

Chinn, M. D., & Ito, H. (2006). What Matters for Financial Developmen? Capital controls, Instituions and Interactions. *Journal of Development Economics, 81*(1), 163-192.

Chinn, M. D., & Ito, H. (2008). A New Measure of Financial Openness. *Journal of Comparative Policy Analysis, 10*(3), 309 – 322.

Chinn, M., & Ito, H. (2002). Capital Acoount Liberalization, Institutions, and Economic Growth: Cross-Country Evidence. *NBER Working Papers*.

Chinn, M., & Ito, H. (2006). What Matters for Financial Developmen? Capital Controls, Instituions and Interactions. *Journal of Development Economics, 81*(1), 163-192.

Chinn, M., & Ito, H. (2011). The Chinn-Ito Index- a De Jure Measure of Financial Openness. Retrieved from http://web.pdx.edu/~ito/Chinn-Ito_website.htm.

Claessens, S.-K. A., & Huizinga, H. (2001). How Does Foreign Entry Affect Domestic Banking Markets? . *Journal of Banking and Finance*, 25(5), . 891–911.

Database, I. C. (2010). Retrieved from http://www.prsgroup.com/prsgroup_shoppingcart/pc-39-7-international-country-risk-guide-icrg.aspx.

De Gregorio, J. (1999). Financial Integration, Financial Development and Economic Growth. *Estudios de Economìa, 26*(2), 137-161.

De Gregorio, J., & Guidotti, P. (1995). Financial Development and Economic Growth. *World Develpment, 23*(3), 433–448.

Demirgüç-Kunt, A., & Detragiache, E. (1998). The determinants of banking crises in developing and Developed Countries. *IMF Staff Papers, 45*(1), 81–109.

Detragiache, E., Tressel, T., & Gupta, P. (2006). Foreign Banks in Poor Countries: Theory and Evidence. IMF Working Papers 06/18.

Edison, H. J., Levine, R., Ricci, L. A., & Torsten, S. (2002). International Financial Integration and Economic Growth. *Journal of International Money and Finance*, 749-776.

Edwards, S. (2001). Capital Mobility and Economic Performance: Are Emerging Economies Different? NBER Working Paper No. 8076.

Eichengreen, B., & Leblang, D. (2003). Capital account liberalization and growth: was Mr. Mahathir right? *International Journal of Finance and Economics*, 205–224.

Eichengreen, B., Gullapalli, R., & Panizza, U. (2011). Capital Account Liberalization, Financial Development and Industry Growth: A Synthetic View. *Journal of International Money and Finance, 30*(6), 1090–1106.

Eichengreen, B., Rose, A., & Wyplosz, C. (1996). Contagious Currency Crises. NBER Working Paper No. 5681.

Gerber, J. (2002). *International Economics.* Boston: Pearson Education.

Glick, R., & Hutchison, M. (1999). Banking and Currency Crises: How Common are Twins? In R. Glick, & a. M. Ramon Moreno, *Financial Crises in Emerging Markets* (pp. 35–69). New york: Cambridge University Press.

Gurley, J. G., & Shaw, E. S. (1955). Financial Aspects of Economic Development. *American Economic Review, 45*(4), 515-38.

Kaminsky, G. L., & Reinhart, C. M. (1996). The Twin Crises: the Causes of Banking and Balance-of-Payments Problems. *International Finance Discussin Paper No 544*.

King, R., & Levine, R. (1993). Finance and Growth: Schumpeter Might Be Right. *The Quarterly Journal of Economics, 108*(3), 717-737.

Klein, M. W. (2005). *Capital Account Liberalization, Institutional Quality and Economic Growth: Theory and Evidence.* NBER Working Paper Series, Working Paper No.11112.

Klein, M., & Olivei, J. (2008). Capital Account Liberalizaion, Financial Depth and Economic Growth. *Journal of International Money and Finance, 27*, 861-875.

Kose, M. A., Prasad, E., Rogoff, K., & Wei, S.-J. (2006). Financial Globalization: A Reappraisal. *IMF Working Papers* .

Kraay, A. (1998). *In Search of the Macroeconomic Effects of Capital Account Liberalization.* Mimeo, World Bank, Washington DC.

La Porta, R., De Silanes, F. L., Shleifer, A., & Vishny, R. (1997). Legal Determinants of External Finance. *Journal of Finance*, 1131-1150.

Laeven, L., & Valencia, F. (2012). Systemic Banking Crises Database: An Update. *IMF Working Paper, WP/12/163*.

Lane, P., & Milesi-Ferretti, M. G. (2006). The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970–*2004*. IMF Working Paper WP/06/69.

Levine, R. (1997). Financial Development and Economic Development: Views and Agenda. *Journal of Economic Literature, 25*, 688-726.

Levine, R. (2001). International Financial Liberalization and Economic Growth. *Review of International Economics*, 9(4):688-702.

Levine, R., & Zervos, S. (1998). Stock Markets, Banks, and Growth. *American Economic Review*, 88(3):537-558.

Levine, R., Loayza, N., & Beck, T. (2000). Financial Intermediation and Gorwth: Causality and Causes. *Journal of Monetray Economics, 46*(1), 31-77.

Levine, R., Loayza, N., & Beck, T. (2000). Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics, 46*(1), 31–77.

McKinnon, R. (1973). *Money and Capital in Economic Development.* Washington D.C: Brookings Institution.

Miniane, J. (2004). *A New Set of Measures on Capital Account Restrictions.* IMF Staff Papers.

Prasad, E., Rogoff, K., Wei, S., & Kose, M. (2007). Financial Globalization, Growth and Volatility in Developing Countries. In *Globalization and Poverty* (pp. 457–516). National Bureau of Economic Research , Inc.,.

Rajan, R., & Zingales, L. (2003). The Great Reversals: The Politics of Financial Development in the Twentieth Century. *Journal of Financial Economics*, 69(1):5-50.

Ranciere, R., Tornell, A., & Westermann, F. (2006). *Decomposing the Effects of Financial Liberalization: Crises vs. Growth.* NBER Working Paper 12806. National Bureau of Economic Research, Cambridge, Mass.

Rodrik, D. (1998). *Who Needs Capital Account convertibility.* A short paper for a Princeton International Finance Section symposium.

Shaw, E. (1973). *Financial Deepening in Economic Development.* New York : Oxford University Press.

Stiglitz, J. E. (2000). Capital Market Liberalization, Economic Growth, and Instability. *World Development, 28*(6), 1075-1086.

Stulz, M. (1999). International Portfolio Fows and Security Markets. In M. Feldstein, *International Capital Flows.* National Bureau of Economic Research.

Summers, L. (2000). International Financial Crises: Causes, Prevention and Cures. *American Economic Review, 90*(2), 1-16.

World Bank. (2012). *World Development Indicators*. Retrieved 2012, from http://data.worldbank.org/products/wdi.

Table 1: Countries of the Sample (90 countries)

Low income countries

Burkina Faso, Ethiopia, Gambia, Ghana, Haiti, Kenya, Madagascar, Malawi, Mali, Niger, Sierra, Leone, Tanzania, Togo

Middle income countries

Algeria, Argentina, Botswana, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Dominican Republic, Gabon, Iran, Islamic Rep., Jamaica, Lithuania, Malaysia, Mexico, Namibia, Panama, Peru, Russian Federation, South Africa, Turkey, Uruguay, Venezuela, RB, Bolivia, Cameroon, Côte d'Ivoire, Ecuador, Egypt, Arab Rep., El Salvador, Guatemala, Honduras, India, Indonesia, Jordan, Morocco, Nigeria, Pakistan, Paraguay, Philippines, Senegal, Sri Lanka, Syrian Arab Republic, Thailand, Tunisia,

 High income Countries

Australia, Austria, Bahamas, Bahrain, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, China, Hungary, Iceland, Ireland, Italy, Japan, Korea, Rep., Kuwait, Netherlands, Norway, Poland, Portugal, Saudi Arabia, Singapore, Spain, Sweden, Switzerland, Trinidad and Tobago, United Kingdom, United States.

Table 2a: Summary Statistics of The Variables: Whole Sample, 90 Countries

Variables	Obs.	Mean	STD	Min	Max	Unit
CPY	83	46.02	34.96	4.60	175.78	%
M2Y	84	53.32	41.80	13.73	219.13	%
KAOPEN	84	0.29	1.25	-1.82	2.47	-
Trade	83	16.30	11.08	3.15	65.10	%
Inf	83	30.30	77.66	2.5	403.18	%
PIY	53	14.21	4.30	4.12	22.80	%
IY	81	21.65	4.22	10.28	33.10	%
GY	82	15.51	4.93	6.53	27.13	%
Growth	83	3.27	1.44	0.28	7.73	%
Govstab	85	7.60	0.82	5.49	9.52	-
Corrupt	85	3.19	1.14	1.26	6	-
Laword	85	3.82	1.28	1.36	6	-
Account	85	3.99	1.28	1.03	6	-
Bureauc	85	2.31	1.04	0	4	-

Source: World Bank (2012) and authors' computations

Table 2b: Summary Statistics of the Variables: High Income Countries

Variable	Obs.	Mean	STD	Min	Max	Unit
CPY	31	76.10	34.67	20.85	175.78	%
M2Y	30	81.87	44.73	28.23	183.78	%
KAOPEN	31	1.29	1.03	-1.16	2.47	-
Trade	31	20.73	15.07	4.39	65.10	%
Inf	31	7.26	7.36	2.05	40.65	%
PIY	12	17.28	1.52	16.18	19.02	%
IY	31	23.05	3.66	16.95	33.10	%
GY	31	18.60	4.75	7.85	27.13	%
Growth	31	3.03	1.35	1.76	6.86	%
Govstab	31	8.09	0.57	6.92	9.52	-
Corrupt	31	4.24	1.07	2.16	6	-
Laword	31	5.13	0.75	3.55	6	-
Account	31	4.88	1.37	1.03	6	-
Bureauc	31	3.36	0.65	1.92	4	-

Source: World Bank (2012) and authors' computations.

Table 2c: Summary Statistics of the Variables, Middle Income Countries

Variable	Obs.	Mean	STD	Min	Max	Unit
CPY	40	32.28	20.19	9.10	97.23	%
M2Y	41	42.08	33.55	17.25	219.13	%
KAOPEN	40	-0.176	1.02	-1.82	2.47	-
Trade	40	13.17	6.77	3.15	36.41	%
Inf	40	53.50	107.45	3.29	403.18	%
PIY	39	15.37	3.77	7.87	22.80	%
IY	39	21.92	3.97	14.29	30.79	%
GY	39	13.68	4.12	6.53	26.79	%
Growth	40	3.53	1.54	0.28	7.73	%
Govstab	41	7.42	0.82	6.03	9.14	-
Corrupt	41	2.62	0.61	1.26	4.12	-
Laword	41	3.09	0.90	1.36	5.13	-
Account	41	3.67	0.85	1.49	5.31	-
Bureauc	41	1.90	0.55	0.91	2.99	-

Source: World Bank (2012) and authors' computations.

Table 3a: Correlations between of the Variables, Whole Sample, 1975-2009

	CPY	M2Y	KAOPEN	Trade	Inf	PIY	IY	GY	Growth	IQ
CPY	1.00									
M2Y	0.43	1.00								
KAOPEN	0.16	0.04	1.00							
Trade	0.10	0.09	0.28	1.00						
Inf	0.02	-0.11	0.08	-0.34	1.00					
PIY	0.36	0.21	0.25	0.20	0.03	1.00				
IY	0.40	0.33	0.17	0.24	-0.12	0.74	1.00			
GY	0.16	0.05	-0.01	0.35	-0.08	0.13	0.25	1.00		
Growth	0.16	0.25	-0.11	-0.002	-0.20	003	0.37	0.03	1.00	
IQ	0.44	0.02	0.18	0.21	-0.03	0.39	0.37	0.57	0.08	1.00

Source: World Bank (2012) and authors' computations.

Table 3b: Correlations between of the Variables, High Income Countries, 1975-2009

	CPY	M2Y	KAOPEN	Trade	Inf	PIY	IY	GY	Growth	IQ
CPY	1.00									
M2Y	-0.68	1.00								
KAOPEN	0.99	-0.71	1.00							
Trade	0.91	-0.91	0.93	1.00						
Inf	-0.78	0.08	-0.75	-0.46	1.00					
PIY	0.75	-0.99	0.78	0.95	-0.18	1.00				
IY	0.95	-0.97	0.96	0.99	-0.54	0.92	1.00			
GY	-0.04	-0.69	-0.002	0.35	0.65	0.61	0.27	1.00		
Growth	-0.98	0.78	-0.99	-0.96	0.67	-0.84	-0.98	-0.10	1.00	
IQ	038	-0.93	0.42	0.71	0.27	0.89	0.65	0.90	-0.51	1.00

Source: World Bank (2012) and authors' computations.

Table 3c: Correlations between of the Variables, Middle Income Countries, 1975-2009

	CPY	M2Y	KAOPEN	Trade	Inf	PIY	IY	GY	Growth	IQ
CPY	1.00									
M2Y	0.37	1.00								
KAOPEN	-0.002	-0.01	1.00							
Trade	0.10	0.16	0.09	1.00						
Inf	-0.04	-0.17	0.09	-0.37	1.00					
PIY	0.12	0.07	0.06	0.29	-0.07	1.00				
IY	0.21	0.25	-0.09	0.26	-0.26	0.61	1.00			
GY	0.15	0.06	-0.18	0.28	-0.07	0.11	0.22	1.00		
Growth	0.18	0.24	-0.10	0.07	-0.24	-0.02	0.41	-0.05	1.00	
IQ	0.36	-006	-007	0.16	-0.11	0.22	0.22	0.64	0.13	1.00

Source: World Bank (2012) and authors' computations.

Table 4: Capital Account Liberalization And Financial Development: 1975-2009, Cross-Sectional Regressions, Whole Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Dependent variable = CPY						Dependent variable = M2Y					
Kaopen	.171***	0.153***	0.149***	0.133***	0.152***	0.129***	0.077***	0.066***	0.089***	0.069***	0.083***	0.076***
	(.041)	(.03)	(.04)	(.04)	(.04)	(.03)	(.02)	(.02)	(.02)	(.03)	(.02)	(.03)
Initial FD	.678***	0.646***	0.594***	0.611***	0.60***	0.519***	0.758***	0.744***	0.794***	0.745***	0.777***	0.754***
	(.06)	(0.59)	(.07)	(.06)	(.07)	(.06)	(.05)	(.05)	(.05)	(.05)	(.05)	(.05)
Banking	-.110	-0.037	-0.046	-0.033	-0.106	-0.0006	-0.103	-0.073	-0.115	-0.093	-0.096	-0.101
	(-.10)	(0.10)	(0.10)	(.10)	(.10)	(.09)	(.07)	(.07)	(.07)	(.07)	(.07)	(.07)
Currency	-.041	-0.039	-0.025	0.003	-0.035	0.022	-0.005	-0.004	-0.010	-0.001	-0.006	-0.004
	(-.56)	(0.05)	(.05)	(.05)	(.05)	(.05)	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)
Trade	-0.040	-0.095	-0.025	-0.056	-0.004	-0.015	0.0004	-0.026	-0.004	-0.002	-0.007	0.0009
	(-0.07)	(.09)	(.07)	(.07)	(.07)	(.07)	(.05)	(.05)	(.05)	(.05)	(.05)	(.05)
Govstab		0.188***						0.093***				
		(.55)						(.04)				
Corrupt			0.115						-0.049			
			(.05)						(.03)			
Laword				0.135***						0.025		
				(.04)						(.05)		
Account					0.083**						-0.021	
					(.04)						(.02)	
Bureauc						0.250***						0.006
						(.05)						(.04)
Constant	-0.140***	-1.78***	-0.65***	-0.886***	-0.499***	-1.044***	-3.39***	-4.128***	-3.353***	-3.468***	-3.391***	-3.394***
	(-.18)	(.51)	(.28)	(.30)	(.25)	(.25)	(.22)	(.39)	(.23)	(.25)	(.23)	(.23)
Obs.	81	81	81	81	81	81	80	80	80	80	80	80
R squared	0.76	0.79	0.77	0.78	0.77	0.81	0.83	0.84	0.83	0.83	0.83	0.83

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5: Capital Account Liberalization and Financial Development (1975-2009), Cross-sectional Regressions, Developing Countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Dependent variable = CPY						Dependent variable = M2Y					
Kaopen	0.067	0.092	0.070	0.073	0.054	0.075	0.054	0.067	0.053	0.057	0.051	0.054
	(.06)	(.06)	(. 06)	(.06)	(.07)	(.06)	(.04)	(.05)	(.05)	(.05)	(.05)	(.05)
Initial FD	0.534***	0.552***	0.489***	0.533***	0.512***	0.480***	0.738***	0.753***	0.745***	0.741***	0.737***	0.737***
	(.11)	(.11)	(.13)	(.11)	(.12)	(.12)	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)
Banking	0.227	0.282	0.240	0.241	0.218	0.220	-0.122	-0.091	-0.120	-0.116	-0.126	-0.123
	(.17)	(.17)	(.17)	(.17)	(.17)	(.17)	(.11)	(.12)	(.12)	(.12)	(.12)	(.12)
Currency	-0.144	-0.158	-0.159	-0.148	-0.145	-0.137	-0.140	-0.143	-0.136	-0.141	-0.140	-0.140
	(.11)	(.11)	(.12)	(.11)	(.12)	(.11)	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)
Trade	0.063	-0.002	0.070	0.032	0.069	0.056	0.077	0.042	0.074	0.062	0.078	0.077
	(.11)	(.12)	(.12)	(.12)	(.12)	(.11)	(.08)	(.09)	(0.09)	(0.09)	(.09)	(.08)
Govstab		0.140*							0.070			
		(.08)							(.06)			
Corrupt			0.080						-0.018			
			(.12)						(.08)			
Laword				0.072						0.034		
				(.07)						(.05)		
Account					0.039						0.008	
					(.08)						(.05)	
Bureauc						0.145						0.004
						(.12)						(.08)
Constant	-0.221	-1.393*	-0.466	-0.518	-0.375	-0.601	-2.865***	-3.527***	-2.855***	-3.015***	-2.886***	-2.871***
	(.39)	(.78)	(.54)	(.48)	(.51)	(.50)	(.46)	(.74)	(.47)	(.52)	(.49)	(.48)
Obs.	39	39	39	39	39	39	39	39	39	39	39	39
Rsquared	0.50	0.54	0.50	0.51	0.50	0.52	0.74	0.75	0.74	0.74	0.74	0.75

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6: Capital Account Liberalization and Financial Development (1975-2009), Cross-Sectional Regressions, Developed Countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			Dependent variable = CPY						Dependent variable = M2Y			
Kaopen	0.116**	0.068	0.102***	0.094*	0.133**	0.114***	0.076	0.050	0.086*	0.084	0.058	0.076
	(.05)	(.05)	(.05)	(.05)	(.05)	(.04)	(.05)	(.05)	(.04)	(.05)	(.05)	(.05)
Initial FD	0.467***	0.484***	0.406***	0.433***	0.415***	0.383***	0.671***	0.669***	0.724***	0.697***	0.749***	0.705***
	(.08)	(.07)	(.08)	(.08)	(.08)	(.07)	(.07)	(.07)	(.08)	(.08)	(.09)	(.09)
Banking	-0.218	-0.208	-0.162	-0.161	-0.206	-0.114	-0.158	-0.147	-0.178	-0.176	-0.145	-0.175
	(.13)	(.12)	(.12)	(.12)	(.12)	(.11)	(.11)	(.10)	(.10)	(.11)	(.10)	(.11)
Currency	0.032	0.012	0.032	0.060	0.035	0.074	0.049	0.036	0.053	0.040	0.054	0.041
	(.06)	(.05)	(.05)	(.06)	(.05)	(.05)	(.05)	(.05)	(.05)	(.05)	(.53)	(.05)
Ltrade	-0.127	-0.173**	-0.096	-0.083	-0.965	-0.049	-0.040	-0.067	-0.052	-0.053	-0.082	-0.053
	(.08)	(.08)	(.08)	(.08)	(.09)	(.07)	(.07)	(.08)	(.07)	(.08)	(.08)	(.08)
Govstab		0.205**						0.117				
		(.10)						(.09)				
Corrupt			0.110**						-0.081			
			(.05)						(.04)			
Laword				0.157*						-0.063		
				(.08)						(.08)		
Account					0.072						-0.070	
					(.04)						(.04)	
Bureauc						0.275***						-0.072
						(.08)						(.09)
Constant	-0.302	-1.967**	-0.772**	-1.086**	-0.616**	-1.239***	-3.120***	-4.068***	-3.010***	-2.911***	-3. 147***	-3.018***
	(.20)	(.86)	(.29)	(.46)	(.28)	(.33)	(.31)	(.83)	(.31)	(.42)	(.30)	(.34)
Obs.	30	30	30	30	30	30	29	29	29	29	29	29
Rsquared	0.65	0.76	0.70	0. 69	0.68	0.76	0.79	0.81	0.82	0.80	0.81	0.80

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7: Capital account liberalization and financial development (1975-2009), Cross-sectional regressions, More Financially Opened (MFO, Kaopen>=0.103)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Dependent variable = CPY						Dependent variable = M2Y					
Kaopen	0.277***	0.227***	0.262***	0.238***	0.290***	0.257***	0.127*	0.072	0.132*	0.110	0.127*	0.121
	(.08)	(.09)	(.08)	(.08)	(.08)	(.08)	(.07)	(.07)	(.07)	(.07)	(.07)	(.07)
Initial FD	0.565***	0.527***	0.439***	0.455***	0.479***	0.407***	0.707***	0.677***	0.725***	0.670***	0.714***	0.679***
	(.07)	(.07)	(.09)	(.08)	(.08)	(.08)	(.07)	(.06)	(.08)	(.08)	(.08)	(.09)
Banking	-0.012	0.023	0.035	0.041	-0.030	0.034	-0.124	-0.096	-0.127	-0.114	-0.122	-0.122
	(.14)	(.14)	(.13)	(.13)	(.13)	(.13)	(.11)	(.11)	(.11)	(.11)	(.12)	(.11)
Currency	-0.113	-0.116	-0.067	-0.034	-0.086	-0.013	0.021	0.019	0.016	0.042	0.021	0.034
	(.07)	(.07)	(.07)	(.08)	(.07)	(.07)	(.06)	(.06)	(.06)	(.07)	(.06)	(.07)
Ltrade	-0.088	-0.131	-0.078	-0.092	-0.041	-0.079	0.017	-0.025	0.016	0.014	0.014	0.016
	(.09)	(.09)	(.09)	(.09)	(.09)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)
Govstab		0.148							0.146**			
		(.08)							(.07)			
Corrupt			0.147***						-0.021			
			(.06)						(.05)			
Laword				0.156***						0.048		
				(.06)						(.05)		
Account					0.097**						-0.006	
					(.04)						(.04)	
Bureauc						0.236***						0.036
						(.08)						(.07)
Constant	-0.491*	-1.733**	-1.215***	-1.386***	-0.968**	-1.428***	-3.269***	-4.331***	-3.259***	-3.360***	-3.272***	-3.277***
	(.26)	(.)	(.39)	(.45)	(.35)	(.40)	(.35)	(.61)	(.35)	(.36)	(.35)	(.35)
Obs.	40	40	40	40	40	40	39	39	39	39	39	39
Rsquared	0.76	0.78	0.80	0.80	0.79	0.81	0.80	0.83	0.80	0.81	0.80	0.80

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 8: Capital Account Liberalization and Financial Development (1975-2009), Cross-sectional Regressions, Less Financially Opened (LFO, Kaopen<=0.103)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Dependent variable = CPY						Dependent variable = M2Y					
Kaopen	0.044	0.199	0.058	0.038	0.001	0.088	0.114	0.173	0.115	0.106	0.121	0.113
	(.14)	(.14)	(.14)	(.14)	(.15)	(.12)	(.09)	(.09)	(.09)	(.08)	(.09)	(.09)
Initial FD	0.822***	0.795***	0.770***	0.793***	0.757***	0.659***	0.844***	0.881***	0.904***	0.888***	0.887***	0.875***
	(.10)	(.09)	(.11)	(.09)	(.11)	(.09)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)
Banking	-0.181	-0.083	-0.134	-0.093	-0.160	-0.053	-0.078	-0.042	-0.090	-0.045	-0.077	-0.074
	(.17)	(.15)	(.17)	(.16)	(.17)	(.15)	(.10)	(.10)	(.10)	(.11)	(.11)	(.11)
Currency	0.067	0.033	0.054	0.076	0.068	0.073	-0.028	-0.041	-0.021	-0.021	-0.029	-0.027
	(.09)	(.08)	(.09)	(.08)	(.09)	(.07)	(.06)	(.05)	(.06)	(.06)	(.06)	(.06)
Ltrade	0.041	-0.065	0.050	-0.008	0.071	0.061	-0.044	-0.088	-0.051	-0.064	-0.048	-0.042
	(.12)	(.11)	(.12)	(.12)	(.12)	(.10)	(.07)	(.08)	(.07)	(.07)	(.08)	(.08)
Govstab		0.242						0.099				
		(.08)						(.05)				
Corrupt			0.093						-0.052			
			(.08)						(.05)			
Laword				0.145						0.059		
				(.06)						(.04)		
Account					0.095						-0.010	
					(.07)						(.04)	
Bureauc						0.279						0.023
						(.07)						(.05)
Constant	0.046	-1.915	-0.272	-0.669	-0.378	-0.770	-3.829	-4.612	-3.764	-4.122	-3.803	-3.847
	(.33)	(.71)	(.45)	(.45)	(.47)	(.36)	(.38)	(.56)	(.39)	(.43)	(.40)	(.39)
Obs.	41	41	41	41	41	41	41	41	41	41	41	41
Rsquared	0.68	0.75	0.69	0.72	0.69	0.77	0.80	0.82	0.80	0.81	0.80	0.80

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 9: Capital Account Liberalization and Financial Development: 1975-2009 Generalized Method of Moments (GMM), Middle Income Countries

	Dependent variable = CPY				
	(1)	(2)	(3)	(4)	(5)
L.FD	0.776***	0.775***	0.774***	0.790***	0.826***
	(0.13)	(0.121	(0.12)	(0.15)	(0.11)
Kaopen	0.095	0.071	0.054	0.061	0.066
	(0.07)	(0.07)	(0.09)	(0.10	(0.07)
Trade	0.287	0.278	0.361	0.516***	0.390**
	(0.22)	(0.20)	(021)	(0.16)	(0.19)
Inf	-0.025	-0.051	-0.055	-0.060	-0.075
	(0.06)	(0.07)	(0.06)	(0.08)	(0.08)
Govstab	0.107				
	(0.13)				
Corrupt		-0.079			
		(0.09)			
Laword			-0.011		
			(0.12)		
Account				-0.168*	
				(0.09)	
bureauc					-0.234
					(0.20)
Tps4	-0.182	-0.090	-0.128	-0.081	-0.065
	(0.10)	(0.12)	(0.13)	(0.12)	(0.12)
Tps5	-0.361	-0.055	-0.082	0.018	0.001
	(0.34)	(0.10)	(0.21)	(0.14)	(0.13)
Tps6	-0.57	-0.225	-0.196	-0.138	-0.155
	(0.38)	(0.08)	(0.19)	(0.12)	(0.10)
Tps7	-0.304	-0.085**	-0.032	0.079	-0.017
	(0.29)	(0.10)	(0.17)	(0.12)	(0.07)
Constant	-1.390	-0.482	-0.867**	-0.731*	-0.471
	(0.92)	(0.62)	(0.44)	(0.40)	(0.55)
Observations	235	235	235	235	235
AR(2) test, p-level	0.41	0.07	0.11	0.13	0.06
Hansen test, p-level	0.11	0.11	0.14	0.36	0.17

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 10: Capital Account Liberalization and Financial Development: 1975-2009 Generalized Method of Moments (GMM), Middle Income Countries

	(1)	(2)	(3)	(4)	(5)
	Dependent variable = M2Y				
L.FD	0.824***	0.731***	0.783***	0.775***	0.795***
	(0.11)	(0.10)	(0.10)	(0.12)	(0.10)
Kaopen	0.101	0.054	0.048	0.091	0.062
	(0.06)	(0.03)	(0.03)	(0.05)	(0.04)
Trade	0.133	0.154	0.138	0.330**	0.221**
	(0.16)	(0.10)	(0.09)	(0.13)	(0.09)
Inf	-0.039	-0.090**	-0.083**	-0.074**	-0.098**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)
Govstab	0.167				
	(0.09)				
Corrupt		-0.075			
		(0.09)			
Laword			-0.023		
			(0.06)		
Account				-0.171*	
				(0.06)	
bureauc					-0.144
					(0.10)
Tps4	-0.131**	-0.077	-0.100**	-0.060	-0.082
	(0.05)	(0.06)	(0.05)	(0.05)	(0.06)
Tps5	-0.517**	-0.081	-0.084	-0.017	-0.098
	(0.28)	(0.10)	(0.08)	(0.07)	(0.06)
Tps6	-0.599*	-0.109**	-0.067	-0.019	-0.124
	(0.34)	(0.05)	(0.06)	(0.08)	(0.07)
Tps7	-0.497	-0.103*	-0.055	0.024	-0.115
	(0.30)	(0.05)	(0.06)	(0.08)	(0.07)
Constant	-1.225**	-0.072	-0.142	-0.111	-0.073
	(0.62)	(0.41)	(0.29)	(0.33)	(0.35)
Observations	233	233	233	233	233
AR(2) test, p-level	0.70	0.28	0.32	0.15	0.07
Hansen test, p-level	0.58	0.19	0.22	0.56	0.19

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 11: Capital Account Liberalization and Financial Development (1975-2009), Generalized Method of Moments (GMM), Middle Income Countries

	Dependent variable = CPY				
	(1)	(2)	(3)	(4)	(5)
L.FD	0.775***	0.726***	0.750***	0.781***	0.824***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Kaopen*govstab	0.006**				
	(0.003)				
Kaopen*corrupt		0.017**			
		(0.008)			
Kaopen*laword			0.019***		
			(0.006)		
Kaopen*account				0.009	
				(0.007)	
Kaopen*bureauc					0.022**
					(0.10)
Govstab	0.057**				
	(0.02)				
Corrupt		0.086**			
		(0.03)			
Laword			0.049		
			(0.03)		
Account				0.016	
				(0.02)	
bureauc					0.027
					(0.03)
Trade	-0.013	0.036	-0.015	-0.0001	-0.003
	(0.24)	(0.04)	(0.05)	(0.04)	(0.04)
Inf	-0.023	-0.031	-0.043	-0.040*	-0.041*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Tps4	-0.094	-0.091	-0.063	-0.061	-0.061
	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)
Tps5	-0.188*	-0.070	-0.064	-0.033	0.052
	(0.11)	(0.08)	(0.09)	(0.07)	(0.08)
Tps6	-0.281***	-0.091	-0.123	-0.122*	-0.138*
	(0.10)	(0.07)	(0.08)	(0.06)	(0.08)
Tps7	-0.074	-0.093	-0.040	0.055	0.044
	(0.10)	(0.08)	(0.08)	(0.06)	(0.08)
Constant	-0.486**	-0.512**	-0.233	-0.163	-0.082
	(0.22)	(0.23)	(0.20)	(0.16)	(0.17)
Observations	235	235	235	235	235
AR(2) test, p-level	0.19	0.12	0.17	0.11	0.10
Hansen test, p-level	1.00	1.00	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 12: Capital Account Liberalization and Financial Development (1975-2009) Generalized Method of Moments (GMM), Middle Income Countries.

	Dependent variable = M2Y				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
L.FD	0.899***	0.901***	0.905***	0.905***	0.915***
	(0.05)	(0.05)	(0.05)	(0.04)	(0.05)
Kaopen*govstab	0.003**				
	(0.001)				
Kaopen*corrupt		0.008**			
		(0.003)			
Kaopen*laword			0.008***		
			(0.003)		
Kaopen*account				0.005**	
				(0.002)	
Kaopen*bureauc					0.012**
					(0.006)
Govstab	0.015**				
	(0.01)				
Corrupt		0.001			
		(0.02)			
Laword			0.018		
			(0.01)		
Account				-0.012	
				(0.01)	
bureauc					-0.009
					(0.03)
Trade	-0.001	-0.001	-0.001	-0.000	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Inf	-0.050***	-0.051***	-0.051***	-0.053***	-0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Tps4	-0.080	-0.074	-0.084	-0.082	-0.082
	(0.56)	(0.05)	(0.06)	(0.05)	(0.06)
Tps5	-0.101**	-0.074	-0.064*	-0.073	-0.085
	(0.05)	(0.04)	(0.09)	(0.04)	(0.05)
Tps6	-0.046	-0.005	-0.013	-0.009*	-0.015
	(0.04)	(0.04)	(0.03)	(0.03)	(0.04)
Tps7	-0.058	-0.025	-0.034	0.024	-0.07
	(0.04)	(0.08)	(0.03)	(0.03)	(0.04)
Constant	-0.060	-0.156	0.122	0.210***	0.207
	(0.12)	(0.10)	(0.10)	(0.08)	(0.12)
Observations	236	236	236	236	236
AR(2) test, p-level	0.34	0.24	0.25	0.25	0.23
Hansen test, p-level	1.00	1.00	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 13: Capital Account Liberalization and Financial Development (1975-2009) Generalized Method of Moments (GMM), Middle Income Countries

	Dependent variable = CPY				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
L.FD	0.753***	0.724***	0.724***	0.755***	0.766***
	(0.07)	(0.06)	(0.07)	(0.07)	(0.07)
Kaopen*PS	0.005***	0.003**	0.004***	0.004***	0.004**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trade	-0.007	0.012	-0.011	0.029***	0.019**
	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)
Inf	-0.025	-0.040*	-0.051**	-0.040**	-0.042
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Govstab	0.053*				
	(0.02)				
Corrupt		0.074			
		(0.04)			
Laword			0.030		
			(0.04)		
Account				-0.024	
				(0.03)	
bureauc					0.023
					(0.04)
Tps4	-0.103	-0.090	-0.066	-0.058	-0.068
	(0.09)	(0.10)	(0.06)	(0.09)	(0.09)
Tps5	-0.199	-0.062	-0.088	-0.020	-0.062
	(0.14)	(0.08)	(0.10)	(0.08)	(0.07)
Tps6	-0.296**	-0.057	-0.140	-0.108	-0.138
	(0.12)	(0.07)	(0.09)	(0.0)	(0.06)
Tps7	-0.110	-0.127**	0.029	0.066	-0.030
	(0.11)	(0.09)	(0.09)	(0.08)	(0.07)
Constant	-0.439**	-0.430**	-0.200**	-0.125*	-0.200
	(0.19)	(0.21)	(0.24)	(0.16)	(0.23)
Observations	235	235	235	235	235
AR(2) test, p-level	0.23	0.14	0.16	0.14	0.12
Hansen test, p-level	1.00	1.00	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 14: Capital Account Liberalization and Financial Development (1975-2009 Generalized Method of Moments (GMM), Middle Income Countries

	Dependent variable = M2Y				
	(1)	(2)	(3)	(4)	(5)
L.FD	0.835***	0.808***	0.829***	0.843***	0.867***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.10)
Kaopen*PS	0.002**	0.002**	0.002	0.002**	0.002*
	(0.001)	(0.0009)	(0.001)	(0.001)	(0.001)
Govstab	0.008				
	(0.01)				
Corrupt		0.044			
		(0.03)			
Laword			0.001		
			(0.01)		
Account				-0.002	
				(0.01)	
bureauc					-0.028
					(0.04)
Trade	0.009	0.023	0.012	0.018	0.005
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Inf	-0.061***	-0.063**	-0.075***	-0.066***	-0.072***
	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)
Tps4	-0.079	-0.104**	-0.083	-0.088*	-0.079
	(0.04)	(0.05)	(0.04)	(0.05)	(0.05)
Tps5	-0.113**	-0.123***	-0.104**	-0.099**	-0.094**
	(0.05)	(0.04)	(0.04)	(0.05)	(0.04)
Tps6	-0.037*	0.001	-0.038	-0.021	-0.030
	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)
Tps7	-0.036	0.025	-0.037	-0.021	-0.031
	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)
Constant	-0.019	-0.102	0.097	0.082	0.199
	(0.16)	(0.41)	(0.12)	(0.15)	(0.19)
Observations	233	233	233	233	233
AR(2) test, p-level	0.45	0.33	0.39	0.39	0.35
Hansen test, p-level	1.00	1.00	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 15: Capital Account Liberalization and Financial Development (1975-2009 Generalized Method of Moments (GMM), Middle Income Countries

	Dependent variable = CPY				
	(1)	(2)	(3)	(4)	(5)
L.FD	0.702***	0.676***	0.667***	0.686***	0.662***
	(0.00)	(0.09)	(0.10)	(0.08)	(0.07)
LMF*PS	0.007*	0.009***	0.006	0.006*	0.007*
	(0.004)	(0.003)	(0.005)	(0.003)	(0.004)
Trade	-0.076	-0.047	-0.066	-0.062***	-0.083**
	(0.07)	(0.07)	(0.08)	(0.07)	(0.06)
Inf	-0.059*	-0.057	-0.057*	-0.077**	-0.060**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
Govstab	0.024				
	(0.02)				
Corrupt		0.062			
		(0.06)			
Laword			0.070		
			(0.06)		
Account				0.044	
				(0.03)	
bureauc					0.021
					(0.07)
Tps4	-0.102	-0.116	-0.112	-0.093	-0.077
	(0.08)	(0.08)	(0.09)	(0.09)	(0.08)
Tps5	-0.096	-0.053	-0.105	-0.056	-0.011
	(0.11)	(0.07)	(0.11)	(0.07)	(0.07)
Tps6	-0.198	-0.105	-0.166*	-0.172	-0.113*
	(0.11)	(0.09)	(0.09)	(0.08)	(0.06)
Tps7	-0.047	0.043	-0.029	-0.042	-0.020
	(0.11)	(0.10)	(0.10)	(0.10)	(0.09)
Constant	-0.197	-0.362	0.296**	-0.180	-0.145
	(0.28)	(0.37)	(0.36)	(0.23)	(0.30)
Observations	235	235	235	235	235
AR(2) test, p-level	0.15	0.12	0.24	0.13	0.14
Hansen test, p-level	1.00	1.00	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 16: Capital Account Liberalization and Financial Development: 1975-2009 Generalized Method of Moments (GMM), Middle Income Countries.

	\(1\)	\(2\)	\(3\)	\(4\)	\(5\)
	Dependent variable = M2Y				
L.FD	0.824***	0.820***	0.825***	0.812***	0.777***
	(0.06)	(0.05)	(0.06)	(0.05)	(0.09)
LMF*ps	0.004*	0.004*	0.004	0.005**	0.004*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Govstab	0.006				
	(0.01)				
Corrupt		0.011			
		(0.04)			
Laword			-0.001		
			(0.03)		
Account				0.018	
				(0.02)	
bureauc					0.010
					(0.05)
Trade	-0.011	0.001	-0.006	-0.017***	0.004
	(0.03)	(0.04)	(0.05)	(0.05)	(0.04)
Inf	-0.068***	-0.065***	-0.068***	-0.071***	-0.070
	(0.02)	(0.03)	(0.01)	(0.02)	(0.02)
Tps4	-0.073	-0.070	-0.066	-0.069	-0.077
	(0.06)	(0.06)	(0.06)	(0.05)	(0.08)
Tps5	-0.076**	-0.063	-0.054	-0.058	-0.011
	(0.05)	(0.05)	(0.07)	(0.05)	(0.07)
Tps6	-0.021	0.014	-0.004	-0.013	-0.113*
	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)
Tps7	-0.037	-0.007*	-0.016	-0.026	-0.020
	(0.06)	(0.06)	(0.05)	(0.05)	(0.09)
Constant	0.022	-0.002	0.051**	-0.006	-0.145
	(0.17)	(0.41)	(0.24)	(0.14)	(0.30)
Observations	233	233	235	235	235
AR(2) test, p-level	0.25	0.18	0.21	0.20	0.14
Hansen test, p-level	0.58	0.19	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 17: Capital Account Liberalization and Financial Development (1975-2009) Generalized Method of Moments (GMM), Middle Income Countries.

	(1)	(2)	(3)	(4)	(5)
	Financial Development = CPY				
L.FD	0.741***	0.771***	0.757***	0.789***	0.793***
	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)
MINIANE*PS	0.013***	0.010***	0.010***	0.011***	0.012***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
Trade	0.036	0.048	0.013	0.059*	0.028
	(0.04)	(0.03)	(0.04)	(0.05)	(0.03)
Inf	-0.043	-0.046	-0.048**	-0.048**	-0.048**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Govstab	0.032				
	(0.02)				
Corrupt		0.038			
		(0.04)			
Laword			0.048		
			(0.02)		
Account				0.001	
				(0.02)	
bureauc					-0.013
					(0.04)
Tps4	-0.083	-0.066	-0.069	-0.067	-0.049
	(0.08)	(0.10)	(0.10)	(0.10)	(0.10)
Tps5	-0.111	-0.023	-0.052	-0.022	0.012
	(0.07)	(0.08)	(0.09)	(0.08)	(0.08)
Tps6	-0.202**	-0.076	-0.095	-0.101	-0.068
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Tps7	0.020	-0.128	0.117	0.104	-0.149
	(0.084)	(0.09)	(0.09)	(0.08)	(0.08)
Constant	-0.470**	-0.377	-0.341**	-0.273*	-0.190
	(0.20)	(0.20)	(0.17)	(0.16)	(0.20)
Observations	235	235	235	235	235
AR(2) test, p-level	0.15	0.11	0.18	0.10	0.12
Hansen test, p-level	1.00	1.00	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 18: Capital Account Liberalization and Financial Development: 1975-2009 Generalized Method of Moments (GMM), Middle Income Countries

	Financial Development = M2Y				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
L.FD	0.825***	0.795***	0.798***	0.821***	0.819***
	(0.05)	(0.05)	(0.04)	(0.04)	(0.05)
Miniane*PS	0.005**	0.054**	0.005***	0.004*	0.005**
	(0.002)	(0.03)	(0.002)	(0.002)	(0.002)
Govstab	-0.001				
	(0.01)				
Corrupt		0.0004			
		(0.02)			
Laword			0.0006		
			(0.02)		
Account				0.009	
				(0.01)	
bureauc					-0.028
					(0.02)
Trade	0.019	0.035	0.033	0.026	0.009
	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)
Inf	-0.074***	-0.076***	-0.075***	-0.075***	-0.082***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Tps4	-0.079	-0.063	-0.068**	-0.075	-0.050
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Tps5	-0.071	-0.062	-0.071	-0.082	-0.054
	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
Tps6	-0.005	-0.004**	-0.007	-0.023	-0.008
	(0.05)	(0.04)	(0.04)	(0.04)	(0.03)
Tps7	0.014	-0.015*	0.011	-0.014	0.009
	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)
Constant	0.049	-0.033	-0.020	-0.003	0.125
	(0.14)	(0.16)	(0.13)	(0.11)	(0.16)
Observations	233	233	233	233	233
AR(2) test, p-level	0.37	0.33	0.33	0.33	0.28
Hansen test, p-level	1.00	1.00	1.00	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 19: Capital Account Liberalization and Economic Growth: 1975-2009, Generalized Method of Moments (GMM), Middle Income Countries

	(1)	(2)
L.Growth	0.988***	0.984***
	(0.008)	(0.02)
KAOPEN*PS	0.001***	0.001***
	(0.0006)	(0.03)
CPY	0.0225	
	(0.03)	
M3Y		-0.034
		(0.03)
IY	0.78***	0.010***
	(0.22)	(0.003)
Enrolls	0.028	0.021
	(0.04)	(0.04)
GY	-0.342	-0.811*
	(0.40)	(0.46)
Trade	0.087	-0.070
	(0.18)	(0.19)
Inf	-0.021***	-0.017
	(0.007)	(0.01)
IQ	0.188	0.004
	(0.03)	(0.003)
Tps4	0.025	-0.001
	(0.01)	(0.020)
Tps5	0.008	-0.0007
	(0.02)	(0.02)
Tps6	0.0002	0.006
	(0.02)	(0.03)
Tps7	0.076	0.068***
	(0.02)	(0.02)
Constant	0.058	0.082
	(0.10)	(0.27)
Observations	242	242
AR(2) test, p-level	0.15	0.26
Hansen test, p-level	1.00	1.00

Notes: 1. Robust Standard errors in parentheses, 2. * significant at 10%; ** significant at 5%; *** significant at 1%.