Almazia Shahzad

Capital Account Liberalization and Development in Pakistan

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Preface

This paper on capital account liberalization and its impact on Pakistan's economic development (1990-2017) was originally written by Ms. Almazia Shahzad as her M.Phil thesis for the degree of M.Phil Development Studies at The Graduate Institute of Development Studies (GIDS), Lahore School of Economics in 2017. This paper contributes in a significant way to our understanding of the challenging subject by discussing various policy measures introduced on opening up the country's capital account since independence in 1947 and traces their impact over 1990-2017 on the capital account position of Pakistan. It analyses factors that have hampered Pakistan's ability to fully capitalize on the benefits of opening up its capital account and makes recommendations that are very applicable and relevant in the current macroeconomic scenario of the country. The paper also documents the IMF recommended changes in the accounting and recording processes of data in balance of payment (BOP) statement, especially with regards to capital account.

The paper is important for researchers wishing to expand on the empirical assessment of the impact of capital controls on balance of payments and Pakistan's overall macroeconomic balances.

Any suggestion, feedback and comments are welcome.

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Introduction

Following the wave of financial liberalizations in the developed countries, prominent economists and international financial institutions began prescribing capital account liberalization to developing countries as a policy for economic development. The idea was to remove legal and administrative restrictions on foreign financial transactions, allow transfer of ownership across national borders and entry of foreign financial institutions. It was expected that free capital mobility would create diversification opportunities for increased risk sharing, efficient global allocation of savings and investment, and greater discipline on domestic policy makers.

Many developing countries underwent the process in mid-1908s and experienced dramatic capital inflows in the initial phases, however in the later years were soon engulfed by massive outflows. The advent of the Mexican Crisis in 1994-95, the East Asian Financial Crisis of 1997-98 and those witnessed in Russia, Brazil and other Latin American Countries in 1998-99 sparked debate around the use and effectiveness of capital account liberalization policies, and till date no consensus has been reached on the subject.

Pakistan too like most developing countries set out on the path of liberalizing its capital account quite early on and even prior to the process of trade liberalization. As we will see later in this paper that such a step prior to meeting a set of necessary preconditions, has serious macroeconomic implications. The purpose of this paper is to examine these effects on development and macroeconomic performance of the capital account liberalization policies put in place in Pakistan.

While there are ample international studies relating the two, those pertaining to Pakistan are very scarce. This paper adds to literature in three ways; it makes an empirical contribution to the existing literature by updating past work with an analysis of recent data and employing a Vector Autoregressive (VAR) methodology to generate impulse response functions (IRFs) for key macroeconomic variables to capital account liberalization. The variance decomposition techniques furthers aids in detecting the causal relationship between variables. This has not been done previously. Another contribution of the paper is that it draws up a timeline of capital account liberalization

reforms and policies in the country and traces their impact on the capital account position. Lastly, the paper tries to document the revision in definition of capital account and the methodology for compilation of data over the years. This effort will facilitate future researchers to understand and interpret data.

It is important to point out here that throughout this paper the terms financial liberalization, capital account liberalization, capital account opening and convertibility of capital account, all represent the same concept and have been used interchangeably.

Literature Review

Theoretical Arguments

In the neoclassical growth model, mobility of capital facilitates efficient international allocation of resources as they flow from capital-abundant developed countries to capital-scarce developing countries. This is because in countries where capital is abundant, capital per worker ratio is high resulting in a low marginal rate of return, while in developing countries, the stock of capital per worker is small and marginal returns on investment are large. This flow of resources into the developing countries reduces their cost of capital, triggering an increase in investment and growth. Hence, if the investment in developing countries is constraint by low levels of domestic saving, the inflow of foreign capital would make up for it.

The endogenous growth framework discusses the spillovers associated with capital flows in the form of innovation, technology and skills along with the positive externalities such as improved efficiency of domestic financial markets leading to better resource allocation and efficient financial intermediation by the domestic institutions.

Other benefits include the discipline imposed on domestic macroeconomic policies, induced by the threat of capital flight. Inconsistent and poor policies result in deteriorating economic performance of the country, which in turn signals risk for foreign investors. Thus, capital account opening incentivizes committed and consistent policymaking. This, economists argue also complicates the macro management process. Haque (2011) elaborates that apart from the usual domestic political pressures, policymakers must then also anticipate the response of foreign investors to their actions. A loss of confidence in economic management or a delay in policy announcement can create a devastating impact on the country's currency and foreign exchange reserves. Moreover, when capital account is opened, policymakers are faced

with the serious choice of losing either monetary policy independence or the control over exchange rate (The Impossible Trinity).

Skeptics categorize the risks associated with capital account liberalization into three broad types: macroeconomic risk, financial risk and risk of capital flow reversal. Capital inflows lead to a higher demand for domestic currency thus causing the real exchange rate to appreciate, simultaneous there is a growth of credit in the economy that creates inflationary pressure as domestic demand expands. This clashes with the domestic policy objectives of stable prices, rendering monetary policy ineffective. The appreciated exchange rate decreases the competitiveness of export goods, thus putting a downward pressure on the balance of payment position of the economy. In the assets market, capital inflows push up the prices, such as of equity and real estate, creating price bubbles and increasing the risk of financial crisis, as banks tend to take more risks and reduce the screening of asset quality when lending. Ranciere et al. (2006) carried out an empirical decomposition of the effects of financial liberalization on growth and the incidence of crisis. It was observed that while financial liberalization directly positively effects per capita GDP growth it also significantly increases the probability of twin crisis, i.e. banking and currency crisis.

History has shown that there have been repeated booms and busts in capital inflows; this is because the global factors affecting foreign investment have cyclical components. At any point in time, they could be a sudden reversal of capital inflows leading to depletion of foreign reserves, sharp currency depreciation and eventually trade deficit. In the Latin American experience, there were major capital inflows during the 1970s and first half of 1990s but were followed by capital outflows and major economic crisis in the 1980s and later years of 1990s. The Mexican Balance of Payment Crisis in 1994-95 and the East Asian Financial Crisis of 1997-98 are other examples of the vulnerability of capital receiving countries to abrupt reversals. What is important to note here is that the common factor among the above incidents of crisis is that they all experienced short term and debt based capital inflows. Such flows are more volatile and sensitive to changes in macro-economic conditions. Pindyck and Solimano (1993) and Ramey and Ramey (1995) argue that any benefits of capital account liberalization can be offset by the greater volatility that it generates which in turn depresses investment and growth.

Other economists are of the view that foreign capital inflows alone only have a temporary effect on growth; rather it is productivity growth, which determines long-term economic growth. Gourinchas and Jeanne (2006) by making use of a calibrated general equilibrium model for 65 non-OECD countries find that for developing countries the welfare gains from switching

from financial autarky to perfect capital mobility are small relative to those from increase in productivity.

Rodrik (1998) relates investment to GDP ratio to the capital account openness and finds no trace of an effect. Similarly, Kraay (1998) uses three alternative measures of financial openness and finds no impact on gross domestic investment as a share of GDP for any of them. He however leaves room for the possibility that investment might be positively affected by capital account openness only in countries where risk-adjusted returns exceed the world average. Haque (2011) also concludes that there is no clear evidence on financial globalization leading to higher rates of investment and accelerated economic growth in the developing world.

Stiglitz (2000, 2004) holds the view that the predictions of allocative efficiency as a result of capital account opening, hold only where there are no distortions to the economy other than barriers to free capital flows, while in reality there are many distortions in developing countries such as asymmetric information. Peter (2007) argues that the predictions of the neoclassical model are based on the capital accumulation channel only, which is subject to diminishing returns in the long run, so the theory point towards temporary increase in investment and growth rate. This he explains is why most empirical papers that test for permanent impact of liberalization on growth, find no effects.

Also contrary to the predictions of the neoclassical model that capital flows from countries with high to low capital-labor ratio, Prasad and Rajan (2008) note that during the decade of 2000s the flow of capital has been from emerging economies to the industrialized ones. They understand it as a possible indications that the low domestic savings which capital inflows are expected to address, are not the real problem facing the developing countries, instead it is the lack of good investment opportunities, poor institutional capacity to enforce property and investor rights and underdeveloped financial systems. Rodrik and Subramanian (2009) further add that in such economies capital flows are then often directed to financing consumption, which is more volatile in nature thus negatively affecting growth prospects.

Another aspect in which capital account liberalization has been observed to have negative consequences on development was noted by Furceri and Loungani (2013), who examined a set of over 50 cases of capital account liberalization in advanced economies and found an increase in inequality by approximately 1 percent during the first year after liberalization and by as much as 2 percent after five years.

Having learnt from the crisis experiences the multilateral agencies particularly the UNCTAD and IMF began to stress on the significance of an integrated approach; the need to treat capital account liberalization as part of an economic reform program, coordinated with other macroeconomic policy objectives.

The financial systems of developing countries are not fully mature, their capital markets are not adequately liquid or deep and, implementation of prudential regulations and supervision of financial institutions is weak. Capital account liberalization places immense pressure on the domestic financial institutions and large inflows can often exceed their absorptive capacity thus leading to inappropriate lending decisions characterized by excessive risk taking which can culminate into financial system fragility. Therefore, ensure that benefits of capital account liberalization outweigh the risks, strong institutions and well-developed markets are essential.

Eichengreen (2001) argues that a positive impact on growth is visible when prudential supervision by the central banks is upgraded, creditor rights are strengthened, financial safety nets that create moral hazard are limited, transparent auditing and accounting standards are implemented and equitable bankruptcy and insolvency procedures are adopted. Boyd and Smith (1992) argue that the process of financial integration in countries with weak financial and legal systems induces capital outflow to countries with better institutions, and often these countries that are already capital abundant. This is congruent to the observation made by Prasad and Rajan (2008) discussed above. In a cross-country analysis conducted by Arteta et al. (2001) evidence is available that the effect of capital account liberalization on growth of a country varies with its degree of legal or institutional development. Edwards (2001) also finds that the rate of growth depends on the level of institutional quality of a country. Faria and Mauro (2004) find that foreign inflows to a developing country with better institutional quality mostly tilt towards foreign direct investment and portfolio investment, which are more stable and less risky.

Macroeconomic policies and structures also determine the level of risk a country maybe exposed from financial openness. Under fixed exchange rate, capital inflows can lead to increase in reserves as the central bank is obliged to buy excess foreign exchange in the market, which in turn increases the money stock; prices go up and currency appreciates in real terms. Although the central bank can resort to sterilized interventions in the foreign exchange market but this policy cannot be sustained in the long run; it will run out of domestic asserts and the cost of borrowing deposits from commercial banks will be too high.

Another view on the subject is that liberalization of current account prior to capital account is necessary to increasing the efficiency of capital account openness and reduce the probability of crisis. This is because economies open to trade and with a significant export volume are less vulnerable to the risk of capital inflow reversal since then could service their external obligation through export revenue.

World Bank in the Global Development Finance Report (2006) pinpoints that financial prudence and stability; particularly low inflation and fiscal deficit, and adequate levels of foreign reserves that provide buffer against negative external shocks, are preconditions for safe transition to open capital account in developing countries. Similarly, Benu Schneider in her paper presented at the conference on 'Capital Account Liberalization: A Developing Country Perspective' held at the Overseas Development Institute in London in June 2000, explained that macroeconomic rigueur, fiscal consolidation, independent monetary policy based on inflation targeting and flexibility in exchange rate management are important preconditions for successful liberalization efforts.

Based on the above discussion, there seems to be a certain threshold level of institutional and economic development beyond which the long run benefits of capital account liberalization can be reaped by countries, while pre-mature opening could render them more exposed and vulnerable to changes in global economic situation. Countries should make efforts towards implementing a fully integrated policy reform program with efforts to attain necessary preconditions, proper sequencing of the liberalization process and careful selection of the components of capital account that are to be liberalized.

Capital Account Liberalization Experience of Developing Countries

Private capital flows to the developing countries increased dramatically in the first half of 1990s. Researchers owe this to recessionary situation in this period in most developed countries such as the United States, Japan and European countries. There was a sustained decline in world interest rates that attracted investors to high-investment yields offered by the Asian and Latin American economies including Argentina, Brazil, Chile, China, India, Indonesia, Malaysia, Mexico and Thailand. At the time, these countries were also showing signs of improving economic prospects. Fernandez-Arias (1993) provide an alternative explanation that many of these countries had high external debt burdens, lower interest rates affected their debt prices, reduced the default risk hence improving their creditworthiness.

However, in the second half of 1990s it was observed that the capital inflows had widened the current account deficit situation of these countries. The improved value of their domestic currencies had resulted in higher consumption of imported goods as opposed to exports that had become relatively expensive in the world market. Simultaneously the tightening of monetary policy in developed countries such as the United States in early 1994 resulted in a rise in interest rates and made the investment in Asia and Latin America relatively less attractive and once again affected the debt burden of these economies. Moreover, the surge in portfolio flows in early 1990s to these economies had led to sharp increase in stock prices, which also suffered as a response to rise in interest rates.

China and India on the contrary withstood the contagion from East Asian crisis in 1997, as they had implemented a relatively restrictive capital account regime. Jadhav (2003) describes the India has pursued a gradual and incremental liberalization process. The policymakers had laid emphasis on encouraging non-debt creating flows while continued restrictions on short-term commercial borrowings and capital outflows.

Gallagher et al. (2014) explains how regulation of the inflow and outflow of capital has been the cornerstone of China's development reforms. For more than three decades, China's capital account policies were aimed at directing credit toward strategic development goals while maintaining financial stability. Despite these controls; contrary to the belief that capital controls hinder economic growth, China's growth rate was among the highest in the world; with more than 10 percent income growth per year for those decades. Although gradual capital account liberalization had started in 1994 in China but it was still largely limited thus acted as buffer for the country from the wrecking effects of the Asia crisis. Today China has removed almost all restrictions for inward FDI and loosened controls over portfolio investments but cross border money market transactions and financial derivatives have remained under strict control. However, because of internationalization of China's currency in 2009, it capital account liberalization process has accelerated.

Capital Account Liberalization Experience of Pakistan

In the case of Pakistan, literature suggests a varied impact of the process on the economy. Khalid (2000) concludes that after fifteen years of implementation of these policies there has not been any significant impact of financial liberalization policies on savings, investment and growth of Pakistan. While, Haque (2011) discusses that during the 2000s where the domestic savings of Pakistan had remained terribly low, the inflow of foreign capital did contribute towards increasing investment. This high dependency

on foreign sources to finance domestic investment has rendered Pakistan's economic growth highly vulnerable to outside factors. However, Haque makes it clear that the large inflow of external finance into the country cannot be solely attributed to the opening of the capital account policy rather the rupee convertibility also attracted significant portfolio investments, direct investment and workers' remittances. Both factors however have posed serious challenges for policymakers in terms of macroeconomic management and controlling tax evasion. The country needs to regulate and better supervise its financial sector and stock market activities. He points out that although the capital account is more and less free of restrictions, the level of Pakistan economy's integration into the global market is limited, which had limited its ability to materialise the potential benefit of an open capital account.

Naveed and Mahmood (2016) use a multivariate cointegration technique and error correction model to examine the impact of external financial liberalization on the economic growth of Pakistan. They find significant negative impact of the process on growth in the long run. They use Lane and Milesi-Ferretti's (2007) de facto measure of capital account liberalization, which is based on the gross stock of foreign assets and liabilities as a ratio to GDP. They shed light on the stagnant position of total assets of the economy relative to GDP and the increasing liability to GDP ratio. They identify 86 percent share of foreign loans in total liabilities as an explanation to why inflows have not contributed positively to growth.

Empirical Models

Almost all the studies investigating the empirical relationship between liberalization of the capital account and economic growth augment a basic growth model, yet there are prominent differences in the results across these studies. This can be due to a number of factors that vary across these studies; country coverage where the state of development of each might vary, due to the sample period under review the stage of liberalization that the economy could be different, measure of capital account controls or liberalization used or the difference between methodology and estimation techniques.

Edwards (2001) estimates multiple regressions for a sample of 60 countries by using weighted least squares (WLS) estimation method. The weights in the model represented the national incomes of the countries included. His estimates suggest a negative relationship between capital account openness and growth but a positive coefficient on openness-income interaction term implies that countries with lower level of incomes suffer negative consequences for growth as a result of opening their capital account, while the

same promotes growth in developed industrialized and rich emerging economies. This finding highlights a conceptual issue with treating capital account liberalization as exogenous to the growth process. There is a potential for reverse causality where countries with a certain level of development maybe more or less prone to liberalizing its capital account.

Arteta et al. (2001) cast doubt on the weighting of observations based on the level of income. They argue that this technique build in more influence of rich countries in the regression as compared to the poor countries. Hence, they follow Edwards' framework but with ordinary least squares (OLS) estimation rather than WLS and also use different instruments for capital account liberalization. Rodrik's (1998) paper is the most cited paper on this topic and makes use of OLS in a cross sectional study including 100 countries. He finds no evidence of a significant effect on growth of per capita income. Likewise, he concludes no relationship between capital account liberalization and investment-to-income and/or inflation.

Many researchers address the exogeneity issue using Instrumental Variable (IV) estimation. Grilli and Milesi-Ferretti's (1995) IV estimates do not support the hypothesis that the opening up of capital account promotes growth of income per capita.

Kraay (1998) carries out a cross sectional study and uses both OLS and IV (with past values of capital account liberalization variables as an instrument). His regressions also return no significant effect on growth. However, when he used a measure of volume of capital flows, he did find some results to be significant.

As already mentioned above that much of the literature that exists on capital account liberalization, is panel or cross sectional in nature i.e. compares the effects across countries. Limited number of studies deal with time series analysis and those that do, also mostly rely on simple linear regressions using either OLS or IVs. I managed to come across only three such studies; Kim et al. (2004), Sethi (2012) and, Kandil and Trabelsi (2015), that make use of Vector Autoregressive (VAR) models to evaluate the macroeconomic implications of capital account liberalization. The VAR model allowed for the flexibility in assuming that capital account liberalization process was endogenous to the growth process. Effects of capital account movements on real GDP appeared to be significantly smaller in these studies as well.

Evolution of the Definition of Capital Account

The term capital account has a much narrow meaning for the International Monetary Fund (IMF) as opposed to the more generic usage by academic and economists. IMF splits the capital account into capital and financial account. When referring to the capital account liberalization or opening up of the capital account or facilitating capital mobility, the actual reference in terms of IMF's definition is being made to the transactions under financial account. The Organization for Economic Cooperation and Development (OECD) and United Nation's System of National Accounts (SNA) also abide by the same distinction.

The key source of classifying what falls under capital account and that under financial account is the IMF's Balance of Payment Manual (BPM). It is a complete comprehensive document that details all possible transactions and how to account for and record them in the Balance of Payment (BOP) statistics. At present, the sixth edition of BMP (BPM6) is in use globally. Not many significant changes with respect to capital/financial account have been introduced in the shift from BPM fifth edition to the sixth. However, the coverage of financial flows and stocks significantly expanded and was restructured in BPM5. The earlier version (BPM4) was published in 1977. Since then there had been widespread alterations in the nature and composition of international financial transaction; financial innovations and new instruments had blurred the distinction between short and long term flows and made it difficult to identify resident-non-resident transaction. Moreover, the move towards liberalization globally made the task of compilation and usage of data for policy and analysis purposes more challenging. Thus there was a need to update the procedures incorporating all the new developments. It was under BPM5 that the former capital account head in the BOP was redesigned as capital and financial account.

As per the formal definition, the major components of the capital account cover all transactions that involve the receipt or payment of capital transfers and the acquisition and/or disposal of non- produced non-financial assets. Transactions categorized as associated with capital transfer consist of transfer of ownership of fixed assets such that nothing of economic value is being supplied to the other party in return. Common examples are debt forgiveness and migrants' transfers. Acquisitions and disposals mainly deal with intangibles such as patents, leases and licenses etc. Land is not included but the only exception is the sale purchase of land by foreign embassies.

Financial account on the other hand deals with all transactions; net acquisition or disposal, associated with change of ownership of financial assets and liabilities. The standard components consist of direct investment, portfolio

investment, financial derivatives, Special Drawing Rights (SDRs) allocated by the IMF to its members and reserve assets.

Based on the definitional difference, assessment of capital account liberalization process deals with changes in flows to and from the financial account head of the BOP.

Measures of Capital Account Liberalization

Despite that numerous measures are available in the literature trying to estimate financial openness (of lack of it) of a country, it is also well established that the ability of these measures to fully capture the complexities of real world control is limited. Thus measuring the extent of capital account openness of countries remains a challenge. Here I present a brief discussion of some main indicators and compare them in terms of their merits and demerits. Most indicators can be grouped into two broad categories: de jure and de facto. The former trace the policy measures taken by governments to liberalize their capital accounts, while the latter examine the actual liberalization that has taken place in terms of financial flows of a country.

De Jure Indicators

The primary source of de jure indicators is the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER). The report covers four components – k_1: existence of multiple exchange rates, k_2: restrictions on current account transactions, k_3: capital account restrictiveness and k_4: requirement of surrender of export proceeds. Further, it provides detailed information on these variables using two formats; as a text covering rules and regulations in place by countries to manage the international transactions in various asset categories, and the other is a tabular representation of whether there are any restrictions on residents' payments in current and capital account categories. Therefore, some indicators are based on the coding of the text and others on the table.

First class of indicators based on AREAER table are binary (0/1) measures and often make use the k_3 component. Epstein and Schor (1992) were among the earliest developers of such an indicator, followed by Garrett (1995), Grilli and Milesi-Ferreti (1995). A value of one indicated an open capital account and zero for a closed economy. This largely limited the informational content; it did not account for the direction of capital flows (inflow or outflow) that was being targeted, it incorporated restrictions on residents only and grouped countries that were either partly or substantially but not fully open with those that were completely closed. This issue was alleviated to some extent by the

introduction of a new tabular structure of AREAER in 1996. It captured more dimensions of k_3 by disaggregating into 13 subcategories.

The new improved tabular format steered the development of a second class of indicators that could now assume values besides 0 and 1. A prominent effort was by Johnston and Tamirisa (1998) created a series of capital controls by summing the binary scores for each of the 13 categories for 40 countries in 1996. Later Brune and Guisinger (2006) made use of the same methodology premise but extended the data from 1970 to 2004 for 187 countries. For pre-1996 portion they coded the qualitative description available in the AREAER. The indicator is labelled Financial Openness Index (FOI) in the literature and hold merit as it is able to distinguish between inward and outward flows.

Chinn and Ito's (2002, 2006, 2008) KAOPEN is the first standardized indicator based on all four component of AREAER table. It attempts to measure the intensity of capital controls for which it relies on the assumption that intensity is correlated with the presence of different types of other restrictions on international transactions. Merits of this index are its wide coverage; 182 countries beginning from 1970 to 2015, and easy/public availability. However, it suffers due to lack of information regarding prevalence of capital controls on different types of capital flows, direction of these flows and whether they are focused on residents or non-residents.

To cater to the limitations of the binary and subsequent measures, researchers created indices that could capture more information regarding magnitude and intensity of capital controls, and simultaneously have the ability to distinguish between resident and non-resident transactions. These indicators are based on the coding of the text of AREAER, which however produces an element of subjectivity in these measures. Quinn's (1997) CAPITAL index is the most cited in this category of capital account openness indicators. Bulk of the index is based on the coded information pertaining to k_2 and k_3 components of AREAER, also accounting for any relevant international agreements the country under consideration might have signed. It is available for 122 countries from 1949 until 2007, with complete coverage of OECD countries while that of less developed countries is less extensive. His indicator rangers from 0-4 reflecting two categories of controls on capital transactions; by residents and non-residents. The larger value indicated weaker controls. Amidst its merits, the Quinn index is constraint by its inability to distinguish between inflows and outflows of capital. It is also not publicly available for use by researchers.

The most refined and widespread measure based on the AREAER text is by Schindler (2009) - the KA index. Each individual transaction under the

subcategories of "Capital Transaction" section are coded for obtaining the indicator. A category was considered unrestricted only under the conditions that there were no restrictions imposed on it at all, the category was on an exceptional nature or if the restriction was merely notifying a competent authority. Aggregating the codes using this methodology yielded indices by residency status, asset category and in terms of inflows compared to outflows. The KA index is available from 1995-2005 for 91 countries. Klein (2012) expanded on it Schindler's dataset to cover the time period from 2006 to 2010, but in doing so he limited the coverage to 44 countries and only looked at the restrictions on inflows of capital. He then goes onto classifying countries as either Open, Gate or Wall based on the percentage of capital controlled transactions. Countries with more than 70 percent and not less than 60 percent of their relevant transactions imposed with capital controls were identified as "Wall", while those with less than 10 percent and no more than 20 percent as "Open". "Gate" countries lied in between.

De Facto Indicators

What the de jure indicators of capital account openness fail to reflect is the extent to which policy measures taken by a country actually affects its capital flows; controls in one category of

assets may induce a change in flows in others asset flows. Neither do they necessarily capture the differences in various capital control regimes. Therefore, they might not be true indicators of a country's openness. De facto indicators present an alternative method of capturing the level of integration of a country's economy with that of the global economy.

The most generally used de facto indicator is Lane and Milesi-Ferretti's (2007) TOTAL index. It is a stock based measure and calculated by summing up a country's assets and liabilities relatively to its Gross Domestic Product (GDP). It includes Foreign Investment (both direct and portfolio), financial derivatives, loans, guarantees and securities.

Then there is FORU developed by Edision and Warnock (2003) which predicts capital account openness by observing the proportion of domestic equities available for purchases by foreigner. The data is available on monthly basis from 1989 till 2006. The attractiveness of this indicator is dependent on the fact that it targets openness aspect from two dimensions; first, the whether or not a stock is available to foreign investors captures the legal restrictions that in turn have a bearing on its pricing dynamics.

From the discussion on difference in pricing stems another category of indicators; the idea behind these is that in more financially integrated economies the difference in external and domestic prices of similar assets diminishes due to arbitrage. Prominent researchers that came up with such measures are Quinn and Jacobson (1989) and Yeyati et al. (2009). However, a drawback is that arbitrage opportunities maybe limited by international frictions rather than domestic.

Other researchers derive the measure of limits placed on transactions pertaining to capital account or its openness, by using values of some key economic variables. Base on capital account theory there are three such sets of variables; comparison of national savings rate with national investment rate, interest rate differential and international capital flows. The first two measures haven't really been employed for analysis purpose primarily due to constraints on availability of relevant information.

One of the early seminal works on quantitative measurement of the extent of capital mobility was by Feldstein and Horioka (1980). The analyzed the behavior of savings and investment in a number of countries. The rationale behind it was that the correlation between these two variables would act as a good indicator for barriers to capital movement. With stringent capital account restrictions, savings and investment are highly correlated, while in open economies that allow free capital mobility the link between the two is weak and/or almost non-existent. This approach however has been criticized on the basis that saving and investment in a country could be highly correlated regardless of the fact that there were no controls in place. Obstfel (1986) shows this could be the case because of the type of external shocks that hit the economy during that period. Bayoumi (1990) shows that a high correlation could be a result of the government's efforts to target the current account.

Next, the difference between the local and global interest rate (also referred to as onshore- offshore interest rate differential) could portray the state of capital account openness. In countries where there are no controls in place, this differential diminishes and transactions take place in a level playing field.

Overall, despite their conceptual advantage over de jure indicators, de facto indicators have their own limitations. The assumption is that capital flows are impacted by government policy stance on capital account openness however; the causality may run in the opposite direction. An increase in capital flows maybe observed due to strong economic indicators of an economy, rather than an actual change in capital control measures, and consequently the government imposes controls to manage surges in inflows that can have destabilizing effects.

The availability of a vast variety of indicators is the reason behind conflicting results on the effects of capital account liberalization on economic growth. Quinn et al. (2011) estimate the correlation between changes in 78 pairs of trade and finance related indicators. They estimate the correlation coefficients in changes to cater to potential issue of serial correlation. Here I discuss the results of only six indicators that have been discussed above; FOI, KOPEN, CAPITAL, KA, TOTAL and FORU. The first four are de jure measures and the correlation coefficients between them are statistically significant at 5% level and above but range from only 0.2 to 0.3 on annual basis. The authors the check the coefficients on five year average basis and fine that the range increase to 0.5 to 0.7. The highlight that lower correlation within table and text de jure measures (FOI & KOPEN vs CAPITAL & KA respectively) could be due to limited information in AREAER tables prior to 1996. However, the main reason as pointed out above is the difference in the aspects that these indicators capture. Quinn's index (CAPITAL) captures capital restrictions solely while Chinn and Ito's index (KOPEN) contains elements of capital as well as current account restrictions. The de jure and de facto measures on the other hand remain largely uncorrelated when observed from either annual or five year average criterion.

Similarly, Edison et al. (2002) in their comparison of the two different types of measures point out that analyzing the correlation between them especially in the case of developing countries is complex. The de jure measures suggest that in 1970s there was a move towards liberalization that reversed in the 1980s and resumed again in the 1990s but at a relatively slower phase. In comparison the de facto measures show a slow opening up process in 1970s, followed by moderate increase in 1980s and acceleration in 1990s.

Capital Account Policies and Flows to Pakistan

Exchange controls were first implemented in Pakistan in 1954 in response to a serious balance of payment deficit. Post Korean War, the global demand for goods especially agricultural goods reduced and so did Pakistan's exports and foreign exchange receipts. The government decided against devaluation of its currency; maintaining a fixed official exchange rate required an outflow of foreign exchange reserves to bridge the demand and supply gap. Consequently, exchange rate controls were adopted. All foreign exchange proceeds and private holdings had to be surrendered to the Central Bank (State Bank of Pakistan – SBP) at the official exchange rate. Further, instead of auctioning the available foreign exchange in the open market and restricting the demand only to those willing to pay a premium rate, the government opted for a licensing system. While this did avoid an official dual exchange rate system it led to a black market for foreign currency. Nevertheless in 1956

the government did devalue its currency. In 1959 the government introduced the Export Bonus Vouchers Scheme to incentivize exports of manufactured goods. Under the scheme, against their exports, exporters received a certain percentage of the freight on board (FOB) as bonus vouchers. These could be used for the import of machinery and other industrial raw material. Towards the end of 1960s, these policies had led to a multiple exchange rate system being implemented in the country alongside a complex system of exchange control. The war of 1965 between India and Pakistan severely affected both the economies, in response to which India devalued its currency while Pakistan continued to maintain its exchange rate.

Soon after the war of 1971 broke out and East Pakistan (currently Bangladesh) separated from West Pakistan (currently Islamic Republic of Pakistan). A major proportion of Pakistan's exports were to Bangladesh, but after the separation, Pakistan experienced a large surplus of goods. The overvalued exchange rate and price discrimination between exporters and importers created by the export bonus voucher scheme were adding to the balance of trade problems of the country, which is why in 1972 the scheme was abolished, the rupee was devalued and the exchange rate was unified. Up until 1971, the rupee was pegged against British pound, which was then replaced by US dollar. In 1973 the government introduced Foreign Currency Accounts (FCAs) for non- resident Pakistanis in order to attract remittances. During this period, the dollar was devalued with lead to an automatic appreciation of rupee.

In 1982, the government of Pakistan decided to move to a managed floating exchange rate system. Between 1982 and 1988 the rupee went through a large reduction in its overvaluation; a 47% depreciation in the exchange rate. The first major steps towards liberalization of Pakistan's capital account was taken in mid 1980s with the introduction of foreign exchange bearer certificates that could be purchased by foreigners as well as Pakistanis using foreign exchange.

In the following years, between 1991 and 1994 dollar bearer certificates linked with London Interbank Offer Rate (LIBOR) rather than the domestic rate were introduced. Other reforms included allowing of residents to maintain FCAs, relaxation in the restrictions on the amount of foreign currency allowed for travelling purposes and those on foreign payments for the purpose of education, membership of professional institutes, royalties and advertisements. Much of these reforms were associated with the obligations laid down in Article VIII section 2, 3 and 4 of IMF Articles of Agreement, which the government formally signed in July 1994. Efforts were made to remove all foreign exchange controls, current account liberalization was complete and rupee became fully convertible. As can be seem from Figure 1;

which shows the state of Balance of Payments (BOP) of Pakistan from 1990 to 2017, following this move towards liberalization the capital account began displaying a gradual increase.

Figure 1 Balance of Payments of Pakistan 1990-2017
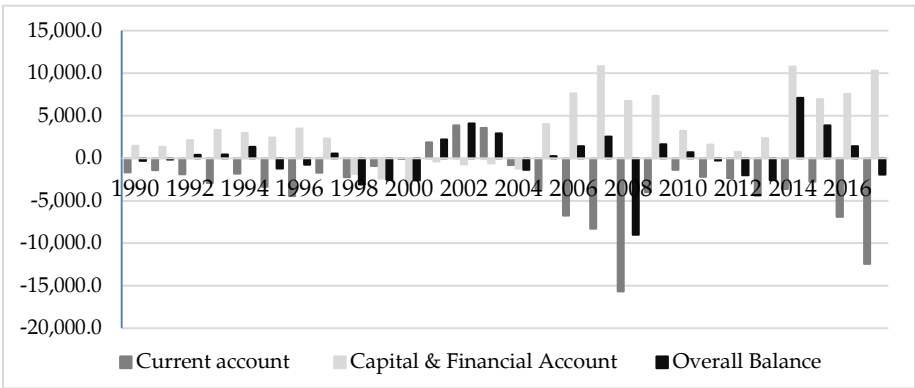
What is interesting to evaluate at this point is the composition of the capital account. Figure 2 illustrates this composition based on the information obtained from BOP statement for 1995- 1996. A major portion of the foreign inflows (61.2%) comprise of other investments that were predominantly short and long terms loans by the government.

Figure 2 Composition of Financial Account of Pakistan 1995-1996
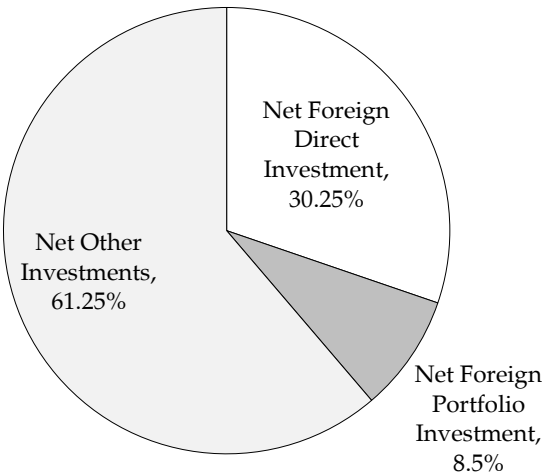
The liberalization process met a setback when economic and financial sanctions were imposed by the international community on Pakistan in response to its nuclear test in 1998. Due to the unpredictable/bleak state of the economy, investors withdrew their money out of the country. The level of foreign exchange reserves fell sharply, there was uncertainty about the country's ability to meet its international financial obligations, i.e. principal and interest payments against external loan. These factors combined increased the speculative demand for dollar and increasing downwards pressure on rupee. A drastic step by the government at time was to freeze all FCAs overnight to prevent immediate and significant outflow of foreign exchange. This state of the economy is also evident from the trend in Figure 1; the capital account of Pakistan witnessed a sizable dip from a positive looking increasing trend in early 1990s.

In 1998, the managed floating exchange rate was replaced with a dual system that was made of three rate; an official exchange rate of rupee set by SBP, floating interbank rate where the Authorized Dealers (ADs) which were primarily commercial banks were permitted to quote their own rates based on the demand and supply of the market, but within the buying and selling bands set by SBP, and the composite rate that was a combination of the fixed and interbank rate. This mechanism of exchange rate was aimed to ensure exporters received the benefits of devalued rupee, facilitate remittance from overseas Pakistanis and curb speculative demand for foreign exchange at the same time.

The dual exchange rate system was a type of multiple exchange rate system and was in violation of IMF's Article VIII. Pakistan was desperately in need of IMF support at the time, and a major deal breaker was abandoning of the multiple exchange rate system and adoption of a unified market-based rate exchanged rate system. Although the government agreed to it in 1999, however unofficially there was a cap on rupee trading which was only removed in 2001.

A number of other restrictions on capital flows covering a much diverse area were relaxed. Foreign Direct Investment in manufacturing, services, infrastructure, social and agricultural sector required no prior approval given that foreign equity investment was at least $0.5 million. Investors could hold 100 percent equity in infrastructure and social sectors but for a maximum period of 2 years. Profits/dividends were allowed to be repatriated but up to 60 percent of total equity. In the agriculture sector a 60:40 percent ratio of equity was required to be maintained between foreign and Pakistani investor. There were no controls on liquidation. Outward direct investment however was subject to approval and so was the sale of an asset held by a Pakistani

resident abroad. Proceeds of such sales were to be repatriated back to Pakistan through proper banking channel. Furthermore, there were no controls on the sale of securities or shares by residents within Pakistan and/or abroad, but proceeds from the latter were required to be repatriated. Banks were authorized to open Special Convertible Rupee Accounts (SCRAs) and all dividends, capital gains etc were required to be credited to these accounts for remittance abroad without reference to SBP. Approval was however required for residents to purchase shares abroad, while non-residents were not permitted to sell the same in Pakistan. In terms of bonds, debt securities and other money market instruments non-residents were free to invest in Pakistan in registered/listed instruments, but residents were not permitted to carryout similar purchases abroad. Private sector entrepreneurs were allowed to obtain foreign currency loans from abroad for long term period under certain conditions, but financial credit was prohibited. For commercial banks, they were allowed to maintain foreign accounts (Nostro) but only up to a limit fixed by SBP and with no investment objective. Foreign exchange available with them through foreign currency deposit accounts was required to be invested or used within Pakistan solely. Interest rate on these deposits however will be linked with LIBOR. A common trend in these measures was the focus on relaxing controls on the inflow of capital relative to outflow.

Despite the sizeable measure, Figure 1 shows that the capital account activity did not respond much. One of the major cause of the stagnated situation was the 9/11 incident, after which global investment picture was blurred.

In mid 2000s and onwards, the focus of the liberalization process shifted towards reforms in the domestic financial sector that proved to be an essential accompaniment to the opening up of Pakistan's capital account. These reforms revolved around strengthening of the regulatory system, privatization of banks, easing foreign banks entry and operations in the country, complying with international banking regulations and moving towards market determined interest rates. Nevertheless new initiatives for facilitating capital account liberalization continued to be introduced as well. Formation of the Exchange Companies was a key step by SBP to ensure development of a well-documented foreign exchange market in the country and help curb the number of unauthorized moneychangers that had spawned in the new liberalized environment. A complementary effort to this was the elimination of a differential rate between the open market and the interbank market; this was made possible but the establishing of Karachi Interbank Offer Rate (KIBOR). Consequently, the economy saw an influx of home remittances channeled through the formal system. Another major benchmark was the setting up of a Swap Desk at SBP to ensure liquidity in the foreign exchange

forward market. This lead to rationalizing of the forward premiums and hence supported both the interbank market and, exporters and importers.

Moreover, with respect to policies on outflows, the limit on the balance held by banks in their Nostro accounts was withdrawn. Pakistani residents including companies and firms were allowed to make equity based investments (excluding portfolio investment) in companies abroad, subject to SBP's approval and on repatriable basis. In 2005 locally established mutual funds were given the permission to invest up to 30 percent of their aggregate mobilized funds abroad for diversifying their portfolios. It was still dependent on SBP and Security and Exchange Commission of Pakistan's (SECP) approval and was subject to a cap of $15 million in permissible categories only.

Referring back to Figure 1, Pakistan economy began showing signs of recovery in its capital account from 2005, witnessing a record surplus by 2007. This substantially offset the widening current account deficit of the country. To better understand the situation, Figure 3 helps analyze the composition of the capital account in 2005-2006.

Figure 3 Composition of Financial Account of Pakistan 2005-2006
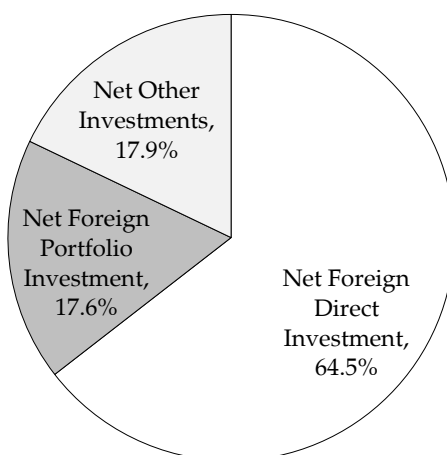
Unlike in 1995-1996, major proportion of foreign inflows (64.5%) was on account of foreign direct investment. Digging a bit deeper into the sources of this investment reveal that the domestic financial sector reforms particularly privatization contributed massively. The flotation of Euro bonds increased the portfolio investment. Consequent upon expansion of equity fiancé avenues, the economy was less dependent on debt finance.

Figure 1 however also highlights the drastic decline in the capital account surplus from 2008 until 2012. Much of this was owed to the global financial crisis that left the foreign investors more risk averse. Significant portion of the activity in the capital account in 2008 was short term debt for earthquake relief that hit the country in the same year. Further political instability and the energy crisis in the country added to the disincentives for investors, thus significantly slowing down of privatization process. At the same time, the oil prices rose in the international market that coupled with the widening current deficit and growing speculative activity in the foreign exchange market pushed down the value of Pakistani rupee.

This led the State Bank of Pakistan (SBP) to intervene; the minimum percentage of inward remittances required to be surrendered by exchange companies to the interbank market was raised from 10 to 15 percent. There were also required to bring minimum 25 percent of their foreign currency exports in their foreign currency account with banks in Pakistan. All nostro accounts of exchange companies held outside Pakistan were directed to be abolished and their balances to be shifted to commercial banks in Pakistan. Further, all Advance payment against imports was restricted to 50 percent value of imports initially and then further reduced to 25. All transactions of US $ 50,000 or above on account of outward remittances or sales of foreign exchange required SBP's approval.

The capital account continued to contract for following five years until it began showing signs of recovery by 2013, reasons being the on-going domestic issues all negatively affecting investors' confidence and increasing the cost of doing business. In 2010 also the IMF stand-by agreement was suspended which influenced the inflows from other International Financial institutions and donors. In 2014, after the issuance of Eurobonds by the government and realization of proceeds from the 3G/4G licensing auctions, Figure 1 shows the capital account to take on an upward trend.

Year 2015 and 2016 saw a rise in the foreign direct investment to the country with the signing of CPEC. However, simultaneously the current account deficit also began to expand as imports of machinery and other related items from China increased. In terms of portfolio investment, outflows due to repayments against Eurobonds were dominant, while the global equity market also witnessed volatility owing to the devaluation of Chinese yuan, hike in the federal funds rate, reduction in oil prices and the Britain's vote to leave the EU.

Figure 4 reviews the composition of the capital account in 2015-16; the level of foreign direct investment and portfolio investment inflows turned out to be

insufficient to finance the growing current account deficit, thus the government had to resort to external debt financing.

Figure 4 Composition of Financial Account of Pakistan 2015-2016
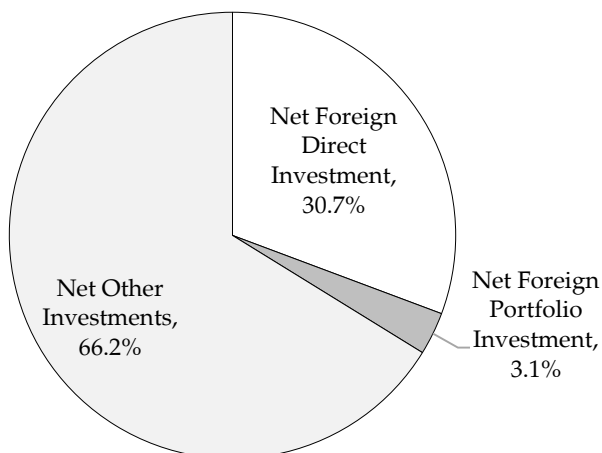
In 2017, while Figure 1 shows that the surplus in the financial account rose significantly and aided in financing the current account deficit, most of the inflows were debt generating in nature. The government relied heavily on short term commercial loans, which exposes the economy to volatility risk. In addition to bridging the current account deficit, the borrowings were more an outcome of the government's efforts to artificially maintain the level of exchange rate. Given that the move is a violation of IMF's Article VIII, the government might have to devalue the rupee in case it seeks financial support from the IMF or other International Financial Institutions; and so was the case of devaluation of rupee in December 2017.

Today much of the policies introduced in late 1990s are still in place; there are no restrictions on inward flows of capital while outflows remain under scrutiny requiring prior approval from SBP. In essence, this difference in policy stance towards allowing free movement of capital both ways is why Pakistan's capital account is categorized as partially liberalized. However, a point of concern is that despite a liberalized environment for inflows, large portions of inflows comprise of external debt, i.e. short term commercial bank credit and official loans from International Financial Institutions and donors, rather than long term stable direct investment. This implies that the liberalization process did aid the country to tap into the pool of global savings, which the proponents of opening of capital account argue helps generate

economic activity. Potential negative effects associated with mounting external debt liabilities can be properly managed if the funds are directed towards financing efficient productive capital. The idea is to generate sufficient level of earning for the government to service the debt without having to rely on further borrowing. In case the government resorts to raising public debt for debt servicing purposes, this leads to the crowding out of investment to the private sector thus further dampening growth prospects. This has been the state of affairs in Pakistan; external debt has been primarily used to stabilize foreign exchange liquidity in the market rather than for productive investment reasons.

Econometric Methodology

To investigate the response of macroeconomic variables to the capital account liberalization process in Pakistan, I employ a Vector Autoregressive (VAR) model. I am particularly interested in the Impulse Response Functions (IRFs) and the forecast error variance decompositions (FEVD) of capital account openness. The former show the effects of a shock in the liberalization process on the selected macroeconomic variables and their adjustment path, while the latter measure the contribution of the shock to the forecast error variance of the variables. Both are useful in assessing how the change in liberalization process reverberate through the economy.

Quarterly data has been used for estimation from the period 1990Q1 to 2017Q4. The variables included in the model are; two alternative indicator of capital account liberalization (a de jure and a de facto indicator), net foreign inflows (INFLOWS), real exchange rate (REER), total domestic investment (LGFCF) and domestic consumption (CONS) of the economy, current account balance (CA), real GDP (LGDP) and price index (CPI). The real GDP series has been constructed by using GDP at current factor cost and GDP deflator index, and then by taking log of the values. Gross fixed capital formation has been used as a measure of domestic investment, and log has been applied to domestic investment and consumption series. From the wide variety of measures available for capital account liberalization discussed earlier in section 4, KOPEN index developed by Chinn & Ito (2002, 2006, 2008) is selected as a de jure indicator of capital account openness of Pakistan, while Lane and Milesi-Ferretti's (2007) TOTAL index is chosen from the de facto indicators. The selection of these two indicators is primarily based on the availability factor in reference to Pakistan.

The data for this paper has been collected from various publications of the State Bank of Pakistan, including the Handbook of Statistics on Pakistan Economy and Statistical Supplements of the Annual Reports (State of the

Economy). Additionally, as discussed earlier that the definition of capital account has changed over time and so has the procedure of compiling relevant data, clarity regarding the methodology and conventions used for compilation of data was obtained internally from the Statistics and Data Warehouse Department (S&DWH) of the State Bank of Pakistan. Assistance was also sought for transforming old data that had not been formally updated to new standards of BPM6, for use in this study. At the time of writing of this paper, I was working at the institution as an Assistant Director.

Empirical Analysis

Prior to carrying out a formal analysis, the data is tested for stationarity by making use of the Augmented Dickey Fuller (ADF) test. Results show that all variables are non-stationary at level, but stationarity is achieved at first difference for all variables, i.e. they are integrated of order one - I(1).

The choice of lags that should be included in the VAR model is also crucial to the quality of estimation. Econometricians either arbitrarily fix the number of lags or decide on the optimal length by using a range of selection criteria available. I first estimated a VAR(1) model, i.e. with lag 1 and conduct the residual autocorrelation test. The rationale behind the test is that if one lag is sufficient, residuals won't be autocorrelated. Residuals of VAR estimated using KOPEN turn out to be correlated, therefore I resorted to a five lag order criterion available in EViews; namely Likelihood Ratio, Final Prediction Error, Akaike Information Criterion, Schwarz Information Criterion and Hannan-Quinn Information Criterion. The optimal lag length turns out to be 3. Residuals of VAR (1) with TOTAL also display autocorrelation, therefore lag of order 2 turns out to be an optimal choice instead. So I run two VAR models; VAR(3) using KOPEN and VAR(2) using TOTAL as a measure of capital account openness in Pakistan using the suitably differenced series.

A limitation of using the VAR model is that the Johansen Cointegration Test reveals the existence of a stationary linear combination between the variables, i.e. they are cointegrated and hence the coefficients of the model might not be efficient. Any long run relationship between the variables might not be fully explained. A more suitable choice would be the Vector Error Correction Model (VECM). The technique has been applied in literature, and by Naveed & Mehmood (2016) in the context of Pakistan. They do make use of the TOTAL index for measuring capital account liberalization in the country, but their other independent variables differ from those used in this paper. Regardless VAR makes it possible to analyze the dynamic interaction between selected independent variables and a shock to the current and/or future values of the variable of interest by using the impulse response functions. It also shows the

duration of the shock's effect on variables. Since the focus in this paper was to observe these impulse responses of macroeconomic variables to the shock in capital account openness, I continue with a VAR model. Those interested in the subject can apply VECM for digging up further on the impact capital account opening has had on Pakistan's economy.

I expanded the VAR model discussed in the previous section by incorporating the chosen variables. The ordering of the variables is of immense significance in a VAR model; the proxy for capital account liberalization will be first, followed by macroeconomic variables in the discussed order. It is expected that an increase in capital account openness will result in more capital inflows that in turn will appreciated the nominal exchange rate (assuming Pakistan theoretically has a flexible exchange rate regime) and also the real exchange rate. Increase in capital flows and improving position of the domestic currency stimulate domestic investment. Consumption is also expected to increase; ideally, this would increase less than investment if a country properly capitalizes on its capital inflows. While appreciation of the exchange rate is expect to drive current account into a deficit, as exports will become expensive and imports cheaper. The impact on real GDP would then depend on the total increase in investment and consumption offset by the net export position. In case of successful targeting and implementation of liberalization policies, economic growth will occur and real GDP figures will increase. All followed by a potential decrease in the rate of inflation.

The impulse response functions (IRFs) in this paper have been generated using Monte Carlo simulation method with 500 repetitions and 95% probability bands for each variable included in the VAR. The responses are available for 24 quarters (or 6 years) to a one standard deviation shock in the capital account liberalization measure. Figure 3 displays IRFs for KOPEN and Figure 4 is for TOTAL.
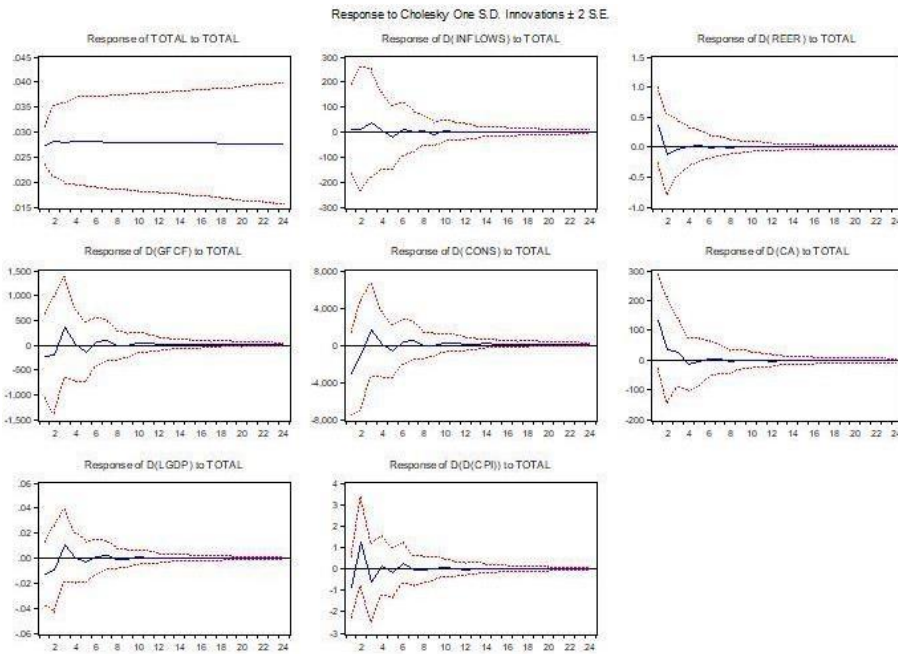
A shock to the capital account liberalization process; as understood by the KOPEN index in figure 3, results in a small immediate rise in net capital inflows into Pakistan but instantly by the second quarter returns to its initial level and remains unchanged. As predicted by theory, exchange rate appreciated but towards the end of the second year it returns to its pre-shock level. Domestic investment and consumption experience only an instantaneous increase but overall there is little to no variation in their levels due to the introduction of the policies. The result is consistent with the observation that we don't observe any significant change in the capital inflows. Current account position shows no immediate change to the shock, a potential explanation could be the inelastic demand for export and imports in the short run. Economic growth and inflation also do not respond much to the shock.

Figure 5 Impulse Response to shock in KOPEN
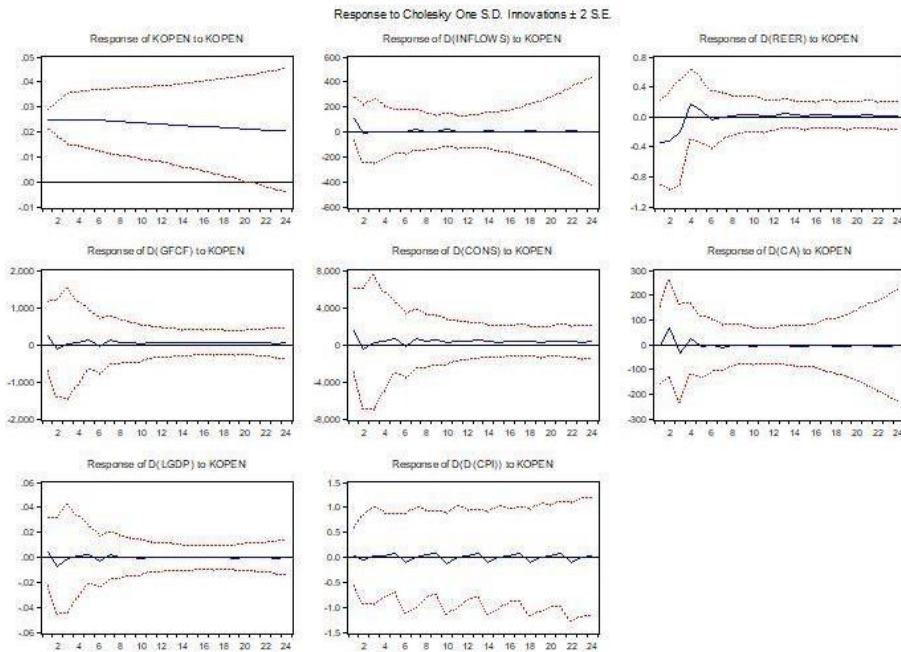
When the capital account liberalization proxy is changed to TOTAL, similar results displaying a stagnant and unresponsive picture of the economy are obtained, with the 95% confidence level taking a far more narrow range of values thus highlighting a lesser probability of variation. The shock to the TOTAL variable implies a change in the actual level of openness in the economy, and an increase in openness merely changes the net inflows; only for the first four quarters, we see a slight increase. A possible explanation could be that the definition of the openness indicator that considers both inflows and outflows, but the increase in both nets off the net inflow position. As opposed to the result from KOPEN, the real exchange rate depreciates initially but within a year it returns to its pre-shock level. This could be an indicator of uncertainty in the market about the commitment of the government to the liberalization policy. Domestic investment and consumption, contrary to the expectations decline as result of the shock, but quickly being to increase. As the impact on all other variables offset, these two variables also return to their initial levels within a year's time. A possible explanation for the fall in investment could be lack of investment opportunities in the country, unavailability of sufficient skilled human capital, low domestic financial development, poor institutional quality and political situation. As Rodrik and Subramanian (2009) argue that under such

circumstances the appreciated currency and loss in international competitiveness actually couple up and result in a decline in the return on investment (ROI), thereby decreasing investment. Unlike before, current account balance instantly responds to the shock in this case and shows a surplus. But the surplus too is a temporary phenomenon, with the exchange rate returning to its earlier level, current account does too. Contrary to the output's response under KOPEN, the economy doesn't experience a rise in output instead it slightly plunges due to low level of aggregate demand components and then returns back to its old level prior to the shock. Inflations falls but shows a volatile trend in the first four quarters, and then goes back to its initial level. The trend here also indicate that the capital account openness process did not attach sufficient inflows to alter the course of economic performance of Pakistan.

Figure 6 Impulse Response to shock in TOTAL

Factors that can explain the differences in the effects of capital account liberalization policy on macroeconomic variables when using KOPEN vs. TOTAL are; Pakistan experienced phases of back and forth exchange policies during the period, while the KOPEN indicator only captures the change in policy, TOTAL also accounts for the consequences that the switch in policy has had on the level of openness. The results of TOTAL also draws attention to the

role other economic and/or political factors have had in shaping the impact of capital account openness on economic growth. What should also be borne in mind when interpreting these results is that the capital inflows in Pakistan largely comprised of foreign borrowings used to finance the current account imbalance rather than investment. Increase in such inflows have relatively minor effects on the economy.

The variance decomposition indicates which variables are affected more in the short term and which have a long term impacts as response to capital account opening shock. The tables below calculate the variance decomposition for future period forecasts (k = 4, 8, 12).

Table 1 Variance Decomposition of KOPEN

Variance Decomposition of KOPEN							
Period	KOPEN	INFLOWS	REER	GFCF	CONS	CA	LGDP	CPI
4	97.78	0.71	0.59	0.04	0.05	0.60	0.23	0.00
8	96.82	0.81	0.79	0.04	0.07	1.28	0.19	0.00
12	96.41	0.89	0.90	0.04	0.05	1.52	0.19	0.00

The values of the variance decomposition of KOPEN are given in Table 1; it highlights that total variability in the model to a capital account liberalization shock comes from KOPEN itself and remains dominant even in the long run, i.e. around 96%. The shock contributes less to changes in other macroeconomic variables. We do however observe that influence on net inflows, real exchange rate and current account very slightly increases, but that on investment or real GDP remains the same and negligible.

The results reported in the Table 2 are variance decomposition of the TOTAL measure. These are similar to those of KOPEN; shock to capital account liberalization process accounts for 96% variation in its own measure - TOTAL. The effect on all other variables are relatively higher than KOPEN; effects on real exchange rate and current account are prominent here as well and variability in real GDP and domestic investment is low.

Table 2 Variance Decomposition of TOTAL

Variance Decomposition of TOTAL							
Period	TOTAL	INFLOWS	REER	GFCF	CONS	CA	LGDP	CPI
4	96.02	0.35	1.13	0.01	0.11	1.61	0.75	0.02
8	96.11	0.37	1.15	0.03	0.15	1.24	0.93	0.02
12	96.11	0.36	1.19	0.03	0.16	1.14	0.99	0.02

According to economic theory, the marginal returns for economies with capital controls are high as they move towards more liberalized policies; inflows are expected to substitute for the lack of domestic capital. The period following liberalization is usually characterized by capital surges, domestic credit expansion, substantial increase in investment and consumption, expansion of economic activity, appreciation of real exchange rate and asset price bubbles. Over time, however such a boom phase does not last and the process tends to reverse itself. Continued appreciation of exchange rate worsens the international competitiveness of exports and increase the demand for imports, thereby generating a current account deficit. Consequently, the investors begin to negatively view the state of the economy and this reversal in expectations slows down the momentum of capital flows. As investors withdraw their investments, net capital inflows decline, exchange rate adjusts and the bubble bursts, hence triggering the bust phase.

The IRFs show that any effects capital account liberalization has had on Pakistan's economy are short lived. The average time it takes the economic variables to return to their initial levels is between one to two years. With responses like these and short spans of impact, the symptoms of boom and bust cycles caused by the inflow of capital seem missing.

Conclusion and Policy Recommendations

Limited literature is available on the dynamics of the relationship between capital account liberalization and the economic performance of Pakistan. This paper attempted to fill the gap by evaluating the impact of opening of capital account of Pakistan on its growth and other macroeconomic variables by using a VAR model on quarterly data from 1990 to 2017. In order to quantify the extent of capital account liberalization, two different kinds of measures were used; de jure and de facto. The idea was to further provide a comparison between the results from using different indicators capturing different aspects of capital account controls, and shed light on any significant differences. Such an assessment can aid in identifying the cause behind mixed results on the impact of the liberalization process on macro economy. Results of the paper conclude no significant contribution of capital account liberalization on the economic growth and development of the country, regardless of the indicator type. Although it is possible from a statistical standpoint that the model could be suffering due to the values taken by the capital liberalization measures, which may have too little variation to produce a desirable analysis, there are a number of factors that can help explain why the country was unable to exploit the potential positive impacts of the liberalization process.

Experience of most developed countries that were able to benefit from the process points to meeting the preconditions central to mitigating the volatility risk associated with greater short term capital flows, followed by careful timing and sequencing of the liberalization reforms. Pakistan's sequencing of the reforms was rather less coherent and not carefully designed; it embarked on the road of capital account convertibility prior to fully liberalizing its current account, while other necessary preconditions had not been fully met.

The country needs to rigorously pursue financial sector reforms with a view to strengthening the banking system, making it more transparent and market forces driven, all of these under the umbrella of a well-defined regulatory framework and effective supervision. Towards mid 2000s we saw in section 5 that reforms in the domestic financial sector especially privatization significantly boosted capital inflows and reduced the reliance on foreign borrowings. However, those reforms were not sufficient and much needs to be done on this front.

The quality of institutions has also been identified in literature as a requisite to positive significant contribution of capital account liberalization towards growth. Mahmood (2013) raises the point that given Pakistan's fully liberalized current account, absence of strong institutions accommodates illegal capital flows. By export under-invoicing or import over-invoicing the trade account can be utilized for unauthorized movement of capital in and out of the country. Presence of alternative informal channels of money transfer, commonly known as the Hundi/Hawala system further facilitate unofficial activity in the capital account. Such transactions result in loss of foreign exchange to the government, tax evasion and even create room for corruption; allowing black money to be easily transferred out of the country to safe havens. In addition, these unauthorized transactions remain largely unaccounted in a formal empirical analysis, which means that any negative impacts is has had on the economy are not observed.

Another explanation for the inability of capital inflows to fuel economic growth of the country is the substantial portion of external debt in these inflows. As discussed in section 5, around 60-65 percent composition of the capital account was comprised of official loans from International Financial Institutions and donors, such as the IMF and WB. Given that much of the inflows were debt generating in nature, Pakistan remained unable to tap into the pool of global savings, which the proponents of capital account liberalization argue encourages economic growth. This assessment is similar to that made by Naveed and Mahmood (2016).

A more worrisome aspect is that governments have utilized these funds to sustain liquidity in the foreign exchange market rather than diverting them towards productive investment opportunities that could in turn generate income for servicing debt liabilities and simultaneously stimulate economic activity. Consequently resorting to further external borrowings or raising public debt, leading to detrimental implications for private sector investment. The government needs to shift its focus to attracting non-debt generating stable and long term sources of inflows. Foreign direct investment relative to portfolio investment should be targeted; reason being short term capital flows are volatile in nature and also pro-cyclical. This means that in times of economic slowdown and policy austerity they can become negative. Over the years, Pakistan has experienced phases of capital flight which have disrupted the potential positive impact of liberalization on the economy; a trend consistent with that experience by East Asian and Latin American economies towards the end of 1990s. Additionally, the government should further its efforts to facilitate and increase foreign remittances from Pakistani working abroad which will ease the current account deficit situation and release the pressure on debt based capital inflows.

One more issue that has constraint Pakistan and many other developing economies in reaping the benefits of the external financial liberalization is the lack of fiscal discipline. When the central banks monetize the government deficit, it exerts an inflationary pressure on the economy affecting domestic demand and triggering a downwards trend in the economy which coupled with an open capital account can lead to crisis like situations. On top of this, as predicted by the concept of 'Impossible Trinity', the act of artificially managing and maintaining the exchange rate by the governments has rendered the monetary independence of the State Bank of Pakistan to control monetary policy and use interest rate flexibly to stabilize the economy, ineffective.

Meager performance of Pakistan's economy, large current account deficit, expectations of major exchange rate realignment and political instability have combined to undermine the liberalization process. Any potential positive impact has been reversed or neutralized due to loss of investors' confidence and consequent capital outflows.

Most researcher (Haque, 2011; Naveed and Mehmood, 2016) also point out that the actual level of integration of Pakistan's economy into the global economy is limited compared to other emerging markets, which is why benefits associated with capital account liberalization have not been fully materialized.

While it is clear that Pakistan needs to increase its involvement in the international market, does it also need to pursue complete capital account

convertibility? The answer might not be as simple as a yes or no. The need for further opening measures can be better analyzed once all other necessary requirements and supporting factors are in place. The performance of the economy under those circumstances can better indicate a gap in liberalization policy initiatives. Any further move towards liberalization needs to be gradual and carefully implemented.

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