Exchange Rate and External Competitiveness: A Case of Pakistan

Sajid Amin Javed, Wajid Ali & Vaqar Ahmed

This paper highlights some important points regarding exchange rate and external competitiveness of Pakistan[1]. Firstly, overvalued exchange rate 0f Pakistani Rupee [PKR] has affected adversely to already weaker external competitiveness of the country[2]. Secondly, claims of failure of depreciation in boosting performance of tradable sector are based on mixing the partial adjustment of PKR towards its equilibrium value during periods of overvaluation with undervaluation - a situation where currency is below its equilibrium value. Thirdly, the gains from depreciation of real exchange rate, during periods of adjustment, were neutralized by lose monetary policy. Fourthly, the State Bank of Pakistan [SBP] needs to develop a tool to assess and monitor the misalignment in PKR so that a better informed and prudent exchange rate policy might be formulated.

1. Introduction

Exchange rate competitiveness, also known as international price competitiveness, is a major driver of external competitiveness of any country and determines its economic performance to a large extent[3]. Competitive exchange rate, therefore, has emerged as "condition" for economic growth (Pereira, 2002)[4]. Price competitiveness[5] plays an important role not only in trade sector performance but also the impacts extend to long run labour productivity growth[6] (Atkinson, 2013) and to inequality and poverty[7].

Real appreciation in exchange rate erodes the external competitiveness and is associated with lower economic growth (Roubini & Wachtel, 1998). Most importantly, persistent overvaluation not only results in lower international competitinvess but also signals the currency crisis (Kaminsky et al. 1998). It is associated with lower levels of GDP per capita growth, falling exports and imports, declining investment and savings and decreasing productivity (Ghura & Grennes, 1993)[8]. Conversely, real exchange rate (RER) depreciation encourages economic growth (Habib et al. 2016)

As the costs involved in producing a product are to be paid in local currency, overvaluation increases the cost of production, which reduces ability of the exporters to compete in foreign market[9] . Lower margins for profits for exporters, resulting from higher costs of productions, also serve as disincentive and exports decline as a result. In the long run, falling exports squeeze the foreign reserves required for the imports[10]. Expectations of future devaluation, guided by persistent overvaluation, may trigger capital flight which further limits the reserves available for imports. Imports decline in the long run. And so does the economic activity. A slowdown in productivity is the outcome eventually when exports and imports sectors are performing low[11]. To conclude, overvaluation hurts the performance of economy[12].

In Pakistan, exchange rate competiveness failed to attract considerable attention of policy makers. Attaining the competitive exchange rate seems to be a neglected objective of monetary policy. Efforts to restore PKR to its equilibrium value lack, as strong rupee is declaimed as to reflecting strong economy[13]. Often, the defence of strong PKR is offered in the name of debt burden associated with depreciation, lower elasticity of exports, and highly

1. See Neary (2006) for detailed discussion on measures of competitiveness.
2. Please read it in terms of Real Effective Exchange Rate [REER]- real exchange rate of a currency adjusted for difference in price indices of trading partners.
3. Refer to Bella et al. (2007) for definition and measures of competitiveness. In this paper we limit analysis to exchange rate competitiveness.
4. A competitive exchange rate is not necessarily depreciated one. The only condition is that it should reflect the fundamentals of the economy (see Pereira 2008 for details)
5. We use exchange rate and price competitiveness interchangeably
6. Gavin Murphy & Iulia Siedschlag (2012) provides an excellent discussion on effects of real exchange rate on firm's productivity.
7. Refer to Javed & Vaqar (2016) for details on socio-economic effects of exchange rate available at http://sdpi.org/publications/files/Demystifying-Exchange-Rate-PB-52.pdf. It must also be remembered that changes in productivity affect exchange rate too.
8. Latina American and African countries present best case study
9. Because now, for less of local currency consumed in production, importers (other countries) have to pay more in their currency
10. This situation leads to public borrowing
11. Overvaluation also results in higher international competition for import competing industry which may push government for "protection" of the industry thus hurting free trade.
12. See Shatz & Tarr (2000) for details
13. Political gains associated with strong rupee in terms of credibility of incumbent governments also create resistance towards any efforts of depreciation of rupee. See Javed et al. (2016) for details.

inelastic imports. It is further supplemented with so-called historical evidence on failure of depreciation of PKR to improve the current account of the country.

It is also believed that the poor performance of tradable sector in Pakistan is an outcome of structural issues, including but not limited to, energy crisis, lower productivity coupled with poor tax structure and that exchange rate management has much less to do with external competitiveness of the sector. Depreciation of PKR, therefore, is perceived not to improve the performance of this sector. Rather, it shall only increase the import bill of the country. On the other hand, appreciated PKR is claimed to be beneficial as it improved debt repayment capacity and lowers the import bill. Also, denial or confusion regarding magnitude and direction (or both) of misalignment of PKR prevails in the country because of conflicting opinions regarding misalignment of PKR reported in the relevant literature in Pakistan.

This work contests the arguments presented above. We argue that fairly valued rupee-closer to its equilibrium - becomes even more important for the country when its tradable sector is already faced with other forms of uncompettiveness including higher costs of production, lower labour productivity and lower value addition, lower product diversification coupled with energy crisis and unfavourable tax structures. Loss of price competitiveness in international market, in this situation, adds to the adversaries of already lower external competitiveness immediately and significantly[14]. We believe that focusing on immediate effects of depreciation, particularly debt burden, and ignoring its long run impact on tradable sector and labour productivity induces the resistance towards adjustment of PKR towards its equilibrium value. Also, we note that adjustment of rupee towards its equilibrium value must not be confused with undervaluation of rupee below its equilibrium value.

This work offers new insights into perceived failure of depreciation of PKR in bringing competitiveness gains[15]. We showcase that fall in the Real Effective Exchange Rate (REER) during periods of overvaluation left the rupee still significantly overvalued, so no significant improvement was observed in trade and current account balances. Further, we show that gains from falling REER were neutralized by increased costs of production domestically, as Wholesale Price Index [WPI] and Consumer Prices Index [CPI] soared because of increased money supply during these periods. To this argument, we document the evidence that, contrary to popular belief, Pakistan performed well in episodes of undervaluation of rupee-value below its equilibrium - as compared to the periods when it was overvalued.

We propose that SBP needs to build a model to assess and monitor misalignment of rupee. It has implications not only for monetary policy in terms of inflation targeting but also it shall help avoid the uncertainties regarding magnitude and direction of misalignment of PKR. Further, exchange rate competitiveness becomes even more important when inflation rates are history lowest in many of our trading partners at one hand, while the adjustments are being made by our competitors on the other. Both the factors are adversely affecting the already weaker external competitiveness of Pakistan.

We conclude that exchange rate is a major driver of external competitiveness and overvalued rupee erodes international competitiveness of Pakistan. It needs to be assigned preferential priority in economic policy of the country. Steps must be taken to bridge the gap between observed and equilibrium value of exchange rate restoring the competitive exchange rate for PKR improving external competitiveness of the country.

Rest of the paper is structured as follows: in section 2, some basics of external competitiveness have been introduced. Section 3 provides linkages between exchange rate competitiveness and economic performance. A snapshot of exchange rate regimes in Pakistan is furnished in section 4 followed by a summary of research on the issue from Pakistan in section 5. Evidence on external competitiveness and economic performance of Pakistan and its comparison with China and India is provided in section 6 and 7 respectively. Section 8 concludes and draws recommendations.

2- Measuring Exchange Rate Based External Competitinvess-Some Basics

This section briefly outlines the concept and measurements of external competitiveness. In order to capture different aspects of global price and cost competitiveness, different measures of real exchange rate are used. The selection of appropriate price or cost index in the construction of real exchange rate is based on different facets of competitiveness. For instance, to measure competitiveness of differentiated product for the sake of capturing productivity differences, index of output price is used. Similarly, international competitiveness is measured by using cost based indices in computation of real exchange rate. The importance of price competitiveness in the dynamics of exports and imports (external trade) has been recognised in external competitiveness literature since long. Alternative cost and price deflators are used to construct the Real Effective Exchange Rate (REER), which is the most common measure of price competitiveness against trading partners in global market (Christodoulopoulou & Tkacevs, 2014).

The deflators used to construct the REER are CPI, unit labour cost (ULC) and exports price index where each of them has its own pros and cons. The consumer price base real exchange rate is an important indicator of competitiveness useful especially to measure cost of living condition. As inflation is being monitor globally through CPI, therefore it is the readily available, reliable and globally comparable measure of real exchange rate indices. One drawback of this measure, however, is that it assigns more weight to non-tradable sector such as housing related items along with its inability to include some of the tradable capital goods.

Unit labour cost (ULC) is the most popular indicator of product competitiveness, which predicts that lower ULC enhances competitiveness and vice versa. Wages of labour rising more than the growth in labour productivity indicate increase in ULC. An appreciation in real exchange rate computed based on ULC would lead to deterioration of international competitiveness because of increase in ULC. Hence, it is evident that countries having larger ULCs (either their labour contribution to national income is larger or general price level is higher) would be less

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14. It is asserted that focusing of exchange rate competitiveness does not deny the role of other sources of international competitiveness i.e. changes in tax policy, cost of doing business and infrastructure development etc.
15. Analysis needs to be extended to other reasons.

competitive in global market than those whose ULC is comparatively lower. As the labour costs constitute greater proportion of input costs, which is comparatively non-tradable, therefore it is considered a good indicator of global competitiveness. Thus countries' profitability and competitiveness are highly associated with ULCs.

Computation of real exchange rate based on export price indices which are an indicator of product quality comparatively help to disclose the fundamental changes in an economy (Aiginger, 1998; Landesmann & Poeschl 1996; Timmer, 2000). Unit value of exports is positively associated with the use of advance technology in production process and with more capital intensive technology than labour intensive which are likely to reshape the whole structure of the economy. This higher export unit value together with lower unit labour cost is used as indicator of real competitiveness. The export unit value which is a ratio of price to quantity has the potential to deal with the issues such as trade specialization, export competitiveness and product innovation (Schott 2004; Timmer 2000; Brunner & Allen 2005).

The EUV is popular because of the advantage such as it carries market based information, easy availability, deeply reliant on consumer's preferences and its crosswise comparability in sectors and countries. The downside of the export price based competitiveness argues that this measure would not be appropriate whenever there is a change in composition of trade. This means that whenever trade between countries move away from low price commodities to high price commodities, this measure would be appropriate to capture competitiveness. Similarly, this measure may overdo the competitiveness in the tradable sector if non-exporting share of tradable sector is excluded from trade between the countries.

3- Exchange Rate Competitiveness and Macroeconomic Performance - A Quick Refresher

To achieve economic growth, "New Developmentalism" relies heavily on policy variables, including active fiscal policy, modest interest rate and competitive exchange rate (Pereira 2002)[16] wherein the last one is most important as its effect range from exports, import to savings and investments. Also, the last one has implication for the former two. Countries, while setting economic policy, must focus not only to reach to macroeconomic stability, but also to the competitiveness (Dornbusch 1980)

Exchange rate as major driver of growth remained ignored till (Dollar, 1992) which associated the appreciated exchange rate with lower levels of growth concluding that "--these results strongly imply that trade liberalization, devaluation of the real exchange rate, and maintenance of a stable real exchange rate could dramatically improve growth performance in many poor countries". Similar findings were reported by (Razin & Collin, 1997). Robust evidence is available that exchange rate depreciation is associated with higher growth levels in developing countries [Benaroya & Janci 1999; Easterly 2001; Pereira & Nakano 2002b; Fajnzylber et al. 2004; Johnson et al. 2007; Yeayti & Sturzenegger 2007; Rodrik 2007].

Undervalued [or not overvalued to be correct] currency

"enhances the relative profitability of the traded-goods sectors and causes it to expand (at the expense of the non-traded sector)" concludes (Rodrik, 2007). Given the fact that non-tradable sector has limited demand as compared to demand for tradable sector, expansion of tradable is associated with employment and job creation. The expansion is also associated with increased aggregate savings and investment (Yeyati & Sturzenegger 2007). The margin for improvement can be particularly higher for developing countries with access supply of labour-lower labour wages as compared to advanced economies.

Furthermore, capital accumulation depends on the rate of savings which, in turn, are dependent on rate of investment (Pereira, 2007). Expansion of tradable sector provides larger opportunity for investments hence a higher rate of investment occurs. These opportunities of investment depend on performance of tradable sector in international market- a phenomenon which is determined by price competitinvess. Further, share of output devoted to tradable sector (as compared to non-tradable)- determined by exchange rate competitiveness - largely determines long run total factor productivity growth of any economy (Rodrik, 2007). This is particularly true for the manufacturing sector.

Conversely, exchange rate overvaluation can dissuade economic growth of the country through persistent current account deficits, increased frequency of economic cycles (Rodrik 2007, increased public debt and speculative attacks (Sallenave, 2010). Further, overvalued currency discourages export diversification[17]. Exchange rate competitiveness, therefore, becomes central to savings, investment, employment and growth of economies (Ocampo, 2004).

An overvalued exchange rate discourages productivity growth because of the disadvantaged exports and imports[18] sector (Cottani et al. 1990). A misaligned exchange rate at upper side may also cause capital flight and the following anticipated devaluation by the citizens' results in a fall in foreign exchange reserves. Finally, it may also be noted that defence of overvalued exchange by adopting deflationary (tight) monetary policy may cause severe recession. Kaminsky et al. (1997) maintain that inconsistent macroeconomic policies are the result of overvalued exchange rate resulting in unsustainable current account deficit, increasing external debt and possible speculative attacks.

Evidence suggests that developing economies adopting import substituting policies by keeping their exchange rate overvalued experienced slow-growth along with adverse balance of payment position (Shatz & Tarr 2000)[19]. It is in this context that overvalued currency (lost external competitinvess) is concluded to be linked with lower levels of growth and poor economic performance (Cavallo et al. 1990; Dollar, 1992; Easterly et al. 1997; Domaç & Shabsigh, 1999; Bleany & Greenaway, 2000; Toulaboe, 2006) as well as (Gala & Lucinda, 2006).

4- Exchange Rate Regime of Pakistan- A Snapshot

Figure 1 exhibits the exchange rate regimes for Pakistan. Pakistan, soon after independence, pegged its rupee to

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16. Available at http://www.bresserpereira.org.br/papers/2008/08.23.tendencytotheovervaluation.nov3.pdf
17. http://www.moongateassociates.com/documents/TIPCEE_GROWTH_STRATEGY.pdf
18. The disadvantage of the import sector lies in the fact that due to overvalued exchange rate the competition between import competing industries and foreign companies may create lobbies which eventually restrict the needed imported inputs and as a results growth may fall.
19. Along with Argentina, Chile, Uruguay, Turkey, and the CFA zone of Africa, Possibly Pakistan makes such a case too.

pound sterling with the rate of pound sterling 1 equal to PKR 11.43[20]. This peg lasted till 1972. Thereafter, PKR was pegged with dollar wherein US$ 1 was equal to PKR 9.90. As is evident from figure 1, Pakistan remained on managed floating from 1982 till 1998. Since then, the country has been following a flexible exchange rate. One can clearly observe that exchange rate fluctuations (exchange rate becomes volatile or unstable) happen under flexible exchange rate regime. This may make many of us think that pegging brings stability and that it

Pakistan registered an appreciation of 8.71 per cent on average (Hussain, 2009). Conceivably, this overvaluation of exchange rate was driven by war between India and Pakistan that leads to the separation of Bangladesh. Other factors that contributed to the appreciation of exchange rate includes double digit inflation, the negative effect of oil price shock on domestic prices, and capital inflows because these variables were below of its sustainable level [22](Hussain, 2009).

There is a strong evidence in favour of adopting flexible

Figure 1: Exchange Rate Regimes in Pakistan (USD/PKR rate)
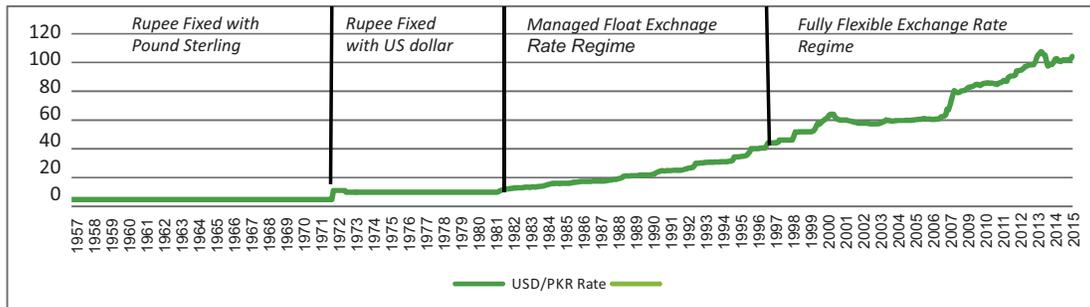

Source: State Bank of Pakistan Statistics & DWH Department Monthly Average Exchange Rates

should be a suitable exchange rate regime for the country. But, the point here is that pegged rate may not reflect the competitiveness of country[21]. It is important to note that appreciation in US$ may artificially overvalue PKR, if both are pegged. This may decrease competitiveness of Pakistan thus affecting the economic performance of the country negatively.

During 1970s reforms were introduced to delink the industrial and financial capital in order to increase the efficiency of the manufacturing sector. The reforms focused on two main export products, i.e. rice and cotton. PKR was devalued and export subsidies were dissolved.

exchange rate regime as currency value, under this regime, reflects economic performance of the country. Significant adjustment has been made in Pakistan exchange rate during 1980s by keeping the State Bank of Pakistan policy rate (discount rate) as high as 10 percent on average and by selling ample amount of reserves (Pakistan reserves as per cent of GDP falls from 6.62 in 1980 to 3.10 in 1988). Pakistan did not devalue their currency during 1980 although US dollar appreciated significantly, which adversely affected Pakistan exports in second half of 1980.

Figure 2: Nominal Bilateral[23] (right) and REER (left) of PKR (2010=100)
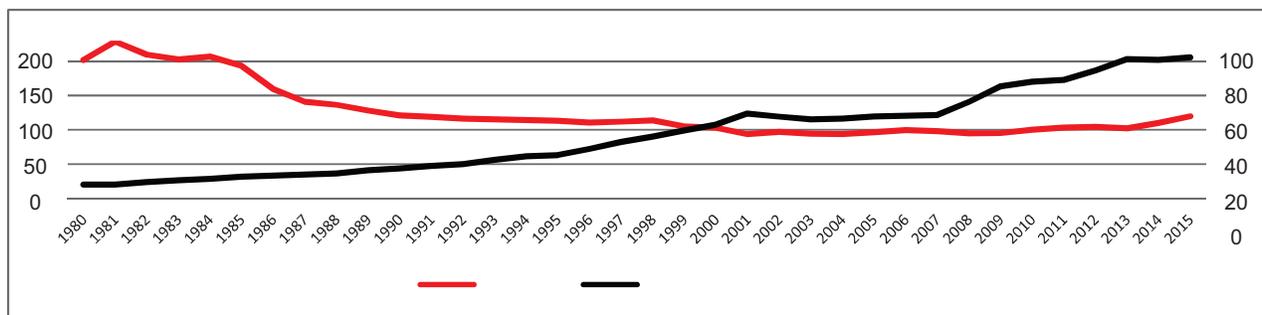
Source: WDI data.

These reforms led to improvement in terms of trade but share of manufacturing sector to GDP dropped. The weakening manufacturing growth was because public investment was not supplemented by saving and private sector investment.

Over the period of 1970 to 1978, real exchange rate of

Because of large budget deficit in the 80s, the US raised the interest rate which attracted capital from abroad. Hence, Pakistani rupee witnessed a drop in its value against dollar. Responding to the situation, SBP adopted the managed float exchange rate to fine-tune the overvaluation of rupee in 1982. Pakistan delinked the

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20. Bang (1957) provides a look in to earliest phase of Pakistan's Exchange Rate Policy.
21. Competitiveness here refers to the ability to compete other countries in international trade market. For example a country producing goods for export at low cost than other countries has higher competitiveness as it can sell its products at lower prices as compared to other countries.
22. A series is said to be sustainable if its permanent component is not deviated from its cyclical component (Newbold, 1990).
24. Nominal Bilateral here refers to number Pakistani Rupees exchanged for US$ 1.

rupee from dollar and tied it with multiple major trading partners due to fear of inflation associated with

devaluation of rupee[24]. Pakistan followed managed floating regime from 1982 till 1999. Since then, the country has been following a flexible exchange rate. Figure 2 showcases the nominal bilateral (against US$) and REER for rupee over a period of 1980-2015.

As is evident from figure 2, REER for rupee appreciated soon after 2010 on the back of US dollar appreciation against PKR, which eroded the export competitiveness of the country. Pakistani rupee [PKR], compared to 2013, is said to be overvalued presently to the extent of 15 per cent and 10.6 per cent respectively according to independent experts and the sixth review report of IMF respectively. Also according to the State Bank of Pakistan, REER for PKR has appreciated by 23 per cent from 2010 to January 2016. Importantly, this period coincides with declining exports (exports fall on average during the period by 3 per cent) and widening trade deficits (trade deficit as a percentage of GDP on average during the period increases by 1.82 per cent).

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5- Exchange Rate Competitiveness in Pakistan- A Summary of Extant Literature

It is well established that exchange rate misalignment has serious implications for the economy and that Pakistani rupee has historically remained misaligned from its equilibrium value. But, there is hardly any literature available on the issue in Pakistan. All the available literature is limited to economic fundamentals based identification of the drivers of misalignment (Hyder & Mahboob 2006; Qayyum et al. 2004; Debowicz & Saeed 2014; Janjua 2007; Zakaria 2010). No study incorporates political and institutional factors involved[25]. Most of the studies have limited horizon of consequences misalignment. Assessment 0f impact of misalignment is limited to growth (Zakaria 2010; Javed & Farooq 2009; Azid et al. 2005), exports (Mustafa & Nishat 2004; Humayon et al. N.A;), and imports and trade (Janjua 2007; Saqib & Sana 2012; Khan et al. 2014; Alam 2015; Afzal 2007).

The most significant drivers of exchange rate misalignment analysed in Pakistan include terms of trade (Debowicz & Saeed, 2014; Hussain, 2008; Janjua, 2007; Hyder & Mahboob, 2005), trade openness (Janjua, 2007;

Hyder & Mahboob, 2005) net capital inflows (Debowicz & Saeed, 2014; Hussain, 2008), relative productivity differential (Debowicz & Saeed, 2014; Janjua, 2007; Hyder & Mahboob, 2005) and current government consumption (Zakaria, 2010; Hussain, 2008; Janjua, 2007; Hyder & Mahboob, 2005). Some of the studies report workers' remittances (Hussain, 2008; Janjua, 2007; Hyder & Mahboob, 2005), interest rate differential (Debowicz & Saeed, 2012), fiscal deficit (Debowicz & Saeed, 2012) and net foreign assets (Debowicz & Saeed, 2012) as major drivers of misalignment of rupee. Zakaria (2010) identified capital accumulation, capital inflows, foreign exchange reserves and domestic credit as the major drivers of exchange rate misalignment in Pakistan.

We find conflicting evidence regarding the direction of misalignment. Hyder & Mahboob, (2005) conclude that exchange rate remained undervalued and overvalued during 1978 and in 2005 respectively while Janjua, (2007) find evidence for undervalued rupee in 1978. Qayyum et al. (2004) and Janjua (2007), report that rupee is overvalued in 2006[26]. Similarly, Debowicz & Saeed, (2014) find that rupee was overvalued in 2010 while Zakaria, (2010) reports it to be undervalued. Hussain, (2008) maintains that exchange rate was overvalued during (1970-1978), close to equilibrium during (1978-1988) and again overvalued in (1989-1999 and 2000-2007).

A similar disagreement on explanations of misalignment is evident. Hyder & Mahboob, (2005) conclude that undervaluation was because of fall in the value of the dollar against major currencies while overvaluation of PKR was because of excess foreign exchange liquidity. Zakaria (2010) reports that undervaluation is the result of sanctions imposed in wake of nuclear tests. (Janjua 2007) finds appreciation of the Real Effective Exchange Rate behind misalignment of rupee. According to Hussain (2008) deterioration in terms of trade and inflation may explain recent overvaluation[27].

Most of the studies use the Johansen cointegartion (Qayyum et al. 2004; Debowicz & Saeed 2012 and Hussain 2008; Zakaria 2010) which determine more than one co-integrating vector among the variables, and the Engle-Granger two-step technique (Hyder & Mahboob 2005; Janjua 2007) determining one co-integrating vector among the variables. Both these methods ignore the issue of endogeneity involved in the nexus and may seriously bias the results (Khan 2008).

One example may make it clear. Many of the studies conclude that trade deficit is a major driver of misalignment in rupee. But, it is important to note that trade deficit itself could be an outcome of the misalignment of rupee. Furthermore, a look into modeling and estimation techniques applied in these studies clearly suggests that the literature ignores the structural issues. Economic series adapt different regimes related to events such as financial crisis and unexpected changes in economic policy. The true model of exchange rate in a dynamic economy like Pakistan may be changing over the time leaving the relationship between exchange rate and other macroeconomic variables changed also[28].

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24. Nominal Bilateral here refers to number Pakistani Rupees exchanged for US$ 1.
25. Javed et al. (2016) fills the void and provide political economy context of exchange rate policy of Pakistan
26. Findings are consistent with Hyder & Mahboob, (2006)
27. These mixed results in drivers, nature and sources of misalignment come from different set of specifications, alternative controls and the varied estimation techniques.
28.   Markov Regime Switching Analysis is used to capture the structural shifts by (Terra, & Valladares. (2010), Takagi, (2010); Valladares, (2002)
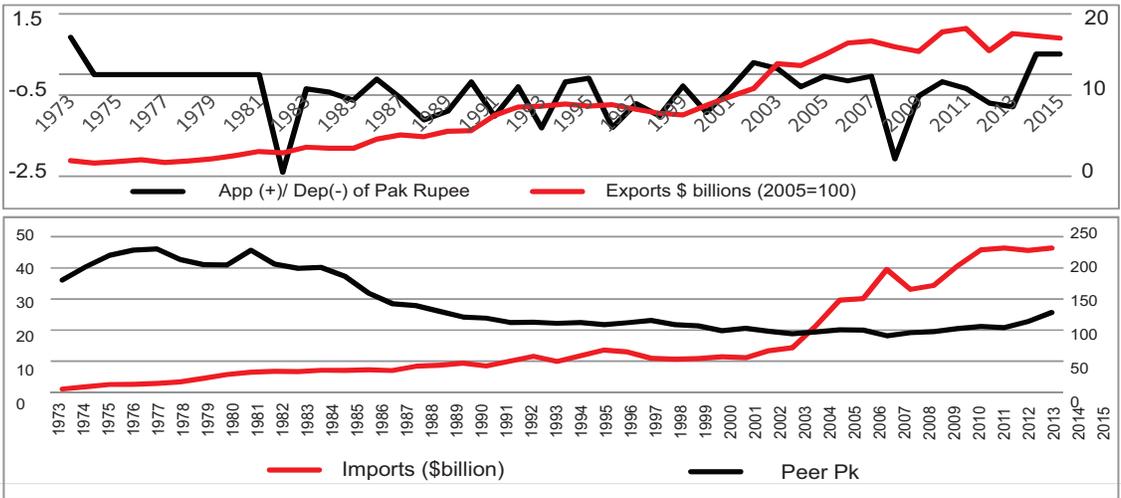
A look into the literature on Pakistan clearly manifests that assessment of the drivers of exchange rate misalignment is limited to economic factors only and and incorporate structural and political factors into analysis, including shift in exchange rate regimes, election effect, etc.

Figure 3: Appreciation (+)/Depreciation (-) (left in %) and exports (Right in $ billion)

Note: Imports and exports are in billion dollars (2005=100) and REER are constant at 2007 prices. Appreciation (+)/Depreciation (-) data are taken from State Bank of Pakistan.

6- Exchange Rate Competitiveness and Economic Performance of Pakistan

It is argued that attempts to narrow the trade deficit by developing countries like Pakistan have often been counterproductive as they import capital good and intermediate inputs which are likely to increase domestic production and then exports. Figure 3 apparently supports the argument where consistent and substantial increase in exports (panel a) are seen after 2000 for Pakistan. After an improvement in current account in 2001-2003, Pakistan faced current deficit of about 9 % of GDP in 2008 due to a number of reasons i.e. fall in exports and significant surge in imports (panel b of figure 3 above), increase in domestic demand and oil prices shock.

ignores the political and institutional factors which motivate and allow the government to misalign the currencies. Also, the impact assessments are limited to X macro level effects only and ignore social and micro level implications of misaligned PKR. Also, we were unable to find analysis of the issue in context of non-linear effects of misalignments-undervaluation vs. overvaluation and the threshold level of both. We assert that expanding the set of explanatory variables will improve the estimates.

Table 1: Misalignment of PKR, REER Depreciation (Correction), Money Supply and Domestic Prices

Periods of overvalued exchange rate	Magnitude of Misalignment (% above Equilibrium value)	Depreciation (REER)	Growth in Money Supply	Growth in WPI	Growth in CPI
1982	6.9	- 8.40	22	4.2	5.88
1983	6.3	- 3.41	21	10.1	6.38
1984	12.9	2.12	5	9.4	6.01
1985	8.7	- 6.60	15	2.8	5.66
Period average	8.7	- 4.07	16	6.63	5.98
1994	2.1	- 0.70	17	19.6	12.35
1995	5.4	- 0.65	14	12.7	12.33
1996	5.5	- 2.65	20	11.1	10.38
1997	9.8	1.37	20	11.2	11.37
1998	8.3	1.41	8	2.3	6.22
1999	1.5	- 7.46	4	7.3	4.14
2000	2.4	- 1.89	12	4.1	4.36
Period average	5	- 1.51	14	9.76	8.74
2006	5.9	2.83	17	9.3	7.91
2007	8.6	- 1.26	20	2.8	7.61
2008	7.8	- 3.71	6	6.63	20.28
2009	11.9	0.66	15	7.26	13.64
2010	25.5	5.12	15	21.3	13.88
Period average	11.94	0.727	14	9.49	12.66

Note: WPI= Whole Sale Price Index; CPI= Consumer Price Index.
All numbers in the table are Year-on-Year Percentage Change

Equally important is to test the sensitivity of the estimates by using alternative set of controls[29]. Finally, the scholarship on the issue needs to go beyond fundamentals

However, the question as to why depreciation of REER failed to bring competitiveness gains in Pakistan remains ignored and straight forward conclusions made for the failure of exchange rate depreciation tool. One needs to

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29. This may include m3 money supply, commercial policy proxy by import to GDP ratio, Business cycle dummy, Share of manufacturing sector over GDP, Share of financial sector over GDP, Foreign liabilities over money and institutional variables i.e. Voice and Accountability, Political Stability, Government Effectiveness, Type of Regime, Central Bank Independence, Regulatory Quality, Rule of Law and Control of Corruption.

explore certain reasons responsible for unfavourable outcome. One of the reasons is the increased money supply in the periods of devaluation/depreciation which neutralized competitiveness gains by increasing the domestic inflation (Janjua 2007). Another plausible factor is confusion between "competitive exchange rate" and "devaluation/depreciation". Depreciation or devaluations may not add to external competitiveness if PKR is left significantly "overvalued" from its equilibrium value even after adjustment. This has been the case in Pakistan as is evident from table 1 below.

Table 1 provides some understanding that why depreciation (of REER) failed to bring the price competitiveness to the tradable sector of economy. We have outlined here periods of overvaluation based on figure 4 reporting the estimates of overvaluation of rupee (upward misalignment). A look into period averages (table 1) clearly manifests two important points. First and foremost, depreciation of PKR here does not denote undervaluation in this case rather it is a move towards equilibrium value of rupee. Secondly, and most importantly, depreciation of REER for rupee was much less than the required to bring the exchange rate of rupee to its equilibrium value. In other words, despite the depreciation, REER for rupee was still significantly misaligned upward in all these periods, which left the country with no gains as exchange rate was far from competitive vale. At the same time, all these periods of

depreciation in REER witnessed growth in money supply resulting in higher domestic prices - WPI and CPI. Growth in WPI and CPI added to the cost of production in domestic market which neutralized the already lower than optimal adjustments in REER.

Contrary to this, real undervaluation of the rupee has always improved economic performance of the country as is evident from table 2 which is based on figure 4. Figure 4 shows exchange rate misalignment for Pakistan. Thick/bold curve exhibits observed Real Effective Exchange Rate (REER) while dotted line depicts exchange rate estimated based on economic fundamentals of Pakistan. Difference between the two lines gives exchange rate misalignment. As is evident, PKR is found to be overvalued in the 80s (1980-85) and undervalued during 1986-1994. Most importantly, PKR is found to be overvalued after 2006. It is interesting to note that two lines do not overlap suggesting that rupee is always misaligned in either direction overvalued or undervalued.

Misalignment, particularly overvaluation, is found affecting the economic growth negatively. Table 1, depicts the major indicators for Pakistan by periods of overvaluation and undervaluation of PKR.

One could clearly observe from table 1 that Pakistan registered improved macroeconomic indicators in periods of undervalued rupee than overvalued[31].

Figure 4: Misalignment of the Real Effective Exchange Rate in Pakistan (1982-2010)
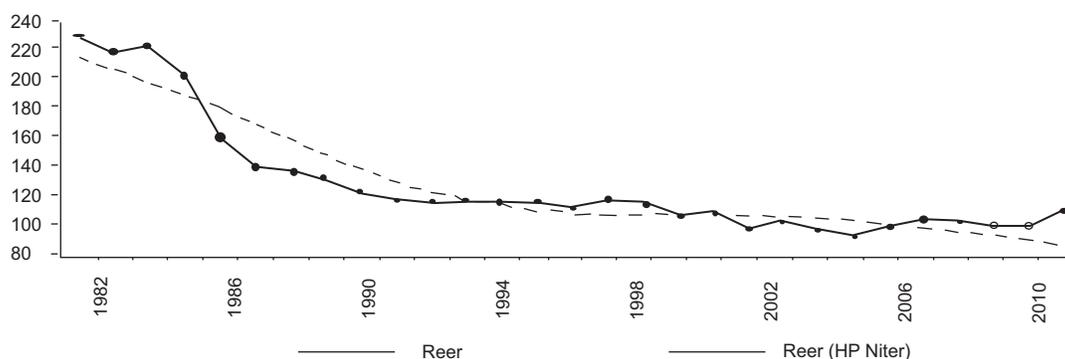
Source – Debowicz and Saeed, 2014 [30]

Table 2: Performance of major macroeconomic indicators (Period average) in periods of over/under valued exchange rate

	1986-93 (Undervalued)	1993-99 (Overvalued)	1999-2005 (Undervalued)	2005-15 (Overvalued)
Real GDP growth *(%)*	5.4	3.4	4.7	3.7
Total external debt stock *(period growth)*	7.9	5.8	0.10	7.2
Current account deficit (% GDP)	-3.4	-3.9	1.3	-3.1
Inflation (%)	8.1	9.4	5.1	10.2
Exports of goods and services *(period growth)*	13.0	-2.2	12.4	2.1
Imports of goods and services (period growth)	4.9	-1.4	7.7	0.9

Source: The statistics are taken from different editions of economic survey of Pakistan

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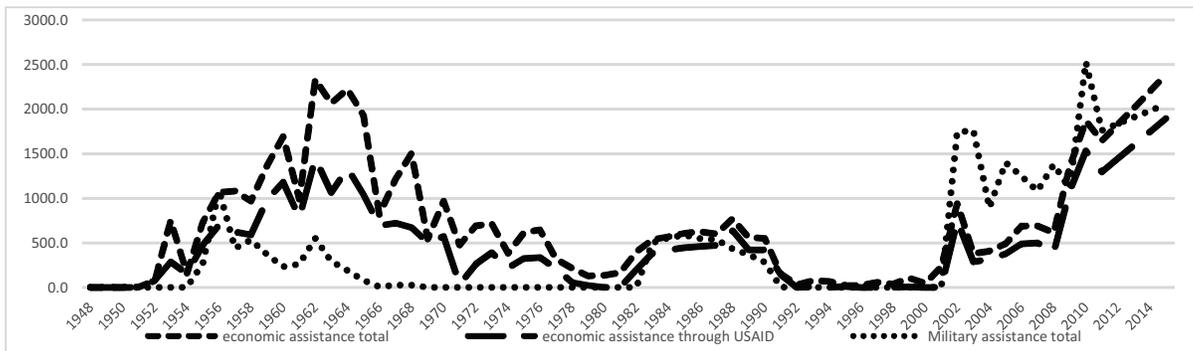30. Full length paper is available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2442023
31. Refer to Javed & Vaqar (2016) for details on interlinkages

During the period of managed float exchange rate in the 1980s, rupee was devalued by 20 per cent. Moreover, the agreement with IMF in 1988 was backed by conditions of devaluation, liberalization of imports and reduction of tariffs.

GDP growth rate was all time high of 5.4 per cent during the period (1986-93) in which exchange rate of Pakistan remain undervalued. Higher external debt growth during the period might be because of the World Bank and the International Monetary Fund (IMF) loan programme. The sustained impact of devaluation on debt comes with lags

Pakistan managed to achieve growth rate of 4.7 (1999-2005) from 3.4 in 1993-1999 even though first three years of 2000s were very challenging due to economic sanctions imposed on Pakistan in wake of nuclear tests. Also the country was going through severe droughts and highest debt repayments in this period. Along with other factors, favourable exchange rate brought the country a current account surplus of 1.3% of GDP. During the period, Pakistan witnessed a growth in exports and imports of 12.4% and 5.80% respectively. Moreover, Pakistan continued to strategy of trade liberalizing and integrating the economy with the global world. Other factors contributing to improved economic performance include good working relationship with IMF, WB and ADB and considerable amount of military and economic aid injected into the economy.

Figure 5: Economic and Military Assistance (US$ million)

Source: Wren Elahi Centre for Global Development.
Note: All figures are in Million US dollar

and is reflected in undervaluation period of 1999-2005 showing growth of 0.10%.

This relatively higher growth rate of GDP and lower current account deficit (3.4 per cent) during this period can be attributed to competitive exchange rate as average misalignment was 0.22 per cent- value of rupee was closer to its equilibrium value. Further, during this period, global wholesale price level remained low as compared to domestic prices in Pakistan. Also, the trade liberalization (sum of exports and imports as share of GDP) helped sustain the exchange rate closer to equilibrium level. Conforming to the productivity effects of devaluation, Pakistan witnessed average growth rate of total factor productivity higher than the sustainable value during the same period which led to depreciation of real exchange rate (Hussain, 2008).

Overvaluation of real exchange rate of about -2.28 during the period of 1990s, current account deficit soared from -3.4% of GDP to -3.9% of GDP. This negative current account deficit can be largely attributed to trade deficit (decline in exports) caused by economic sanctions. Along with appreciated rupee, structural adjustment program, trade liberalisation and tariff reforms also added to slower growth rate of GDP falling to 3.4% on average (Mahmood et al. 2008), along with the unsustainable level of capital inflows, rise of inflation to 9.4 per cent as compared to world price level of 2.4 per cent contributed to appreciation of REER for rupee in this period. Resultantly, average total factor productivity remained below its sustainable level[32] together with deteriorating terms of trade (Hussain, 2008).

Historically, autocratic regimes have attracted more foreign aid in Pakistan as illustrated in figure 5 below. Average economic and military aid during democratic Bhutto's (1971-1977) regime was $3755 million and $5.1 million respectively. In Zia's autocratic regime (1977-1988), the two types of aid was $4418 million and $2935 million respectively. In democratic regimes of Benazir and Nawaz Sharif ((1988-1999) economic and military aid stood at $1555 million $612 million respectively. Most importantly, military aid was all-time high $3786 million in Musharraf regime (1999-2007) with economic aid as low as $4.265 million.

Also, considerable amount of military and economic aid was injected into the economy after 9/11 together with $ 1 billion debt relief[33]. Finally, Congress authorizes tripling the economic assistance during democratic regime of PPP government which led to high economic and military assistance of $1998 million and $3345 million during respectively this regime[34].

During the period of (2000-2007), the driving forces behind appreciation of the REER of about 1.2 per cent were inflation, capital inflows, deteriorated terms of trade and low total factors productivity because they were deviated from their sustainable position. After 2000s, Pakistan did not have pre-set path for its exchange rate and the State Bank of Pakistan (SBP) let the exchange rate fluctuate. The bank shifted its focus mainly to inflation targeting. In the period, foreign investors were allowed to freely move their capital across the borders.

According to IMF (2010), rupee was de facto conventional peg to US dollar within a narrow band. Tariff rates were

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32. A series is said to be sustainable if its permanent component is not deviated from its cyclical component (Newbold, 1990).
33. Ahmed & Siddiqui (2010) provide an excellent refresher on Aid, Security and Development in Pakistan
34. As the current democratic regime lead by PML(N) continues, we are unable to provide the numbers.

reduced to 25 per cent between 2003 and 2007, which resurged to 35 per cent in 2008 in response to trade deficit. Between 2009 and 2012, the government introduced Strategic Trade Policy Framework (STPF) which carries measures, including financing of export firms at fixed interests for a short to medium term, facilitation of export firms in foreign markets, arranging warehousing facilities abroad, providing support for compliance certification, funding technology, skills and management up gradation for value added products and reducing cost of doing business.

Historically lower post global financial crisis of 2008 inflation in trading partners of Pakistan left REER for rupee appreciated eroding the external competitiveness of the country. At the same time, lower commodity prices and demand led to decline in exports of Pakistan. The incumbent government set a target of 6 to 7 per cent growth rate by the year 2018, but succeeded only to achieve a growth rate of 4.14% in fiscal year of 2014-15. This relatively high growth rate of GDP as compared to past six years (remain on average 3.7%) was mainly because of growth in industrial sector despite the fact that the service sector growth downturned slightly from 4.85% to 4.29%.

The current account deficit remained at manageable level mainly because of $1.5 billion grants from Saudi Arabia and historically low oil prices. The remittances, inflation and national saving target were also not met and the growth rates were registered as 4.1%, 8.69 and 12.9% respectively compared to the target level of 4.4%, 8% and 14%. A healthy growth rate of 3.5% was recorded in per capita income and stood at $1,386 in 2013-14.

Similarly, fall in exports might be caused by the declining rate of existing capacity utilization, which leads to fall in growth rate of private investment in manufacturing sector from 11.2 per cent in 2014-15 to 2.2 per cent in 2015-16. Despite improvement in Global Competitive and Ease of Doing Business Index, exports are showing a secular decline in this period. Experts are attributing this decline to overvalued REER to the extent of 23 per cent, as per data from the State Bank of Pakistan.

7- Managing Exchange Rate Competitiveness- A Tale of Three Countries

This section provides a comparative perspective of exchange rate management for three economies, namely Pakistan, India, and China. The purpose is to showcase that how different levels of responsiveness to exchange rate incompetitiveness have translated into three varying trajectories of performance of tradable sector and how it has contributed towards growth of the respective economies. India presents the democratic regime with marked economic performance in recent times while Pakistan endows a mix of political settings (autocratic and democratic) and unstable trajectory of economic performance. Finally, China, in an autocratic setting, provides a classic case for studying the exchange rate misalignment winning the trade war the world over with consistent devalued Yuan and displaying unprecedented economic performance. The first two started almost similar, but departed widely in political system (the nature and stability), the currency value and the macroeconomic performance.

Unlike Pakistan which associated its rupee with Pound sterling soon after the independence and kept it until 1971, Indian rupee was associated with USD at that time. India, in response to pound devaluation, devalued her currency in 1949 but Pakistan did not. The decision was justified that Pakistan exports only raw materials to India and UK while in turn imports machinery. Hence, in net, cannot get benefit from devaluation (Cable & Weston 1979). This however brought higher cost to the country in the long run.

The global recession after the Korean War in 1955 depleted the foreign exchange reserves of the economies worldwide, including Pakistan. Pakistan faced huge balance of payment (BoP) problem and trade deficit widened after 1956. Amid global recession, overvalued Pakistani rupee aggravated the BoP problem further. Pakistan devalued its currency in 1955 from 3.31 to 4.78 rupee per US dollar. India devalued its currency from 4.79 to 5.57 (between 1962 and 1965) to meet the rising budget deficit[35]. It was the second devaluation from India so far.

It was in 1971 that rupee was pegged against US dollar and further devalued[36] to PKR 11 per USD. Interestingly, India did the opposite-detached the rupee from dollar and linked it with Pound sterling. PKR remained fixed between 1973 and 1981 with USD after a real appreciation of about 14%. Pakistan experienced a fall in its exports and rise in imports, which resulted in trade deficit of $ 836 million along with current account deficit of $ 699 million (as per cent of GDP the deficit was 6.3 and 5.6 per cent respectively) during the period. Because of large budget deficit in 1980s, the US raised the interest rate which attracted capital from abroad, including Pakistan and hence rupee depreciated against dollar. Exports of Pakistan grew 26.8% annually during this period. This growth in exports led to preventing the value of rupee from further falling.

India pegged its currency to her major trading partners' currencies in September 1975 (Ahluwalia, 1986). Depreciation in REER for Indian rupee by 17% (from 1975 to 1979) caused current account surplus of Rs 1031 crores which lead to average GDP growth of 5.1% in 1979 as compared to 3.5% in 1975. A significant appreciation in Indian Real Effective Exchange Rate was observed during the 1980s due to which exports volume dropped from 9.4% during 1973/74-1978/79 to 3.6% in 1978/79-1983/84. In 1991, India devalued its rupee IDR 17.9 per US solar because of structural problems of low growth, high inflation together with the reserves falling to the level that did not meet imports even of three weeks.

Pakistan adopted the policy of managed floating exchange rate regime during the period of 1982 to 1998. Both trade and current account deficit stood at 4.7 and 5.8 per cent of GDP respectively during Benazir's and Nawaz's regime (1988 to 1998). From 1998 to 2000, the political situation of the country remained unstable along with sanctions

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35. It was the period when India had two wars; one with each China (1962) and Pakistan (1965)
36. In 1972 Bhutto devalued rupee by 131 percent.

from the west because of nuclear tests. Multiple exchange rate regimes changing from pegged to floating and a mix of pegged and floating emerged as the strategy for handling the crisis.

It was in 1993 that India adopted flexible exchange rate. The value for Indian rupee varied from 40 to 50 per US dollar during 2000 to 2010. The general depreciation in the Indian rupee was carried out after 2008 global crisis. In India, Real Effective Exchange Rate depreciated by 1 per cent on annual average basis between 2008 and 2012, which caused an average increase in exports of 7.7 per cent during the period.

We now turn to China. The movements in RMB affect major economies of the world through trade balance effect. A significant increase in China's trade balance and macroeconomic performance is evident during periods of overvalued RMB-before the 80s - and devalued periods after 2005. China through intervention[37] in foreign exchange market, historically kept its RMB undervalued against the US dollar. The Chinese government used exchange rate as policy tool very strategically. At first stage, it benefited from overvalued RMB by importing machinery at a low cost. Abundance of cheap labour led to high productivity through interacting with modern imported machinery. At the second stage, China undertook reforms of 1979 of devaluing its currency and sustained its unprecedented growth in exports throughout the world soon.

Before the reforms periods, i.e. between 1949 and 1970s, China kept RMB overvalued in order to support the strategy of import substitution (Gupta 2013). After a persistence depreciation of RMB from 1.49 per dollar to 4.79 per dollar between 1980 and 1990, China started

managing its currency to a basket of currencies (important among them were pound and yen) due to which the RMB appreciated to 6.3 per dollar later in 2012 (Gupta, 2013). Regardless of large appreciation in 2008, Goldstein & Lardy, 2009 conclude that RMB is still undervalued to the extent of 15 to 25 percent.

Based on the aforementioned discussion, we find that Pakistan keeps up their effort to support their domestic industry by maintaining a fixed and overvalued exchange rate[38]. Value of Pakistani rupee is the most overvalued and volatile of three while RMB is most undervalued and stable. This has resulted in varying levels of exports, trade deficits and overall economic performance. Of the three, Pakistan fared poor with lower and falling levels of exports, widening trade and current account deficits and, poor growth rates over the time.

In addition, Pakistan assigned a lower priority on raising productivity, which manifests lack of focus on reducing the structural barriers to exports. Despite constant incentives given to export sector which include falling mark-up rate from 9 % in 2010 to 4.5% in 2016 together with drop in Long Term Financing Facility (LTFF) rate from 11.4%(2010) to 6% (2016), export performance is on a downward slope, thus requiring serious attention.

It is in this context that exchange rate policy of the country needs a serious reconsideration wherein the stronger Rupee, unexplained by economic fundamentals, has resulted in loss of international competitinvess. In order to boost exports and substitute imports SBP must ensure a prudent exchange rate policy, i.e. managed float which has the benefit of boosting dollar earnings and is possible to increase the autonomy of Central Bank.
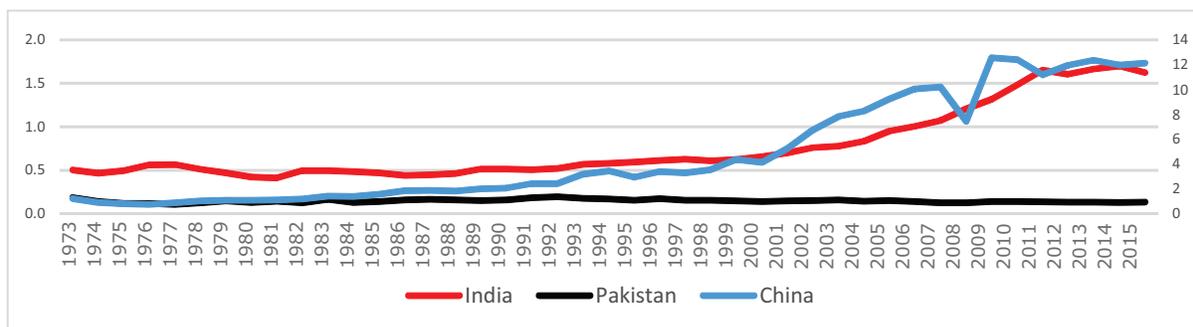
Pakistan on the average shows 5 per cent growth rate

Figure 6: Comparative GDP Growth Rates (% period average) of Selected Asian Economies
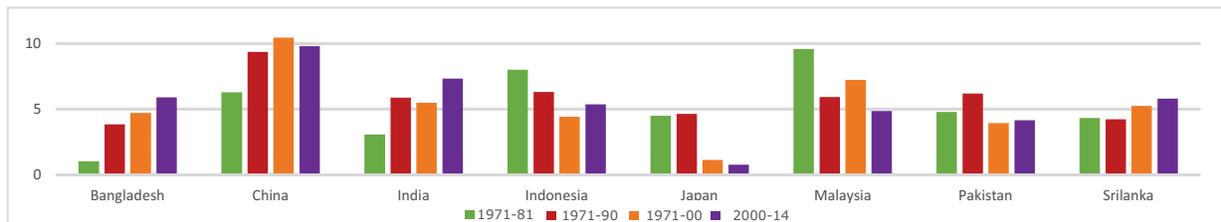
Source: Authors calculation based on national accounts main aggregates database of US

Figure 7: Exports of China (Right Side), India and Pakistan (% Share to Total World Exports)

Source: WTO

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37. When global demand for Chinese product declined in 2008 due to global financial crises, China prevent its currency from further appreciation through intervention and held the RMB/dollar rate at 6.83 till 2010.
38. Import substitution strategy

over the last four and a half decades. Figure 6 suggests that other selected Asian economies, including China, Malaysia, and Indonesia perform better than Pakistan during the 70s. China experienced major economic reforms, as the policy of equal trade and investment opportunity, special economic zones and investment in human and physical infrastructure brought China to a double digit growth rate consistently since the 1980s till date. India's average growth rate also exceeds 6 per cent in the last one and a half decades. Since the 80s, India and China emerged as big economic players in the world, while Pakistan stays behind in this race. China, however seems to be an outlier in terms of growth rates achieved. Point worth mentioning here is that, along with other factors, currency wars of China has contributed much to its growth.

Export sector has emerged as one of the major sectors contributing to the growth of India and China. In figure 7, export share of world market is drawn for selected Asian economies. Out of total three economies, the share of India remained most stable over the time and a steeper rise is witnessed after 2001. Pakistan performed the worst with not only the lowest share but also showing no improvement over the time. To be exact, share of Pakistan in total exports of the world decreased over the time. Lower external competitiveness has contributed much to the trend. Better management of external competitiveness by China and India has resulted in improved performance of exports sector of the both.

8- Conclusion

We conclude that exchange rate appreciation affects the external competitiveness unfavourably and that it is negatively associated with economic performance of the country. In addition to negative effects on tradable sector, overvalued exchange rates are associated with lower economic activity, lower investment and savings and lower labour productivity. Our analysis shows that active exchange rate management has led to expansion of tradable sector of China and India which ultimately, translated into better economic performance. Contrary to it, Pakistan was less responsive to restoration of competitive exchange rate and PKR exhibited a persistent deviation from its equilibrium value, and more so overvaluation. This, along with other factors, has resulted in poor performance of the economy.

Contrary to common perception that depreciation did not benefit the country, we provide evidence that Pakistan performed better in periods of undervaluation of rupee. We argue that claims of ineffective role of depreciation emanate from confusing the partial and unsubstantial adjustment of PKR to its equilibrium value - during periods of overvaluation - with undervaluation of PKR. To this point, our analysis shows that rising domestic prices, measured in WPI or CPI, neutralized the competitiveness gains from depreciation as an increase in money supply was documented in these periods. Further, our findings exhibit that despite relative depreciation in periods of overvaluation, REER for PKR remained misaligned upward. This work also identifies conflicting findings regarding nature and magnitude of misalignment of REER for PKR as one of the major barriers in taking steps towards exchange rate management.

We conclude that uncompetitive exchange rate for PKR will further burden the already feeble tradable sector of a country having weaker external competitiveness. This is particularly important after 2008 financial crisis, which resulted in historically lower inflation in trading partners of the country causing real appreciation of rupee. Further, we recommend that SBP needs to assess and monitor exchange rate misalignment of PKR regularly. To avoid conflicting conclusions regarding exchange rate misalignment in Pakistan, SBP needs to develop a tool for measuring equilibrium exchange rate for PKR. Also, uncertainty regarding direction and magnitude of misalignment in PKR needs to be minimized for better formulation of monetary policy. In this regard, autonomy of SBP in managing and measuring exchange rate should be respected. We suggest that academic and research circles in the country need to frame the issue in policy context in addition to modelling estimates of exchange rate based on economic fundamentals.

Finally, in addition to improve exchange rate competitiveness, the government should also create an environment conducive for economic activity and supplementing competitiveness of tradable sector through improving ease of doing business, etc. To bring the exchange rate into economic policy as a major strategic variable, awareness amongst policy makers needs to be created.

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