

**“IMPACT OF EXCHANGE RATE
MISALIGNMENT ON INFLATION AND
ECONOMIC GROWTH: EVIDENCE FROM
PAKISTAN”**



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CERTIFICATE

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Dedication

*Dedicated from core of my heart to my beloved parents and my respected teacher Dr.Uzma Zia .
and Prof. Dr.Saud Ahmed Khan*

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I am thankful to my writer **Allah Subhana-Watala** to have guided me for the duration of this work at each step and for each new idea which you setup in my thoughts to enhance it. certainly, I may want to have accomplished not anything without Your assist and steerage. Whosoever helped me throughout the path of my thesis, whether my parents or every other person became Your will, so indeed none be worthy of reward however you.

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ABSTRACT

Pakistan is a country that experienced Exchange rate misalignment issues due to chronic inflation and unstable economic prosperity pattern due to international market. After the partition reduced capacity of our economic prosperity created variations in our exchange rate. The previous studies showed the impact of Exchange Rate misalignment without defining the level of ER misalignment which this study fulfilled up to a level. Therefore, this investigation attempts to look at exactly how (RER) misalignment influences Pakistan growth. In such manner, we have not just assessed the immediate effect yet additionally the backhanded/ conditional effect of misalignment on GDP prosperity by utilizing the channel of financial progress. The objective of this study are classified into two categories of finding out the Exchange rate deviation impact on the inflation and Economic prosperity for Pakistan. The study analyzed the power of time series(OLS) ordinary least square regression technique to generate the measure of level of deviation in Exchange Rate for Pakistan and its impact on economic growth. We utilized time series data information going from 1984 to 2020 to do the exact examination. By examining the time series analysis long run RER is computed and then it is used to compute RER misalignment. At last, we assessed the effect of misalignment on per capita GDP growth. The outcomes uncover an antagonistic effect of RER deviation on Pakistan economic growth. Notwithstanding, the study reports that financial development assists in limiting the unfriendly effect of RER deviation, however not completely eradicating it. In view of the experimental findings, the investigation recommends that exchange rate policies should be directed differently. In addition, the financial sector area advancement should be fortified which may help in completely easing the antagonistic effect of RER deviation on economic growth.

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CHAPTER 1

INTRODUCTION

The impact and influence of the currency fluctuation values on home country trade and economic stability. It is the ‘Price’ which links an economy with all the global markets. The importance of ‘Price’ is because of two reasons. If the home currency price is high, foreign economies discourages to do business activities with that country because of expensive goods and services. If the situation is vice versa, and the price is low then it is quite difficult to do business with the rest of the world.

The policy-makers face difficulty due to unstable situation in such case and tries to over come these challenges. By suggesting policy interventions, main focus of policy makers is on keeping these fluctuations minimum or in equilibrium.

After Second World War (1939-1945) markets cannot guarantee full level of occupation. Governments will then have to step in to reduce price, production, and occupation level fluctuations for the welfare of their states.

This could have been accomplished if governments had the ability to regulate the flow of products, capital, and labor (which can be done by Exchange rate tools). In summary, the major goal of the international economic process following the war was to maintain economic stability and full occupancy in the rising industrial world. Its concept was agreed upon at the United Nations Monetary and Financial Conference in New Hampshire, USA, in July 1944. Then, in

1973, after the Smithsonian agreement fell through. In 1971, the world's 10 most developed countries, including Canada, France, Germany, the United Kingdom, and the United States, negotiated a temporary agreement. The agreement modified the fixed exchange rate mechanism defined under the Bretton Woods Agreement. The Smithsonian agreement ended the Bretton wood process of Fixed exchange rate among major industrial countries. Initially many countries tried to sustain their initial fixed exchange rate process, while after wards the developed economics moved toward the adjustment in nominal exchange rate process.

Exchange price deviation commonly tells us about the fluctuations which can be inconsistent with a satisfactory BOP . If a home country's currency is priced too high (foreign money devaluation), this makes imports excessively appealing and exports are difficult to sell, which is prone to result in an unsustainable cutting-edge account deficit. There are essentially three views of the exchange price. first of all, purchasing energy Parity theory (PPP) (exchange charge because the relative price of products) which states that the ratio of the fees in country wide currencies of the equal right or carrier in one-of-a-kind nations. PPPs are also calculated for product businesses and for each of the diverse stages of aggregation up to and inclusive of GDP. Secondly, Interest rate Parity idea (IRP) (trade price as the relative rate of Bonds) The Interst rate parity (IRP) is a concept concerning the connection between the spot trade fee and the predicted spot rate or forward change price of two currencies, based totally on hobby charges. The idea holds that the ahead change fee ought to be identical to the spot forex price times the hobby rate of the house united states, divided with the aid of the interest rate of the overseas united states of america. finally, International Fisher effect (IFE) concept which states that the distinction between the nominal interest quotes in two countries is without delay proportional to the changes

in the trade price in their currencies at any given time. Irving Fisher, a U.S. economist, advanced the principle.

The theory of parity of purchasing power (PPP) refers to goods. There are two essential forms of PPP: the theory of absolute PPP and the theory of relative PPP. Purchasing power parity notes that there is a correlation between two-country prices and the exchange rate between both countries' currencies. The One Price Rule states that in any two, any similar commodity should have the same price two countries. The rule of one price should work for an equivalent product sold in two countries, according to the PPP principle. Therefore, the price in the home country of a commodity and the price in the foreign country of an equivalent product (in the currency of Y) should be such that the price ratio is the exchange rate between the currencies of the two countries.

The theory of protected interest parity is another name for the theory of interest rate parity. The idea states that the nominal interest rates of the two countries are related to the exchange rate between their currencies. Financial assets are the subject of the principle.

The uncovered interest parity theory is also known as the International Fisher effect (IFE). This theory asserts that the forward price (FX/Y) and the projected spot charge [$E(SX/Y)$] can be the same because, even if the forward market does not cover exchange price risk, marketplace participants' actions will make them equal.

It is widely recognized that correcting the real exchange rate variance is one of the maximum critical situations for improving monetary overall performance and macroeconomic stability.

If the actual exchange rate is misaligned, economic uncertainty could increase and investment decisions could be skewed, resulting in the cost of welfare and productivity.

Given the fact that real exchange rate has become a significant consideration in the economy, there is limited empirical evidence on the trade balance and its effect on economic efficiency, especially in Pakistan. The primary objective of the study is to find out the Impact of Exchange rate deviation/misalignment impact on the inflation for Pakistan.

Secondly, Exchange rate misalignment impact will also be observed by its impact on Economic prosperity/Economic Growth and FD (fixed deposit) in term of market capitalization in case of Pakistan separately. The actual inflation rate and variance for Pakistan are empirically examined in this study.

1.1 BACKGROUND OF THE STUDY

The Asian Clearing Union includes Pakistan, Bangladesh, Bhutan, India, Iran, the Maldives, Myanmar, Nepal, and Sri Lanka (ACU). The Asian Clearing Union (ACU) is a payment agreement in which participants settle payments for intra-regional transactions between participating central banks on a net multilateral basis. The clearing union's main goals are to increase eligible trade payments between member states, thereby reducing the usage of foreign exchange reserves and transfer costs, as well as to foster economic and banking links between the nations who participate.

It is important to analyze patterns over time in the external competitiveness and balance of payments indicators of a country in order to determine whether its real exchange rate is likely to be likely to be consistent with a sustainable external account.

In the past, Pakistan has been pursuing an export-led prosperity policy with a view to ensuring its balance of payments is viable. The country must follow different exchange rate process at several other times in order to achieve this objective. From 1947 to 7 January 1982, a fixed exchange rate regime was observed. The dollar began to appreciate as major currencies at the beginning of the 1980s when it was compared with U.S. dollar, this affected Pakistani products' competitiveness on international markets. In order to ensure that exports are competitive and thus achieve a sustainable equilibrium balance between recent money and current payments.

The value of the Pakistani rupee was reviewed daily in relation to a trade-weighted currency basket of the country's top trading partners/competitors. The necessary adjustments in the Pique-Rupee value were made in circumstances where the necessity for an adjustment emerged, taking into account the relative change in exchange rate and the prices of the country's major trading partners/competitors, as well as the country's primary macroeconomic indices. The float was handled and kept running till July 21, 1998. As a result of the nuclear testing on May 28, 1998, major donor economic sanctions and global financial institutions retreated.

Since Pakistan's free float, monetary policy has dominated the stabilization of Pakistan's exchange rate. Significant rates up and down are now monitored by effective monetary policy instruments.

Likewise, the advance active monetary policy measures of the State Bank(SB) are taken whenever speculative activities occur on the market. The Bank uses the disconnect rate instrument to control undue exchange pressure while CRRs are being used to curb the international forex market, or by purchasing excessive liquidity on the kern market. Nominal exchange level recently in view with monetary policy, the rate seems controversial. The IMF

and other institutions have recently voiced concern about its appropriateness based on the continuous deterioration of Pakistan's external trades, specially the current account , despite the fact the SBP considers exchange rate levels suitable for foreign trade.

True exchange price variance, specially overvaluation, discourages exports and might wipe out the company area, consistent with Edwards (1989:12). it may also trigger capital flight (when belongings or money flow hastily out of a country because of an event of economic impact), which may be most advantageous from a private point of view, but has a social welfare impact on fees.

In each constant and floating alternate fee systems, actual exchange rate versions happen. Asfaha & Huda (2002:1) talked about that actual trade rate variance represents susceptible coverage fundamentals in fixed and bendy exchange fee procedures that prevent the actual trade rate from adjusting to changes within the fundamentals.

The role and importance of REER in international trade is undisputed. Rodrik (2008) emphasizes that the management of the RER is essential for development. In contrast to volatility of REER the deviation of REER is defined as “the diversion of the REER, undervaluation or overvaluation, from its equilibrium level for a relatively long time (Razin and Collins, 1997)”. The REER deviation affects the economic development of a country.

Ample of literature is accessible on the association between the REER deviation and economic growth. For example, Rodrik (2008) asserts that overvaluation affects economic performance of a country by reducing the economic growth, while undervaluation lead towards export diversification and economic growth.

In contrast, Williamson (1990) believes that undervaluation has a negative impact on economic success since it causes internal imbalance and high inflation. Furthermore, it may limit the resources available for domestic gross capital formation, hence limiting growth potential.

1.2 RESEARCH GAP

The research gap has been identified from literature Abida, Z. (2011). Real exchange rate misalignment and economic growth . Many other studies like : Taylor (1988); Patel (1990);; Crowder (1992); MacDonald (1993); Ardeni and Lubin (1991); Dornbusch (1988) and Moosa and Bhatti (1996) have carried out comprehensive research exploring the verification of the theory of PPP during the current exchange phase rates but these studies have not found evidence in support of the hypothesis as a long-run hypothesis, it just specifies the short term analysis.

Bhatti et al.(1996) and Khan (2002) found supporting evidence as Pakistan is relevant , while Chishti and Hassan (1993) came across with evidence that does not support the REER hypothesis, which is a reliable measure to check the exchange rate deviation impacts. The effect of exchange rate deviation is more of concern and important to evaluate the effect on inflation and economic prosperity as of its primary importance by REER. The dilemma is that the least effective in results models are used to evaluate the exchange rate deviation .Secondly. The time span in most of the cases in Pakistan is not taken appropriate to find out the results.

1.3 OBJECTIVE OF STUDY

The objective of this study can be classified into two categories:

The Initial objective of the whole study is to find out the Impact of Exchange rate deviation/misalignment impact on the inflation for Pakistan.

Secondly, Exchange rate misalignment impact will also be observed by its impact on Economic prosperity/Economic Growth and FD(Fixed deposit) in case of Pakistan separately.

1.4 RESEARCH QUESTIONS

This main concern of this research is to check: what impact does real exchange rate misalignment, especially overvaluation or undervaluation, have on Inflation and Economic growth in case Pakistan?

Will the growth be enhanced in Exchange rate misalignment situation?

1.5 SIGNIFICANCE OF STUDY

The degree of deviation is influenced by the exchange rate system. For emerging economies which receive adequate capital flows, the significance will be achieved. In order to assess how exchange rate deviation influences economic development, it also utilizes standard prosperity regressions. Usually, overvaluation hurts prosperity dramatically, whereas undervaluation has the opposite effect. Countries are affected by this impact deviation to different degrees, with a greater impact for developing countries specially in case of Pakistan. The persistence of deviation matters in continuing overvaluation or undervaluation so this study will help in suggesting its reduction or avoidance..

1.6 SCHEME OF STUDY

The following are the chapters that make up the research.

The research's first chapter covers the introductory and background material, which contains the basic concept, history, meaning, relevance, classification, and an overview of exchange rate misalignment.

Second chapter deals with literature review and its background.

Third chapter focuses on the methodology,theoretical framework,computation of exchange rate misalignment on inflation and economic growth.

Fourth chapter deals with discussion of results, descriptive statistics, key diagnostic tests,growth effects etc.

In last and 5th chapter the researcher has made an attempt to examine various aspects of exchange rate mislignment results with conclusion and gave a further policy direction brief.

CHAPTER 2

LITERATURE REVIEW

2.1 BACKGROUND

Both economists and policy makers are much worried about exchange rates. The transfer from constant exchange rate tenure to flexible started in the start of 1970s has increased there concern.

The exchange rate between two currencies (often referred to as the currency exchange rate or the FX rate) is the rate at which one currency is exchanged for the other. It is sometimes referred to as the worth of one country's currency in terms of another.

The foreign exchange market, which is open to a variety of buyers and sellers, is open 24 hours a day. Exchange rates are determined for the foreign exchange market, which is open to various sorts of buyers and sellers. The spot currency is the current exchange rate, whereas the advance exchange rate is a currency stated and traded today but with a particular delivery and payment date in the future.

The collapse in March 1973 of the Smithsonian agreement marked the end of the Bretton Woods fixed exchange rate process between the major industrial countries. Many developing countries initially reacted to this by trying to maintain their fixed exchange rate parities. Over time,

however, most of these countries have also been progressing to currency arrangements with more frequent nominal exchange rate adjustments.

Economic prosperity experience in developing countries is outlined by undervalued exchange rates and overvaluations of exchange rates have negative effects on long-term economic growth. Behrman and Schneider (1991) discusses the effects on economic prosperity of the selected southern Asian economies, especially developing countries, of exchange rate movements as well as exchange rate deviations over a specific time period.

We are expecting statistically significant evidence that, while taking certain regions, we are looking for both appreciation and variation of the exchange rate and its impact on economic prosperity. Deepening, it is interesting that the exchange rate deviation does not have linear/non-linear, symmetrical, and asymmetrical impacts on growth.

Deviation in exchange rates could occur in the fixed currency, in the flexible currency regime or in any hybrid of the two regimes. The exchange rate determined on the markets may be significantly different from the short-term fundamental "equilibrium values," because: The deficiencies in the exchange market arisen from flock and feedback trading based rather than fundamental on price movements, and which leads in turn to unequivocal exchange rate changes.

2.2 LITERATURE REVIEW:

The balance exchange rate is comprehensively theoretical whereas empirical literature evaluate different aspects of the exchange rate deviation and its impact on the Asian region, European region while using different variables for the impact analysis. Volatility deviation could have a growth effect as well. Theoretical and empirical research shows the harmful effect on economic performance of a volatile economic environment (e.g., trade volatility, exchange rates, money supply, productivity). Volatility of deviation is probably an additional factor.

Focusing on the exchange rate deviation and its root cause of the deviation while highlighting the impact on economic prosperity in specific region will be my research gap. The early research work on Exchange rate is being done on different areas which is discussed below in summarized literature review.

Comparing policies of developed and underdeveloped countries, the decline in exchange rates in developing countries is often overvalued, due to inappropriate and often uniform government policies, while under-developed countries tend to fail vice versa. Macroeconomic policies have been found to decrease. In the first place, exchange rates are a continuous deviation from their long-term level of equilibrium, as well as overvaluations.

Theoretical and empirical textual data on Equilibrium Real Exchange Rate (ERER) drivers for developing nations may be found in Bartolini (1994), Edwards (1994), Elbadawi (1994), Guerguil and Kaufman (1998), and Chinn (1998). For ERER, a theoretical model was developed based on Edwards (1994), which provides a long-term sustainable balance in the uncounted and

external sectors. The model acknowledges that only the real-life behavior of the real exchange rate can differ from the ERER's short- and long-term determinants and FEER(Fundamental Equilibrium Exchange Rate), and that both nominal and real affect short-term behavior.

Williamson's key work (Williamson 1985) is designed for a tiny open business that has no control over its business terms. It's a very comparable model. The real exchange rate is predicted to maintain inner and external stability in the construction of an ex-post ERER.

The importance stage of the ERPT in powerful and correlated economic and alternate-exchange rate policies turned into emphasised by way of recent literature. moreover, the effect of a nominal depreciation at the actual exchange rate means that authorities can best have an effect on the real ER quickly due to the fact, with local prices growing, the preliminary effect of a nominal depreciation rate on an RER could alternate. in step with Chudhri and Hakura (2001), "A low change rate via is thought to provide greater freedom for pursuing an independent monetary policy and to make it simpler to put into effect inflation targeting".

There are, but, no enormous results of decreasing in nearby exchange rate influenza [i.e., Siddiqui and Akhtar (1999) and Choudhri and Khan (2002)]. The current surveys provide the relationship among the alternate price and the costs to a mixed outcome. There are numerous explications about a low or decline passage in current literature approximately ERPT.

McCarthy (1999) evaluate the effects of exchange and import prices in nine selected industrialized countries on domestic Producer Price Index (PPI) and Consumer Price Index (CPI) from 1976:1 to 1998 by applying a recursive VAR model.

Choudhri and Hakura (2001) study concludes that the passage in countries with a greater share in imports is somewhat stronger. They are proven to be positive and significant across regimes that the relation between passing rate and average inflation. In 2000, Goldfajn und Werlang show that the Real Exchange Rate Misalignment (RERM) is the robustest explanatory of the exchange rate performance in new upcoming markets. "Depreciation not based on the required value" illustrates Goldfajn and Valdes (1999).

The writing on the genuine harmony of the swapping scale returns to 1960s (Balassa, 1964) and the second piece of the primary decade of the new century demonstrated that there was an increment in the quantity of observational investigations on the deviation and development of the genuine conversion standard rate. The conversion scale deviation writing has not gone to an agreement with respect to how to gauge deviation since some portion of the writing depends on PPP deviations. Different investigations center around deviation of the genuine conversion scale from an equilibrium level. The possibility that over-valuation measures that last an extensive period are acceptable pointers of the conceivable money emergency (Frankel and Rose, 1996) and eventually influence the overall value advertisement is another issue every now and again investigated in the writing on genuine conversion standard variety.

Edwards (1989) studies the relation between RER and prosperity and major finding is that inadequate (misaligned) RER are associated in the trade- and non-tradable sector with relative price distortions, resulting in non-optimal assignment of resources among various economic sectors that is negative for growth.

Chishiti and Hassan (1993), Afridi (1995), Siddiqui, Afridi and Mahmood (1996) chipped away at the Interest rate assurance in the case of Pakistan to be addressed in term of exchange rate

misalignment. Chishti and Hassan (1995) used Engle and Granger Co-Integration Test on Quarterly Information from 1957 1st quarter till – 1992 last quarter(4th) and , inspected the significance of PPP in Pakistan. At that point they utilized the VAR approach for the assurance of the genuine conversion scale in the money and genuine channels. Their discoveries show that a solitary model of PPP isn't sufficient for Pakistan, while the VAR examination demonstrates that financial extension and shortage funds have caused medium-term unsettling influences of genuine trade rates and their effect on genuine factors - e.g., exchange conditions, tax pay, ostensible devaluation and capital inflows in the long haul.

In economic as well as political discussion, the exchange rates have reached a high level in the last few years. It has been argued, for example, that some countries in the late 1970s had pursued inadequate exchange rate policies that helped in the early 1980s in the international debt crisis. Overvalued exchange levels were reputed to have led to a dramatic deterioration of agriculture and external accounts in a number of middle east countries, as per according to the World Bank (1984). Others argue that exchange rate policies have triggered the deceptive result of reforms and free entry exit market policies in the southern cone (Argentina, Chile, and Uruguay) in the late 1970s.

Empirical findings across countries tend to show that exports boost economic growth.

It promotes investment, increases productivity factor, and would therefore tend to show high national income growth. However, if they are unstable, export revenues may become a barrier to growth. However, clear proof of the impact of export stability on prosperity and the formation of capital has shown a lot of inconsistency. In the 1950s there was such a controversy. For instance, Nurkse (1958) and Caine (1958) have shown whether or not export volatility is damaging to

economic growth? Since it is still very important It also greatly benefited newly growing countries. Foreign sector instability can become a bottleneck for sustainable growth. Export earnings fluctuations can also cause inflation. Although export demand is increasing, exports at higher prices are feasible. However, due to its low rigidity, the decline in exports cannot decrease prices.

Moreover, when export profits decrease the prosperity process and thus the deficit of foreign currency, which generates inflationary pressure, is utilized in importing the capital goods and inputs. In addition, slow export earnings prosperity means lower import resources and, as a result, inflationary commodities may be short. Besides, a country such as Pakistan, which is priced in inflation with goods imports is imported into small countries (Chaudhary and Naveed, 1996 and Bilquees, (1988). However, the effect of Ratchet could have a positive effect on inflation. In addition, government policies can speed up inflation. For instance, during the export boom, investment in Pakistan increased. Significant income from export and import duties has also increased. Government shall adopt discriminatory controls on imports to increase imports of capital goods to safeguard a foreign exchange required to fund imports of capital goods. This can lead to domestic economic inflation. In addition, government deficit spending leads to inflation (Chaudhary and Ahmed, 1995, 1996), which could also be caused by export fluctuations.

The negative effect of export instability on investment was observed by Kenen and Voivodas (1972), though for the 1960s only. The link between export instability and economic prosperity has been identified as unstable. The argument from a priori, that export inconsistency in the LDCs is usually greater than in the DCs, was shown by Lezakos (1973) and that this is adverse to the economic development of the former but not of that latter. However, Savidos (1984) has

been the source of much criticism. He explained the significant and positive effect on the per person real GDP prosperity of LDCs in terms of export instability. In addition, export instability affects the rate of export prosperity of the LDCs significantly and positively. In particular, export prosperity is a more important factor to determine LDC revenue prosperity than DC growth.

Ancieri (1978) tested the relationship between export instability and GDP prosperity rates using a sample of 101 countries in 1961-1972. The relationships of real GDP prosperity and instability of real overall agricultural exports were also tested by Lancieri (1979) using a sample of 70 countries between 1961 and 1972. Rank correlation has been estimated in both studies. Its findings support Glazakos's earlier findings (1973); negative effects on prosperity from export instability. The relationship between export volatility and economic prosperity was significantly positive between Lam (1980).

As a result, Love (1989) developed a time-set model to examine pessimistic orthodoxy, which in turn affects the import capacity and the investment, in a series of samples from developing countries. The results of the relationship between export instability and imports instability of capital goods show significant consistency with the first stage and relatively less consistency for the second stage of the conventional wisdom transmission mechanism.

Edwards' (1989, 2000) original work was the main generous undertaking to fabricate a balance conversion scale explicitly for agricultural nations dependent on diminished structure single condition approach.

Razin and Collins(1996) finds that lone genuine (principal) factors impact the balance genuine conversion scale over the wide haul however in short time changes in financial stuns can be significant.

One of the early investigations on swapping scale deviation and their flourishing is discussed by Razin and Collins (1997) contends that the approach of keeping the genuine conversion standard deteriorated is for the most part connected with serious debasement strategies to animate a country\'s fare area.

Uribe (1997), represent the relationship between ER and inflation with traditional method that shows the ER based control programs for a minute open economy. This study also examines the problem of credibility, expectation, and sticky prices. Inflation takes as tax model that represent mediation of transaction cost and also the physical capital accumulation. The result involves more parameters than a traditional kind but has a significant contribution in shoe-leather costs and has large sufficient reduction in inflation that shows the stable small economy with regarding to inflation.

Elbadawi (1994), Montiel (1997, 1999) and Baffes (1999) utilize co-combination strategies to appraise the harmony swapping scale. Montiel (1997) recommends that co-combination is an unrivaled technique for assessing the genuine swapping scale over the PPP procedure.

Afridi (1995) rethought the determinants of the genuine conversion scale utilizing yearly information during 1960–1990. The outcomes proposed that overabundance interest of homegrown credit and capital streams are contrarily identified with the genuine viable swapping scale and the effect of exchange is irrelevant. Siddiqui, Afridi and Mahmood (1996) investigated

and predict the genuine conversion standard by assessing the conduct connection among money related and genuine factors and REER by utilizing synchronous condition model. The assessed coefficients uncover that changes in both money related and genuine factors influence the balance way of genuine conversion scale. These investigations have nor examined time arrangement characteristics of the information nor registered the deviation of genuine swapping scale throughout the course of time which spurred us to return to these issues by giving a few assessments of conversion of standard deviation.

This study examined the reduced-form approach of the single equation which is widely used for the estimation of REER(Real effective exchange rate) in developing countries. The first major endeavor was to achieve a balance exchange rate specific to developing countries (Edwards 1989, 1994, 2000). A significant effort was made by Edwards. It found that the EREER has long-term influence on only actual (fundamental) variables. However important determinants can be the short-term changes in monetary shocks. In order to estimate the balance of exchange, Montiel (1997, 1999) and Baffes et al. (1999) employ techniques of cointegration. Montiel (1997) suggests a superior method of co-integration to estimate the real exchange rate over the PPP methodology.

Exchange rate deviations, nonetheless, are hard to identify as there is no agreement on the strategy to appraise the balance conversion standard [Hinkel and Montiel (1999)]. Much of the time utilized pointers incorporate ostensible and genuine viable trade rates, efficiency and other intensity measures, terms of exchange, current outer record and equilibrium of installments viewpoint, loan cost differentials, and equal market trade rates. An issue is that these markers

may not generally permit strategy creators to recognize the level of deviation exactly enough to pinpoint the proper planning and measure of mediation.

There are lot of means that are effect to inflation in consumer price and other side. ER is a key term that keeps effect on purchasing power rate in a country. Exchange rate means what is the value of your product with respect to others country's products and same in with currency. So, it has highly favorable and maybe unfavorable aspect with regarding with inflation in a country. Kara and Nelson (2003) research out on those factors in an economy. They put the data of UK economy because of they used to argument that it is highly open economy, and this country has monetary policies have highly effective policies in inflation. This study gave the deep view of theoretical justification modeling that are assured the trend of price hike and the proportion effect of ER in UK economy. They used the macroeconomic model that cover the waterfront in this issue and see the impact of nominal ER on price hike . In the paper estimation result shows that ER has positive effect on inflation rate which take as a consumer price of intermediate goods.

Rajan and Shen (2001) took those twenty-five developing and emerging countries having fixed exchange rate process to find relationship between ER volatility and output. They used panel data and differentiated crisis period and normal period. The result shows that there are recessionary effects of devaluation on output during crisis period. The same work extended by Chou and Chau (2001) to find relationship between ER and output by handling with the data for crisis affected countries. They conduct research on five Asian financial crisis affected countries for the purpose to find the stabilization impact of devalue on output. For empirical result ARDL test used. Finding shows that except one country there is no long run relationship between exchange rate and aggregate output in these all financial crisis countries. Furthermore,

devaluation has short run worse effects on aggregate output. Reason of short run contractionary effect of devaluation is higher prices.

Bahmani-Oskooee and Miteza (2003) conduct his research based on previous studies. Some countries consider devaluation effect on economic prosperity as a short run concept. While some studies show contractionary effect of devaluation . He divides the literature into four classes and finds the mixed results. He finds that contractionary effect exists in either 1st world country or 3rd world countries. In the developing world, if one country will face contractionary effect, the other country would face expansionary effects. The same result would be occurred in developed country case. In short contractionary devaluation is country specific.

The impact of currency rates on inflation and production prosperity in Eastern and Central Europe is also examined in this study. The author discovered that exchange rates, low inflation regimes, and high inflation had substantial correlations. The data reveals the outcomes of low inflation (1998-2004) and high inflation (1994-1997) periods, and when the outlier in the sample model is eliminated, the results show a positive relationship between exchange rate and inflation. The author also investigates the link between the exchange rate and economic growth. So, in this paper result suggests that the membership of those countries like Eastern and Central countries would have a significant effect of country's prosperity(Grauwe and Schnable, 2008).

The work created by Aguirre and Calderón (2006) is among those utilizing a proportion of swapping scale deviation dependent on the residuals from a FEER (Fundamental Equilibrium exchange rate) relapse and they utilize dynamic board and Cointegration investigation for a set sixty nations with information from 1965 to 2003. The experimental proof recommends that the impact of RER deviation on thriving is non-straight, which implies that when genuine conversion

standard deterioration is too high the effect on success is negative however when it is little or moderate it tends to be flourishing improving.

Gala and Lucinda (2006) built up a powerful board information examination utilizing for a bunch of 58 nations from 1960 to 1999, with a proportion of genuine conversion scale deviation consolidating the Balassa-Samuelson impact and other control factors for the flourishing relapse, for example, physical and human resources, institutional climate, and expansion.

The primary experimental proof backings the contention that a genuine deteriorated (appreciated) conversion standard is related to higher (lower) thriving rates.

Bleaney and Franciso (2007), authors examined the trend of exchange rate on the four basis classification schemes in 91 developing countries as well as the relationship between inflation and prosperity and how exchange rate effect on those factors from the time period of 1984 to 2001. Research shows that growth rate is significantly moving with line of stable Economic growth if few macro economic variable are controlled.. On the other side researchers observed that on the same page when the inflation is high the growth rate also high and vice versa.

Eichengreen (2008) builds up a verifiable survey of the writing on the genuine swapping scale and development, zeroing in consideration on potential channels through which the genuine conversion standard may affect it. The creator contends for a more devalued genuine conversion scale as long as this isn't related with higher conversion scale unpredictability. The mix of a devalued genuine swapping scale and low instability is viewed as an ideal mix for creating and arising economies, where a more unique fare area is generally a significant piece of the cycle for accomplishing higher and supported financial thriving rates.

The fundamental arrangement proposal, along these lines, is for such nations is to keep their genuine conversion standard at a serious level and with lower unpredictability since they are pertinent for kicking off success dependent on improvement encounters, for example, the high flourishing East Asian economies.

Rodrik (2008) is one of the new examinations on genuine conversion standard deviation and development, with assessment results for a bunch of 184 nations and time-arrangement information from 1950 to 2004. The creator builds up a record to quantify the level of genuine swapping scale undervaluation adapted to the Balassa-Samuelson impact utilizing genuine per capita Gross domestic product (RGDPCH - Penn World Table) information.

The fundamental observational outcome is that thriving is higher in nations with more underestimated genuine trade rates and the impact is direct and comparable for both under and overvaluation, inferring that an exaggerated genuine swapping scale harms success while an underestimated rate cultivates development. The extent and measurable meaning of the assessed coefficient for genuine conversion standard undervaluation is higher for non-industrial nations because of the way that such nations are frequently described by institutional delicacy and market disappointments.

Rodrik (2008) estimated the long time relationship between macroeconomic factors and real REER, this study used the Autoregressive Distribution-lag bounds testing approach et al. (2001). Moreover, the results show that long run positive association among financial development, real output per capita, government expenditure, terms of trade, trade openness and real effective exchange rate. The main and important observation is that Pakistan had to undergo devolution of its currency in 1970 by 17 percent that was much high. In the other side Pakistani currency have

been appreciated and depreciated since 1995. Ultimately, it is examined that real effective exchange rate deviation has Granger causality with real output growth.

Khan and Qayyum (2007) found that ER were part of Pakistan's price (WPI) level. It was concluded by Nieh and Chung (2005) and Rahman and Hossain (2003) that nonvolatile exchange rates help investment enterprises. Parikh and Williams (1998) show that exchange rate fluctuations can impact prices, unemployment, and supply production directly. Ali and Eatzaz (1999) studied how simple and unidirectional are the relationships between inflation and exchange rates. In the short term, inflation has a higher impact on devaluations than inflation and exchange rate movements usually driven by price hike in Pakistan. Ahmed and Ram (1991); Bilquees (1988); Hassan and Khan (1994) and Khan and Qasim (1996) research in Pakistan is reliable evidence of the significant but gradual reaction of domestic price levels to criticise.

Meiselman (1975) examines a link between Foreign reserves and inflation to determine the direct link between international reserve change and inflation. The association of international reserves and global inflation is investigated by Heller (1976) who shows that changing international reserves have a positive effect on global inflation as the monetary base change and the supply of money.

The nature of correlations between the above variables is also examined by Genberg and Swoboda (1977) and Parkin (1977) and the results are consistent with Meiselman (1975) and Heller (1976). They conclude that the growth of domestic supplies of money due to the rise of international reserves has a positive effect on domestic inflation.

Khan (1979) concludes that the increase or increase of inflation was due to the prosperity of international reserves. In other words, Khan's findings are consistent with the theory of quantity of money extended to the international economy.

The relationship between generic foreign exchange pricing, inflation and stocks options has been studied by Haastrecht and Pelsser (2008). Fisher's theory has been tested for inflation, interest rate and exchange rate data for four countries, from 2003 to 2008, on both annual and quarterly levels in Utami and Inanga (2009). They found a positive and significant connection between differentials in interest rates and change in exchange rates. Prasertnukul (2010) investigated the decline in the exchange volatility target in Asian countries inflation targeting.

Thomas (1997) and Funke (2000) arrived at comparative resolutions on account of Sweden and the Assembled Realm. A comparable end was additionally reached among Artis and Ehrman (2006), who inspected the balanced and uneven stuns in Denmark, Sweden, Canada, and the UK. In the Check Republic, Hungary, Poland and Slovenia, the investigation completed by Coricelli et al. (2005) then again found no stun burning-through part for trade rates.

Borghijs and Kuijs\' (2004) investigation found that trade rates for focal European nations were less useful than serving a helpful safeguard of genuine stuns regarding money related stuns. Shevchuk\'s (2014) concentrates on something very similar. Then again, the conversion scale agents for the unfriendly impacts of inflation and growth index in Poland, Stazka Gawriskyak (2009) and Dabrowski and Wróblewska (2014), contended that the conversion standard reacted with a safeguard to genuine stuns.

Edwards (2006) has not discovered any proof of a safeguard conversion scale linkage between conversion scale and swelling in arising and change nations. Tsangaridis (2012) as of late demonstrated that the developing business sectors that have been connecting their monetary forms under the monetary emergency have not been more regrettable than the drifting ones. Notwithstanding, during the recuperation time frame, 2010-2011 "peggers" were a lot of more regrettable.

Roger et.al (2009), suggest the policy implication with regarding stable inflation with effect of exchange rate and inflation targeting emerging economies and also elaborate the relationship between ER and inflation regime, ER could reduce the inflation if policymaker considered the significant role of exchange rate. However, strong policies with respect to exchange rate specifically inflation targeting economies and less developed countries can remove the dispute regarding high inflation. Foreign exchange market can be significant play a role in the inflation targeting economics suggested by the country's experience . Other factors also effect the confusion of inflation such as transparency for the ER and operational procedures. In order to control the inflationary measures, the central bank have to need to make a clear policy to overcome the problem of inflation. Financial market improves the policies by overcoming the need to depend on foreign exchange. In this way, by making the proper policies and implication of these policies the confusion about inflation can be resolved.

Berg and Miao (2010) build up an experimental examination on genuine swapping scale deviation and flourishing to contrast the outcome proposes that the two perspectives are observationally identical for the fundamental thriving relapses however there are some ID issues

since the determinants of genuine conversion scale deviations are additionally prone to be illustrative factors in the success relapse.

Tarawalie (2010), evaluate the effect of RER on economic prosperity in the context of Sierra Leone. In this study author identify the factor which are affected to economic prosperity and search out the further identification about REER. After classification of data the researcher used the recent econometric technique and then investigates the relation between economic prosperity and exchange rate. In order to check the causality relationship between REER and economic production in Sierra Leone, the Bivariate Granger causality test was performed as part of the approach. In the long run, the estimation results demonstrate that financial policies are more valuable than fiscal measures. In addition, the study highlights other factors that influence the real exchange rate, such as the investment-to-GDP ratio, an increase in excessive domestic credit supply, terms of trade, and exchange rate depreciation.

This paper is very precise about the full information about the how exchange rate effect the output prosperity of an economy. Researchers investigated that the Long-term and short-term relationship between devaluation and economic prosperity through using unit root and cointegration test with the context of Pakistan. The data were used from the period of 1980 to 2009.

Besides, the results show the four different, but equally significant analyses have each different policy. First one is that REER cause becomes real GDP. Second is that real effective ER because real GDP, lastly the bivariate relationship between the two factors. Fourth one is that two variables also have causality independently. This study's results represent the positive relationship between economic prosperity and devaluation in both long run and in short run. In

time period, long run, and short run it observed that currency devaluation effects the output prosperity observed by (Shah et.al, 2011)

Tipoy et. al (2017), authors examined the impact of exchange rate on economic prosperity with regard to emerging economies. This study used the data spam from 1970 to 2014 using regression vector error model in econometrics. The result shows the deviation causes of output in given level in both short run and long run time period. Although, there is strong relationship, but some weaker Granger causality identifies between economic prosperity and deviation. Therefore, this result generates some significant policies.

2.2.1 STUDIES RELATED TO PAKISTAN

Zia and Mahmood (2013) conduct a study for Pakistan by using annual data. The model focused on **two parts**, one is exchange rate volatility and export performance and the other is exchange rate depreciation and export-price competitiveness. The study focused on the manufacturing sector of Pakistan, the results show that despite of depreciation in real exchange rate, export prices are not increasing, and this is the reason of slow prosperity in manufacturing sector in Pakistan.

Ahmed and Wahab (2011) investigated the relationship between economic output and exchange rate as well as foreign assistance. This study collected the data from the period of 1972 to 2010. In other various articles, due to low mobility of resources, Pakistan had to face foreign assistance. This study analyzed the result by using the time series data with employing Johnson maximum likelihood procedure. In this study authors reach the conclusion about when macroeconomic factor stabilized the foreign assistance exit. Moreover, there are negative

relationship between structural reforms and per capita income. Albeit (2015) identified a positive relationship of national saving and real per capita output. Pakistan's history gives the overview that two variables are dependent to each other with regarding to multilateral and bilateral relation.

Siddiqui and Akhtar (2014) Studied the impact of ER on prices for Pakistan. The impact of change is the foreign prices with estimating change in the monetary and real variables on local prices is estimated. The study used the cointegrating test that were applied to determine the order of integration and casualty between the ER and price level of domestically .The time period analysis is from year 1972-1998 from Pakistan Economic survey(1988-99), financial statistics (1998) and fifty years of Pakistan |Statistics The domestic price proxy was consumer price index (CPI) , for which they used whole sale price index (WPI) in US to incorporate the real ER and CPI for United States to express the foreign inflation. They used the model of Error correction model to conclude the results .The results showed that there was no significant Uni-directional or bi-directional relationship between the change in ER and domestic prices. The level of imported inflation is not valid for Pakistan, but the major determinants of domestic prices is affected by domestic money supply and domestic economic activity .

Jehan and Irshad (2020), investigated the study of ER and its impact on Pakistan economy output. In this paper, authors examined that not only direct but also indirect impact by using the financial development channel from 1980 to 2016 with time series data. This study firstly tests the characteristic of time series data and then calculates the real ER deviation and later test the long run equilibrium of real ER. Then researchers test the impact of real ER deviation on per capita income in direct and indirect way. In this way, the results show that negative effect of real

ER on economic output. The empirical results suggested that policies about ER need careful attention and policy maker need to make strong policies with regarding to financial sector development that may boost the adverse effect of real ER on economic output.

Zakaria (2010), studied about the ER deviation and economic prosperity with respect to Pakistan. It examined the empirical evaluation of economic prosperity and effect of ER in Pakistan for the floating ER from period 1983Q1 TO 2005Q4. In this paper author calculate the real ER as a deviation of actual ER from its equilibrium value and it shows that the real ER is undervalued with respect to Pakistan. Second one is that researcher used GMM model and suggested that undervaluation of ER has improved the prosperity rate in Pakistan. This paper also examined that other factors also have influence in economic prosperity of a country such as Per capita income, democracy, corruption, human capital and other financial markets have significant values with regard to economic output.

Propagators of conventional theorist believe that the real depreciations expand real output while in contrast new structuralism theorist believe in compression of output due to depreciation. Khattak and Tariq (2012) find the link between foreign exchange and product gap for Pakistan. The study uses three versions of IS curve approach and find results supporting new theoretical approaches. Real depreciation tends to decrease production in Pakistan. In addition, flexible ER tends to reduce output further.

Bhatti, A. A., Ahmed, T., & Hussain, B. (2018), examined that prosperity of real ER deviation with regard to Pakistan. The author used data from 1980 to 2013 and estimates the model for significant results. This research shows three major relationships including examination of long run relationship between the real effective exchange rate (REER) and its economic

fundamentals. To find, equilibrium real effective exchange rate (EREER) and real exchange rate misalignment.

On the other hand , inflation includes consumer price index, and the ER has also effect CPI .Therefore there is some evidence that shows that there is plenty of impact on inflation. In this regard, Ahmad and Ali (1999) had conducted the study that how fluctuation in ER effects the inflation rate with respect to Pakistan context. The study shows that ER pass-through in Pakistan effect the inflation rate. The data collected from 1995M1 to 2009M3.Researcher examined the long run and short run effect of ER pass-through while taking as real ER deviation.

Summing up the literature it is found that the undervaluation is associated with economic growth as Rodrick (2008) claimed. Here is long- run relationship among REER, Real GDP per capita, trade openness, terms of trade, government expenditures, discount rate, FDI, and financial development. Moreover, REER misalignment Granger causes real GDP growth, whereas no reverse activity effect is observed.

It is also noted that the effect of real ER is very low on inflation (means inflation rate is very low) whereas previous studies show significant impact on inflation.

Moreover, it can be said that the overall effect of real ER pass-through has no effect on inflation, but domestic inflation has effected through out of country inflation rate which is significantly strong.

CHAPTER 3

METHODOLOGY

3.1 METHODOLOGICAL APPROACH :

The empirical estimation usually consist of two main steps. In the initial step it tells us the intactment of RER deviation and prosperity effect of RER deviation is calculated later. There have been a very few studies on the subject of ER deviation impact on the economic prosperity especially considering the case for Pakistan economy. As we have seen the impact of ER on Pakistani economy leaves several adverse impacts in the recent history of the country ER deviation is estimated by several techniques of purchasing power parity and REER. The past several studies are being done on different developed and developing economies. This study of ER deviation in the case of its findings for Pakistan will be analyzed by the power of time series(OLS) ordinary least square regression technique to generate the measure of level of deviation in ER for Pakistan and its impact on economic growth.

3.2. THEORETICAL FRAMEWORK

As a technique to shape the basis of the empirical estimation, this segment gives a simplified version for estimating the equilibrium RER. The long-run equilibrium RER is defined as the rate at which the financial system is in both internal and external stability, based entirely on the assumption that the RER is a function of a set of exogenous and policy-driven fundamentals. When the markets for hard effort and nontraded items are obvious, an inner balance is

maintained. In response to this surrender, there is a mountain of theoretical and empirical evidence emphasizing the growing relevance of trade prices in the face of globalization.

3.3. COMPUTATION OF REAL EXCHANGE RATE MISALIGNMENT

Being a chronic determinant of the estimated ER in a long-term equilibrium ER is referred to as ER deviation. As a result, calculating the equilibrium ER is a necessary first step in computing the ER deviation. To assess ER deviation, there are three basic approaches: (i) buying power parity, (ii) foundational Equilibrium ER method created by Williamson (1994), and (iii) Behavioral Equilibrium ER (BEER) method developed by Clark and MacDonald (1998). This research makes use of the BEER technique formulated by Clark and MacDonald (1998) for estimating equilibrium ER, which is advocated in the recent studies for estimating equilibrium ER (e.g. Aguirre & Calderon, 2008, Hyder & Mehboob, 2005; Sallenave, 2010; MacDonald & Vieira, 2010; Abida, 2011 & Ndlela, 2012, amongst others).

The following is how this method works: 1) The primary determinants of RER are used to estimate real ER. (ii) Equilibrium RER is computed using the “estimated coefficients from the regression” in the initial step and the everlasting various parts of the determinants of RER. (iii) RER deviation is calculated as a result of the difference between the actual ER found and the equilibrium RER computed. In accordance with Step 1 above, the undermentioned model (derived from Berg and Miao 2010; Naseem et al. (2013); Conrad & Jagessar, 2018) has been expected, which includes each home as well as external influences determining ER:

$$LRER_t = \beta_0 + \beta_1 G_t + \beta_2 RIRD_t + \beta_3 TO_t + \beta_4 GC_t + \beta_5 NFA_t + u_t \dots (3.1)$$

where t denotes the time span 1984–2020. $\ln RER_t$ displays the log of the genuine bilateral ER. Because of its importance as the primary currency in international trade, the US dollar is used as a benchmark currency. Furthermore, Pakistan's foreign exchange is denominated in dollars, justifying the usage of the US dollar (as the standard/benchmark foreign currency); we utilize the CPI of Pakistan and the US to convert nominal ER to actual ER. $[RER = \text{NER} (\text{CPI}_{\text{usa}}/\text{CPI}_{\text{pak}})]$. ΔRER_{qt} denotes the quick time period actual interest rate (r_{ir}) difference between Pakistan and the United States; $\ln G_t$ denotes the log of actual gross domestic product per capita; ΔRER_{rt} denotes the rapid time period actual interest rate (r_{ir}) disparity between Pakistan and the United States and the United States ($r_{\text{irpak}} - r_{\text{irusa}}$) The hobby rates are rendered actual by using the inflation rate of the relevant international locations, as is common practice. TOT means for trade openness (the sum of exports and imports as a percentage of GDP); GC_t stands for government intake spending as a percentage of GDP; NFA_t stands for net overseas property as a percentage of GDP; and ϵ_t stands for error term.

GDP per capita is predicted to lead to a decrease in actual ER. The impact of exchange openness, on the other hand, is determined by whether it results in a surge in exports or imports. As a result, TO might cause RER to appreciate or depreciate. The impact of government spending is determined by the mix of that spending. Higher inflows from the trading zone may cause disruption in the cutting-edge account, causing the domestic currency to weaken, and vice versa. Internet foreign property is expected to have an effect on ER via the current account channel; for example, an increase in foreign reserves leads to an increase in the home foreign currency, and vice versa (Lane 2004 & 2005).& Mariano 2016).

Let's not forget that how excellent or bad a real interest rate discrepancy is determines how much of an impact. For example, an increase in foreign capital is projected to boost the value of the local currency, but depreciation is predicted for an increase in foreign capital.

It is fed the strong/equilibrium values of determinants of actual ER to construct the equilibrium real ER (obtained by HP filter). According to Toulaboe (2006) and Nourira and Sekkat (2012), the genuine ER deviation is determined as follows:

$$Mistt = RERt - EERERt / EERERt \times 100 \dots \dots \dots (3.2)$$

Where, *Mistt* represents Deviation of RER, *RERt* is the analysed RER, while *EERERt* tells us Estimated Equilibrium RER.

In spite of the fact that it is regularly utilized to portray the estimate of a company, showcase cap does not degree the value esteem of a company. As it were a exhaustive examination of a company's basics can degree a company's genuine esteem. Utilizing value advertise capitalization to esteem a company is insufficient since the showcase cost on which it is based does not essentially reflect how much a bit of the commerce is worth. Offers are frequently exaggerated or undervalued by the advertise, which suggests that the advertise cost as it were decides how much the showcase is willing to pay for a company's offers.

3.4. IMPACT OF REAL EXCHANGE RATE MISALIGNMENT ON ECONOMIC GROWTH

Through following Conrad and Jagessar (2018), Akram and Rath (2017), and Naseem et al. (2013)³, we've anticipated the unconditional effect of RER deviation on financial prosperity as follows:

$$G_t = \alpha_0 + \alpha_1 LEMP_t + \alpha_3 LGFCF_t + \alpha_4 GSSE_t + \alpha_5 LRER_t + \alpha_6 Mis_t + u_t \dots \dots (3.3)$$

As previously stated, this study seeks to analyse both the indirect/conditional influence of RER deviation on financial upgradation in a same way as it try to estimate the direct/unconditional impact of RER deviation on economic growth. The current study on the RER-prosperity relationship has focused on a few transmission routes that have an impact on the ER and prosperity courting (Razin & Colins, 1997; Bhalla, 2012; Levy-Yeyati & Sturzenegger, 2007; Rodrik, 2008). One of the plausible pathways is the improvement of the financial region, which could have an impact on the effect of RER divergence on monetary boom.

As a result, we investigate the effect of monetary development as a mediator in deviation-prosperity courting. (Schumpeter, 1911; McKinnon, 1973 & Shaw, 1973) have developed models that have demonstrated the role of economic development in proofing financial prosperity through innovations and effective financing identification and investment. Furthermore, McKinnon (1973) and Shaw (1973) suggest that economic progress causes an increase in savings and capital accumulation, which leads to an increase in economic boom. Those boom-enhancing economic development outcomes may be powerful enough to overcome the negative effects of RER fluctuations (RER volatility and/or RER deviation).

Decreased unemployment and/or higher economic growth can also provide better hedging equipment to defend against the uncertainty associated with RER fluctuations and/ (Aghion et al. 2009; Elbadawi et al. 2012, and Basirat et al. 2014).

The interaction between RER deviation and economic improvement has been included to the model to see if monetary improvement merely fulfills this moderating role. The model then has the following shape:

$$G_t = \gamma_0 + \gamma_1 LGFCF_t + \gamma_2 LEMP_t + \gamma_3 LTO_t + \gamma_4 GSSE_t + \gamma_5 LRER_t + \gamma_6 Mis_t + \gamma_7 FD_t + \gamma_8 Mis_t * FD_t + \varepsilon_t \dots \quad (3.3)$$

Where 't' stands for the time period (1980–2016); The log of real gross domestic output per capita is referred to as G_t . $LEMP_t$ displays an occupation log; Log of gross fixed capital formation (LGFCF_t); LTO_t stands for Log of Trade Openness; $LRER_t$ displays the log of genuine bilateral ER (in Rs/US\$); $GSSE_t$ stands for gross secondary school enrolment rate, which is a measure of human capital. RER deviation (in percent) is shown by Mis_t . FD_t stands for financial development as measured by domestic lending to the private sector (as percent of GDP).

The interplay of RER deviation and monetary improvement is known as $Mis_t FD_t$. In this approach, the interaction time period captures the moderating role of monetary improvement. In other words, it depicts the prosperity impact of RER variation via the financial improvement route. t and t are misspelled words. Because 2010 is the base year, all variables are in constant greenback form. The direct effects of RER deviation and financial development on economic growth are captured in Eqs. 6 and 7, respectively. γ_8 captures the conditional influence of RER deviation on the economic boom, considering the magnitude of financial improvement.

The real ER divergence is expected to stifle monetary expansion. The detrimental impacts of ER divergence on monetary increase can be transmitted through a variety of mechanisms. A misaligned ER, for example, has a negative impact on the tradable zone and its relative competitiveness, causing output to decline (Aguire and Calderon, 2005). Furthermore, ER variation might result in less-than-reliable allocation of resources across sectors by issuing inaccurate alerts based on skewed relative fees of tradable and non-tradable assets, thus harming the economy (Razin & Collins, 1999).

In accordance with theoretical underpinnings, economic growth is supposed to be enhanced by economic development, GFCF, stage of occupation, and level of education, but trade openness may either activate or impede the monetary growth. Research was conducted from 1980 to 2016 and covered a the World Bank (2018) World Development Indicators (WDI), Penn International Tables 9.0, and Pakistan Finance Survey were used to collect data (2018). Global financial statistics of the International Monetary Fund (IMF) provide information on interest rates (2018).

Testing the desk bound features of the time series is significantly more important than empirical court cases since it helps the use of the suitable econometric approach for estimate.

As a result, the observer relies on the most widely-recommended check for Examine the Dickey Fuller that has been (ADF). For the integration order, we use a Dickey Fuller-Generalized Least Square (DF-GLS) check, which was established by Elliott, Rothenberg, and inventory (1996). This test is more effective when it comes to determining the unit root housing. One of the advantages of this test is that it de-fashions the information collection domestically so that the deterministic parameter of the collection can be appropriately estimated and the transform information can be used to do the same old ADF check.

This is followed by using the fully modified normal least squares (FMOLS) technique to estimate equilibrium RER as well as the direct and oblique effect of RER deviation on financial prosperity (Equations 1, 3&4)., proposed by Phillip and Hansen (1990), is a semi-parametric method to co-integration. It should be the structural variable of most importance (1).

3.5. IMPACT OF REAL EXCHANGE RATE MISALIGNMENT ON INFLATION

Inflation is one of the most important variables affecting macroeconomics. In fact, long-term rapid inflation can do a lot of damage to the economic, social and cultural structure of society. It can adversely affect the effective outcomes of policy makers and the management of macro-level communities. It also impairs economic stability.

The fixed and sustainable inflation rate of the economy shows that when the effects of inflation occur, the effects are long-lasting. Inflation sustainability prevents inflation from dropping to controllable levels (Dargahi, H., & Sharbat Oghli, R. (2010). In addition, continued inflation is preventing monetary policy from lowering inflation and delaying the economy's response to financial and fiscal policy. Exchange rate mismatch is one of the important variables affecting the continuation of inflation.

Because of this, it's important for financial markets to know if their currency is overvalued. As a result of the lack of a proper method for estimating the equilibrium exchange rate, the task of comparing the present value of a currency with According to researchers, a mismatch is defined as a difference between a real exchange rate at equilibrium and a prospective rate at equilibrium.

So, an exchange rate discrepancy is a divergence from an equilibrium (long-term) path of the actual exchange rate. Real exchange rate deviation can take two forms. Overvaluation of the home currency occurs when the real exchange rate is nearly below the equilibrium exchange rate (to make the home currency more expensive). Devaluation of home currency is responsible if it's higher than the balance (the home currency is cheaper).

3.6 RELATIONSHIP BETWEEN THE MISALIGNMENT OF EXCHANGE RATES AND INFLATION PERSISTENCE

The transmission of changes in the exchange rate to domestic prices can be classified into direct and indirect effects: a. Direct Effects: Effects show how changes in the exchange rate are passed on to the price of imports through a country's foreign sector.

The transition is complete when the additional fees and marginal costs are fixed. With surcharges and marginal costs constant, producers do not apply any form of price discrimination and import prices change with exchange rate movements. If producers reduce additional costs by changing prices and applying price discrimination, the translation of exchange rate changes to prices will not be complete. The higher the pricing power based on market conditions (in fact, the more likely it is to change prices based on changes in market conditions), the less likely it is to convert (Goldberg and Conte). , 1977). NS. Indirect effects: The transfer effect of exchange rate changes is related to good competitiveness in international markets. Studies show that the transmission of exchange rate changes to the domestic price level is incomplete. The transfer of the changed exchange rate to consumer prices largely depends on the share of imports. The higher the share of imports in consumer goods, the higher the conversion rate of the exchange rate by increasing

the share of imports in consumer spending, import prices can fully explain domestic inflation (Khoshbakht and Akhbari, 2007).

The cash value of a nation with a consistently low inflation rate tends to rise as its purchasing power increases relative to other types of money. Countries with low inflation included Japan, Germany, and Switzerland in the latter part of the 20th century, whereas the United States of America and Canada achieved low inflation much later on. The currencies of nations with higher inflation tend to depreciate at a faster rate than those of their trading partners. Usually, increased interest rates followed. Interdependence exists between interest rates, economic growth, and trade rates among other. Inflation and currency prices are affected by central banks' interest rate policies. Economies with higher interest rates offer their lenders a better return compared to other.

To look at the affect of genuine trade rate developments on financial development within the T&T(Tinidad and Tobago, 2010) economy, we gauge the taking after model:

$$Y = f(\text{REER, Controls}) \dots\dots\dots (3.4.1)$$

Along with inflation (CPI), net household savings (funding price range), trade and imports over GDP (OPENESS), and private sector credit as a percent of GDP (Credit to the private sector) (CRP). Global Development Indicators (WDI) from World Databank's Global Development Signs (WDI) are used to deflate the variable financial savings in order to assess the effects of inflation on accurate time collection.

This study uses a VAR model and a nonlinear Markov switching model to investigate the relationship between variables. This secondary data collection method is based on a library

database available online. The model used in this study (Masoumi, E., & Tehranchian, A. M. (2015) is based on the work of the Bafs et al. (1997), Nasrallah et al. (2013) and Dargahi and Kachlou (2001). For the purpose of this investigation, which is also examining the impact of exchange rate mismatches on the persistence of inflation, an econometric model of vector auto regression (VAR) is used.

According to the VAR model, the model used to examine the effect of currency mismatch on the persistence of inflation is defined as:

$$ST_t = F (MIS_t , GM_t , GGD P_t) + \varepsilon_t \dots\dots\dots(3.4.2)$$

Here, ST_t is stable inflation, MIS_t is exchange mismatch, GGP_t is GDP growth rate, and GM_t is liquidity growth. Inflation smoothing is calculated using the HP filter. Filter HP minimizes the variance of y around the exchange rate misalignment, which is the difference between Real exchange equilibrium exchanges, calculates the smoothing amount of y 's (S) time series, and is measured as follows (Nasrallah. et al., 2013).

$$MIS = (ERER - RER) / RER \dots\dots\dots(3.4.3)$$

Where $ERE R$ is the balanced real exchange rate and RER is the real exchange rate. To calculate the exchange rate misalignment, you first need to estimate the balanced real exchange rate. The model used to estimate the balanced real exchange rate is defined as follows:

$$LERER = f(LSP, L TOT, LOPEN, LCAP) \dots\dots\dots(3.4.4)$$

where LERER is the logarithm of the equilibrium real exchange rate, LSP is the logarithm of social trends toward consumption, the logarithm of the LTOT trade equation, LOPEN is the logarithm of openness, and LCAP is the logarithm of the net capital account.

$$G_t = \gamma_0 + \gamma_1 LGFCF_t + \gamma_2 LEMP_t + \gamma_3 LTO_t + \gamma_4 GSSE_t + \gamma_5 LRER_t + \gamma_6 Mis_t + \gamma_7 FD_t + CPIt + \gamma_8 Mis_t * FD_t + \varepsilon_t \dots \dots \dots (3.4.5)$$

in which ‘t’ represents term (1984 to 2020); The log of real gross domestic output per capita is Gt. LEMPt stands for log of occupancy; LGFCFt stands for log of gross fixed capital formation; and LTOt stands for log of change openness. The log of actual bilateral ER (Rs/US\$) is suggested by LRERt. GSSEt stands for gross secondary faculty enrolment price, which is a measure of human capital. RER deviation (in percentage) is shown by Mistt. FDt stands for financial development as measured by domestic lending to the private sector (as percent of GDP).

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CHAPTER 4

DISCUSSION OF RESULTS

4.1 DESCRIPTIVE STATISTICS

This chapter will elaborate the findings of the study utilizing numerous econometric techniques. For understanding data and its importance, we will do first descriptive statistical analysis. Descriptive statistics are actually brief descriptive coefficients that summarize a given data set. Before employing an econometric model, it is important for the data to be stationary. Data have been examined to check the stationarity by using Augmented Dickey-Fuller (ADF) test and findings reported in table 4.1.

4.2 Descriptive statistics

4.2.1 Normality:

Normality is concerned about whole data structure. If the majority of points of the data of all variable are somehow similar then it is concluded in normality. It is also one of the main concern before going towards testing for data analysis. Generally we have two distinctive methods for normality distribution check. These methods are 1) Graphically 2) Numerically.

But here we rely on numerical method. After applying Jarque-Bera test we found that GDP with GFCF, GSSE, EXCH included in those categories who are normally distributed while in case of RIRDT, EMP and NFA are the variables where there is no normality in data. Similarly,

government consumption term of trade (TOT) is normally distributed in accordance with CPI and GDP.

4.2.2 Skewness:

Skewness is simply the asymmetry of the series around its mean. GFCF, EXCH are right skewed while TOT are left skewed. Similarly result for GDP, NFI are left skewed while other remaining i.e. RIRDT, MIST are right skewed. For CPI estimation shows that GFCF and GFC are left skewed in contrast to CPI estimation for EMP and NFA are right skewed.

4.2.3 Kurtosis:

Kurtosis measures the flatness and peakness in the series. All variables are leptokurtic in GFCF and GSSE while in case of CPI only EXCH is leptokurtic and other variables are platykurtic. TOT is leptokurtic while GDP, NFA and RIRDT are platykurtic in nature.

on average, remains superior to the excellent (26.41 percentage). The greatest period of overvaluation occurred in 2001 in the United States as a result of a significant influx of capital following the declaration of war on terror. The beneficial deviation, on the other hand, is felt for a longer amount of time within the observer's chosen time period. Using the ER movements as a guide, we can see that the lowest rate is eight and the highest is one hundred sixty in real terms. Surprisingly, the equilibrium RER's lowest and maximum values stay higher than the actual RER.

With a minimum cost of 1.01 and a maximum cost of 10.2, the real GDP consistent with capita prosperity is 5.4 percent on average. This indicates that economic prosperity has remained almost constant across the sample period.

Table 4.1 Descriptive statistics results.

	GDP	GFCF	GFC	GSS E	EXC H	TOT	NFA	CPI	RIRD T	MIS T	MistF D	EMP	NFA 01
Mean	5.004	16.16	11.18	28.05	50.48	32.7	2.48	4.128	2.470	-16.4	7.148	52.51	
Median	4.846 5	16.83	10.87	31.13	41.13	32.99	7.95	3.556	3.09	-6	8	51.92	7.95
Maximum	10.2	19.2	16.71	43.81	160	38.90	1.36	13.43	7.65	25	26	55.77	1.3
Minimum	1.014	12.5	7.785	16.52	8	25.3	-3.96	2.223	-5.87	-59	-14	50.50	-3.9
Std. Dev.	1.983	1.67	1.86	8.27	40.10	3.41	4.25	2.545	3.63	26.7	11.22	1.17	4.21
Skewness	0.141	-0.452	0.75	0.05	0.896	-0.24	0.94	1.344	-0.59	-0.14	-0.21	0.80	0.99
Kurtosis	2.823	2.170	4.03	1.71	3.01	2.32	2.76	3.989	2.43	1.49	2.109	2.45	2.76
Jarque-Bera	0.218	2.99	6.570	3.23	6.29	1.34	7.080	0.219	3.39	4.57	1.92	5.676	7.08
Probability	0.895	0.22	0.037	0.19	0.04	0.502	0.02	0.777	0.18	0.10	0.382	0.058	0.02
Sum	235.1	759.64	525.4	1318. 2	23.8	1540. 2	1.17	270.6	116.0	-774	336	2467.9	1.13
Sum Sq. Dev.	181.0 8	127.95	160.6	3138. 0	73983 .	537.2	8.29	211.0	606.4	32857 ..7	5791.9	63.0	8.29
Observatio ns	47	47	47	47	47	47	47	47	47	47	47	47	47

Jarque-Bera test we found that GDP with GFCF, GSSE, EXCH included in those categories who are normally distributed while in case of RIRDT, EMP and NFA are the variables where there is no normality in data. Similarly, government consumption term of trade (TOT) is normally distributed in accordance with CPI and GDP. Similarly result for GDP, NFI are left skewed while other remaining i.e. RIRDT, MIST are right skewed. For CPI estimation shows that GFCF and GFC are left skewed in contrast to CPI estimation for EMP and NFA are right skewed.

4.3 UNIT ROOT TESTS

Unit root exams can be used to establish whether fashion statistics need to first be differentiated or regressed by deterministic time feature to stabilize statistics. monetary and monetary theory regularly shows that long-term balance relationships exist among non-usual time collection variables. The unit root test here is analysed on the following units of variables: (a) the set of variables that can be used to degree actual ER deviation; (b) the set of variables that can be used to degree actual ER deviation; (c) the set of variables that can be used to degree actual (b) variables needed to calculate the monetary increase's deviation effect. In table 4, you'll find unit root estimations. 2. Each test statistic (ADF and DF-GLS) confirms that the selected sets of variables are integrated in the order of 1.

Table 4.3 Unit root test results ADF, DF-GLS

Variables	Level		1st difference		Conclusion
	ADF	DF-GLS	ADF	DF-GLS	
GDP	-3.02	-5.003	-3.11	-4.01	I(1)
GFCF	-2.02	-4.003	-2.11	-3.01	I(1)
GFC	-4.003	-2.11	-3.01	-4.003	I(1)
GSSE	3.77	-3.23	- 10.23	-4.003	I(1)
EXCH	5.82	-1.18	-8.18	-4.003	I(1)
TOT	9.01	2.01	-4.99	-3.003	I(1)
NFA	4.88	-2.12	-9.12	-3.003	I(1)
CPI	2.22	1.653	4.344	-2.455	I(1)
RIRDT	6.77	-3.77	- 10.77	-5.66	I(1)
MIST	9.3	2.3	-4.7	3.45	I(1)
MIST_FD	5.65	4.009	- 2.991	6.98	I(1)
EMP	-3.02	-5.003	-3.11	-4.01	I(1)
FD	-2.02	-4.003	-2.11	-3.01	I(1)

DF-GLS is a -step method, wherein the time series is anticipated by generalized least squares in the first step before a normal Dickey-Fuller test is used to check for a unit root within the second step. Supposedly this method improves the electricity of an ordinary ADF test whilst the autoregressive parameter is near one.

DF-GLS is used since ADF is less reliable for small length data (Dejong et al. 1992; Sollice and Harris, 2003; Shahbaz et al., 2008). It was noted by Dejong et al. (1992) and Harris (2003) that

ADF sometimes commits Type 1 and Type 2 mistakes when the sample size is In addition to the ADF check, we use DF-GLS for further security. Elliot et al. (1996) developed the Dicky-Fuller Generalized Least Squares Detrending Check, which was observed by Ng-Perron (2001).Elliot et al. (1996) boost the power of ADF examination with the aid of detrending standards, and DF-GLS examination is dependent wholly on null hypothesis $H_0: =zero$.

Here after checking the stationarity for the variable, the decision about the acceptance and rejection of null and alternate hypothesis.The value of null hypothesis and alternate hypothesis is decided by the value of the probability given in form of every variable.

If All variables are stationarity (as given in above table 4.3) at the level or differences (first, second), called the integration of different order up to order P, the appropriate model is VAR or OLS but if non- of the variables is stationary after conducting a non-stationary test or unit root test, then Johansen cointegration or non-cointegration applied and if the variables are stationary at mixed order of integration, the ARDL is applicable.

As given in the table the GDP,GFCF and EXCH are stationary at level 1 which intimate us the acceptance of dependency of variable.

The TOT variable reject the effect at level and move towards the 1st level stationarity. while a time series Y_t (TOT) has a unit autoregressive root, Y_t is integrated of order one. this is regularly denoted by way of $Y_t \sim I(1)$. We simply say that Y_t is $I(1)$. If Y_t is $I(1)$, its first difference ΔY_t is stationary.right here, series is non stationary at degree, while it done stationarity at 1st difference.It means TOT is integrated of order $I(1)$.

NFA and CPI counter argue about the level of stationarity; the prior hit the point of stationarity at level while the later one bring the stationarity at 1st level. Here, series is stationary at level in NFA, while CPI it achieved stationarity at 1st difference. It means CPI is I(1).

To sum up, the desired results checked the individual (Net domestic savings, sum of trade plus import over GDP, credit to private sector of GDP, Liquidity growth,) and collective diverse (Gross fixed capital formation, Human capital, Estimated equilibrium exchange rate) impact of exchange rate misalignment on inflation by Consumer price index proxy, while the economic growth by GDP per capita proxy. Both the proxies focused and provided the intimation of its direct effect and direct linkage by estimating the results obtained via model.

4.4 EQUILIBRIUM REAL EXCHANGE RATE

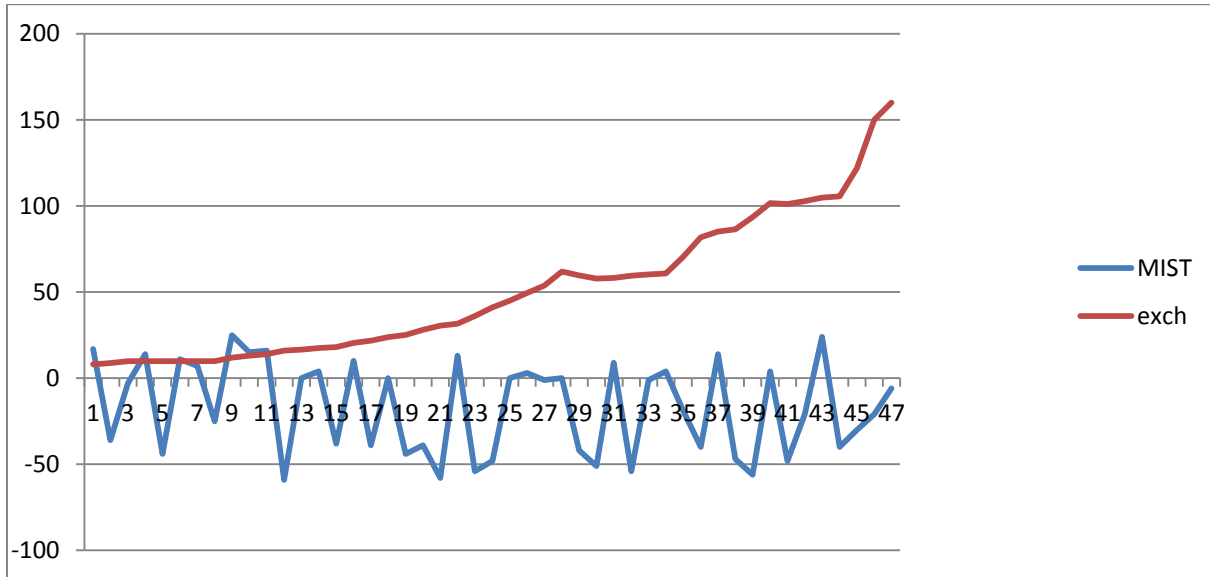
Table 4.4 contains all real ER estimations, with the implications depicting expected signs and the significant effect of selected indicators on actual ER. The equilibrium ER is determined by some of the coefficients of those variables and their trend components. Equation 2 creates a measure of actual ER inconsistency by substituting the values of real ER and equilibrium price of exchange.

4.4 Table of ADF test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	0.9355	0.31196	2.998782	0.0338
RIRDT	-0.97	-0.13	7.461538	0.0000
TOT	0.59	0.13	4.538462	0.0017
GFC	-0.368	0.1	-3.68	0.001
NFA	0.065	0.032	2.03125	0.0042
CPI	0.356	0.322	2.5344	0.5444
C	9.2703	4.98	1.86151	0.0726

The difference between the actual ER and the expected equilibrium ER is identified as real ER deviation in Figure 4.1. The fact that the two lines do not cross in the figure indicates that the RER in Pakistan has always been misaligned, either in terms of overvaluation or undervaluation. In the real ER, a good price indicates undervaluation, while a bad price indicates overvaluation.

Fig 4.1 Overvaluation REER and Undervaluation REER result comparison



ER (EXCH) of Pakistan, as shown in figure 4.1, is overvalued at the close of the twentieth century. From 1983 until 2000, however, it was undervalued, and after then, it has been overvalued. Even after then, the managed float continued to operate well until the 21st of Economic penalties by domestic or multilateral financial organizations, as well as restraint measures taken in response to the nuclear assessments on May 28, 1998, forced Pakistan into taking a number of measures to stand the undertaking. Undervaluation has a considerably less impact than overvaluation.

From October 2001 to March 2015, the SBP purchased US\$ 28.2 billion in foreign exchange to protect export competitiveness against a sudden exchange rate increase following the post-September 11, 2001 rise in workers' remittances through the formal banking channel. Exporters' increased demand for foreign currency dried up excess liquidity in the inter-financial institution market, which not only led the SBP to reduce its purchases from the inter-bank market.

Aside from providing market support, SBP also had to start funding lumpy oil payments. I find it fascinating how well India's Rupee held up against the dollar and other currencies in spite of its comparatively low inflation rate in comparison to those of its trading competitors.

4.5 GROWTH IMPACT OF REAL EXCHANGE RATE MISALIGNMENT

Table 4.4 examines the direct and conditional effects of RER inconsistency on financial boom using OLS. Column 2 depicts the direct influence of absurdity on economic prosperity, while Column 3 depicts the conditional impact of absurdity on economic prosperity via the financial improvement channel.

Each of the estimations in Table 4.3 is statistically significant and corresponds to expected indications and symptoms. In prosperity fashions, exertions and capital are the two most significant aspects of manufacturing, as emphasized by neoclassical prosperity models.

As a result, to include this aspect of the manufacturing function, we employ each profession stage (a degree of labor input) and GFCF (a degree of physical capital stock) to assess their importance in Pakistan's monetary prosperity. Estimates in both specifications show that both manufacturing components have a statistically significant and effective impact on Pakistan's GDP per capita. In addition, this placement is consistent with past findings (Toulaboe 2006; Abida 2011 & Masunda 2011, among others). There is a negative correlation between average actual exchange rate misalignments and economic growth. Due to this, many developing nations suffer from poor monetary overall performance as a result of inapplicable

Table 4.5 Prosperity Impact of Deviation: Direct and Indirect Impact

Dep variable: Log GDP/ Capita	Model 1					Model 2				
	Var.	Coefficient	F stats	P-value	LM Test	ARCH	Coefficient	F stats	P-value	LM Test
LRER	0.043*	5.001	0.003	0.66	0.24	0.146	0.444	0.001	0.47	0.65
Mist	-0.088*	4.337	0.001	0.04	0.12	-0.071*	1.698	0.018	0.002	0.32
FD	0.009*	5.112	0.003	0.45	0.65	0.005**	0.568	0.000	0.21	0.13
Mist*FD	0.004*	3.987	0.0021	0.39	0.53	0.003*	0.667	0.001	0.15	0.30
LGFCF	0.001**	2.243	0.004	0.54	0.98	0.175**	3.754	0.000	0.24	0.05
LEMP	0.005*	9.769	0.000	0.72	0.08	0.651**	2.678	0.002	0.42	0.38
LTO	0.002*	2.221	0.001	0.12	0.19	0.121**	9.221	0.009	0.65	0.67
GSSE	0.010**	5.776	0.005	0.25	0.35	0.004*	2.221	0.000	0.08	0.45
R-Squared	0.91					0.981				

, **, * Indicate significant at 1 percent and 5 percent and 10 percent level respectively.*

The critical values are given by Mackinnon (1991).

The p value, chosen before any statistical test (whether regression or other statistical analysis) of the “Null Hypothesis” is zero. If the calculated p value is less than the chosen p value (often p = .05) then we conclude that the likelihood of getting that statistical result if the Null Hypothesis is true is less than the chosen p value and so we “reject the null hypothesis.” And vice versa. Here the probability value of most of the variables are below 5% and shows significance which permits to accept the null hypothesis. In general, a p-value of less than 5% explains rejection of

the null hypothesis and indicate there is a unit root. The calculated ADF statistic can be compared with a tabulated critical value.

The values of LRER with a coefficient 0.043 and significant value of probability elaborate the impact of the variable positively, FD with a coefficient 0.009 leave a non significant; though upto certain extent impact on GDP per capita variable. The variable of LTO with a coefficient value of 0.002 and a significant value of probability 0.001 tells the significance and impact on GDP per capita. The key variables i.e. LRER, FD, LGFCF, LEMP, LTO are mostly showing a positive and direct impact of the opponent dependent variable.

To examine the fit of several linear models, an F-test in regression is used in standard practice. Unlike t-tests, which can only find one regression coefficient at a time, the F-test can determine multiple coefficients at once. It's a specific form of the F-test. As a result, the model is compared against a model without predictors. It's also known as an intercept-only model for a regression version that doesn't include any predictors. As seen in results and significant probability level we accept null hypothesis and should not focus on our F value statistics.

To test heteroskedasticity we apply ARCH test, its p-value is insignificant, so we accept null hypothesis which shows there is no ARCH effect. We will use autoregressive conditional heteroskedasticity (ARCH) to check heteroskedasticity problem in the series. Diagnostic results show there is no evidence of serial autocorrelation as it can be seen in Table 4.5 that all the Serial correlation LM tests values are insignificant, and we accept null hypothesis. Null hypothesis of serial correlation LM Test shows that "there is no auto correlation", while alternate hypothesis accept the acceptance of auto correlation.

4.6 GROWTH IMPACT OF MISALIGNMENT : CONDITIONAL EFFECT

Using both change and prosperity theories, it has been suggested that commerce plays an important role in prosperity. However, the empirical literature has produced a mixed bag of results. Various studies have proven the high quality function of exchange in monetary success, including (Cottani et al. 1990; Aguirre and Calderon, 2005; Béreau et al. 2009; Dufrenot et al. 2009 & Abida, 2011). Another body of literature, in comparison, presents empirical evidence for trade's negative impact on growth. Particularly in developing countries, trade may result in weaker financial growth. Our data suggest that trade openness has a positive influence on Pakistan's GDP per capita.

According to theoretical assumptions, an increase in RER should enhance exports, employment and thus monetary growth by making exports less expensive on the global market. Our data confirm these expectations. A number of prior inquiries have likewise come to similar conclusions (Eichengreen, 2008; Rodrick, 2008 & Rapetti. 2011, among others).

In all scenarios, divergence in RER appears to be deleterious to economic growth. Conventionally, this placement is statistically common and in accordance with our theoretical predictions, yet it is As a result of deviation, relative costs are distorted, leading to suboptimal resource allocation and, ultimately, a slowdown in financial growth.

Similarly, the direction of ER's departure from its equilibrium point affects funding decisions and the capital accumulation process. Because finance is a necessary component of growth, ER divergence undermines economic success by distorting investment. Using the same method, similar results are pronounced by (Edwards, (1988); Ghura & Grennes, (1993); Aguirre & Calderon, (2005); Toulouse, (2006); Rodrik, (2008); Eichengreen, (2008). It turned into

additionally mentioned that shocks as a result of changes in forex coverage and worldwide trends contributed to deformity. In standard, more real change-fee over-cost episodes than undervalued episodes have been recorded.

CHAPTER 5

5.1 CONCLUSION AND POLICY RECOMMENDATIONS

It is because of the reliance on deliver and call for, the period of flexible ER process has been difficult for policymakers for a variety of reasons. Controlling ER volatility and maintaining the actual fee of exchange in the direction of its long-term equilibrium are two of the issues. As a result, a large body of research has been allocated to disseminating literary history and figurative evidence on the underlying reasons of ER oscillations and their effect on monetary enhancement.

The Exchange Rate is one of the most key markers of the overall degree of financial health of a nation. ERs play a key role in the degree of exchange in an economy. It is essential part of the free market economies around the globe. Thus, ERs are among the most frequently observed , analyzed and administratively controlled financial pointers. RER deviations bring about extreme government assistance and proficiency costs, the greatest of which come from the trade and exchange controls that typically go with overvaluation. RER deviation likewise creates gigantic capital flight, which might be ideal, however a generous expense regarding social government assistance.

This study offers some new and critical evidence on ER deviation for Pakistan. The findings of our observation monitor an adverse effect of deviation even as a good effect of economic development on financial prosperity became observed. To locate the indirect impact, the take a look at makes use of an interaction time period of RER deformation and monetary up-gradation while the coefficient of the interaction time period appears as fantastic. consequently, we

conclude that the stage of improvement of economic services transforms the terrible effect of RER deviation into effective for financial prosperity in Pakistan.

However, even when the direct and indirect consequences are taken into account, the overall impact is still disastrous. This study implies that Pakistan's monetary zone development needs to be improved in order to mitigate the negative impact of RER variation on financial overall performance.

Based on empirical data, the research suggests that ER recommendations should be carefully monitored, as this will help the true ER to stay closer to its equilibrium factor, reducing the unfavorable effect. It is unquestionably a difficult mission for a country like Pakistan, which suffers from several financial and political system flaws that obstruct the successful implementation of market-oriented ER policies. ER is also frequently set to cover an ever-increasing current account imbalance. Pakistan wants to examine the current ER control and propose steps that would not only lower the volume of deviation but also improve the country's economic development.

To improve its financial development position, the United States must upgrade its domestic banking system, expand capital markets, and introduce new and advanced monetary tools. Higher hedging centers must be provided to buyers, therefore the financial method must be advanced. This helps to improve investor confidence and leads to financial growth.

This analysis is pertinent and relevant in light of the present financial situation and ER changes in the country. Due to a combination of financial and political factors, Pakistan's PKR is severely undervalued against the US dollar.

Because of the growing uncertainty in the financial system, the current wave of ER deviation has significant socioeconomic and political ramifications. It has, for example, not only reduced domestic support but also restricted abroad direct funding.

Because investor and consumer trust has been destroyed, consumer options for saving and consumption have changed. There is a noticeable drop in general economic activity. Because of the large expansion in import payments and accumulating outside debt, the ER undervaluation has resulted in an increasing current account deficit in the external sector. Significantly, Pakistan's financial markets and financial institutions lack the necessary hedging capabilities to protect against large ER swings.

Social efficiency of Pakistan's monetary system should be enhanced in order for it to be more predictive of economic swings. Furthermore, a large amount of forex influx/outflow is undocumented; as a result, policymakers must streamline the currency input and outflow mechanism to reduce ER volatility.

5.2 POLICY RECOMMENDATIONS

The exchange rate misalignment index implication on inflation and economic growth is being depreciated by variable that are Gross fix capital formation, Net foreign assets, Real interest rate openness to trade, government expenditure and capital inflows, in the direct effectiveness in exchange rate misalignment.

Inflation is a socioeconomic trouble in Pakistan and needs to be addressed through a complete socioeconomic response and an powerful and obvious implementation mechanism on the floor and proper implementable steps must be taken to counter effect inflation.

The country's export's structure -that effect economic growth- suggests that policy changes must be implemented, exports must be diversified across different products Although in Pakistan there is a large amount of agriculture products i.e fruit, vegetables and fish produced, textile, minerals and other products processing industry is not developed properly.

Pakistan urgently requires a national policy to increase export revenue and keep the import bill under control. A credit channel's role as a crucial transmission mechanism is also evaluated. However, because to the lack of growth in our monetary markets, records asymmetry, destructive choice, and moral threat difficulties are widespread, reducing the channel's effectiveness. To increase the efficiency of the credit channel, the law of economic offerings, as well as the transparency and accountability of financial markets, are all important considerations.

5.3 FUTURE DIRECTION

To sum up, if Pakistan desires to repair its international competitiveness to decorate increase and controlled Inflation technology it wishes to cast off the overvaluation of the forex and adopt an change fee coverage, which both in short run and long term keep this unpredictable issue of economic system instability.

Moreover, maintaining a competitive real exchange rate must be our key priority in governmental policies in this world of globalization. The recent upsurge of currency fluctuation which include the current account deficit and low foreign exchange reserve is directly hampering our economical status.

You can also lower her currency's external price if you want to stabilize expenses and/or reduce the ongoing stability of bills deficits. Devaluation of the Rupee (over a period of three to five years) until the preferred actual trading fee is attained and then maintenance of that level.

A rise in workers' remittances in the formal banking system after Sept. 11, 2001 forced the SBP to purchase US\$ 28.2 billion from October 2001 to March 2015 to protect export competitiveness against sudden trade charge appreciation.

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