Are Overseas Remittances a Source of Dutch Disease in Pakistan?

AUTHORS

Saqib Jafarey, Aziz Khan Maak, Ijaz Nabi, Irfan Qureshi

Consortium for Development Policy Research

MARCH 2024

Saqib Jafarey is Professor of Economics, City University, London, Aziz Khan Maak is an independent consultant, Ijaz Nabi is Executive Director, Consortium for Development Policy and Irfan Qureshi works at the Asian Development Bank. Martin Kessler (FDL) provided detailed comments on the paper.

This research was a collaboration between CDPR and Finance for Development Lab, Paris School of Economics.

www.cdpr.org.pk. +924235778180 admin@cdpr.org.pk

TABLE OF CONTENTS

Introduction

Pakistan's once-promising economy has been in the doldrums for the past three decades, experiencing erratic growth, recurrent trade deficits and frequent balance of payment crises. Over the same period, overseas worker remittances have increased significantly, both in absolute terms and in proportion to Gross Domestic Product (GDP). Remittances have provided buffers against both external imbalances and stagnating incomes at the household level. While concessionary capital and FDI inflows have also contributed to relaxing foreign exchange shortages, this has been to a lesser extent. In 2020, for example, remittance inflows were worth 8.7% of Pakistan's GDP while aid and net FDI inflows, taken together, added 2% (WDI Database).

The question has been asked whether remittances contribute to the phenomenon known as Dutch Disease (Chami et. al., 2008), which can arise when a country receives large unrequited inflows of foreign currency. The classical effects are overvaluation of the real exchange rate, a consequent loss of export competitiveness, and structural shifts that favour non-tradeable over tradeable sectors with the manufacturing sector being particularly adversely affected (Hassan and Holmes, 2013; Mien and Goujon, 2022). These symptoms can arise whatever the source of unrequited inflows, be it natural resource abundance, FDI, concessionary capital or remittances.

Remittances, however, enter the economy as additions to recipient household income stream. While this brings many benefits to the household, it can also affect their behaviour in ways that reinforce the classical Dutch Disease symptoms (Chami et. al., 2008).

First, remittances might induce greater spending and less frugality by recipient households. To the extent that increased spending is on non-tradeables, it adds to the sectoral imbalance effect of an overvalued exchange rate. To the extent that it flows towards tradeables, it leads to an increase in imported consumption goods, worsening the trade deficit. The latter will dampen the overvaluation of the exchange rate but not by enough to offset a worsening trade deficit.

The above two effects can arise even if the recipient household saves some of the remittance receipts, so long as savings take the form of land purchases or of imported consumer durables such as cars.

Second, as established in a number of micro-level studies, remittances can induce recipient household members to work less (Kozel and Alderman, 1990; Funkhouser 2006; Kim, 2007; Amuedo-Dorantes and Pozo, 2006). The channels through which reduced labour supply contributes to sectoral imbalance are somewhat complex. Large scale emigration itself puts upward pressure on wages for the category of workers to which the migrants belong. If the occupational profile of family members left at home is similar to that of the migrants, any reduction in the formers' labour supply will stimulate further wage increases for that category of workers. In the case of Pakistan, out-migration has, especially since the new millennium, been almost exclusively to the oil-producing Gulf states and consisted mainly of semi-skilled and skilled blue-collar workers (see Table 2). To the extent that such workers and their relatives back home are more likely to work in the formal manufacturing sector, the wage effects discussed above can undermine economic activity in that sector.

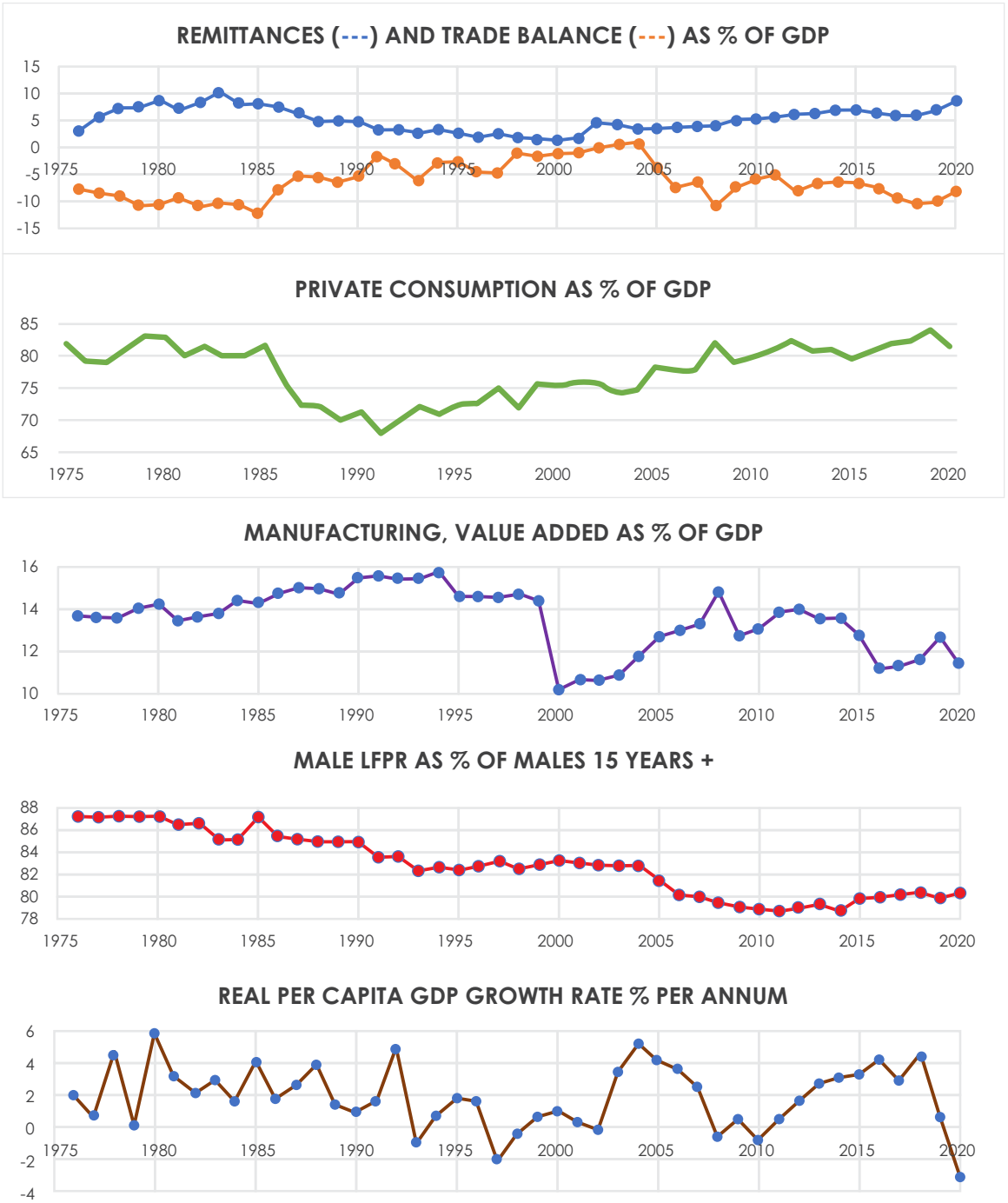
Third, unlike natural resource exports but like concessionary capital inflows, remittances do not enter as credits in GDP calculations because of their status as unrequited transfers. But if they cause Dutch Disease which suppresses economic activity in an economy's more productive sectors, they would have a negative effect on levels and growth rates of measured GDP, even if consumption and household welfare was rising.

An economy's structural features such as economic openness, competitiveness and financial maturity, as well as its government's fiscal and monetary policies determine whether and to what extent the economy can absorb currency inflows in a way that promotes structural modernisation, rather than structural distortion. Indeed, overseas migration might itself be an adaptive response by workers to a stagnating economy. If this is the case, trying to assign causality in the association of remittances with Dutch Disease is futile; each may cause the other in a mutually self-reinforcing manner.

With these caveats in mind, we shall be studying the question: to what extent can Pakistan's economic performance of the last 2-3 decades be attributed to remittance-induced Dutch Disease. We start by

considering prime facie evidence for Dutch Disease symptoms. The charts below compare the inflow of remittances over the period 1976-2020 with movements in Pakistan's trade balance (Panel 1), private consumption (Panel 2), manufacturing value added (Panel 3), male labour force participation rate (Panel 4), and the growth rate of real per-capita GDP (Panel 5).[1]

Figure 1: Remittances and Key Performance Indicators in Pakistan, 1975-200



Visually, Pakistan's trade balance appears to move fairly consistently in the opposite direction to remittances, a prime facie reflection of Dutch Disease.[2]

The plot for consumption moves roughly in parallel, albeit with greater volatility than the one for remittances. Both rose between 1976 and 1980, then dipped briefly before rising

[1] The variables in Panels 1-3 are all measured as ratios to GDP, LFPR is measured as percent of male population 15 years of age or older, and growth rate of GDP is in percent per annum.

[2] In the case of natural resource-based Dutch Disease, the relevant imbalance to consider would not be the overall trade balance, which might remain positive, but the balance between non-resource exports and imports. Since remittances enter the current account but not the trade balance, this consideration is not applicable to them.

again until the mid-1980's after which there was a period in which they both declined until 2000. Since 2005 both have increased again. These broad co-movements again *suggest prime facie* evidence for Dutch Disease.

There is less comparability of co-movement in the other variables with remittances. Manufacturing value-added and growth of real GDP do not show a clear pattern, except over the last decade when manufacturing value added has declined as remittances have steadily increased relative to GDP. Male labour force participation appears to have steadily declined over the period under consideration.[3]

Since Pakistan is not alone in its region for having large numbers of migrants working in the Gulf region, it is worth comparing Pakistan with its neighbours in relation to key indicators of Dutch Disease.

Table 1: Comparing South Asian Countries

COUNTRY	REMITTANCES (1)	TRADE BALANCE (2)	CONSUMPTION (3)	GROWTH (4)
Bangladesh	7.75	-6.28	76.68	6.25
India	3.31	-4.00	68.27	5.68
Nepal	23.94	-25.73	90.41	4.47
Pakistan	6.23	-7.81	91.9	3.54
Sri Lanka	7.89	-7.45	73.91	4.58
(1), (2), (3) are as % of GDP				

Source: World Development Indicators

Table 1 compares average values of remittances, trade balance, consumption, all expressed as shares of GDP, over the period 2008-2020 for five South Asian countries: Bangladesh, India, Nepal, Pakistan and Sri Lanka. The last column of Table 1 compares average growth rates of GDP per capita across the five neighbours in an informal test of the hypothesis that remittances suppress economic growth when they lead to Dutch Disease.

As expected, India, the largest economy, has the lowest ratio of overseas remittances to GDP, while Nepal, the smallest, has the highest. Only Nepal appears to share with Pakistan the full set of Dutch Disease symptoms: sizeable trade deficits, low growth and high consumption to GDP ratios.

In this paper, we use local projection methods to study the impact of remittance shocks on relevant economic variables for Pakistan. For some variables, we also study analogous impacts on Bangladesh and India in order to compare the results for Pakistan with those of its neighbours.

We find that indeed, remittances appear to be associated with exchange rate appreciation and an increase in the consumption-to-GDP ratio in Pakistan but not so in India or Bangladesh. For labour force participation, although male participation rates have been declining over time in Pakistan, we find that remittances are not a significant factor affecting the decline.

The implications of these results are (i) large inflows of remittances can cause Dutch Disease symptoms for some macroeconomic variables, but this is not inevitable; (ii) a likely reason that some economies might be more susceptible to Dutch Disease than others is a

[3] The reasons for focusing on male labour force participation rates are that i) female migrants in the region of our interest are miniscule numbers compared to males; ii) female labour force participation has been historically low in Pakistan, even by South Asian standards, and this has attracted several reforms and initiatives by provincial, national and international policymakers. The most recent of these is the World Bank-sponsored SHIFT programme which promotes better working conditions for home-based, mainly female, workers. A combination of these reforms, even when half-heartedly implemented, and changing demographics World Bank 2018) has led to a gradual increase in female LFP.

difference in economic structures and the fiscal, monetary and industrial policies that shape them.

In going deeper into the second point, we find that in recent decades, both India and Bangladesh have experienced steady growth in their respective exportable sectors, which are manufactures in Bangladesh and services in India. For Bangladesh, at least, we learned from secondary sources that one factor underlying its growing exports is a monetary policy that attempts to neutralise the effect of remittances on real exchange rate appreciation (Chowdhury and Rabbi, 2014).

Pakistan, by contrast, has experienced stagnation in both its export performance and growth rate. This stagnation has been accompanied by an increasing share of skilled and semi-skilled workers among its emigrants. The combination of these phenomena suggest that Pakistan might be in an equilibrium in which a weak economy both induces emigration and is unable to mitigate Dutch Disease effects from the resulting remittances, thereby reinforcing incentives to emigrate. We also find evidence that since 2013, the State Bank of Pakistan has followed a monetary policy that focuses on nominal exchange rate stability, allowing real exchange rate appreciation. This might have inadvertently increased the economy's vulnerability to Dutch Disease. Nonetheless, our conclusion is that neither remittances nor currency movements are primarily responsible for three decades of stagnation. We go on to discuss various root causes for it and policies that could help pull the economy out of it.

The rest of the chapter is as follows. Section 2 reviews the theory and empirical literature on the macroeconomic effects of remittances. Section 3 describes the changing patterns of emigration and remittances for Pakistan since the 1960s. Sections 4 and 5 present the empirical evidence linking inflows of remittances with movements in key macroeconomic variables. Section 6 documents a pattern of structural stagnation that started in the early 1990s and appears to be behind Pakistan's vulnerability to Dutch Disease. In Sections 3 to 6, our main focus is on Pakistan but comparisons are made with Bangladesh and India. Section 7 discusses the main factors behind Pakistan's stagnation and vulnerability to Dutch Disease effects of remittances. Section 8 draws conclusions.

Theoretical and Empirical Antecedents

A micro-macro paradox, similar to the one linked to foreign aid (Mosley, 1986; Rajan and Subramanian, 2008) appears to arise with remittances. At the micro level, remittances have been found to generate positive outcomes in multiple dimensions: poverty reduction (Adams and Page, 2005); reduced vulnerability to income shocks (Chami et. al., 2003), improved school attendance (Hanson and Woodruff, 2003), improved health outcomes (Maimbo and Ratha, 2005), more entrepreneurship (Woodruff and Zenteno, 2001). The picture is more ambiguous in the macro context.

Much of the empirical research into the macroeconomic effects of remittances has concentrated on real exchange rates. The majority of papers find a positive association between remittances and real exchange rates, albeit not always and not to the same degree. While a variety of other macroeconomic effects have been proposed and investigated, as discussed below, the literature on them is less dense and its results are generally mixed.

Early works on real exchange rate effects by Bourdet and Falck (2003) and Amudeo-Dorantes and Pozo (2004) found statistically significant effects of remittances on real exchange rates for, respectively, Cape Verde and a panel of 13 Latin American countries. These papers reported roughly similar magnitudes of effects: a 1% increase in remittances was associated with, respectively, 0.12% appreciation in Cape Verde and 0.22% in the panel study. A host of other papers, using panel or single country data and employing a variety of time series econometric approaches have reported similar confirmatory results (Acosta et. al. 2007; Ahmed, 2009; Hassan and Holmes, 2013; Ratha and Moghaddam, 2020).

Somewhat more nuanced results emerge when country-by-country comparisons are made within the same study and/or country panels are conditioned on characteristics such as openness and financial development. Izquierdo and Montiel (2006) for example reported mixed results. In a country-by-country analysis of six Central American and Caribbean countries, three showed no effects while another three showed effects that were

significant but with considerable variation in magnitude.

Barajas et. al. (2011) conducted a series of regressions on a large set of remittance-receiving countries. They found that whether real exchange rate effects arise, and their magnitude if they do, depends on a large set of conditioning fundamentals: openness to trade and capital flows, place in the global distribution of income per capita, region, etc. In general, low- and lower-middle income countries were more susceptible to Dutch Disease effects, less openness exacerbated such effects and while Middle Eastern countries were particularly prone to the conventional Dutch Disease effects, Asian countries showed significantly negative effects of remittances on real exchange rate appreciation.

Chowdhury and Rabbi (2014) reinforce the notion that the effect of remittances on real exchange rates is mitigated by both structural factors and policy responses. While they find borderline significance in the effect of remittances on real exchange rate appreciation in Bangladesh, they identify openness to capital flows and trade as well as nominal devaluations as being important offsets to such appreciation.

Turning to other macroeconomic consequences, both beneficial and detrimental effects of remittances have been proposed in the literature. Reduced volatility of income at both household and national levels is a commonly cited effect (Chami et.al.,2008; Hassan and Holmes, 2013). The latter authors add economic growth as a further effect, arising from the reduced volatility of national income.[4]

A second by-product of reduced volatility is reduced country risk and increased sovereign debt sustainability (Chami et.al., 2008). The latter is attributable not just to the reduction in country risk but also to a potential expansion in the government's revenue base. The authors go on to point out the flip side of this: the government might exploit the enhanced fiscal space for consuming and borrowing more, and citizens might allow the government to get away with unproductive use of borrowed funds.

Another channel through which remittances can promote economic growth is by relaxing credit constraints and promoting financial development (Aggarwal et al., 2006; Gupta et al. (2009); Giuliano and Ruiz-Arranz, 2009). The former two papers focus on financial development itself, using standard proxies such as bank deposits and bank credit, while the latter directly studies effects on investment. Both Aggarwal et. al. (2006) and Gupta et. al. (2009) find that remittances promote financial development, although the link is somewhat qualified in the second of these studies.

Giuliano and Ruiz-Arranz (2009) directly test the effect of remittances on investment. They used macroeconomic data to test their hypothesis that low financial development leads to a positive effect of remittances on aggregate investment. They found that indeed such a threshold level of financial development exists, below which remittances promote investment. The authors also find evidence that for the subset of less developed economies below this threshold, remittances can be pro-cyclical which is both contrary to received wisdom and suggests that remittances have an investment motive. What these authors do not address is the possibility that in the presence of structural distortions, investment and entrepreneurship might be going into relatively unproductive sectors in line with Dutch Disease.

Another possible negative consequence of remittances is a decrease in the labour supply of recipients. Chami et. al. (2006) argue that while employment declines anyway during economic downturns, remittances intensify this effect by inducing a reduction in the willingness to work of recipients. This deepens the amplitude of recessions. In a different vein, Chami et. al. (2005) point out that compensatory remittances cushion income loss during bad states of nature. While this increases recipients' welfare, it reduces their incentive to put effort into mitigating the risk of negative income shocks in the first place and this makes such shocks more likely. Through both these channels, the macroeconomic effects of remittances reduce GDP.

Bayangos and Jansen (2011) investigate the aggregate labour market effects of remittances using data from the Philippines. They find that remittances do indeed reduce labour supply and increase labour costs; while the effect of higher labour costs are partly offset by rising labour productivity, the overall effect is one of reducing competitiveness. This

[4] Studies have shown that national income volatility is negatively related to economic growth (Ramey and Ramey, 1995).

effect reinforces the conventional one that arises from real exchange rate appreciation, which they find to be largely caused via nominal exchange rate appreciation. Interestingly, they find that the latter arises directly from the remittance inflows and indirectly from the central bank's policy response of raising interest rates in response to the inflationary effects of remittances.

Chami et.al. (2005) also raise the possibility that, in economies where returns to labour are relatively low, emigration to high-wage economies can be a safety valve for migrant households to maximise returns to the emigrant's human capital. This induces a positive macroeconomic benefit of remittances on labour supply by attracting investments in education and vocational training for all children, not just those with migrant relatives. Without the safety valve of emigration, the low wages of the home economy might discourage this skill formation. Empirical evidence of this effect is reported for Peru by Salas (2014), by Amadeo-Durantes and Pozo for the Dominican Republic and by Calero et. al. (2008) for Ecuador.[5]

With respect to other macroeconomic effects: consumption versus saving, sectoral composition and economic growth, there are to our knowledge not many studies that have used macroeconomic data to study them. Exceptions include Chami et. al. (2005) who tested their own theoretical model on macroeconomic data from a cross-section of countries. They found evidence that remittances are compensatory transfers for negative shocks to income as well as that they lower economic growth.

Given the paucity of macro-level studies, macroeconomic impacts have sometimes been inferred from micro-level studies. For example, Chami et. al. (2005) cited a number of micro-level studies to evaluate their claim that remittances might have adverse macroeconomic effects; namely, Sofranko and Idris (1999), who found that very little of remittance income was being invested by Pakistani recipient interviewees; Lopez and Seligson (1991) who reported similar findings from El Salvador and Taylor (1992) who did find positive investment effects from remittances received by Mexican farmers.

One problem with trying to extrapolate from micro-level studies is precisely the micro- macro paradox: what is beneficial at the micro level may be inconsequential or even harmful at the macro level. This is particularly relevant to the relationship between household savings and aggregate investment. In his study of how remittances affect household savings in Pakistan, Alderman (1996) reports that the marginal propensity to save out of overseas remittances is an astonishing 0.84 and consists of both physical capital and financial saving.

Alderman's measures of financial savings, however, include loan repayments, while physical capital includes residential construction. Neither of these contribute to gross capital formation in its productive sense. In the same vein, in their study of spending patterns by remittance receiving households in the Philippines, Ang et. al (2009) include consumer durables as household investment.

Even when household savings are clearly in forms that contribute in national accounts, the question remains of how much these investments contribute to increased productivity and/or gross capital formation. Taylor (1992) and Adams (1998) separately report that farmers in Mexico and Pakistan use remittances to purchase farm animals. While clearly an investment at the farm level, how much this contributes to society's aggregate capital stock or agricultural productivity is unclear.

To summarise, there is quite a large body of literature on the classic Dutch Disease effect of remittances, mostly supporting the conventional prediction that remittances appreciate the real exchange rate of the recipient country. There is less evidence on the other macroeconomic effects and whatever evidence there is, tends to be both mixed and incomplete in its coverage of the full spectrum of possible macroeconomic effects.

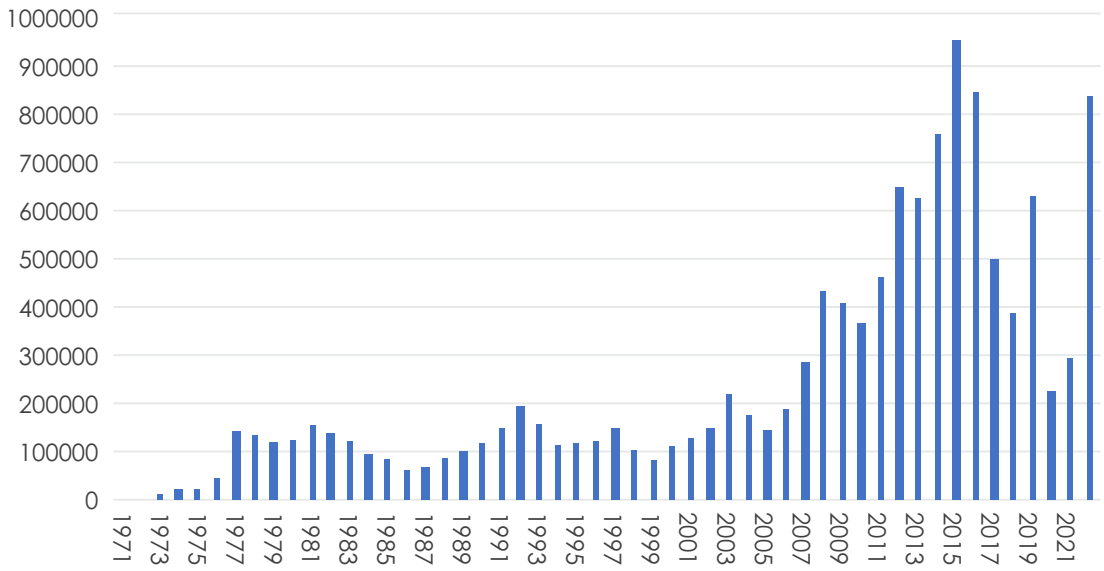
[5] Acosta et. al.(2007) however found contrary evidence for the effect of remittances on educational attainment in the Dominican Republic.

Patterns of Emigration and Remittances

The history of emigration from Pakistan can be divided into three partly overlapping phases: i) from the 1950s to the first part of the 1970s, emigration was mainly to developed countries, especially the United Kingdom UK); ii) from the early 1970s until roughly the start of the new millennium, the Gulf countries emerged as increasingly popular destinations, partly because of anti-immigrant legislation in the UK and partly because of the oil boom, but numbers emigrating remained within the low 100,000s ; iii) from early 2000s onwards, emigrant numbers dramatically took off, practically all towards the Gulf.

Figure 2 depicts the rapid increase post-2000. From 78,000 emigrants leaving Pakistan in 1999, almost double that number, 147,000 left in 2002. Since then, there were more or less steady increases, with almost all emigrants going to the Gulf Cooperation Council (GCC).[6] The numbers peaked in 2015, since when they have fluctuated, although half of that period has coincided with the pandemic. By 2022, the numbers had returned to par with those in 2016 so it is hard to say whether the post-2015 pattern represents yet another phase.

Figure 2: Emigration from Pakistan, 1971-2022

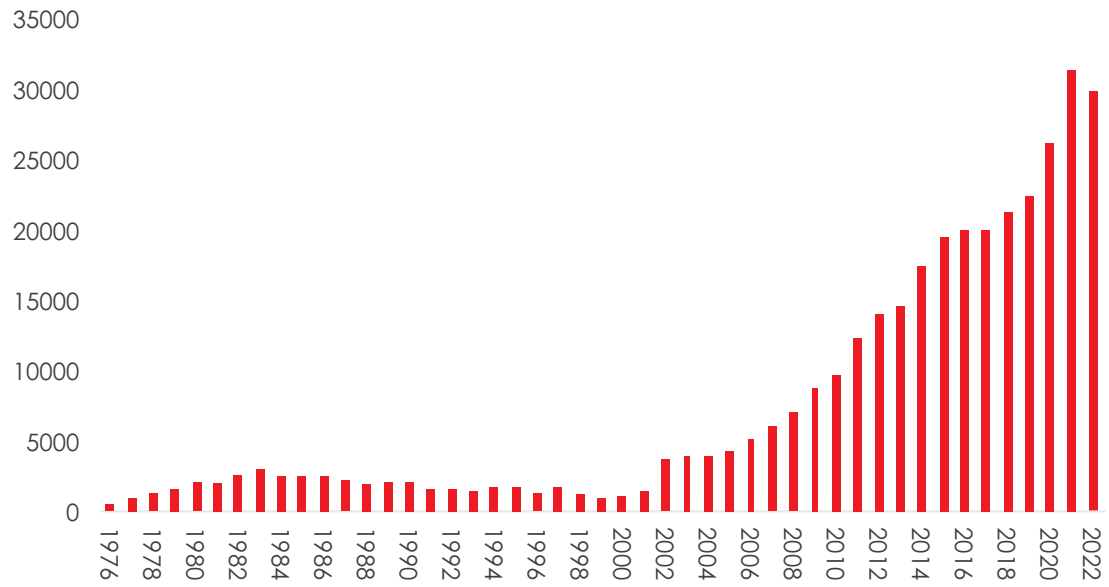


Source: Bureau of Emigration and Overseas Employment, Pakistan

The time pattern of remittances matches that of emigration, with a sharply increasing trend starting in 2002, as depicted in Figure 3. The only difference between the two charts is that post-2015, the trend of increasing remittances flattened out for a few years without actually going down. Remarkably, remittances grew even during the pandemic period.

[6] The GCC is a group of five countries clustered on the Arabian Peninsula: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. Between 2008-2016, although there were Pakistani migrants in over 50 countries, some 97% of them went to the GCC (ILO,2016).

Figure 3: Remittances, 1976-2022



Source: World Development Indicators

Not surprisingly, the GCC countries emerged as the main source of Pakistan's inward remittances. For example, in 1975, when Pakistan received a modest 216 million USD in remittances, the GCC countries accounted for 35%, while the UK and US collectively accounted for 43%. By 2020, when remittance inflows had increased a hundred-fold to 23 billion USD; Saudi Arabia alone accounted for 29%, the GCC collectively for 65% and the USA and UK for 19% State Bank of Pakistan, 2020).

The dramatic increase in emigrant numbers, the rise of GCC countries as migrant destinations and the dramatic growth of inward remittances from these countries all occurred after a decade of economic dysfunction in Pakistan. Whereas the country had enjoyed more or less steady growth in per-capita GDP at an average of 3% a year from 1961 to 1992, from then until 2002 growth averaged only 0.35% a year WDI Database, annual growth rate of GDP). There was also a structural shift in value-added to GDP away from manufacturing and to a lesser extent, services, towards agriculture.[7] Officially recorded unemployment hovered around 4%–6%, up from 1%-3% in most of the preceding years (WDI Database). The incidence of poverty almost doubled (Husain, 2004). At the same time, countries like India and China had started booming, while advanced economies were enjoying an unprecedented period of economic stability and growth known as the Great Moderation.[8]

Pakistan's 1990s decline has been attributed to (i) political instability reflected in frequent changes in government and (ii) the sanctions imposed on Pakistan after the nuclear test of May 1998 (Husain, 2004). Following the October 1999 army takeover, a series of reforms were enacted that averted some of the most disastrous eventualities: inflation and external debt both came down and economic growth returned to pre-1992 levels by 2003. Yet the years since then have been marked by volatility in growth and, as we shall argue later, persistence in structural weaknesses that emerged during the 1990s.

This raises the possibility that the sharp increase in emigration post-millennium has been at least in part a result of the economic decline of the 1990s and that in turn these high levels of emigration have contributed to the inability of the economy to fully recover from that decline. Indeed, what we observe could be a large-scale illustration of Chami et. al.'s (2005) hypothesis that overseas emigration is itself an investment by the emigrant and his/her family. Based on the implications that the authors' draw for the recipient household, if the number of such households were to be large enough, it

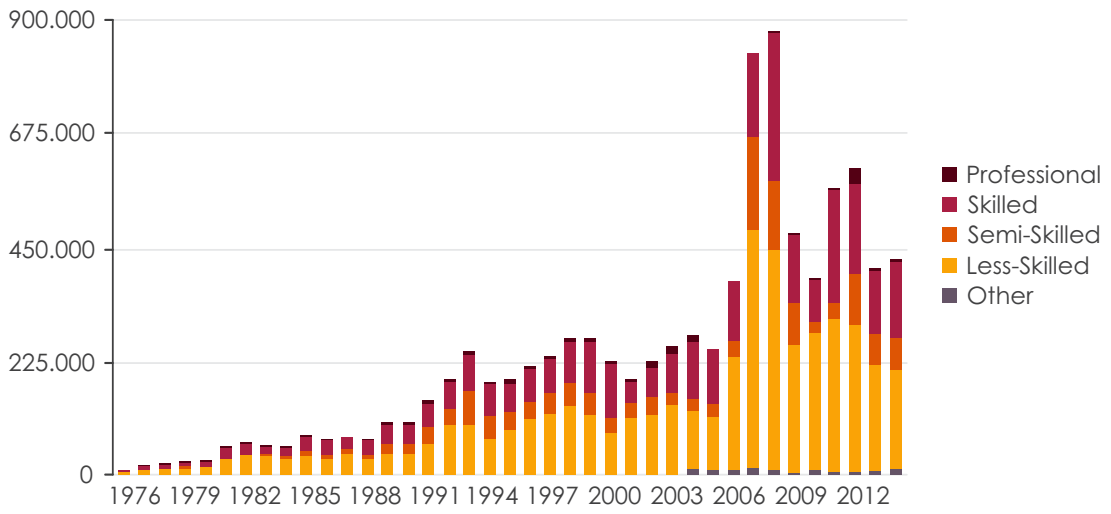
[7] The share of agriculture in GDP went from 43% in 1992 to 52.8% in 2002, while that of industry fell from 22.6% to 17.7% over the same years WDI Database).

[8] While the East Asian crisis was an important setback for otherwise rapidly growing Southeast Asian economies, Pakistan's situation was one of slow burning stagnation. In this sense Pakistan was more like Japan than Thailand.

could well lead to a "bad" equilibrium where economic prosperity at the micro level coexists with stagnation at the macro level.

Rigorously investigating the causes for this post-millennium increase in emigration would require taking into account a wider set of both push and pull factors, which is beyond the scope of this chapter. But we can at least examine whether pull factors were decisive by comparing emigration from Pakistan with those from Bangladesh and India. All three countries experienced significantly higher levels of emigration in the second decade of the new millennium than anything experienced in the preceding five decades.

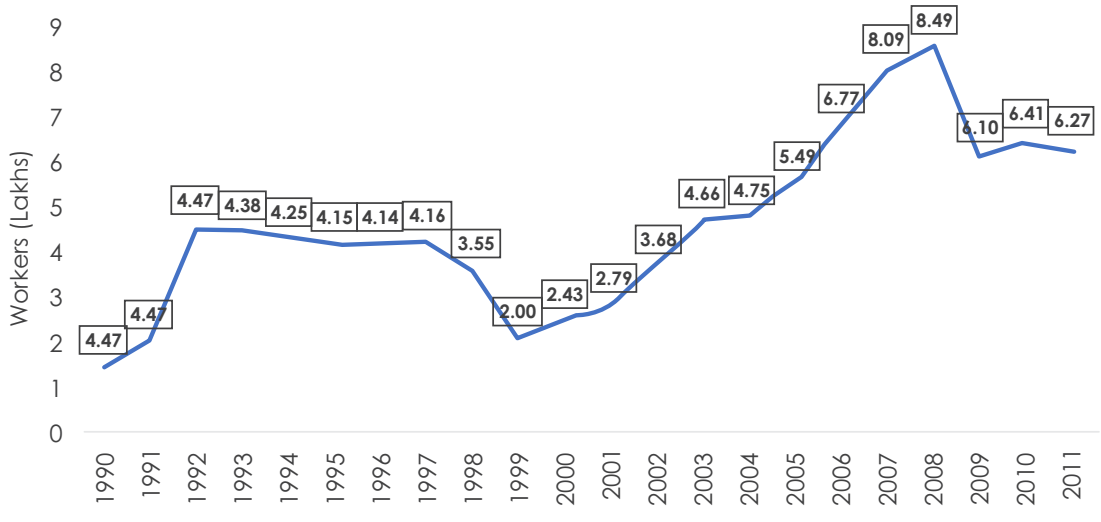
Figure 4: Emigration from Bangladesh, 1976-2014



Source: Bureau of Manpower, Employment and Training, Bangladesh

Bangladesh arrived there along a more or less steadily increasing trend that began in the 1970s, with brief dips in each decade. For India, we could only find a consistent time series that spans the period 1990-2011, which gives a narrower window to compare patterns with Pakistan. Given this limitation, India's trend of increasing emigration seems to have started in 1999, which is not that different from Pakistan's. India's economy was doing well during the 1990s with per capita growth of GDP of 5%-7% in the latter part of the decade. Based on these comparisons, we cannot rule out the possibility that external pull factors were the main drivers of the increase in emigration.

Figure 5: Emigration from India, 1990-2011



Source: Chanda and Gupta, 2018

This does not rule out the possibility either that Pakistan's own economic under-performance did play a contributing role and more importantly that this underperformance left a structural legacy that made Pakistan more susceptible to suffering from Dutch Disease once the increased flow of remittances began to come in.

In the next section, we shall examine the extent to which remittances are linked to Dutch Disease in Pakistan, making comparisons, whenever appropriate and feasible given data, with India and Bangladesh.

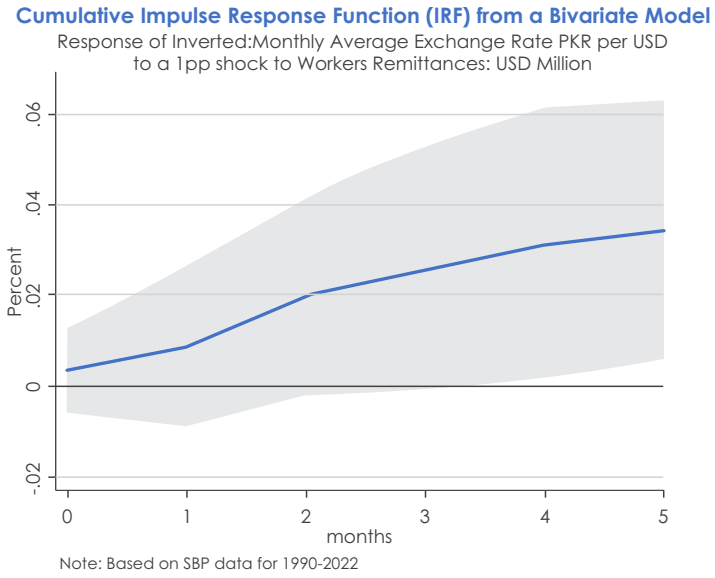
Effects on Exchange Rates

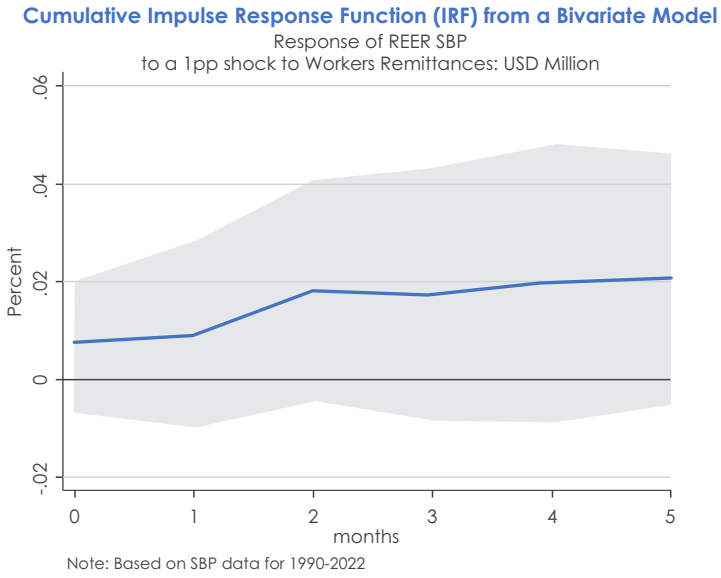
We used a combination of monthly data take from the State Bank of Pakistan (SBP) website and annual data taken from the World Development Indicators (WDI) website to study the effects of remittances on the (i) real exchange rate; (ii) nominal exchange rate (iii) the policy interest rate and (iv) trade volumes. The time period under study is approximately 1980-2021 for WDI data and 1996-2021 for SBP data.

We use a technique called local projections (LP) to analyse these effects. LP involves a semi-parametric alternative to VARs for generating impulse responses, by comparing the conditional means of some forecast variable, y, over a given time horizon, t+h, with and without a shock, δ, to some explanatory variable, x, at time t (Jorda, 2005). It has become increasingly popular as it is less susceptible to misspecification bias, but at the same time, it is more susceptible to large standard errors at long time horizons (Li et.al., 2022). For the latter reason, we calculate our LPs as far as possible on monthly data, but this depends both on data availability and the expected time horizon over which shocks to remittances are likely to take effect.

We start with the most likely point of entry for Dutch Disease, namely the exchange rate defined in nominal and real terms respectively. For this we use monthly SBP data. Figure 6 shows the impulse response functions (IRFs) calculated from the month-by-month LP coefficients for the impact of remittances on (i) the nominal PKR-USD exchange rate and (ii) the real effective exchange rate.

Figure 6: Impact of Remittances on the USD-PKR Exchange Rate (Left Panel) and the REER (Right Panel)





Source: State Bank of Pakistan

Since the nominal exchange rate is measured as dollars per rupee, an increase following a positive shock to remittances is associated with appreciation, with a significant impact (at the 10% level) emerging in the fourth month. The magnitude of the impact at this point of time is 0.034% for a 1% increase in remittances. The real effective exchange rate moves in the same direction but does not reach significance at the 10% threshold. The magnitude of the effect in the fourth month is approximately 0.02%. One possibility is that, since the real effective exchange rate depends on the domestic price level as well as the nominal

exchange rates against several currencies, it takes longer to reach a level of statistical significance.

Figure 7 shows the LP using annual data. We see that a 1% increase in annual remittances leads to a statistically significant but modest increase in the annual average real effective exchange rate within one year, and that the cumulative effect after five years reaches about 0.2%, which is not very different from the one reported by Amudeo-Dorantes and Pozo (2004).

Turning to the impact on exports and imports, Figure 8 shows the LPs for these exports show a clear and significant decrease of 0.16% following a 1% increase in remittances. The impacts on monthly imports are also negative but they are insignificant over most of the time horizon[9].[7] A negative impact on imports appears counter-intuitive, especially since imports of consumption goods are correlated with aggregate consumption which is expected to rise with remittances. However, it can be explained via the counter- cyclicality of remittances found in most (but not all) studies, while imports are likely to be pro-cyclical. In any case, the coefficients on imports are generally smaller than on exports, implying a worsening of trade deficits.

One question that arises is how the State Bank of Pakistan reacts to the inflow of remittances. We have seen the positive impact on the value of the rupee relative to the US dollar which eventually contributes to real exchange rate appreciation. If the State Bank intended to avoid this outcome, we would expect it to either buy US dollars on the open market or lower its policy rate in response to an increase in the inflow of remittances. We do not have data on its currency-market operations, but can observe movements in the policy rate. Figure 9 shows the LP for how the latter responds to an inflow of remittances. Due to lack of monthly data on the policy rate for earlier periods, these LPs apply only to the 2015.-2022 period.

The direction of change in the policy rate in the third month appears to show an attempt by the State Bank to stabilise the nominal exchange rate, given that it takes about four months for the latter to appreciate to a statistically significant level. However, the error bands around the policy rate suggest that the effect is insignificant. While the evidence on policy rates is therefore weak as far as inferring overall State Bank strategy is concerned, we can nonetheless gain some insights by revisiting the effects of remittances on real effective and nominal exchange rates in light of a study by Hamid and Mir (2017).

[9] The downward spike in the third month for both exports and imports is hard to interpret; it might represent a spurious seasonal effect as both remittances and exports of at least certain goods are subject to seasonality.

Figure 7: Impact of Remittances on the Average Annual REER

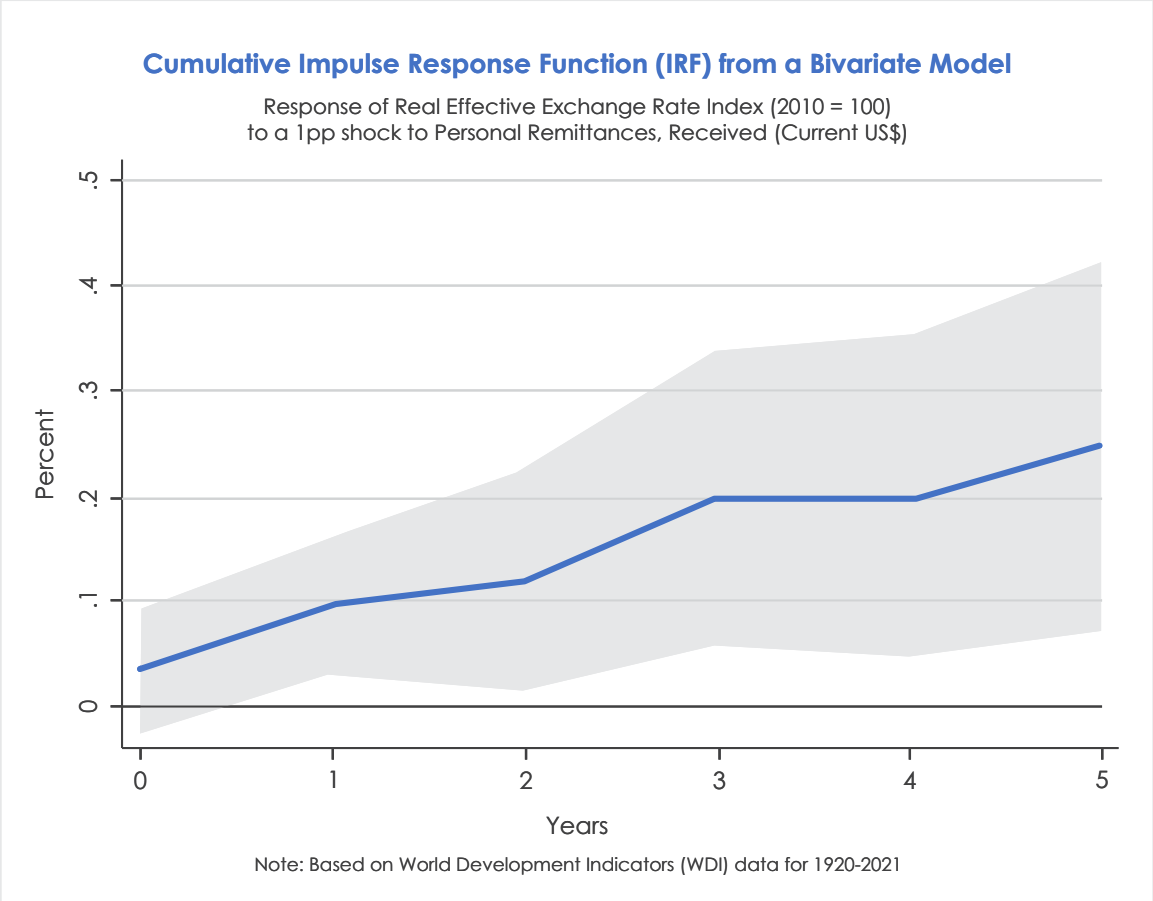
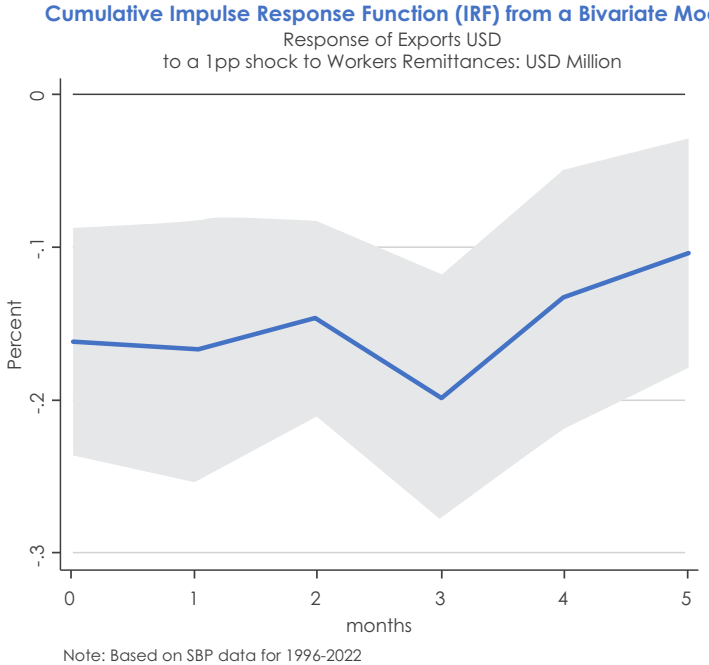


Figure 8: Impact of Remittances on exports (Left Panel); (Imports (Right Panel)



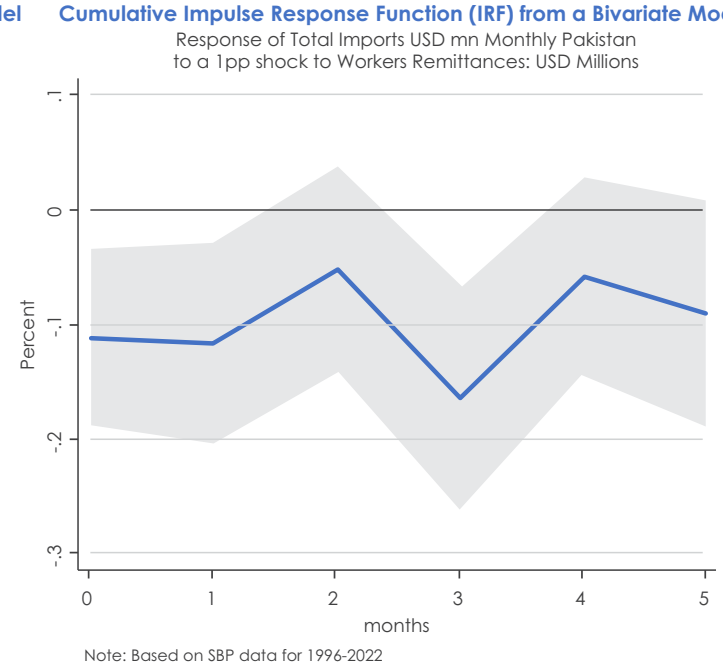
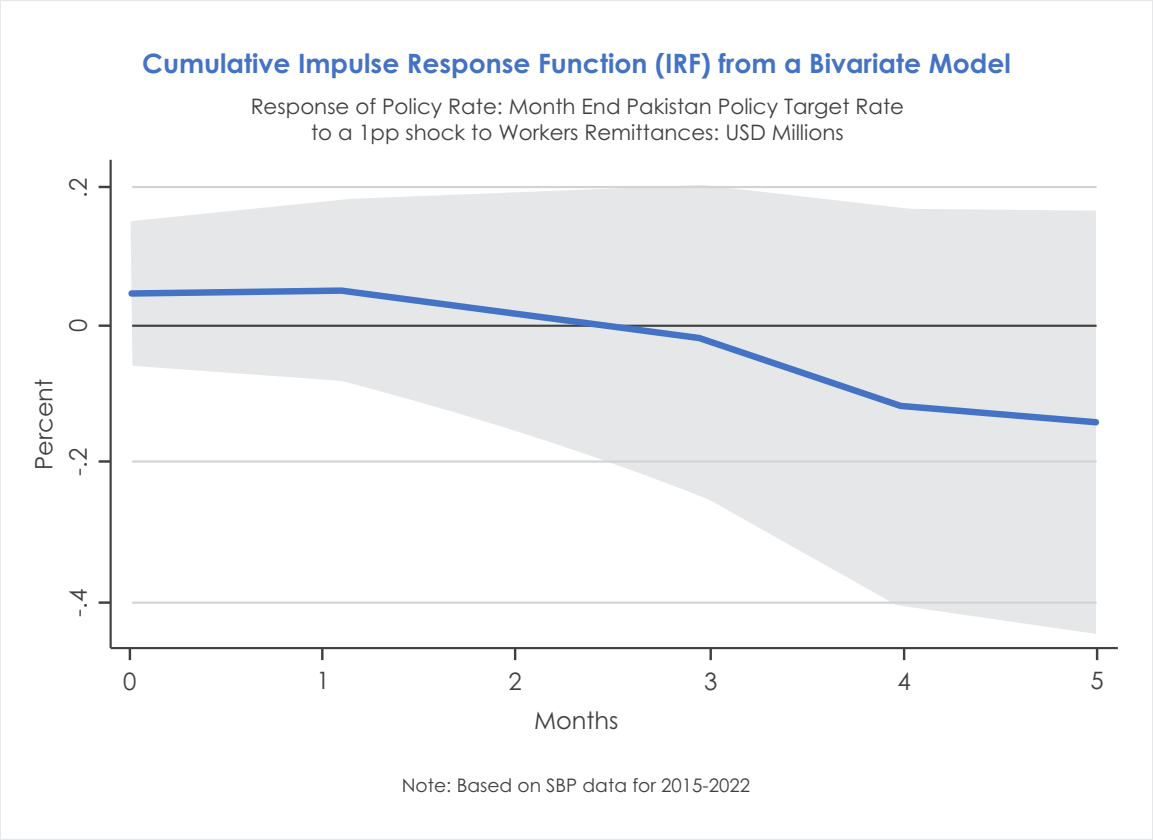


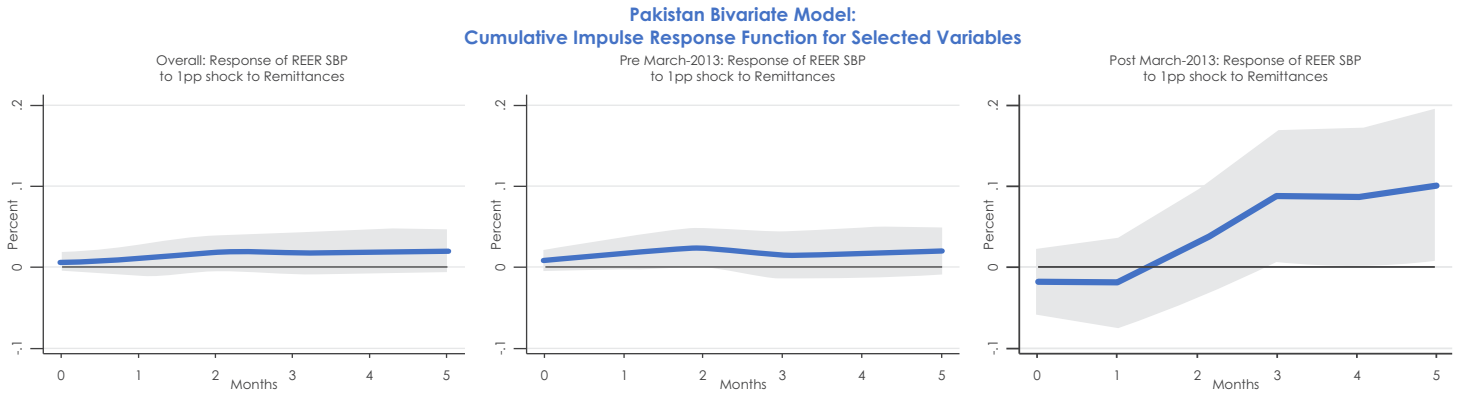
Figure 9: Response of Policy Rate to Remittances



Hamid and Mir (2017) used textual evidence such as policy announcements to characterise the various policy regimes pursued by the State Bank since 1947. Of particular interest to our study is the period from 2000 onwards when remittance inflows took off. Hamid and Mir found that until March 2013, the State Bank pursued a target of stabilising the real effective exchange rate, but after March 2013, the target was switched to stabilising the nominal value of the rupee against the US dollar. We therefore redo the LP analysis of these exchange rate movements, given a shock to remittance inflows, by splitting the data into two periods: pre-March 2013 and post-March 2013. Figure 10 and 11 show the LP results. Note that the nominal exchange rate in Figure 11 is defined as rupees per dollar so a decrease represents rupee appreciation.

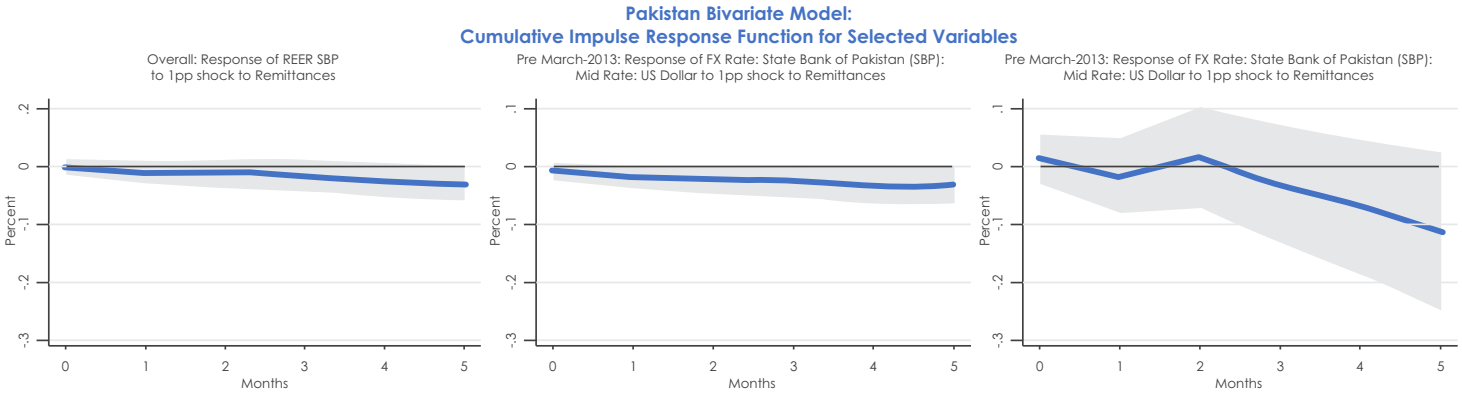
The LPs are remarkably consistent with Hamid and Mir's (2017) findings. Prior to March 2013 (middle panel of Figure 10), the LPs for the real exchange rate display weak and insignificant effects of remittance shocks. After March 2013 (right panel of Figure 10), the effects begin to appear positive and significant within three months following a 1% increase in remittances. Analogously, the IRFs for nominal exchange rates now show appreciation from the third month for the pre-2013 sample (middle panel of Figure 11) but insignificance in the post-2013 sample (right panel of Figure 11). Taken together, these LPs support the hypothesis that as of March 2013, the State Bank switched its policy objectives from real exchange rate stability to nominal exchange rate stability, precisely as implied by Hamid and Mir's textual analysis.

Figure 10: Real Effective Exchange Rate Response to Remittances: Entire Period (Left); Pre- 2013 (Middle); Post-2013 (Right)



Note: 90% confidence bands displayed

Figure 11: Nominal PKR-USD Exchange Rate Response to Remittances: Entire Period (Left); Pre-2013 (Middle); Post-2013 (Right)



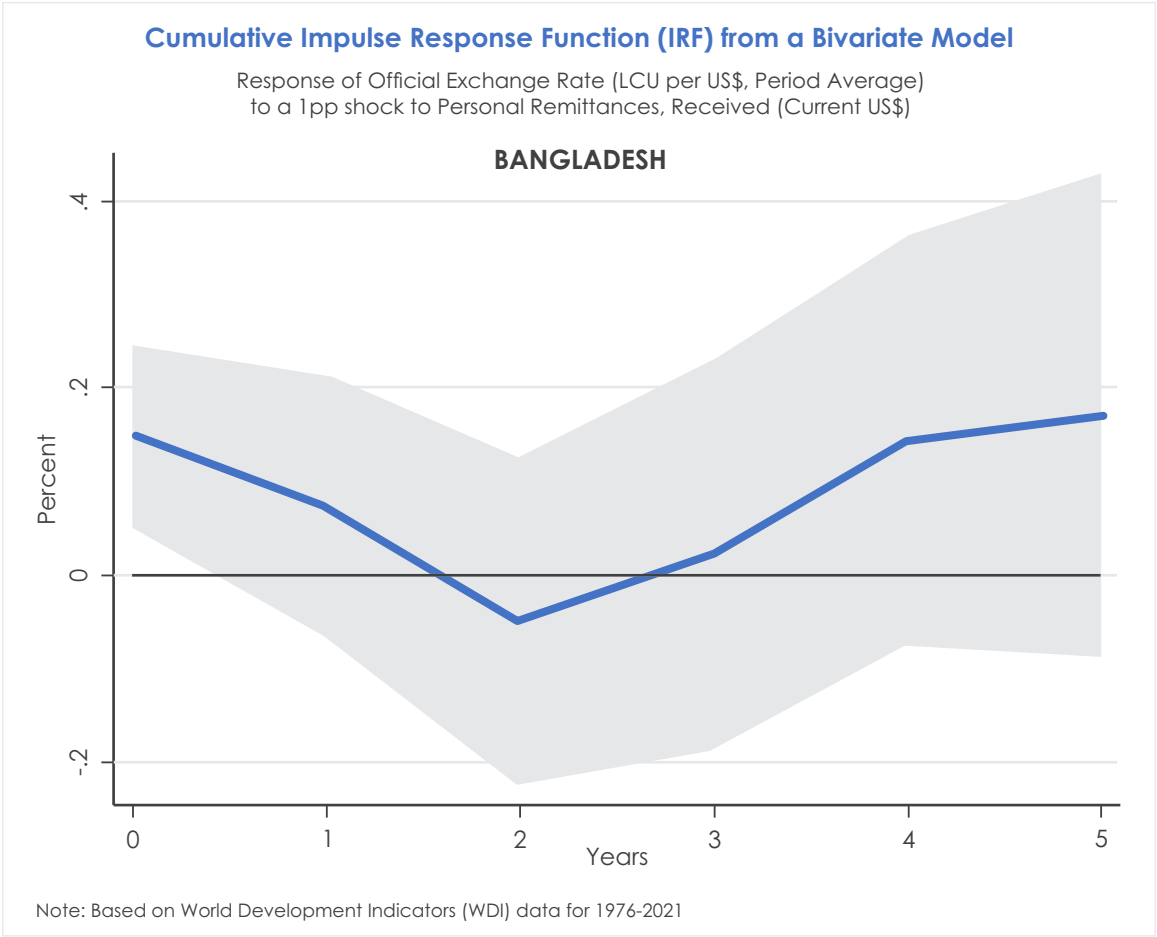
Note: 90% confidence bands displayed

The final point of interest for this analysis is whether and/or to what extent comparator countries show the same effects of remittances. For reasons of both brevity and availability of data, we concentrate on the nominal exchange rate of each country's currency against the US dollar[10]. This is anyway the most likely entry point for real exchange rate appreciation and Dutch Disease.

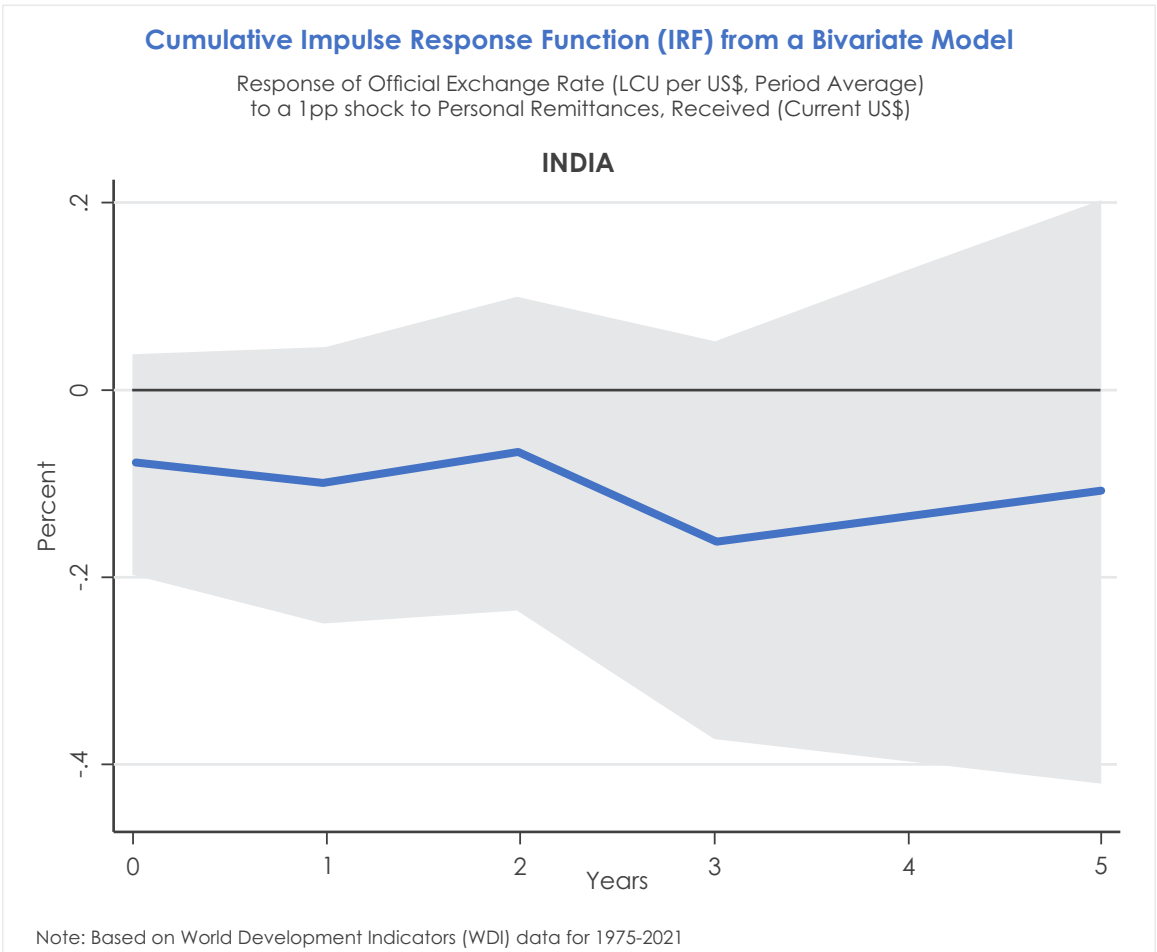
Figure 12 depicts the IRFs for how nominal exchange rates react to remittances in Pakistan, India and Bangladesh. The data are annual averages taken from the WDI website. Each country's exchange rate is measured as its own currency's parity against the US dollar (described as LCU per USD in the WDI data) so in his case, a decrease implies appreciation.

[10] Real effective exchange rate data were not consistently available for Bangladesh and India.

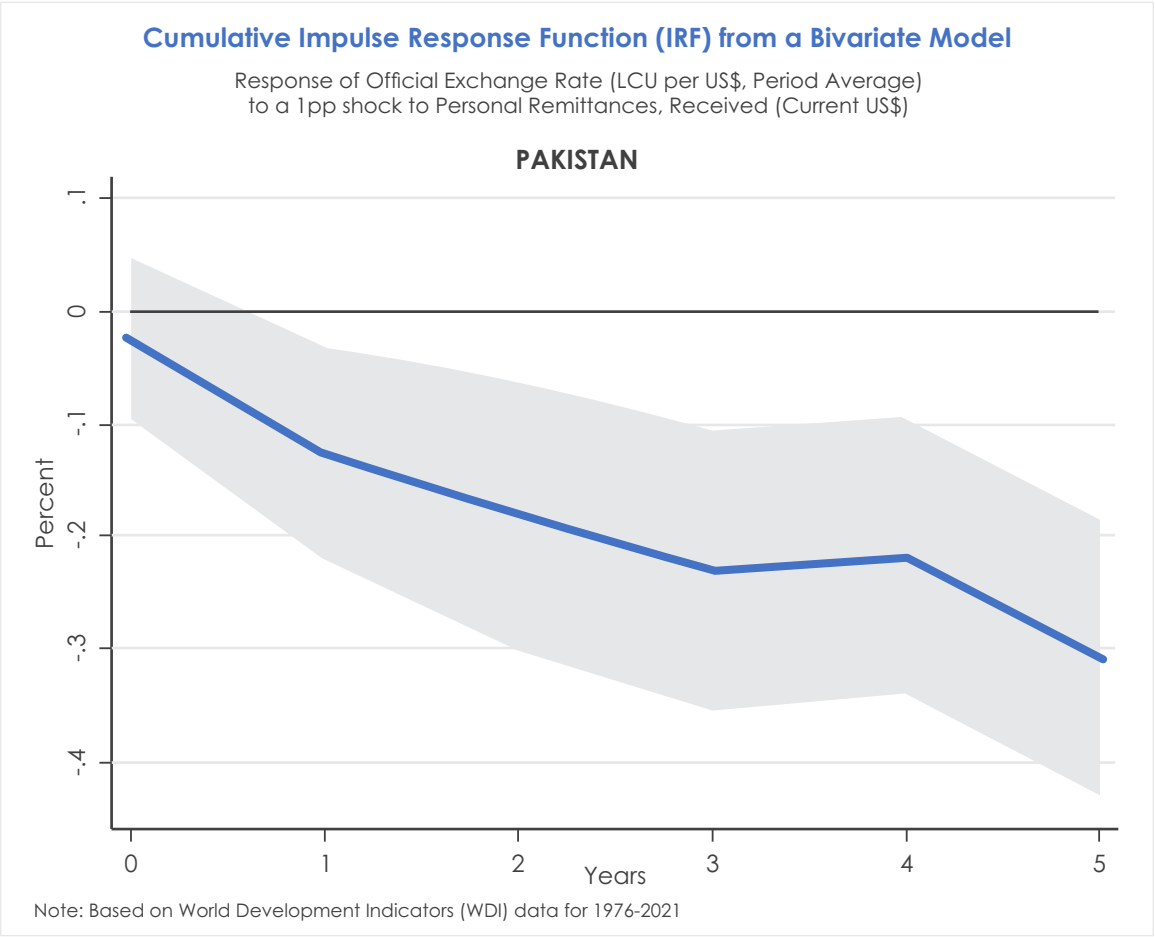
Figure 12: Nominal LCU-USD Exchange Rate Response to Remittances: Bangladesh, India and Pakistan



Note: Based on World Development Indicators (WDI) data for 1976-2021



Note: Based on World Development Indicators (WDI) data for 1975-2021



Source: World Development Indicators

Of the three, only Pakistan's IRFs show a clear and significant appreciation. In Bangladesh, there is in fact a tendency, although insignificant, towards depreciation.[11]

Other Macroeconomic Variables

As noted in the Introduction, remittance inflows differ from other sources of unrequited overseas funds in that they enter the economy through migrant-to-household transfers. They increase household disposable income and make it more predictable by responding to income shocks at both idiosyncratic and aggregate levels. The income effect would be expected to reduce labour supply of recipients.

The effect on recipients' consumption are ambiguous, as households they may save a large proportion of the remittance for either business or personal reasons, e.g. towards meeting wedding expenses or those from other ceremonial milestones. Financial development may itself play an ambiguous role. Households that face borrowing constraints might be obliged to build up informal savings in order to pay for upcoming milestones. On the other hand, life-cycle savings would be discouraged in undeveloped financial markets with low returns to formal savings.

In the subsections below, we consider evidence from previous studies and our own empirical results to study effects on both labour market and consumption behaviour.

Consumption

Using data from a study of how permanent and transitory income shocks affect household spending patterns in four poor rural districts of Pakistan, Alderman (1996) found that, as per theory, households tend to mostly save transitory income and spend out of permanent income. He also found that households have a high marginal propensity to save out of overseas income, and a high marginal propensity to spend on current consumption out of domestic remittances received from urban areas within Pakistan. In other words,

[11] Chowdhury and Rabbi (2014) suggest that the overall appreciation that remittances induce on Bangladesh's real exchange rate is mitigated by nominal exchange rate "devaluations", as they call them.

overseas remittances are treated as transitory income shocks while domestic remittances are treated as shocks to permanent income.

These findings are both encouraging and reflective of the micro-macro paradox referred to earlier. At the household level, any deferral of current consumption counts as savings. In Alderman's analysis, savings includes those carried out for eventual spending on ceremonial events. To the extent that they include financial and physical capital, the first includes repayment of loans and the second includes expenditures on residential construction. Of these three types of recipient "savings" only residential construction would be counted as savings in national income accounts and even this would not contribute to the economy's stock of productive capital.

Adams' (1998) studied rural asset accumulation in Pakistan, using data from three of the four rural districts covered in Alderman (1996) along with a different fourth district, His study explicitly focused on productive household assets. In this respect, Adam's findings regarding household saving would coincide with macroeconomic saving. Similarly, to Alderman (1986), Adams (1998) finds that the marginal propensity to invest out of remittances is statistically significant and higher in magnitude for overseas remittances but insignificant for domestic remittances.

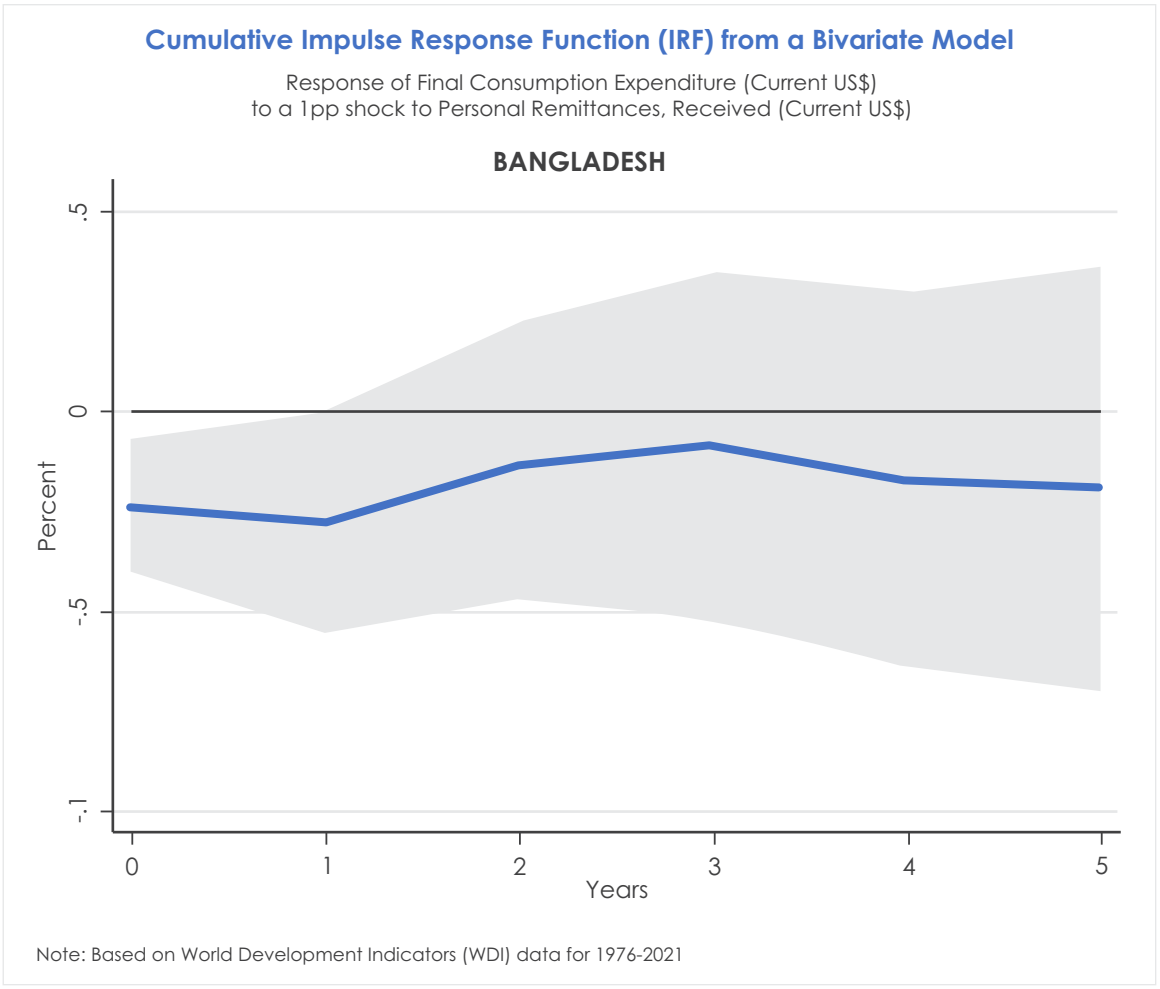
Adams' findings are encouraging at both the microeconomic and macroeconomic levels but it is difficult to judge their significance for the sort of issues associated with Dutch Disease, as they are based on a small segment of farmers who are among the poorest income earners of Pakistan.[12]

Figure 13 below depicts our own IRFs for aggregate final consumption in response to a positive shock to overseas remittances.[13] Because a thorough analysis of the relationship between remittances and final consumption at the macroeconomic level is beyond the scope of this paper, our 'control' for the observed bivariate IRFs for Pakistan are the IRFs for its comparator countries.

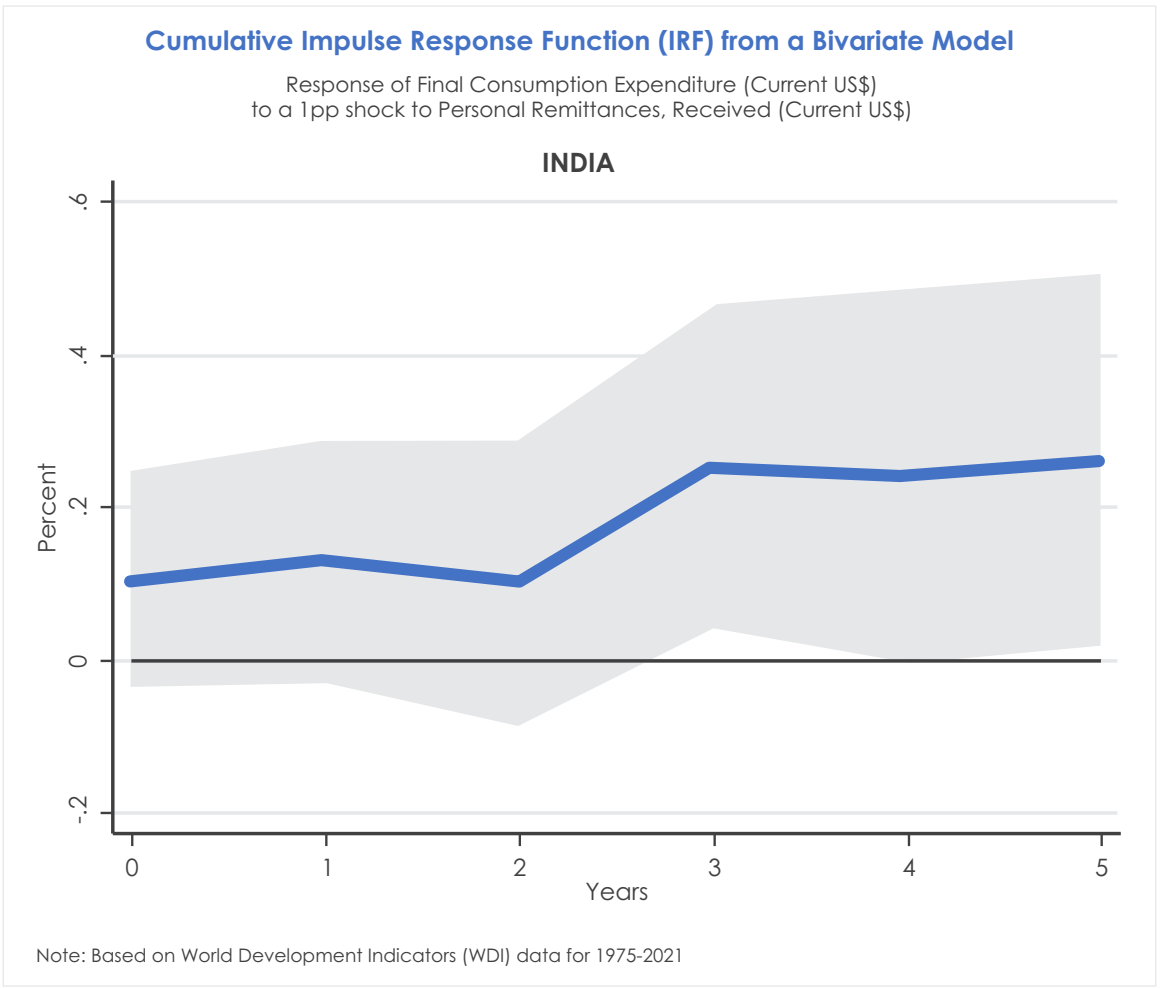
[12] Of course, this is not to undermine their social significance.

[13] Final consumption includes both private and government consumption. In both India and Pakistan government consumption counts for approximately 10% of total consumption so this has to be taken into account in interpreting the results.

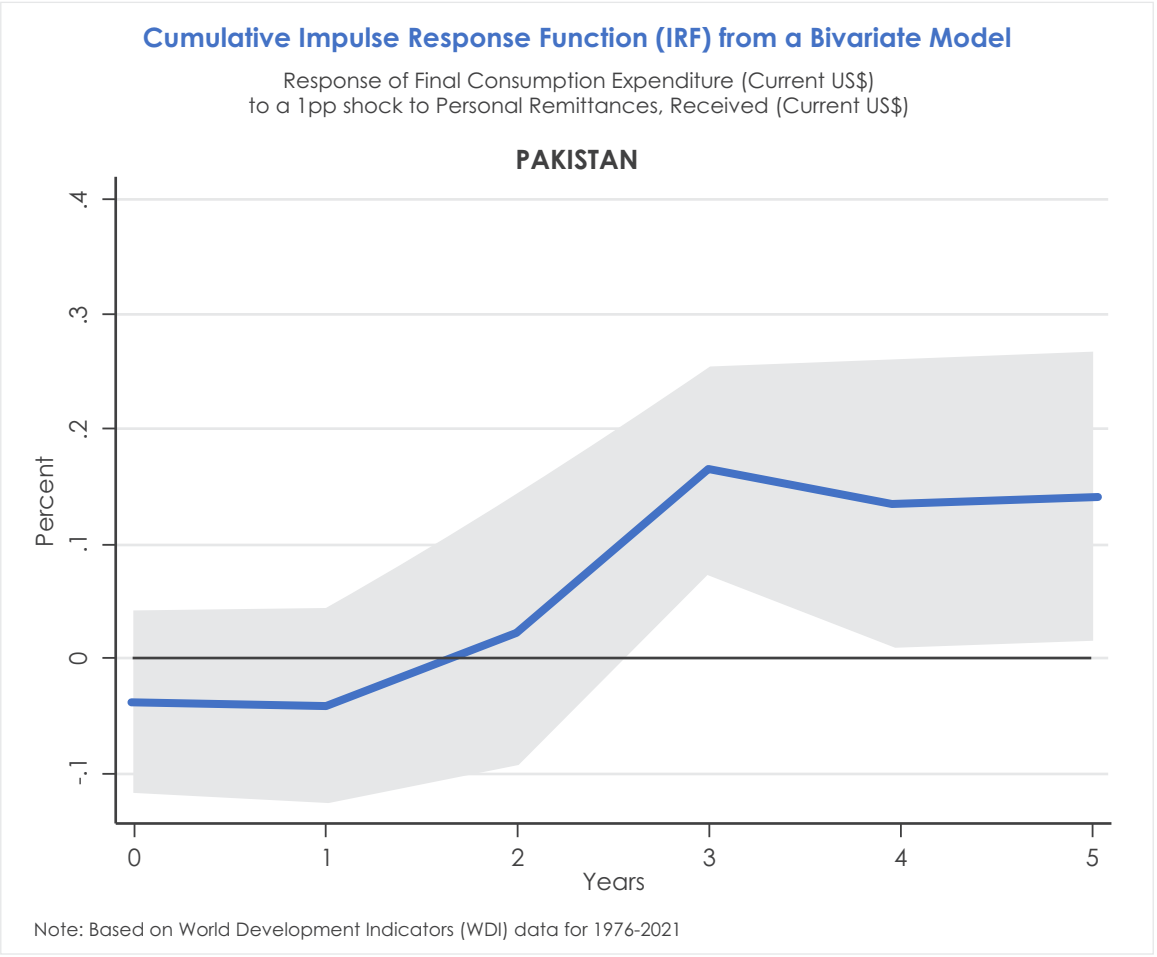
Figure 13: Consumption Response to Remittances



Note: Based on World Development Indicators (WDI) data for 1976-2021



Note: Based on World Development Indicators (WDI) data for 1975-2021

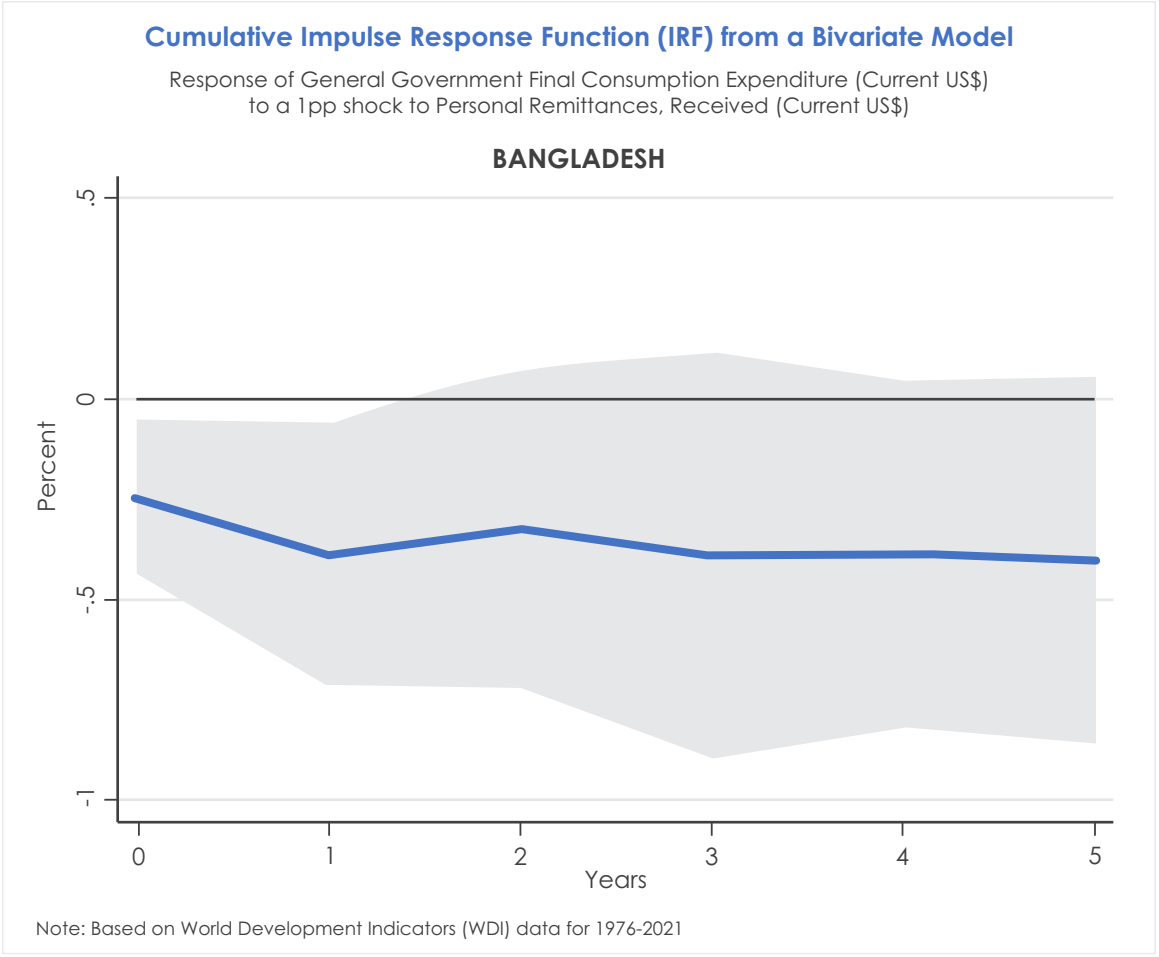


Source: World Development Indicators

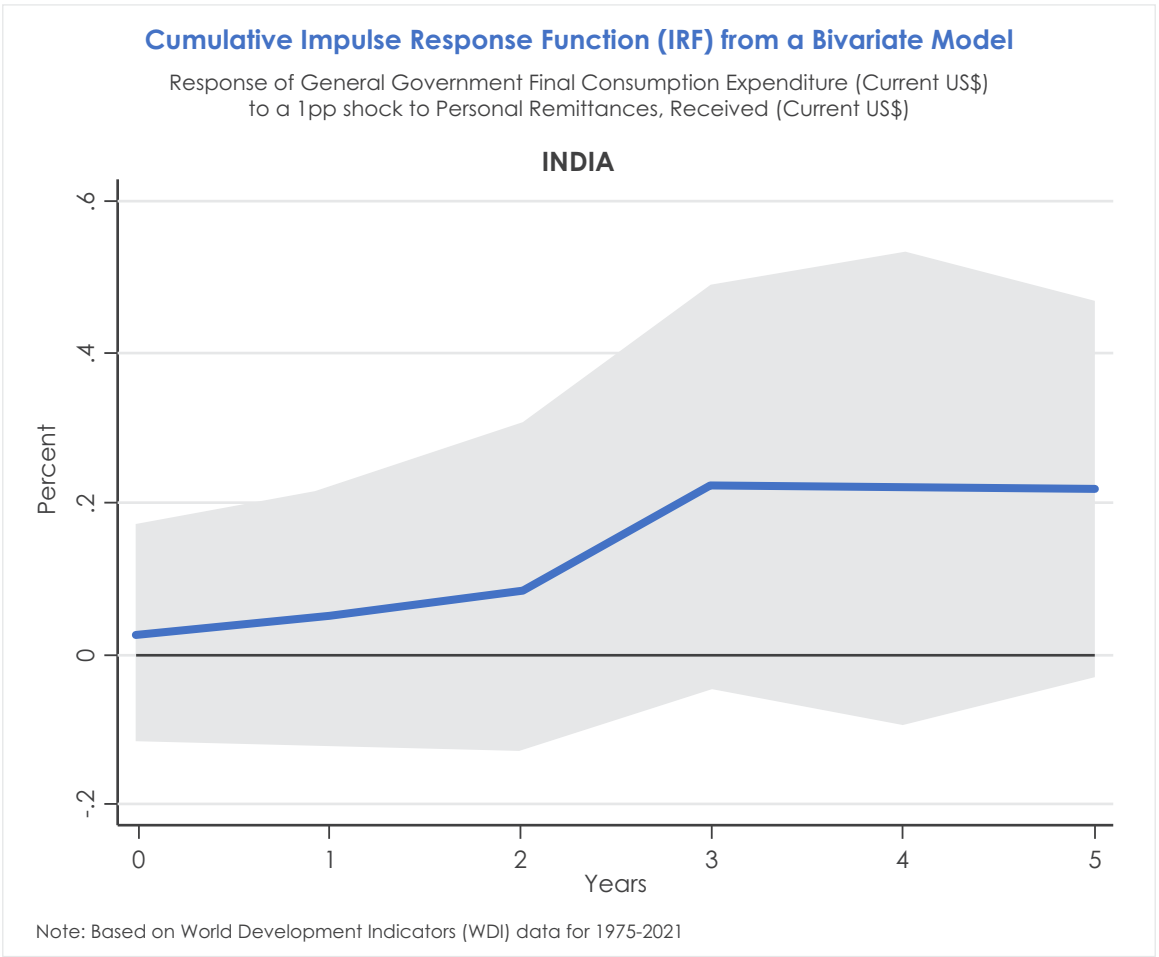
As with previous comparisons, Pakistan appears most affected by remittance-induced Dutch Disease. For Pakistan, a significant and positive effect of remittances on final consumption arises after the third year. For Bangladesh, the impact appears negative and significant in the short term and to vanish after 3 years. For India, the effect is positive but insignificant.

The above IRFs are based on a World Bank data that include both private and public-sector consumption. Figure 14 compares how the government consumption component alone responds to remittances across the three countries.

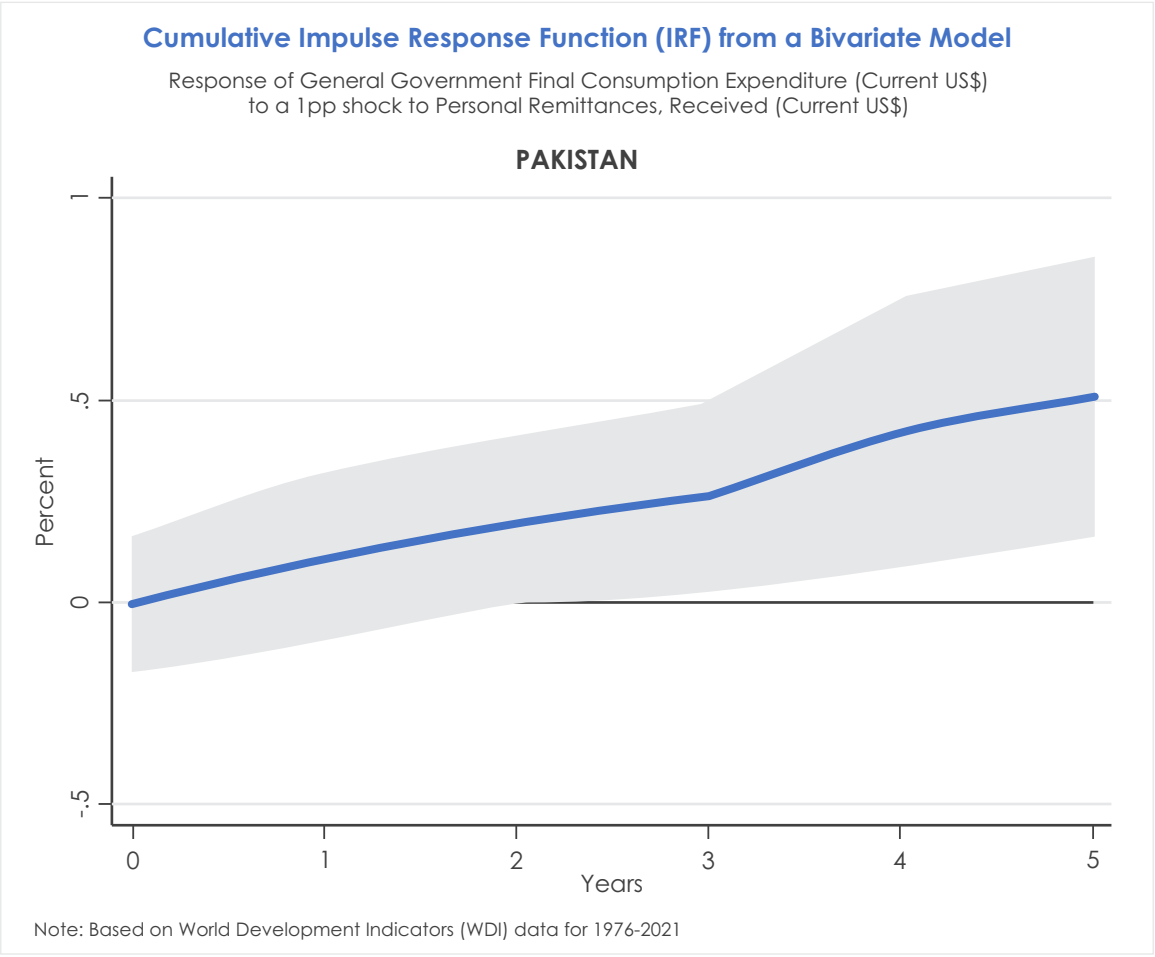
Figure 14: Government Consumption Response to Remittances



Note: Based on World Development Indicators (WDI) data for 1976-2021



Note: Based on World Development Indicators (WDI) data for 1975-2021



From Figure 14 it appears as if the IRFs for total consumption were largely driven by government consumption rather than private consumption. The shape of the IRFs is pretty much the same in Figures 13 (total consumption response) and 14 (government consumption response); however, for Pakistan the trend line is clearly higher in Figure 14 and rises steadily over the years. The confidence bands also suggest a more significant effect.

The observed effect of remittances on government spending in Pakistan is consistent with Chami et.al.'s (2008) claim that by lowering the sovereign risk premium in international capital markets, remittances encourage government profligacy financed by higher external debt. This issue is studied in a companion chapter and from the analysis presented therein, the above could be a fairly plausible explanation of the IRFs observed in Figure 14 and suggests that through their effects on sovereign risk premia, remittances encourage debt complacency by both deficit-prone governments and international creditors.

Labour Market Effects

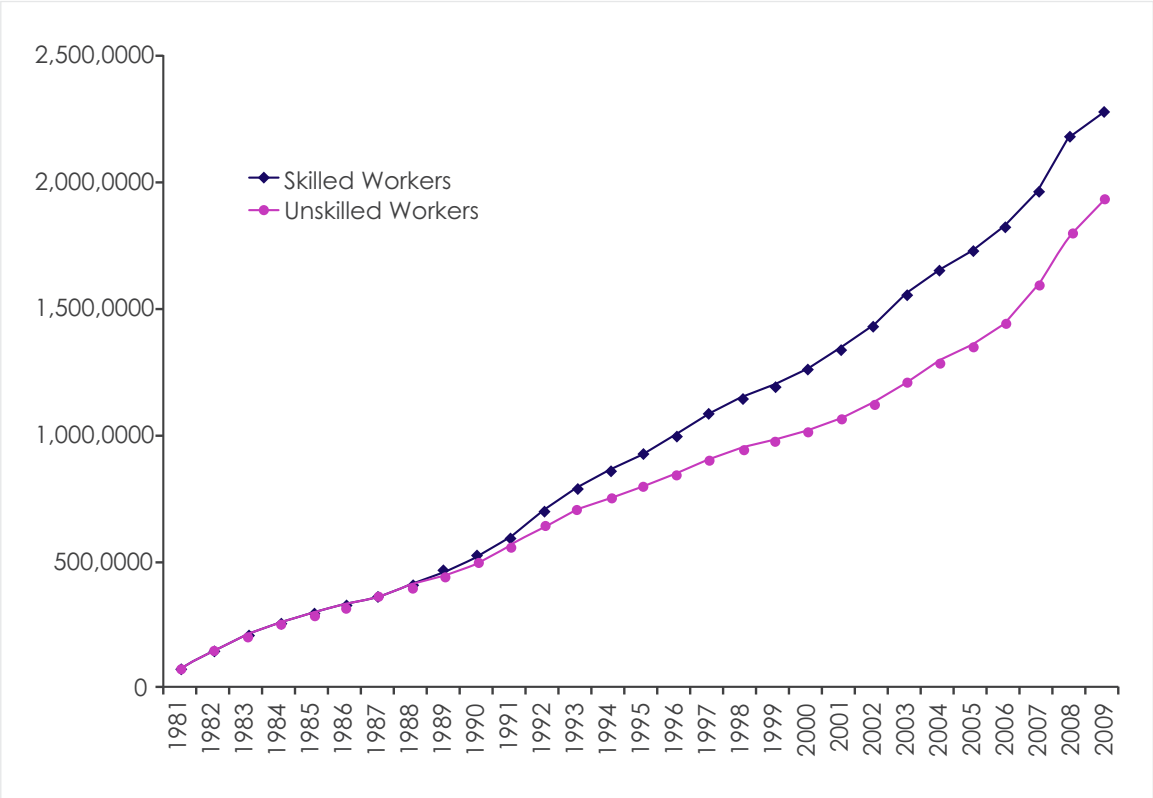
The literature has noted that emigration directly reduces the labour supply available to the domestic economy and indirectly induces relatives back home to reduce their labour supply due to reliance on remittances (Funkhouser 2006; Kim, 2007; Amuedo-Dorantes and Pozo, 2006; Bayangos and Jansen, 2011). Both effects can raise wages and lower the competitiveness of the domestic economy. Economists hypothesise that this effect is partly offset by an increase in labour productivity, partly due to the principle of diminishing marginal productivity and partly because firms might be incentivised to invest in labour-saving technology. These hypotheses assume homogeneous labour, but what if emigration affects skilled workers more than unskilled?

Figure 15 shows how the skill composition of Pakistani migrants has changed over time, from 1981-2009. In the first decade the numbers were roughly equal, but from the early1990s, skilled workers began to leave Pakistan in greater numbers than unskilled ones so that by 2009, the balance had clearly shifted towards skilled workers[14]. Figure 15 suggests that in 2009

[14] This in itself could have been a result of economic stagnation.

the balance of skilled versus unskilled was roughly 55:45. This is consistent with ILO data that from 2015 that shows that almost 60% of Pakistani migrants in the GCC were in skilled and semi-skilled occupations (ILO, 2016).

Figure 15: Pakistan's Migrant Stock by Skill Level, 1981-2009



Source: Kock and Sun, 2011

If skilled workers leave the country in significant numbers, and if the remittance-receiving relatives of the former are themselves skilled, the effects on labour productivity could turn negative, contrary to the prediction made by Bayangos and Jansen (2011). While we cannot estimate the effects on labour productivity, we can investigate the effects on labour force participation and the skill composition of the domestic labour market.

Direct Effects

As discussed above, emigration affects the domestic labour market not just through numbers but also the type of workers who leave. It is worth noting that the third phase of emigration from Pakistan has attracted away a significantly different type of worker with a very different goal in mind than was prevalent in the first phase.

The typical Pakistani emigrant of the first phase was an unskilled worker from rural Punjab or Azad Kashmir, employed in the textile or car manufacturing industry in the industrial heartlands of the UK, and planning to eventually settle here and bring close family over (Luthra and Platt, 2017). In parallel with these blue-collar workers, a smaller number of doctors from India, Pakistan and what is now Bangladesh had been arriving since the 1950s, with the infamous Enoch Powell personally responsible for bringing in 18,000 of them, in his capacity as Minister of Health (Snow and Jones, 2011).

Table 2: Ratio of GCC Migrants to Pakistani Workers by Skill Level.

	GCC MIGRANTS		PAKISTAN WORKERS		RATIO
CATEGORY	(1) (PROPORTION)	(2) (MILLIONS)	(3) (PROPORTION)	(4) (MILLIONS)	(2):(4) (%)
Unskilled	0.39	1.10	0.159	7.07	15.7
Semi-skilled	0.16	0.45	0.217	9.56	4.7
Skilled	0.42	1.18	0.257	11.33	10. 5
Skilled + Semi-skilled	0.58	1.63	0.474	20.89	7.8

Source: ILO, 2016 and PLFS, 2015

While these two types belonged to opposite ends of the skill spectrum, they had in common the intention of settling in the host country and bringing close family over, rather than supporting them back home through remittances. In this sense their impact on relatives back home was (a) confined to immediate family and (b) to resettle them overseas rather than support them through recurring remittances.

By contrast with the first phase of emigrants, those leaving Pakistan in the second and third phases have been mainly skilled and semi-skilled blue-collar workers from all parts of Pakistan. According to an ILO report (ILO, 2016), in 2015 almost all (99.9%) of Pakistani workers in the GCC were male; skilled workers constituted the largest category (42%), followed by un- and low-skilled (39%), and semi-skilled (16%). High-skilled and highly-qualified workers accounted for only 3%.[15]

Table 2 compares the number of Pakistani workers working in the GCC across the three major skill categories (skilled, semi-skilled and unskilled) with their counterparts employed in Pakistan. Column 2 reports the composition by skill level of Pakistani migrants in the GCC. Combining that information with the UNDESA estimate of 2.82 million Pakistani migrant workers in 2015 in the GCC, Column 3 estimates the total numbers of GCC-based Pakistani workers by skill levels. Columns 4 and 5 use data from the Pakistan Labour Force Survey (2015). Column 4 reports the skills composition of employed male workers in Pakistan. Combining that information with a total of 44.7 million employed male workers in the country, Column 5 estimates the breakdown of the employed workforce by skill level. Column 6 reports the ratio of Pakistani workers in the GCC to Pakistani workers in Pakistan for each skill level.

The above estimates suggest that in 2015, for every 12 skilled and semi-skilled workers who were working in Pakistan, one of their counterparts was in the GCC. This is not a trivial proportion. It is also almost certainly an undercount due to the phenomenon of down-skilling. According to ILO (2016), employers tend to hire migrant workers according to stereotypes that they hold about the migrants' home countries. For Pakistani workers, this means having to accept jobs as unskilled manual labour regardless of their own skill background. One survey found that while only 27.6% of Pakistani GCC migrants had worked as labourers before migration, 41.7% were working in that role while overseas (Amjad and Arif, 2014). In other words, up to 33% of those counted as unskilled workers in the GCC could have been skilled or semi-skilled in Pakistan.

[15] These classifications are based on BEOE categories which place manual labourers and cleaners in the un- or low-skill category, masons, cooks, waiters, tailors in semi-skilled while welders, carpenters, electricians, secretaries are categorised as skilled.

Applying this correction to the ILO data, the ratio of skilled + semi-skilled in Pakistan to their counterparts in GCC rises to 8:1[16].

An interesting empirical question is the extent to which the changes in skill composition of the labour market have affected labour costs for sectors of the domestic economy that would have employed them. A granular analysis that takes into account both the heterogeneity of worker skills and that of sectoral production functions would shed greater light on this question. Given the large numbers that have been emigrating from Pakistan in the last twenty years this would be an important detail to study in the overall problem of Dutch Disease.

At the same time, a positive effect of skilled-worker emigration is that it can encourage younger generations to seek education and skills training. Casual observation suggests that this could be happening in Pakistan, especially in the Punjab, where there has been a rapid growth of low-cost private schools in rural areas and small towns, especially in the Punjab.[17]

Such growth reflects demand by low-income households for educating their children, which could very well be arising through the lure of emigration. Even so, some less positive considerations come to mind. First, households' reliance on emigration as the main avenue for investment might reduce conventional savings. Second, although skill formation would increase, the local workforce would not benefit from its positive externalities. Third, and most importantly, in a world facing an increasing level of geo-political, environmental, and bio-medical threat, the safety valve of emigration can be abruptly and arbitrarily switched off.

Indirect Effects

As early as 1990, Kozel and Alderman (1990) found that remittances negatively affect male labour force participation and hours worked in urban areas of Pakistan. Combining the two effects, there was a dramatic decrease of 14.3 hours per week on male labour supply; conditional on the recipient remaining in the labour forces the effect fell to 5.6 hours, still a significant drop. Focused on urban labour markets, their evidence supports our conjecture that emigration affects the potential labour market for manufacturing mores strongly.

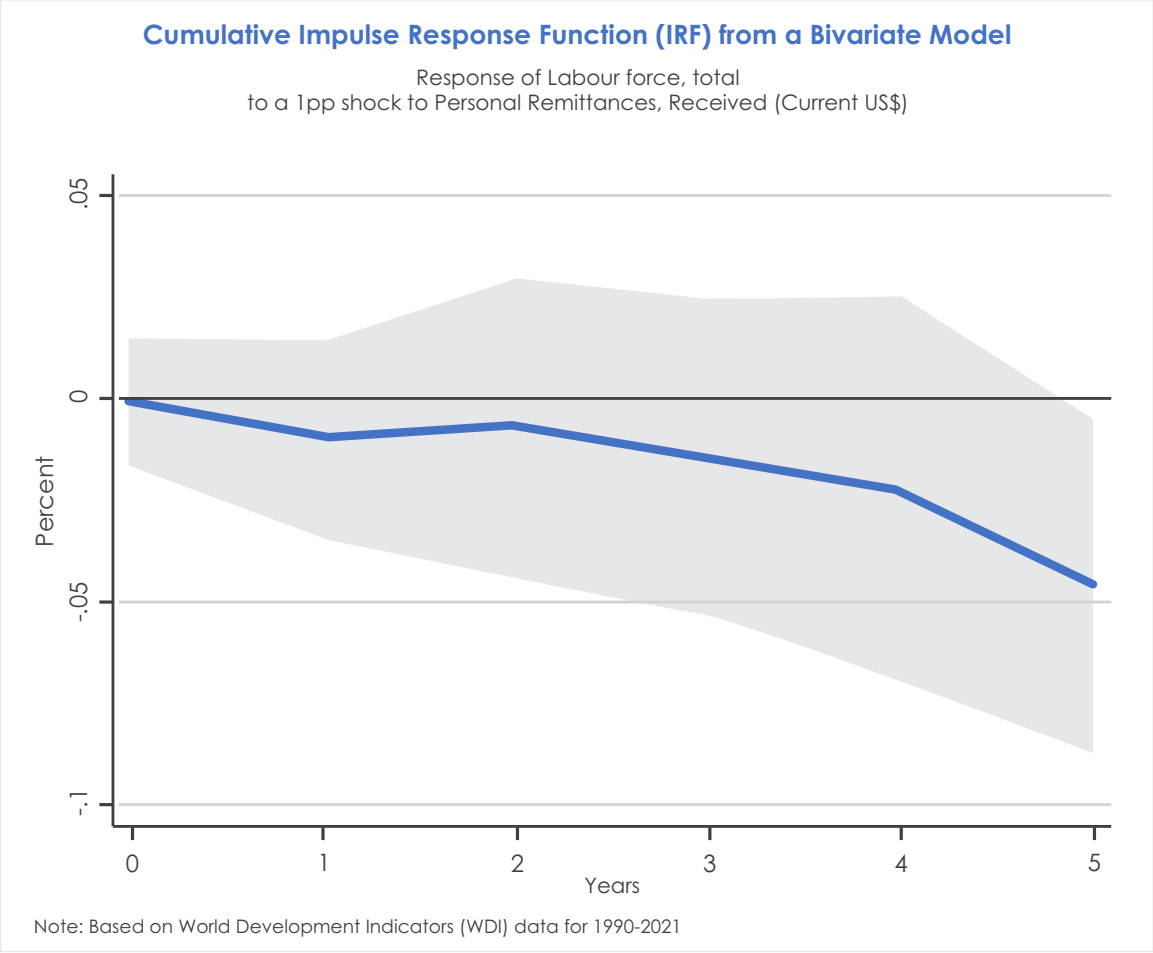
Our analysis concentrates on labour force participation, which as noted in the Introduction has been declining in Pakistan as well as its comparators. Figure 16 shows IRFs for labour force participation. Our WDI data cover both male and female labour so the results are possibly biased, although the direction of bias is unclear.[18] The confidence bands suggest a statistically significant effect only in the fifth year which is approximately equal to -0.04%. While the sign is consistent with expectation and with the findings of Kozel and Alderman, it is hard to take it too seriously as it reflects a bivariate relationship which has probably been buffeted by changes in other covariates over the five-year period.

[16] We have combined two different classification systems for rating a worker's skill level, one from ILO (2016) and the other from the Pakistan Labour Force Survey (PLFS, 2015). Since the PLFS does not rate occupations according to skill we have tried to match their categories to the ILO categories by the following classification: elementary occupations = unskilled or low skilled; sales and service, clerical support workers = semi-skilled; plant and machine operators, craft and related trades, technicians and associated professionals = skilled.

[17] The Asian Development Bank reports a growing share of low-cost private schools in educational provision, from 28% of school enrolments in 2008 to 38% in 2018 (Rizwan et. al., 2022). It also reports growth in schools established through public-private partnership PPP) in Pakistan, particularly in the Punjab.

[18] Kozel and Alderman (1990) only estimated effects on participation and hours supplied for males, due to lack of sample size for females.

Figure 16: Impact of Remittances on Labour Force Participation



Structural Hysteresis

In previous sections we have seen evidence of Dutch Disease symptoms in Pakistan, or at least that Pakistan comes closer to exhibiting such symptoms than its regional comparators. However, our analysis does not allow for strict causal interpretations so we cannot attribute the observed effects to remittances alone. In particular, we remain open to the possibility that overseas migration and the weak structure of Pakistan's economy are mutually reinforcing phenomena that jointly cause the observed symptoms.

To elaborate, Pakistan could be caught in a low-growth equilibrium whereby the structural weaknesses that emerged during the early 1990s have had two effects: (i) they made the economy unable to generate meaningful employment, thereby promoting emigration and (ii) they also made the economy unable to absorb remittances in a productive, growth-enhancing and export-promoting way. In this equilibrium, low economic growth could well be consistent with a growing middle class and rising education levels (as noted in the previous section), all fuelled by the pull of emigration and the flow of remittances.

This scenario was invoked in Section 2, with reference to Chami et. al. (2005)'s conjecture, and its possible relevance for Pakistan discussed therein. Its potential drawbacks have also been noted. It needs to be reiterated that such an equilibrium could be easily shattered by wars, pandemics and populist politics in host countries.

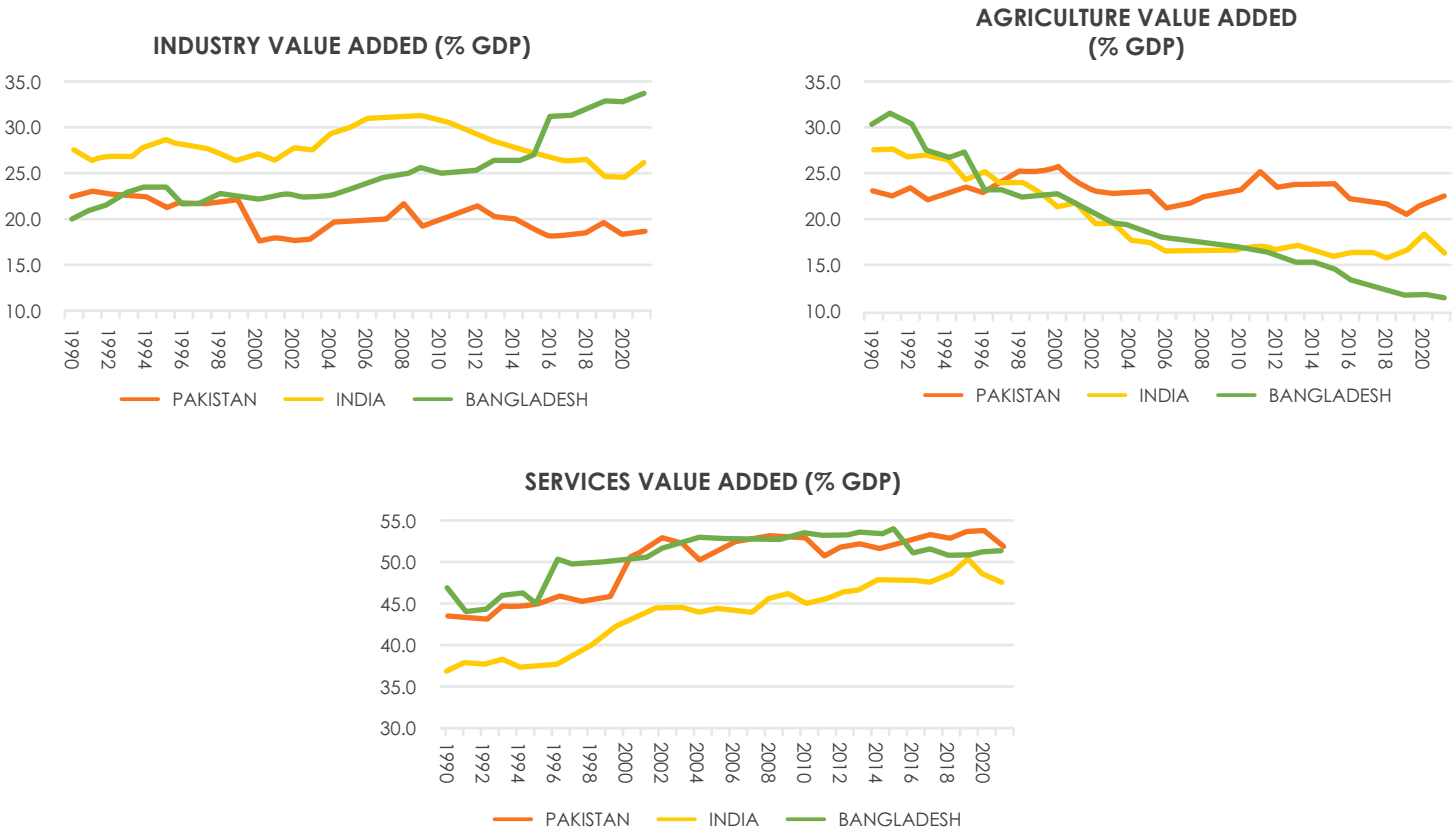
In this context, it is worth noting that India and Bangladesh seem, at least in comparison with Pakistan, to have diversified and modernised their economies and thereby mitigated the negative effects of remittance inflows on domestic productive capacity.

In this section, we shall consider how economic structures have evolved over time in the three countries. Our emphasis will be on the post-1990 period, just before the start of Pakistan's decade of stagnation.

We start with sectoral shares of GDP. Figure 17 show the shares of value added by each of the three major sectors, Industry, Agriculture and Services, from 1990 to 2021.

Both India and Bangladesh started with higher shares of agriculture value-added than Pakistan, both have reduced this share over time, a sign of modernisation of their respective economies. Pakistan, where the share of agriculture declined rapidly in the 1960s, has achieved barely any further reduction over the last 30 years. While Bangladesh has steadily increased industry's share in value-added, so that it is now higher in Bangladesh than in India, both Pakistan and India have seen industry's share decline in recent years. With India this decline reflects a fairly successful transition to exportable services, particularly IT, as we shall demonstrate later on.

Figure 17: Sectoral Shares of GDP, 1990-2021



Source: WDI Database

Neither of these pathways towards modernisation has been followed by Pakistan. At a superficial level, Pakistan too has grown its service sector (in terms of share of GDP). But the implications for the growing importance of this sector in the case of Pakistan are very different from those in India. Before going on to discuss these differences, we compare the sectoral distribution of work across the three countries. This is shown in Figure 18.

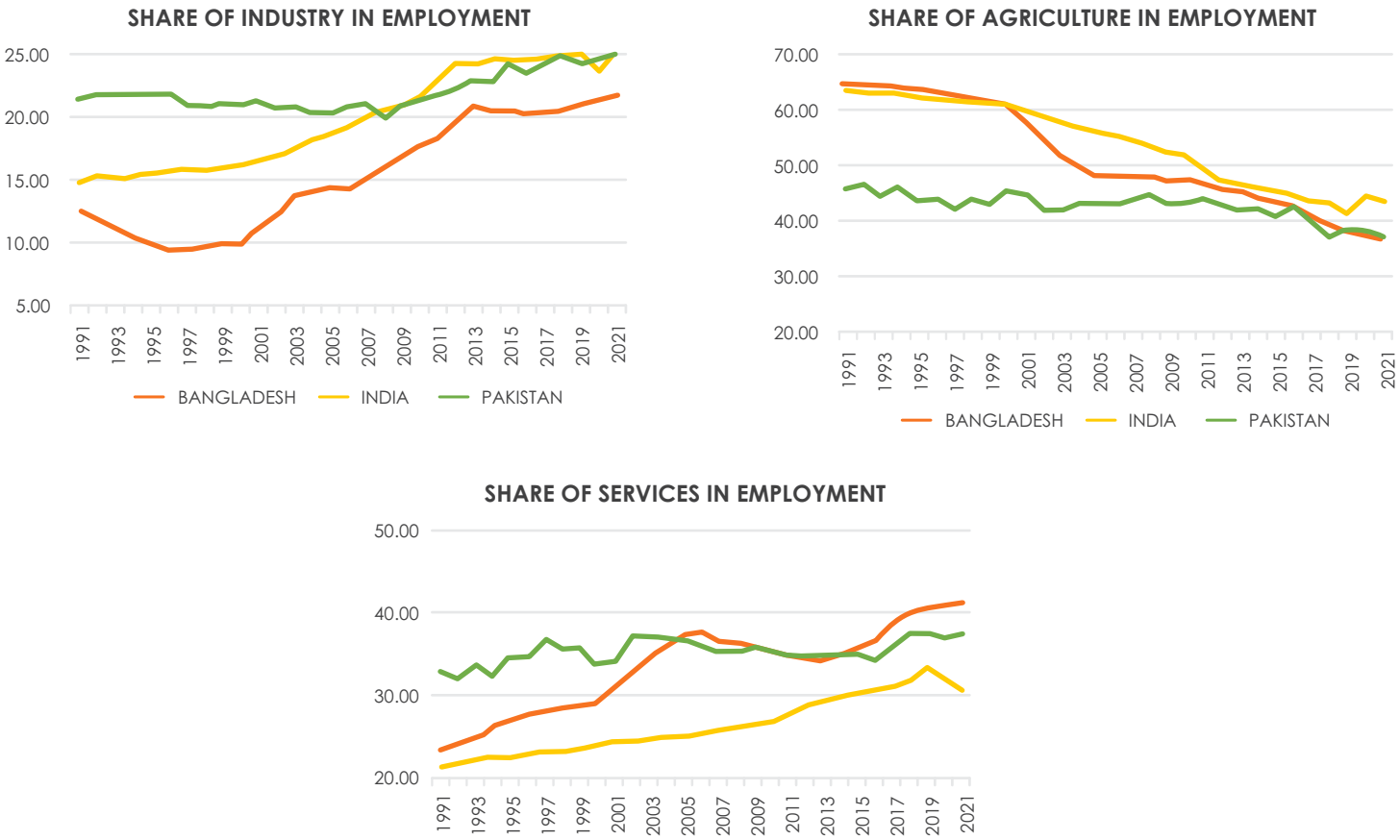
Over the period of interest, India and Bangladesh both show an increasing share for industry and a decreasing one for agriculture. In India, industry's share of employment has increased despite a reduction in its share of GDP. Pakistan, which started with a higher share of employment in industry has seen only modest growth in that share, which has mostly occurred over the last decade. Agriculture's share has seen a modest decline, also mainly in the last decade. All three countries have seen the employment share of services grow over the last three decades, with Bangladesh experiencing the highest growth.

Given the increasing contribution of services to both value-added and employment in all three countries, it is worth asking how this is affecting their trade competitiveness. The conventional view of the services sector is that its output is not traded and that labour productivity is generally low in this sector, so their growing share of GDP would be seen as a sign of Dutch Disease. This view has been challenged in recent times, when modern services such as finance, banking and communication are arguably both traded and generate high value-added are contrasted with traditional services such as retail and hospitality which fit the conventional stereotype (Nabi, 2010).

Indeed, the dollar value of service exports has been increasing in all three countries, although

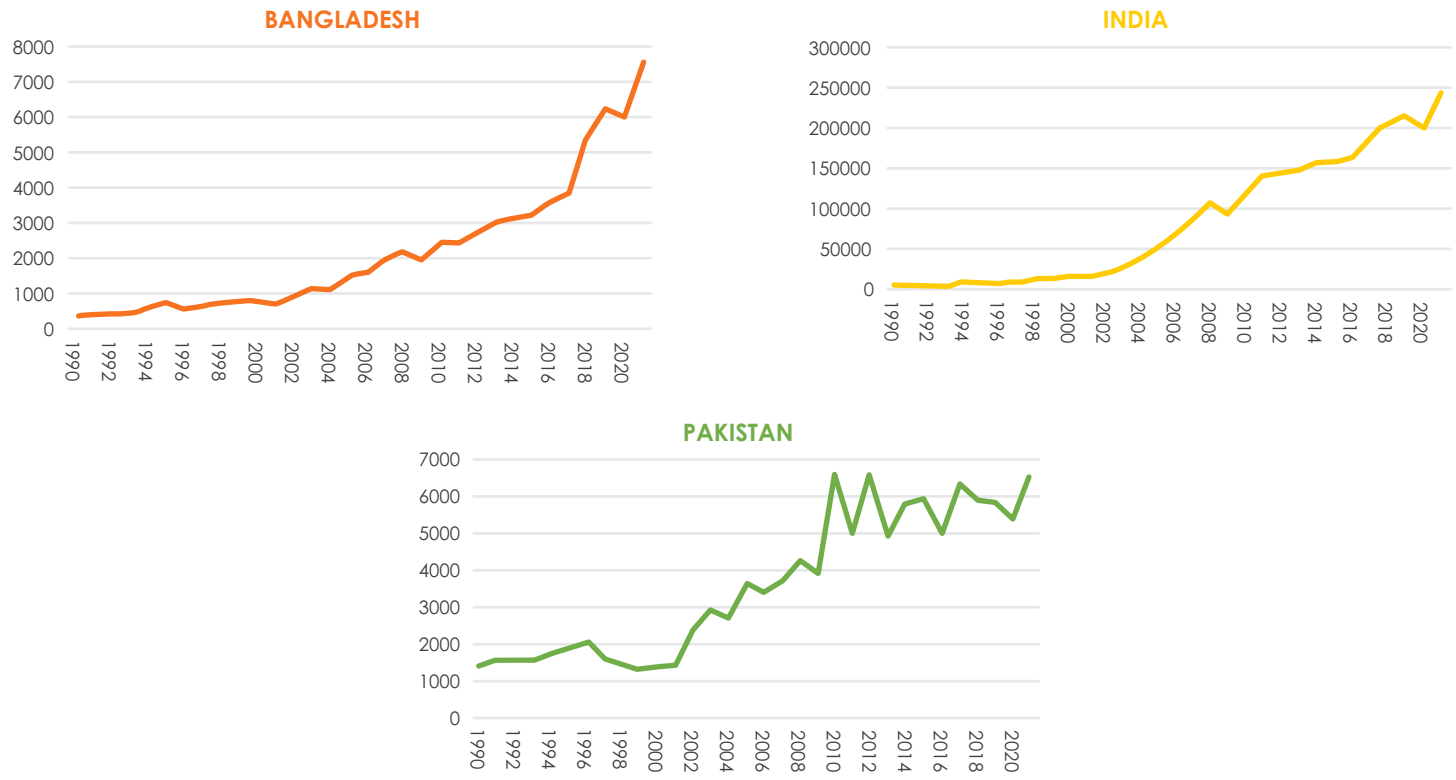
not consistently for Pakistan (see Figure 19). Increasing dollar values do not necessarily mean growth in the relative importance of exportable services to domestic production in general and total exports in particular. To gauge these effects, we turn to intensive measures, namely he ratio of service exports to total exports or to GDP.

Figure 18: Sectoral Shares of Employment, 1991-2021



Source: WDI Database

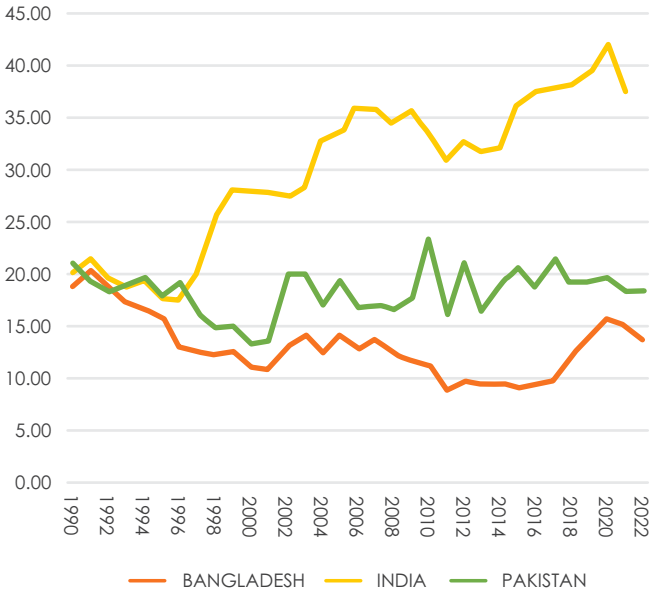
Figure 19: Service Exports (millions of current USD), 1990-2021



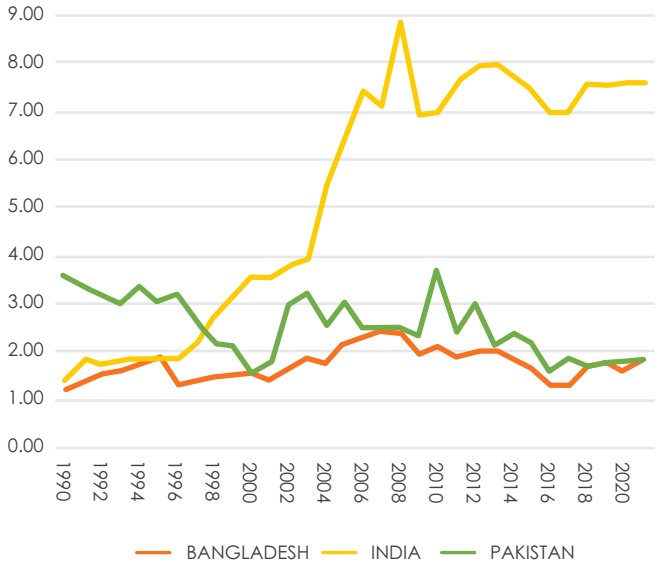
Source: WDI Database

Figure 20 shows service exports in proportion to (i) total exports and (ii) GDP for the period starting in 1990. In 1990, the three countries had roughly similar ratios of service exports to both total exports and GDP. Since then, India has clearly moved towards service exports in a big way. By 2020, they accounted for close to 40% of India's export earnings and 8% of its GDP. In Pakistan, the corresponding figures were approximately 20% and 2% respectively and these were not much changed from 1990. Bangladesh was the least reliant on service exports for either export earnings or overall GDP.[19]

Figure 20: Service Exports as % of Total Exports (Left), % of GDP (Right).



RATIO OF SERVICE EXPORTS TO TOTAL EXPORTS (%)



RATIO OF SERVICE EXPORTS TO GDP (%)

Source: WDI Database

We can see that in India, the rise of the service sector has been accompanied by an increase in the relative importance of service exports to both total exports and GDP. The same cannot be said for Pakistan or Bangladesh. In Bangladesh, however, the saving grace is that manufacturing, not services, has been the fastest growing sector. The question arises whether manufactures have played the same virtuous role of increasing Bangladesh's export potential as services have for India. Figure 21 compares manufactured exports relative to GDP for all three countries, between 1990 and 2013.[20] We see that, as with other indicators, Pakistan's ratio started off higher than that of the other two countries but it has not only fallen behind them, it has declined, Bangladesh, on the other hand, has indeed steadily increased this ratio. Thus, both Bangladesh and India show a pattern of evolution in their respective economic structures that appears to complement their export potential, but Pakistan does not.

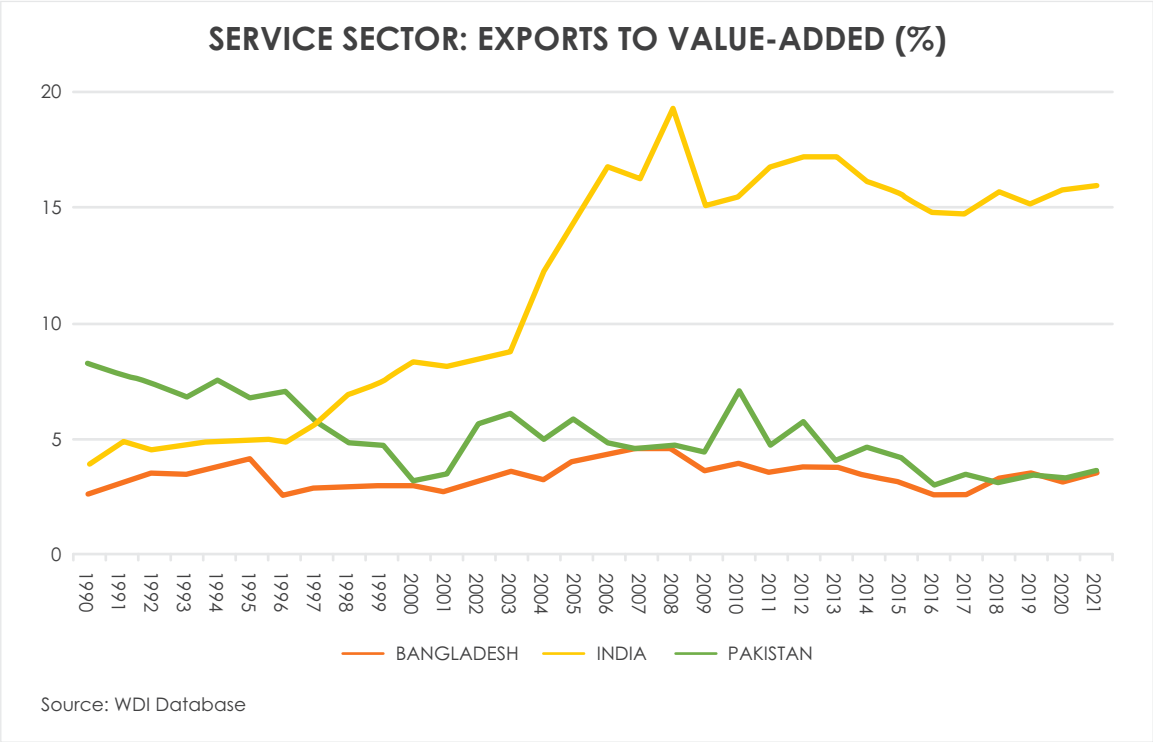
[20] The data do not go beyond 2013 for Bangladesh and some years of data are missing for both Bangladesh and Pakistan.

Figure 21: Manufactures Exports as % of GDP

Source: WDI Database

Given that in line with the traditional view of the service sector, some services such as hospitality, healthcare and housing, remain non-tradeable in most countries, the extent to which growth of that sector can be seen as contributing to Dutch Disease will depend on how the balance of tradeable to non-tradeable activities changes within that sector as it grows. The greater the share of non-tradeable services the more likely is it that growth of services is a sign of Dutch Disease. While we do not have data that would enable us to comprehensively decompose the service sector into its constituent parts, we can infer something about that composition by looking at the ratio of service exports to service value-added, both measured in dollar terms. Figure 22 shows this.

Figure 22: Services Exports as % of Services Value-Added (%)

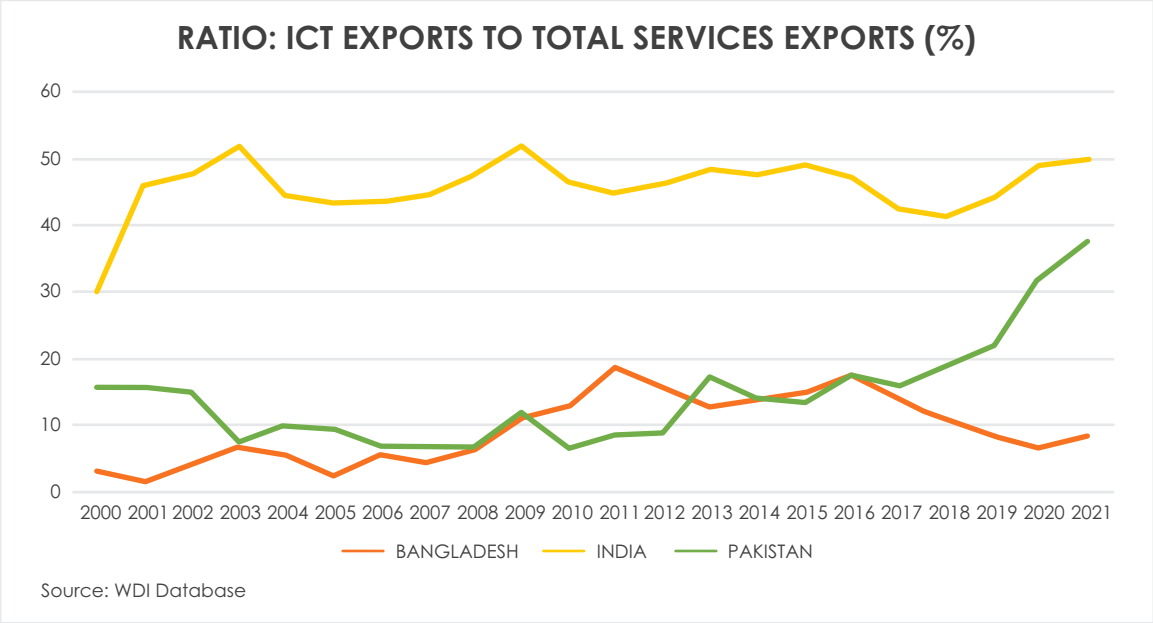


Source: WDI Database

Starting with exports of only 4% of its services output in 1990, India has raised this ratio, albeit with a few bumps, to over 15%. In Pakistan, the movement has been in the reverse direction. Starting with a ratio of exports to value added of 8%, Pakistan has recently been exporting about 4% of value-added in services. In Bangladesh the ratio has not changed much over this period. India's service sector therefore appears to have a relatively greater proportion of tradeable services than either Pakistan's or Bangladesh's. Again, Pakistan stands out as the country that has been unable to grow its tradeable sectors, via either services or manufactures, consistent with Dutch Disease symptoms.

One relatively optimistic exception to this otherwise bleak scenario is Pakistan's ICT sector. Over the last seven years, ICT service exports from Pakistan increased steadily from 789 million USD to 2.65 billion USD. This represented not just an absolute increase but also a growth in sectoral importance, as shown in Figure 23.

Figure 23: Share of ICT Exports in Total Services Exports (%)



Source: WDI Database

While India's ICT services have been famously portrayed as dynamic source of the economy's growth, this sub-sector's importance to Pakistan has also grown and recent trends suggest a narrowing of the gap in their relative importance to the two countries. What the facilitators of this growth have been in Pakistan is a matter for separate research.

To sum up, it appears that while India and Bangladesh have experienced roughly similar levels of emigration, and Bangladesh receives a similar share of remittances to its GDP, as Pakistan, its two comparators have managed to avoid the worst of Dutch Disease by developing their exports in the services and manufacturing sectors respectively. Pakistan, on the other hand, has not shown the same adaptability. Remittances have most likely contributed to this stagnation via both the effects on real exchange rates and trade balances and their effects on labour markets, fiscal discipline and consumer behaviour.

Sources of Structural Stagnation

We have discussed several developments in Pakistan's economy coinciding with a period of high remittances that can be seen as symptoms of Dutch disease. These include periodic over-valuation of the exchange rate, increasing consumption, rising trade deficits and reduced domestic supply of labour, especially of skilled workers. We have also seen that the overall stagnation of structural evolution in the economy. We have argued that this stagnation, combined with remittance-induced Dutch disease symptoms, may have mutually re-enforced the loss of international competitiveness.

In this section, we discuss the factors behind Pakistan's structural stagnation. Section 7.1 presents key productivity trends as evidence of declining international competitiveness. As argued by Montiel (2006) and others, monetary

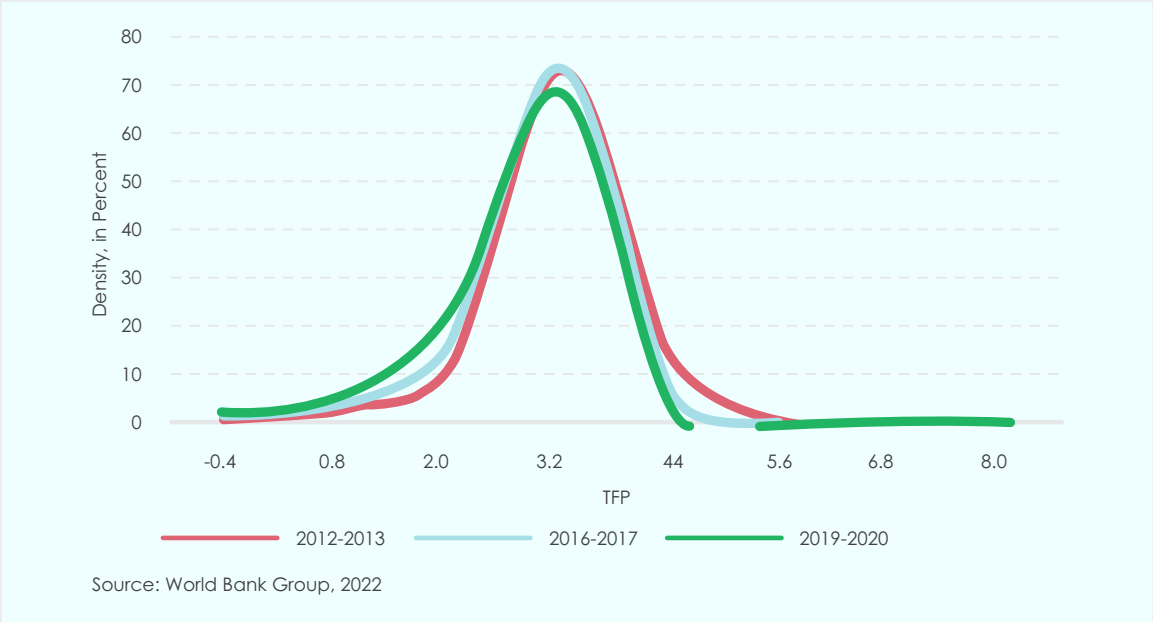
intervention to counter real effective exchange rate appreciation may be necessary but is not sufficient; a proper policy response requires putting the economy on a higher productivity trajectory via fiscal interventions that stimulate infrastructure improvement, upgrade the workforce and attract FDI. In section 7.2 we discuss salient pathways that would put the economy on a higher productivity path. In section 7.3 we assess the role of fiscal policy in launching the pathways as counterweight to remittance induced loss of competitiveness.

Stagnating Productivity

Evidence presented in a recent World Bank report is that overall productivity growth has slackened in recent years (World Bank, 2022). Between 1991-2021, labour productivity (measured in constant 2015 US dollars value added per worker) in Pakistan increased from about $3200 to $4700, a multiple of 0.5; over the same period, labour productivity in Vietnam shot up from $1200 to $6000, a multiple of 5.

Productivity trends at the firm level corroborate the stagnation in overall productivity. They also reveal variability across firms and shed light on the points of remedial policy interventions.

Figure 24: Total Factor Productivity at the Firm Has Stagnated Over Time



Source: World Bank Group, 2022

The study also reports that most of the slow-down in productivity growth is because firms are not bringing about the needed changes in managerial practices and technology. Loss making firms, including many state-owned enterprises (SOE's) upstream in the production chain, have low productivity and survive on subsidy. Firm size remains small despite age. This is the case even for exporting firms: Pakistani exporting firms on average exported US$1.5 million in 2021 compared to US$3.8 million by the average Bangladeshi exporting firm (World Bank, 2022). Small size and longevity of loss-making firms discourage productivity enhancing innovation.

The productivity trend in agriculture is also not promising. Following a decade of impressive growth 1960-1970, total factor productivity (TFP) in agriculture has grown sluggishly in most years and decreased in some, by as much as 3% in the period 2011-2013 (Malik et. al., 2016). At the provincial level, the two main crop-growing provinces of Sindh and Punjab experienced negative growth rates of TFP over the period 1960-2006, at annual averages of -0.18 and -0.5 respectively. These were offset partially by slightly positive growth of 0.60 in Khyber-Pakhtunkhwa (KPK) and 0.18 in Baluchistan (World Bank, 2022). Much of the growth in Pakistan's agricultural output has therefore been due to great input use rather better technology. Unchecked climate change will mean even greater productivity declines going forward (see below).

Sectoral employment shares reflect Pakistan's stagnating labour productivity. As we saw in

Figure 18, the share of agriculture in employment has hovered around 40% for the last three decades, despite the sector's stagnating productivity growth. When labor does move out of agriculture to other sectors, the productivity jump is modest since the productivity gap between agriculture and manufacturing and services is small and declining because of productivity decline in the latter.[21]

Pathways to Improve Productivity

Underpinning the loss of international competitiveness that perpetuates the Dutch disease is declining productivity. Addressing the exchange rate over-valuation alone will thus not be enough. This sets the stage for a discussion of the various channels through which productivity can be enhanced.

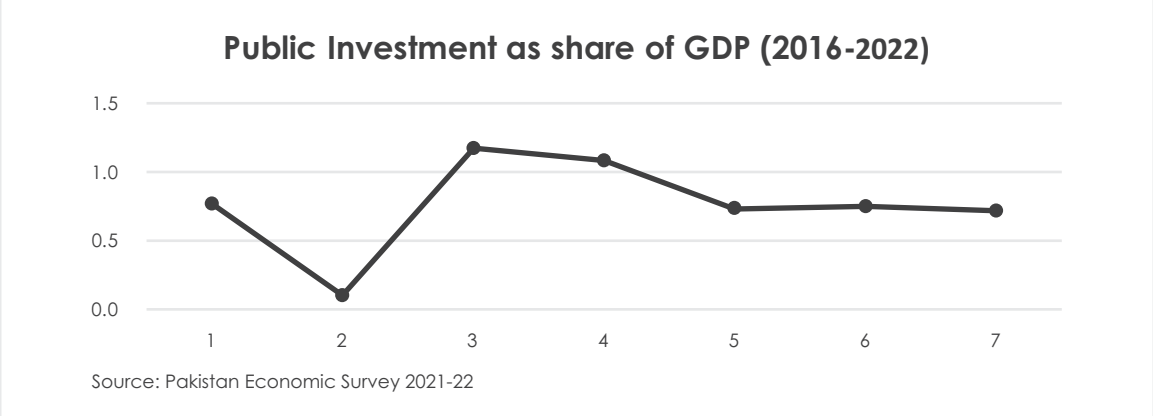
More Exporting Firms

Overall high growth is sustained when it is driven by firms that export. Competition in the international market encourages innovation and unleashes productivity. Firms exporting to rich country markets are more innovative (Wadho et. al., 2019) and better managed than others (Choudhary et. al., 2018). Publicly listed companies' data corroborates this: it shows that exporting companies have higher productivity compared to domestically oriented firms. The falling share of exports in GDP is thus of concern because of the implications for overall productivity in the economy.

Upgrading Infrastructure

Improving infrastructure beyond energy, such as ports, inland rail and road haulage, is another instrument for restoring competitiveness of firms. A well-designed public investment program, that crowds in private investment in such infrastructure, is key here. The reality is that fiscal deficit targets have been met largely by cutting back public investment instead of increasing revenue and sharply reducing untargeted subsidies. Improvements in inland transport and port operations have been postponed.

Figure 25: Public Investment 2016-2022



Source: Pakistan Economic Survey 2021-22

Building Agriculture Resilience

Crop yields have been low and climate change induced increase in heat and rainfall variability pose additional challenges affecting international competitiveness in agriculture. It is expected that wheat yields will be lowered by climate induced effects on temperature (higher maximums and lower minimums), precipitation, humidity and wind speed (Burki et. al., 2022). This requires an effective agriculture research network to promote green innovation and re-orienting of agriculture subsidies. Little attention has been paid to this.

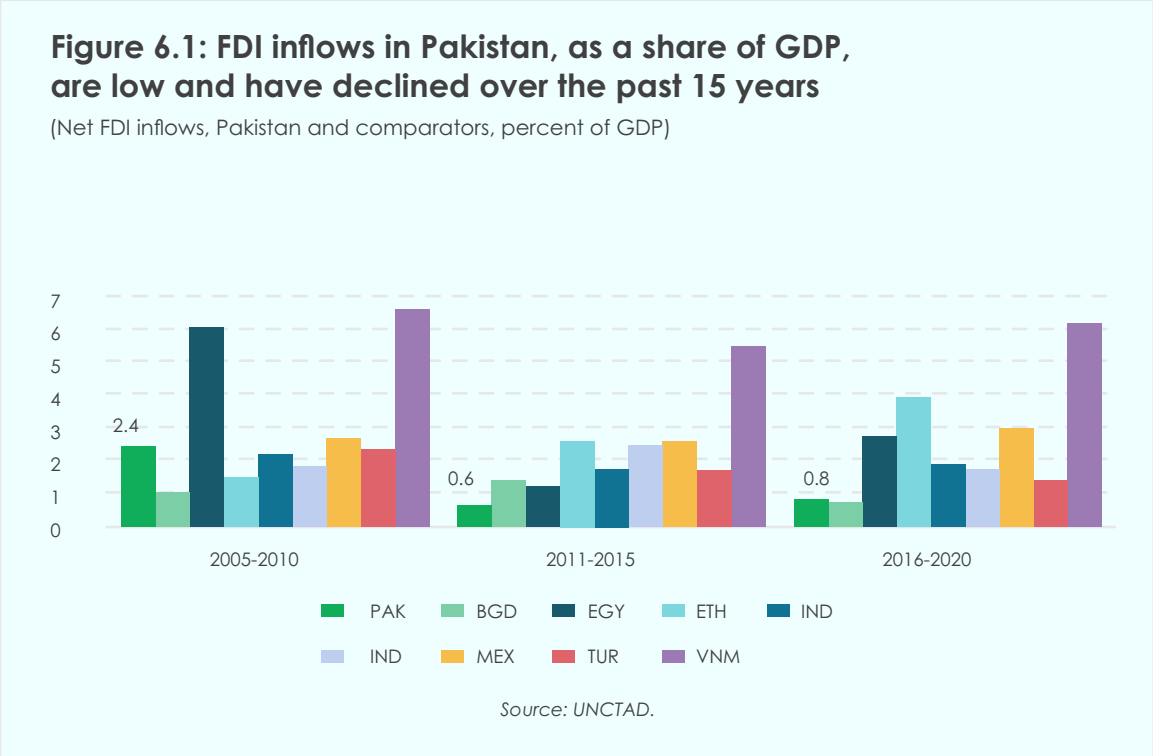
Attracting FDI

Foreign direct investment can be an important source of innovation in management practices, production technology and market access, key elements of productivity growth (including via productivity spillovers for firms connected to FDI firms). According to World Bank (2022), Pakistan has an untapped potential to attract US$2.8 billion worth of FDI annually. Privatization of SOE's, a well-designed

[21] An ADB Working Paper reports that while India's and China's labour productivity in services has, since the 1990s, grown at an average of approximately 8%, Pakistan belongs to a set of countries where the average is a meagre 2-3%. In industry, both India and Pakistan belong to an underperforming set of countries whose growth in labour productivity is eclipsed by high performers such as Malaysia, Thailand and China (Noland et. al., 2012).

program for upgrading the trade infrastructure, farming and food processing and textiles present opportunities for realizing the productivity enhancing FDI potential. This has been on the reform agenda for many years and, if implemented, would have helped alleviate the adverse impact of high remittances and concessionary capital flows on international competitiveness.

Figure 26: Public Investment, Various Countries, 2005-202



Raising female labour force participation

It is well recognized that transformative growth cannot happen when a large section of the population is outside the labour force or stuck in low productivity jobs. Malaysia achieved high growth in the three decades 1970-1990's by bringing women into the formal labour force, especially manufacturing exports. Rising female labour force participation rate (FLPR) is also an important factor in Bangladesh's ongoing transformation. Vietnam's rapid productivity growth also correlates well with its very high FLPR rate. In Pakistan, although the FLPR has been gradually increasing over time (unlike India where it has been declining) the current rate remains low at 23.3%. This can be improved through more years of schooling for girls and improving their working conditions. It is estimated that achieving Bangladesh's FLPR could increase GDP by 20 percent, a substantial jump in productivity (World Bank, 2022).

Table 5: Female Labor Force Participation Rate, 2022 (Percentage of Total Labor Force)

Vietnam	69.1
Malaysia	52.7
Bangladesh	37.7
Pakistan	**23.3**

Source: WDI Database

The Fiscal Headroom and the Perverse Tax Structure

Getting on the pathways to productivity growth will require regulatory reform to lower the cost of doing business for exporting firms, to attract FDI and to increase FLPR. However, fiscal headroom is also needed to upgrade infrastructure and increase years of schooling for workers especially women. Not being able to fund the pathways because of the lack of fiscal space is an important reason why Pakistan's Dutch disease has persisted.

Importantly, poor design of the tax structure has reinforced the Dutch disease problem by making it more attractive for firms to move out of tradeable to non-tradeable activities. Because of policy forbearance and weakness in tax administration, real estate plots and retail and wholesale trade enjoy much lower taxation than manufacturing and other corporate activity. This results from poor valuation, low capital gains tax rate and rampant regulatory forbearance (for real estate) and exclusion from the sales tax net for much of wholesale and retail trade (CDPR, 2023).

Table 3: Direct Tax Collection Gap 2018-19

	% Share in Tax Collection	% Share in GDP	Gap
Manufacturing	34.5	22.5	12
Wholesale and Retail Trade	2.96	18.2	-9.3

Direct taxes include tax demanded, voluntary payments and tax withheld.

Source: CDPR (2023)

Table 4: Property Tax Collection (% GDP), 2020-21

France	3.96
United Kingdom	3.16
USA	3.12
China	1.32
Mexico	0.31
Bangladesh	0.2
India	0.8
Pakistan	**0.003**

Source: IMF, GFS year books, Provincial budget statements

The need to plug the chronic fiscal deficit and the failure to broaden the tax net have resulted in higher import duties which, combined with problems in getting duty refunds (drawbacks), has exacerbated the difficulties of exporting firms (Nabi and Nasim, 2023). World Bank (2022) estimates that import duties on intermediaries increased by 50 percent in the past decade, which accounts for 85 percent of the firms' productivity slowdown.

The structure of subsidies has also not evolved to compensate for Dutch disease symptoms. The energy subsidy, the largest in terms of overall budget, is greater for residential consumers than for manufacturing units and among exporters for insiders (older, better entrenched players) than for outsiders (newer more dynamic players).

Conclusions

We have examined a variety of outcomes associated with large inflows of overseas remittances. Our statistical analysis has been largely comparative and what we have inferred from it is just that remittances appear to be associated with Dutch Disease symptoms in Pakistan but not in its neighbours.

We are not arguing that remittances by themselves are causing Dutch Disease; rather that weak economic structures are leaving Pakistan vulnerable to its symptoms. Non-traded services seem to be the growth sector of Pakistan. Our hypothesis is that with nowhere else to go, remittances are being spent on consumption and real estate acquisition, driving growth in the retail and construction sectors. In Bangladesh, manufacturing and in India, tradable services are the growth sectors, absorbing funds in a way that contributes to further enhancements of each country's export potential.

We do not wish to imply that India or Bangladesh represent role models for Pakistan to follow. Much of India's success comes from IT services which do not generate the type of mass employment that a labour-abundant country needs to uplift its population and reduce inequalities. Bangladesh relies heavily on a few manufacturing sectors, particularly textiles and apparel.

What our evidence enables us to deduce is that Pakistan's regional comparators have been better at evolving their economic structures in directions that strengthen export capacity and thus reduce reliance on remittances as a source of foreign exchange. The importance of reducing such reliance was highlighted by the pandemic and the ensuing disruption of migrant labour. In addition, the GCC countries cannot be counted on to maintain their demand for migrant labour forever.

In the 1960s, Pakistan seemed to have a road map for industrialisation and modernisation along which it was moving along with considerable if not complete success. From the 1990s onwards there appears to have been no roadmap.

While the sort of planning used in 1960's Pakistan is now largely discredited, governments continue to play a leading role in shaping the development process. Pakistan has fallen behind not just in macroeconomic performance but also in improving the social and material lives of its masses. While Bangladesh started improving on this front long before India and Pakistan, in recent years India too has opened up a gap in areas such as school attainment and family planning.

It is possible that Chami et. al.'s (2008) argument that remittances lead to national complacency helps explain why successive governments have failed to address Pakistan's prolonged stagnation. The steady growth in living standards that has been enabled by remittances might have blunted the public's appetite for demanding reforms. However, the recent balance of payments crisis, combined with energy shortages, high inflation and political turmoil suggest that public's patience might be wearing thin.

Any reforming government will have to contend with the fact that Pakistan's existing industrial and commercial landscape appears beset by contradictions, conflicts of interest and red tape. As an example, consider Pakistan's commercial services sector which has done relatively well and risen in world rankings based on export earnings. According to the Pakistan Business Council (PBC), among the bottlenecks endangering the sector's future competitiveness and growth are the following: multiple regulatory authorities, ambiguities in tax laws, weak protection of intellectual property rights, and poor communication infrastructure. All of these bottlenecks fall within the public sector's remit and it should be the

government that fixes them. Moreover, at least some of these issues appear to be curable without a massive outlay of funds.

BIBLIOGRAPHY

Acosta, P., P. Fajnzylber and H. Lopez (2007): The effect of remittances on poverty and human capital: Evidence from Latin American household surveys, Journal of Population Economics, 19(2), 227-254.

Acosta, P., E. Lartey, E. and F. Mandelman (2009) : Remittances and the Dutch disease, Working Paper, No. 2007-8a, Federal Reserve Bank of Atlanta, Atlanta, GA.

Adams, R. (1998): Remittances, investment and rural asset accumulation in Pakistan, Economic Development and Cultural Change 47(1), 155-173.

Adams, R. and J. Page (2005): Do international migration and remittances reduce poverty in developing countries? World Development 33(10), 1645-1669.

Aggarwal, R., A. Demirguc-Kunt and M. Peria (2006): Do workers' remittances promote financial development? World Bank Policy Research Working Paper 3957, Washington DC.

Ahmed, H. (2009): Capital flows and real exchange rate overvaluation - a chronic ailment: Evidence from Pakistan, Lahore Journal of Economics September 2009, 51-86.

Alderman, R. (1996): Savings and economic shocks in rural Pakistan, Journal of Develop- ment Economics 51, 343-365.

Amuedo-Dorantes, C. and S. Pozo (2004): Workers' remittances and the real exchange rate: A paradox of gifts, World Development 32(8), 1407-1417.

Amuedo-Dorantes, C. and S. Pozo (2006): Migration, remittances and male and female employment patterns, American Economic Review 96(2), 222-226.

Ang, A.P., G. Sugiyarto and S. Jha (2009): Remittances and household behaviour in the Philippines, Economics Working Paper Series No. 188, December 2009, Asian Development Bank, Manila.

Asian Development Bank (2022):

Barajas, A., R. Chami, D. Hakura and P. Montiel (2011): Workers ' remittances and the equilibrium real exchange rate: Theory and evidence, Economia 11(2), 45-99.

Bayangos, V. and K. Jansen (2011): Remittances and competitiveness: The case of Philippines, World Development 39(10), 1834-1846.

Bourdet, Y. and H. Falck (2003): Emigrant remittances and Durch Disease in Cape Verde, Working Paper Series 2003:11, Kristianstaad University College, Sweden.

Burki, A. A., V. Arif and A. Memon (2022): Sensitivity of crop yield and TFP to extreme weather events in Pakistan's Punjab, mimeo.

Calero, C., A. Bedi and R. Sparrow (2008): Remittances, liquidity constraints and human capital investments in Ecuador, World Development 20, 1-11.

CDPR, 2003: Understanding informality in Pakistan's wholesale, retail and real estate sectors, Centre for Development Policy Research Study, Lahore, Pakistan. Commissioned by Pakistan Business Council

Chami, R., C. Fullenkamp and S. Jahjah (2005): Are immigrant remittance flows a source if capital for development? IMF Staff Papers 52(1), 55-81.

Chami, R., (2006): Beware of emigrants bearing gifts: Optimal fiscal and monetary policy in the presence of remittances, IMF Working Paper 06/61, International Monetary Fund, Washington DC.

Chami, R., A. Barajas, T. Cosimano, C. Fullenkamp, M. Gapen and P. Montiel (2008), Macroeconomic consequences of remittances, Occasional Paper 259, International Mone- tary Fund, Washington DC.

Chanda, R. and P. Gupta (2018): Indian migration to the Gulf: Overview of trends and policy initiatives by India, in P. Fargues and N. M. Shah (eds.) Migration to the Gulf: Policies in Sending and Receiving Countries, Global Labour markets and Migration Programme, Gulf Research Centre, Cambridge, UK

Chowdhury, M.B. and F. Rabbi (2014): Workers' remittances and Dutch Disease in Bangladesh, The Journal of International Trade and Economic Development 23(4), 455-475.

Choudhary A., R. Lemos and J. Van Reenen (2018): "Management in Pakistan: Performance and conflict." IGC Working Paper F-89459-PAK-1.

Funkhouser, E. (2006): The effect of emigration on the labor market outcomes of sender households: A longitudinal approach using data from Nicaragua, Well-Being and Social Policy 2(2), 5-25.

Gupta, S., C. Patillo and S. Wagh (2009): Effect of remittances on poverty and financial development in Sub-Saharan Africa, World Development 37(1), 104-115.

Hamid, N. and A.S. Mir (2017): Exchange rate management and economic growth: A brewing crisis in Pakistan, Lahore Journal of Economics September 2017, 73-110.

Hanson, G.H. and C. Woodruff (2003): Emigration and educational attainment in Mexico, mimeo University of California, San Diego, CA.

Hassan G. M. and M. J. Holmes (2013): Remittances and the real exchange rate, Applied Economics 45(35), 4959-4970.

Izquierdo, A. and P. Montiel (2006): Remittances and equilibrium real exchange rates in six Central American countries, mimeo, Williams College.

Jorda, O. (2005): Estimation and inference of impulse responses by local projections, American Economic Review 95(1), 161-182.

Kim, N. (2007): The impact of remittances on labor supply: the case of Jamaica, World Bank Policy Research Working Paper 4120, Washington, DC.

Kock, U. and Y. Sun (2011): Remittances in Pakistan: Why have they gone up and why aren't they coming down? IMF Working Paper 11/200, International Monetary Fund, Washington DC.

Kozel, V. and H. Alderman (1990): Factors determining work participation and labour supply decisions in Pakistan's urban areas, Pakistan Development Review, 29(1), 1-18.

Li, D., M.Plaborg-Muller and C. Wolf (2022): Local projections versus VARs: Lessons from thousands of DGPs, NBER Working Paper 30207.

Lopez, J.R. and M.A. Seligson (1991): Small business development in El Salvador: The impact of remittances, in S. Diaz-Briquets and S. Weintraub (eds.) Migration, Remittances and Small Business Development: Mexico and Caribbean Basin Countries, Westview Press.

Luthra, R. and L. Platt (2017): The changing face of Pakistani migration to the United Kingdom, AAPI Nexus 15(1/2), 1-42.

Maimbo, S.M. and D. Ratha (2005): Remittances: Development impact and future prospects, World Bank, Washington, DC.

Malik, S., S. Ali, K. Riaz, E. Whitney, M. Malek, A. Waqas (2016), Agriculture, land and productivity in Pakistan, in D. Spielman, S. Malik, P. Dorosh and N. Ahmad (eds) Agriculture and the Rural Economy in Pakistan: Issues, Outlook and Policy Priorities, International Food Policy Research Institute, Washington, DC.

Mien, E. and M. Goujon (2022): 40 years of Dutch Disease Literature: Lessons for Developing Countries, Comparative Economic Studies 64, 351-383.

Montiel, Peter J., 2006, "Workers' remittances and the long-run equilibrium real exchange rate: Analytical issues," Williams College, mimeo

Nabi, I. (2010): Economic growth and structural change in South Asia: miracle or mirage? DPRC Monograph, Lahore University if Management Science, Lahore, Pakistan.
Nabi, I. and A. Nasim (2023): Addressing Pakistan's chronic fiscal deficit, CDPR Monograph, Lahore, Pakistan

Noland, M. D. Park and G.B. Estrada (2012); Developing the service sector as engine for growth in Asia: An overview, Asian Development Bank Working Paper 320.

Rajan, R.G. and A. Subramaniam (2008): Aid and growth: What does the cross-country evidence really show? Review of Economics and Statistics 90(4), 643-665.

Ramey, B. and V. Ramey (1995): Cross-country evidence on the link between volatility and growth, American Economic Review 85(5), 1138-1151.

Ratha, A. and M. Moghaddam (2020): Remittances and the Dutch Disease phenomenon: evidence from the bounds error correction modelling and a panel space, Applied Economics 52(30) 3327-3336.

Rizwan M., R. Hiraoka and K. Taniguchi (2022): The role of the private sector in Pakistan's school education, Asian Development Bank Brief No. 208, February 2022.

Salas, V.B. (2014): International remittances and human capital formation, World Development 59, 224-237.

Snow, S. and E. Jones (2011): Immigration and the NHS: Putting history to the forefront, History and Policy, blog https://www.historyandpolicy.org/

Sofranko, A. J. and K. Idris (1999): Use of overseas migrants' remittances to the extended family for business investment: A research note, Rural Sociology 64(3), 464-481.

Taylor, J.E. (1992): Remittances and inequality reconsidered: Direct, indirect and in- tertemporal effects, Journal of Policy Modelling 14, 187-208.

Wadho, W., M. Goedhuys and A. Chaudhry (2019): Young innovative companies and employment creation: Evidence from the Pakistani textiles sector, World Development 117: 139–152.

Woodruff, C. and R. Zenteno (2001): Remittances and microenterprises in Mexico, mimeo, University of California, San Diego, CA.

World Bank (2022): From swimming in sand to high and sustainable growth, mimeo, World Bank, Washington DC.