

Anti-corruption in Pakistan's pharmaceutical sector: A political settlement analysis

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July 2020

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Acronyms and abbreviations

API	Active pharmaceutical ingredient
DRAP	Drug Regulatory Authority of Pakistan
FGDs	Focus group discussion
GDP	Gross domestic product
GMP	Good manufacturing practices
HIES	Household and Income Expenditure Survey
KII	Key informant interview
MRP	Maximum retail price
PPMA	Pakistan Pharmaceutical Manufacturers Association
WHO	World Health Organization

Acknowledgements

We are grateful to Ali Ahmed and Syeda Haleema Hasan for research assistance. This paper benefited from comments from participants at the SOAS-ACE workshop in London in 2019, and in particular we thank Mushtaq Khan and Pallavi Roy for their valuable insights. We are also grateful to Joanna Fottrell and Mushtaq Khan for feedback on an earlier draft that improved this paper. All errors of omission and commission remain ours.

Executive summary

The pharmaceutical sector in Pakistan forms a critical component in the provision of access to essential medicines for its citizens. However, the sector has hitherto been unable to perform efficiently. One illustration of this inefficiency is that the top 100 firms cater to 97% of the market, while there are 650 firms competing for the remaining 3% market share.

This paper focuses on ways to tackle private-sector corruption – rule-violating, rent-seeking processes – that has developmentally harmful effects. An important component of anti-corruption is the feasibility of reforms – only those reforms that are in line with the political settlement, or the distribution of power in society and the sector, can be successful.

Pakistan's political settlement is characterised by a high degree of fragmentation and competition between various organisations. The nature of the political settlement has meant that enforcement capabilities have remained weak and ruling coalitions have always operated on short time horizons. This is coupled with rents that have accrued from geo-political alignments which have then been distributed centrally. Consequently, rents have not been diverted to developmentally productive ends in the manufacturing sector. In the pharmaceutical sector, while firms have been able to capture rents individually, the sector as a whole has not benefited from any rents. Firms have been able to do this individually through overpricing, low-quality production and public procurement of medicines. In this paper we focus on the first two mechanisms.

All pharmaceutical products in Pakistan have price ceilings. This, combined with a policy of price rigidity, resulted in firms being incentivised to secure prices with very high initial margins and to substitute medicines that are no longer profitable to produce with higher-priced alternatives, as well as scarcity rents through hoarding and market shortages. The price rigidity, where governments do not grant price increases, exists because of populism that is reinforced by the media.

In 2015, and then again in 2018, a new pricing policy was introduced as a result of judicial intervention. While the new rule-based pricing eliminates these rents in theory, in practice they are likely to continue.

In addition, due to weak enforcement of rules, firms also produce low- or poor-quality medicines – including sub-standard, spurious and counterfeit drugs – by compromising on good manufacturing practices (GMPs), which are a necessary condition for the acceptable quality of medicines. By cutting costs on GMPs, the bottom 650 firms are able to survive on a small market share.

Our research – based on key informant interviews, focus-group discussions and secondary literature – suggests that the industry can be broadly categorised into two groups according to implementation of GMPs. Large technocratic firms, mostly in the top 100, are rule-following and enforce GMPs. In contrast, embedded firms, typically in the bottom 650, rely on personal networks for rents by violating rules and do not comply with GMPs.

These rents associated with overpricing and compromising on GMPs are harmful in two ways. First, consumers have to spend more because drugs are more expensive than they should be, and they also have to consume drugs for longer than necessary because they are of lower efficacy. For instance, the expenditure on medicines as a share of total health expenditure jumped from 45% in 2010–11 to 80% in 2015–16 for the lowest income decile in Pakistan. Second, when price increases are not granted, firms stop producing medicines which results in the shortages of essential drugs. Both the processes result in health and monetary costs for citizens in Pakistan.

To address the price rigidity, this paper proposes that the pharmaceutical industry, and in particular large firms, can build a coalition with the media to encourage a more informed discourse on drug pricing in Pakistan. It is in the interest of the larger technocratic firms, who are also relatively powerful within the sector, to enforce pricing rules, while the media has emerged as a powerful organisation in Pakistan's political settlement and is able to influence political and economic outcomes.

This anti-corruption strategy can be operationalised by firms financing the training of journalists in print and electronic media through independent journalism schools. By highlighting the impact of drug pricing decisions on social welfare, this coalition can incrementally decrease opposition to price increases. This would have the effect of opening up space for price increases to take place consistently in line with the pricing policy, which, in turn, would lead to fewer shortages and thereby increased access to medicines.

1. Introduction

Pharmaceuticals are critical to health systems, but poor drug access remains a global problem. The United Nations (UN) has included in its Sustainable Development Goals (SDGs) 'access to safe, effective, quality and affordable essential medicines and vaccines for all' (UN, 2020). However, the World Health Organization (WHO, 2017) estimates that nearly 2 billion people globally do not have access to essential medicines.

Pakistan is no exception to this, where access to medicines is a major concern (Zaidi et al., 2013). A number of issues along the entire health-sector spectrum mediate this access and can cause inequalities, from drug prices to health infrastructure to corruption (Cohen et al., 2007). This makes an understanding of Pakistan's pharmaceutical sector and its inefficiencies vital.

Discussions of corruption in Pakistan are usually concentrated on corruption by government officials and politicians, but private-sector corruption is also rampant. Borrowing from the literature on rent-seeking, we understand corruption here as rule-violating rent-seeking processes that create, capture or distort rents (Khan et al., 2019). In particular, we focus on rule-violating private sector rent-seeking that has developmentally harmful effects on private-sector performance.

Pakistan's pharmaceutical sector has developed a skewed structure, with the top 50 firms catering to 89% of the market and the top 100 firms catering to 97% of the approximately \$3 billion market. Another 650 firms compete for 3% of the remaining share. While the pharmaceutical sector is relatively concentrated across countries, the distribution of firms in Pakistan suggests that many firms in the industry may be capturing rents.

In a previous paper (Dawani and Sayeed, 2019), we examined how rents may be captured through different processes in the pharmaceutical sector: the pricing regime, the quality of medicines, and the public procurement of medicines. In this paper, we build on and update these earlier insights through further key informant interviews (KIIs) and three focus group discussions (FGDs), specifically focusing on pricing and quality in Pakistan's pharmaceutical sector.

Our focus on these aspects is motivated by two factors: first, some processes of rent capture may have a significant negative impact on welfare by increasing costs to consumers either monetarily or to their health as a result of poor quality; and second, because it may be feasible to address some of these rent-capture processes, given the distribution of power in society and in the sector, the 'political settlement'. This latter point is particularly important because there are many areas of corruption in developing countries that may be developmentally harmful, but which are difficult to address given the distribution of power.

The rest of this paper is organised as follows: in section 2 we analyse the political settlement in Pakistan, with a focus on the pharmaceutical sector; in section 3 we identify changes in drug pricing regulation over time and the consequent rents captured within the industry. Finally, in section 4 we identify a feasible anti-corruption strategy to target developmentally damaging rent seeking in the sector, given the political settlement, before we conclude in section 5.

2. Political settlement analysis

A political settlement has been succinctly defined as the 'distribution of power across political and economic organisations in a society' (Khan, 2017: 20). This framework enables an understanding of institutions in a society, the constraints that a ruling coalition operates in, and therefore also what policies can be implemented by a ruling coalition (Di John and Putzel, 2009; Khan, 2010). Hence, an understanding of these will enable us to subsequently locate feasible anti-corruption strategies.

Political settlement analyses have been conducted previously for Pakistan, including on the country's antecedents and early history (Sayeed, 1995, 2002; Roy, 2013). We build on these past analyses to map the evolution of the political settlement since the early 2000s, outlining the main organisations that are able to wield significant power in Pakistan's economy and society and describing stylised facts on Pakistan's economic trajectory over this period.

2.1. Pakistan's political settlement: mapping organisations that wield power

The military has been in a dominant position in Pakistan's political settlement and has tended to be actively and determinedly involved in shaping political and economic outcomes, regardless of whether it has been directly in power or not. Its organisational strength relative to other organisations, and the circumstances in which the country gained independence, has provided the impetus for the involvement of the armed forces in politics (Jalal, 1990; Nawaz, 2008). Over time, the military has also developed significant business interests, which, in turn, has further incentivised its involvement in economic and political outcomes (Siddiq, 2007)

Pakistan also has a long and abiding tradition of mobilisation through political parties that pre-dates the formation of the country. Political parties, as elsewhere, represent and incorporate various formal and informal organisations, including in the intermediate classes, that are occupationally mobilised. These organisations include trade unions, bar associations, and traders', farmers' and manufacturers' associations, and so on. Because of the multi-ethnic character of the country, over time, a number of political parties have also attained a distinctly ethnic character. While there is ethnic mobilisation which exists outside of mainstream political processes also, vote banks of most political parties have tended to become regional. Thus, their representation of ethnic identity issues has become endogenous to these regional realities.

Mobilisation around religious identity is also to a large extent coalesced around political parties. However, there are a number of sectarian and radical religious organisations that are not networked with political parties. These organisations may have temporary alignments with mainstream political parties but are known to have greater links with the non-elected state in Pakistan as they tend to mobilise around extracting a share of the rents Pakistan gets through its international geo-political alignments.

In the last decade, the electronic media and the judiciary have attained a level of power and influence to shape regional, local and international public opinion as well as domestic political-economic outcomes. The judiciary has attained its new-found influence and relative autonomy on the back of a mass mobilisation of lawyers to restore the then Chief Justice Iftikhar Chaudhry. This autonomy has given the judiciary enough relative power to influence political and economic outcomes in a manner it could not in the past (Kureshi, 2018). While there is no evidence, as such, on the judiciary seeking rents through its relative autonomy, lawyers (individually and collectively) are able to seek and extract rents to an extent that was not possible before (Khan, 2019).

The influence of the electronic media has also become an important conduit in influencing public opinion on political and economic outcomes. This influence can be located in the liberalisation of the media, first with the rise of privately owned television channels in the early 2000s, and second with the spread of social media (Sulehria, 2019). Its organisational power, however, is circumscribed, and rather than extracting rents autonomously, it is dependent on its alignments with political parties, religious organisations and/or the military for this purpose.

2.2. Salient economic patterns

Pakistan's economy can be characterised by low growth rates, with growth primarily driven by the services sector. Its manufacturing sector has performed poorly, and large-scale manufacturing, in particular, has been on the decline from 2007 onwards. In fact, economists have analysed the structural transformation of Pakistan and have noted that the stagnation of manufacturing has resulted in premature deindustrialisation (Hamid and Khan, 2015; Nazeer and Rasiah, 2016).

Figure 1 clearly illustrates that, in terms of growth, Pakistan's economy has been caught in a boom-bust cycle for the last two decades. These cycles correlate significantly with constraints that the country has faced on its external balances.

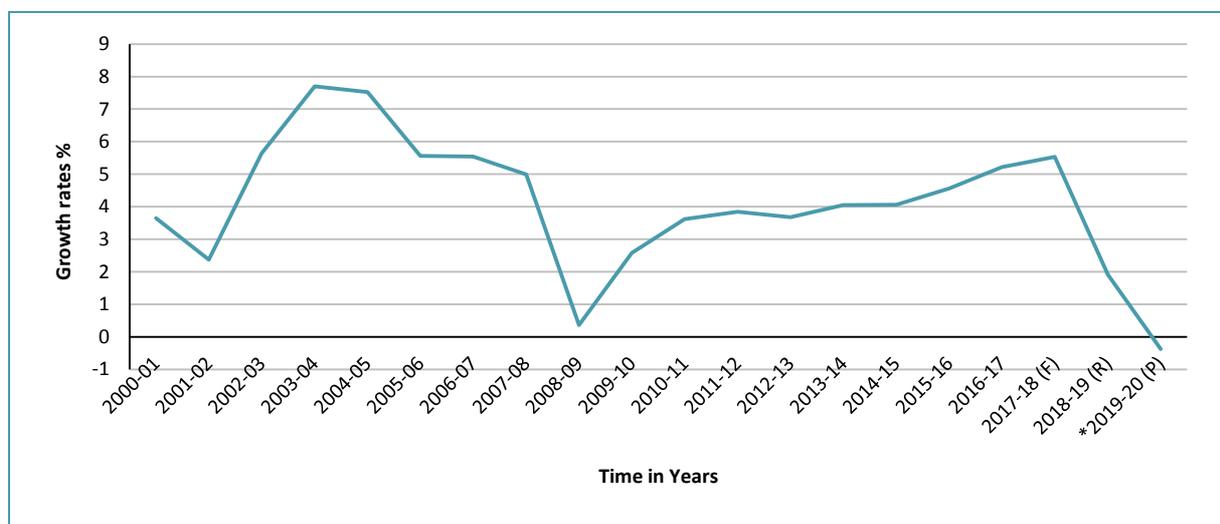
The boom from 2001 to 2004 is the period when the country was flush with the bounty it reaped from international geo-political transfers in the aftermath of 9/11. Debt relief and both civil and military aid from western powers boosted growth in the economy. Pasha (2018) characterises growth in this period as consumption-led because the liquidity constraint was relieved and a policy of an over-valued exchange rate was adopted. We can see that, post-2004, there is a steady pattern of growth deceleration as the trade deficit kept increasing. That this growth was not sustainable is amplified by the fact that once international oil and commodity prices spiked in 2007, there was a balance-of-payments crisis and growth rates came crashing down.

The period from 2008 to 2015 shows a modest recovery in growth at between 3–4% per annum. This pattern again started picking up in 2015 due to a higher degree of macro-economic stability and another round of consumption-led growth ensued along the same pattern as witnessed in the early 2000s. The sudden downward spike in 2018 came on the back of political instability that started in 2017 and culminated in the elections held in July

2018 as well as a high and unprecedented increase in the current account deficit. Partly because of the external balances crisis it inherited and partly because of its own mismanagement, the new government has presided over another bust in growth since the summer of 2018.

This boom-bust cycle signifies two important trends in Pakistan's aggregate growth trajectory. One, that the binding constraint to growth has been external account imbalances. As a result, Pakistan has had to resort to International Monetary Fund (IMF) funding almost every five years since the beginning of the 2000s. Second, when the economy is stable, governments have worked on a short time horizon and have increased consumption though subsidising imports.

Figure 1. Gross domestic product (GDP) growth rates at constant prices 2005-06



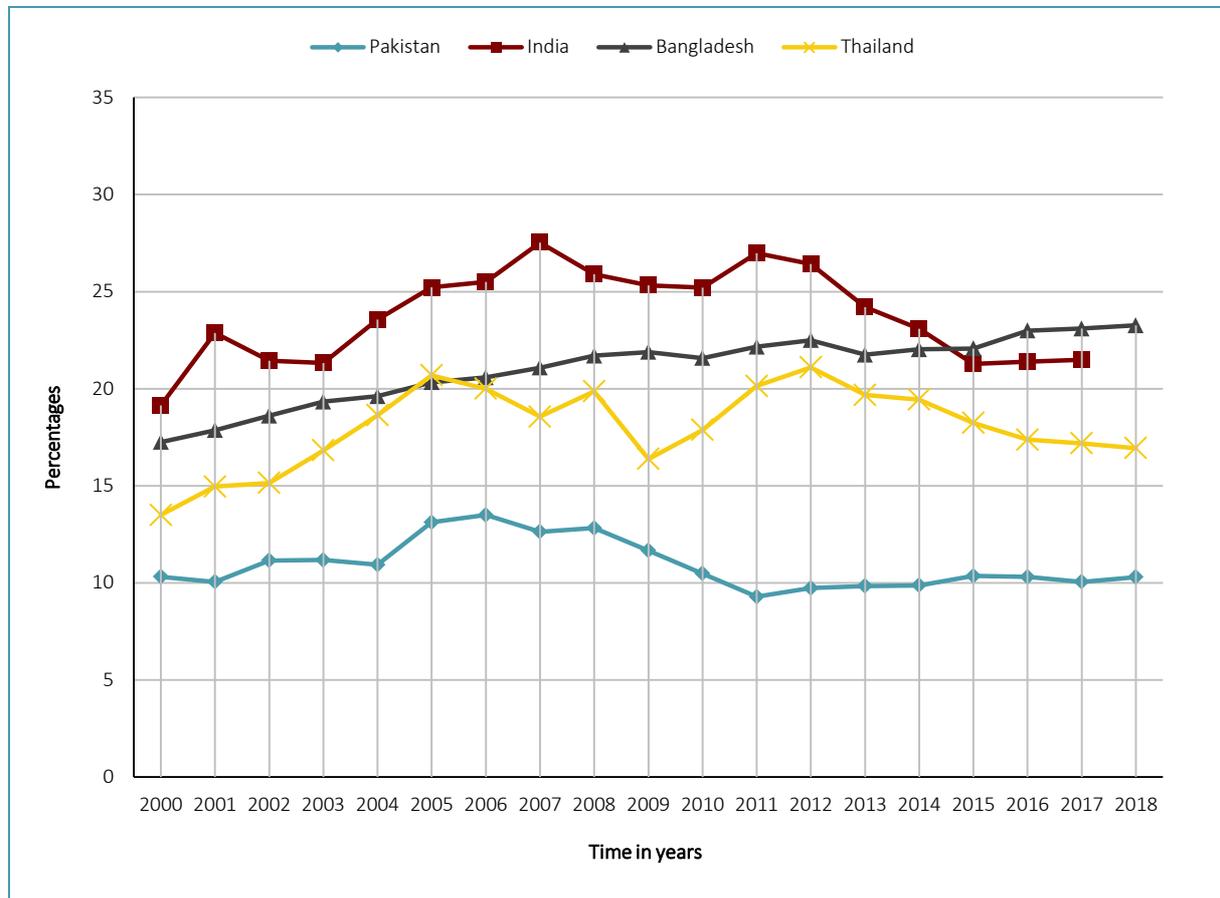
Source: Authors' calculations based on data from National Income Accounts, Pakistan Bureau of Statistics (<http://www.pbs.gov.pk/sites/default/files/tables/national-accounts/Table-6.pdf>)

Perhaps the most important underlying reason for Pakistan's below-par economic performance is its consistently low rate of private investment. We see in Figure 2 that Pakistan's rate of fixed investment in the private sector is significantly lower than that of other countries in the region and those similarly placed in terms of per capita GDP. Explanations for this gap in investment levels range from the lack of enabling infrastructure, low 'ease of doing business' indicators, the energy crisis, and high levels of violence and terrorism prevalent in the country.¹ Although each of these factors may have disincentivised private investors, a number of these hurdles – especially energy and human resource bottlenecks, and government red tape – have also been prevalent in other countries. Moreover, even at times when violence and terrorism was low in the country (as in the

¹ See Pasha (2018) and Husain (2018) for explanations along these lines for persistent low levels of investment in Pakistan.

beginning of the 2000s and in the post-2015 period) one does not see a discernable increase in the rate of investment.

Figure 2. Gross fixed capital formation in the private sector (% of GDP)



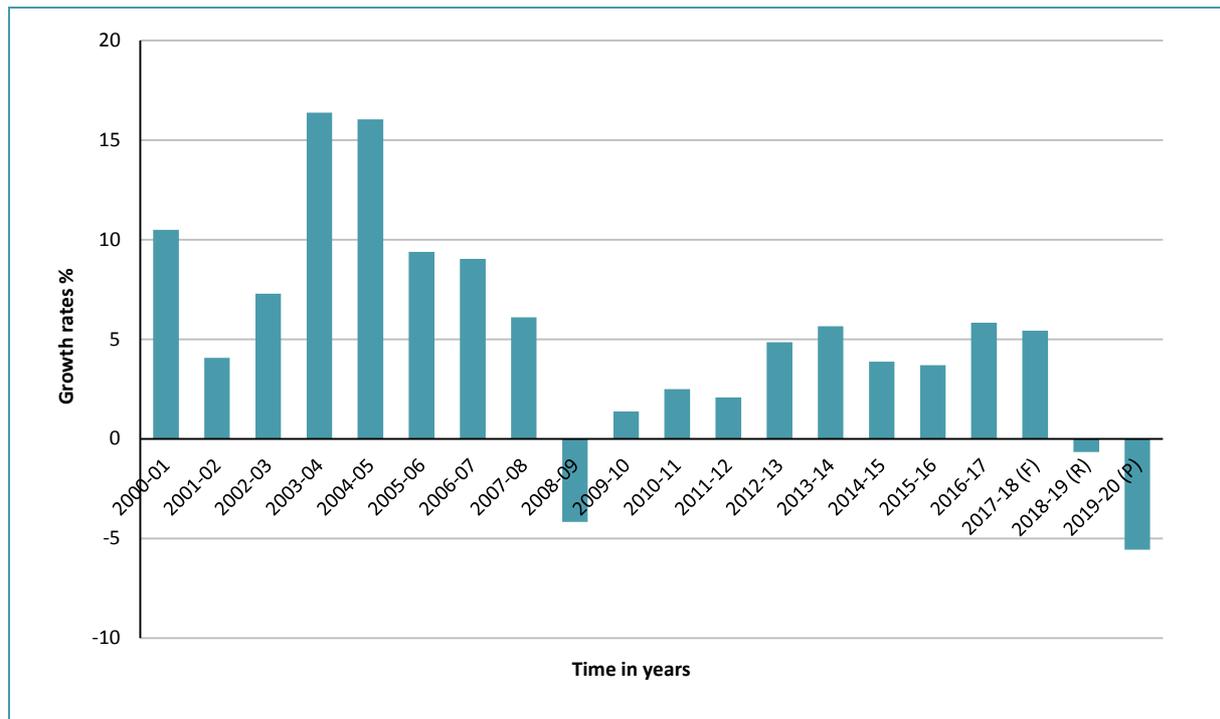
Source: World Development Indicators, World Bank (<http://datatopics.worldbank.org/world-development-indicators/>)

One important reason for this phenomenon is the nature of rents that have accrued to the economy and their subsequent distribution in the prevailing political settlements. As Khan (2014) and Roy (2013) have suggested, Pakistan has received significant geo-political rents over the last four decades and this contributed to a distortion of incentives. These rents were centrally disbursed and largely supported consumption-led growth as explained earlier, or were diverted to speculative activity, mainly real estate and the stock market. Since rates of return in speculative activity are significantly higher than in the productive sectors of the economy, we see a flat pattern in capital formation in the country.

Specific to the manufacturing sector, the growth pattern (as shown in Figure 3) has been low and volatile. The beginning of the 2000s did see healthy growth in the sector, but this decelerated after 2005 and the last decade has seen low or negative growth. The broad picture that Figure 3 thus portrays is one of a stagnating manufacturing sector. This stagnation links to a lack of competitiveness and sluggish export growth, which in turn has led to the country's perennial balance-of-payments crises.

There are several explanations for this process of de-industrialisation that we witness in Pakistan. Perhaps the most important are the policies of liberalisation and de-regulation pursued since the beginning of the 1990s, where liberalisation of imports at a time when the manufacturing sector did not have enough competitive nodes of growth is an important one.² Specific to the 2000s, Pasha (2018) mentions that the Free Trade Agreement signed with China in 2007 has had a particularly deleterious impact on manufacturing growth.³

Figure 3. Manufacturing sector growth rates (%)



Source: Authors' calculations based on data from National Accounts, Pakistan Bureau of Statistics (<http://www.pbs.gov.pk/sites/default/files/tables/national-accounts/Table-6.pdf>)

However, the underlying reason for de-industrialisation relates to the structural features of the manufacturing sector. Close to two thirds of manufacturing value added in the country is still concentrated around textiles and food processing. Another 10% of value added is in cement and automobile assembly. These industries are technological laggards with little prospects for achieving global competitiveness to enhance their global market shares.

The lack of emphasis on industrial policy and investment in the manufacturing sector is linked intimately to vulnerable political settlements with short time horizons and weak enforcement capacities, as we highlight in the following sub-sections. First, rents accrued by the manufacturing sector are crowded out by consumption, real estate and other speculative activities. Second, rents available to manufacturing are invariably diverted to the

² See Zaidi (2015) for a detailed description of this.

³ In 2016, 63% of Pakistan's global trade deficit in manufacturing was with China (Pasha, 2018: 126).

textile, food, cement and automobile sectors at the expense of higher value-added industries, such as electronics or pharmaceuticals where possibilities of technological deepening are greater (Nazeer and Rasiah, 2016).

2.3. Recent shifts in Pakistan's political settlement

Roy (2013) has characterised Pakistan's political settlement during the 1990s as one of '**competitive clientelism**'.⁴ In October 1999, Pakistan's military led by General Pervez Musharraf launched a military coup and dismissed the government of Prime Minister Nawaz Sharif. Parliament and all provincial assemblies were dissolved and the Constitution was held in abeyance. This coup shifted the political settlement to what can be labelled '**vulnerable authoritarianism**'.

The vulnerability of the regime stemmed from three factors. First, the ruling coalition had excluded the two mainstream parties that carried substantial organisational power. Second, at the time of the Musharraf coup, Pakistan's economy was precariously placed with a large debt over-hang. Pakistan had tested its nuclear weapons a year earlier, which had resulted in international sanctions and severe de-stabilisation on the balance-of-payments front (Sayeed and Rasheed, 2003). Third, this was also the period when the Taliban was ruling Afghanistan and Pakistan was under pressure to deliver concessions from that regime. Pakistan's global reputation as an abettor of terrorism was further fueled by its alleged role in helping the Kashmiri freedom fighters wage jihad in Indian Kashmir.

This vulnerability was relieved, to some extent, on the international front subsequent to the events of 9/11. The United States' (US) war in Afghanistan meant the need for logistical and military support from Pakistan. Not only was the military government's external liabilities reduced through a debt reprieve, but the country once again became the recipient of military and civil aid (Khan, 2014). These external sources of rents allowed rents to be further centralised (Roy, 2013; Khan, 2014). To consolidate the ruling coalition, rent distribution mainly occurred through the military. One of the sectors into which significant rents were diverted was land development and speculation – land developers are closely linked to retired and serving military personnel who are allocated land grants that can then be traded at high premia (Siddiqi, 2007).

The excess liquidity created because of foreign aid resulted in low interest rates and aggregate macro-economic stability that supported higher growth and investment rates (Pasha, 2018). But in the absence of an industrial policy, much of the excess liquidity went into the textiles, construction and the automobile sectors that lacked global competitiveness.

⁴ See Khan (2010) for a full description of the various types of political settlements.

However, due to the enhanced power of the central authorities in the 'top-down' allocation of rents arising from geo-political aid, the 'incremental inclusion of powerful political organizers' did not happen (Khan, 2014: 74–75). This meant that the ruling coalition remained unstable in the longer run given the power of excluded factions. The major political parties, with a large support base and networked with a number of informal organisations comprising the intermediate classes, were kept out of the ruling coalition. Since political parties also represent the ethnic elites, there were severe regional fissures created in the country as well. In addition to this, the ruling coalition had also alienated the religious extremists because of its alliance with the US in its war in Afghanistan. This meant that rents going to religious lobbies also dried up, who in turn responded to this exclusion through high levels of violence. The assassination of Benazir Bhutto at the end of 2007 was the final nail in the coffin for the Musharraf coalition, with the media and judiciary playing instrumental roles in overthrowing the regime.

From 2008 to 2017, Pakistan's political settlement again reverted to competitive clientelism. The electoral outcome of the 2008 elections gave a stake to all major political parties in coalition governments at the national as well as provincial levels. In 2009–10, to further institutionalise the inclusivity fostered by the coalition, the Constitution was amended to devolve more powers to the provinces through the 18th Amendment. To provide fiscal muscle to this devolution, the share of revenues going to the provinces was also enhanced through the 7th National Finance Commission Award. These two structural changes can be viewed as a rupture in the distribution of power (Behuria et al., 2017), as they increased the holding power of the regionally concentrated ethnic elite.

However, the particular ruling coalition that emerged post-2008 in Pakistan – despite being the most historically inclusive coalition due its co-optation of provincial elites – excluded the powerful military as well as religious groups. As outlined in Section 2.1, the military is a dominant organisation with significant holding power. Due to the strength of these newly excluded factions, the backlash from the organised religious groups ramped up levels of violence, the military started imposing costs, and political instability soon returned to the fold.

Rent distribution across the large ruling coalition meant that allegations of corruption surfaced. The media and judiciary, often working with the military (Shah, 2019), highlighted instances of corruption that further de-legitimised the coalition. Both economic growth and investment reduced during the period (see Figures 1 and 2) and expected support from the international community, particularly the US, never came through.

The characteristics of the political settlement survived the 2013 elections even though there was a change of government as a result. Post-2013, there was some consolidation in terms of economic stabilisation and improvement in growth, investment and manufacturing output. The onset of the China–Pakistan Economic Corridor (CPEC) also promised a new source of international rents that the coalition could benefit from. After 2014, violence also abated as there was decisive action against religious groups.

As the military exerted its influence, Pakistan's Supreme Court dismissed Prime Minister Nawaz Sharif on a 'technicality' in a corruption inquiry in the summer of 2017 (Shah, 2019). This began the process of dismantling the ruling coalition and altering the political settlement. The consolidation of the ruling coalition thus far had been perceived as further excluding the military and interests aligned to it. The elections of 2018, however, marked the evolution of the political settlement away from competitive clientelism to be replaced by a hybrid one, which increasingly appears to have features of vulnerable authoritarianism.

Amidst the charges of electoral foul play, the pro-military Pakistan Tehreek-e-Insaf (PTI) was brought into power at the federal level as well as in three of the four provinces in the country. Despite an electoral transfer of power, this change effectively consolidated the move to vulnerable authoritarianism and continues to this date. Similar to Bangladesh, this hybrid political settlement can be described as 'authoritarian clientelism' (Khan, 2017).

The present coalition is extremely vulnerable because of the exclusion of the main political parties, which have a strong support base among lower-level factions. Its vulnerability is further enhanced by a macroeconomic downturn, which is partly a result of inheritance from the previous government and partly because of the present coalition's poor handling of the situation. The regime is also attempting to consolidate its ruling coalition (towards an authoritarian one) by imposing costs on the opposition in the form of corruption charges. However, they have had no success in convictions thus far, making the existing (and evolving) ruling coalition vulnerable. Whether the coalition will be able to consolidate and move towards a more secure authoritarianism will depend a great deal on the holding power of the excluded organisations.

2.4. Manufacturing and Pakistan's political settlement: a focus on the pharmaceutical sector⁵

The political settlement analysis has illustrated how, from 2008 onwards, Pakistan has had a 'competitive clientelism' in its ruling coalition. In more recent times, however, it has veered towards a 'vulnerable authoritarian' coalition (even though procedural democracy remains). As a result of the high degree of competition and the power of the excluded factions in every ruling coalition formed, enforcement capabilities have remained weak throughout and ruling coalitions have always operated on short time horizons. This is despite the fact that formal power has often been centralised.

The frequent alteration of formal rules (due to weak enforcement), along with the centralisation of rents accruing from geo-politics, has meant that rents have not been channeled to developmentally productive ends. The manufacturing sector – barring the textiles sector which generates critical foreign exchange through exports – has largely been

⁵ This section sets out the broad contours of the sector, but many of the ideas are developed further and supported with evidence in subsequent sections.

given secondary status. Some sectors that are not very competitive but are politically networked through political parties or the military, such as automobiles, construction, and sugar, have survived by being able to capture rents. However, on the whole, manufacturing has not been a priority for any ruling coalition. State–business relations have been weak, and collective bargaining on the part of business has been largely absent.

Against this backdrop, the technically complex pharmaceutical sector is no exception. Although individual firms have managed to capture rents through overpricing, low-quality production, and preferential treatment in the public procurement of medicines (Dawani and Sayeed, 2019), the sector as a whole does not receive any significant rents. The regulatory architecture introduced in the 1970s has been the underlying policy trigger for rent generation and individual firms are able to capture the rents through personal networks with politicians and bureaucrats.

As we show in the next section, the bulk of the sector is engaged in sub-optimal types of production which are developmentally damaging. Reform has been difficult precisely because of the political settlement. The fractured distribution of power has meant weak enforcement of rules relating to quality. Further, drug prices have become a politically attractive signal of pro-poor commitment and, in the face of strong opposition, governments have succumbed to populist pressures – voiced through the media and excluded political parties – in maintaining the pricing regime that generates rents in complex ways.

The judiciary, which has gained some relative autonomy, has also been able to alter the rents in the sector recently. It has been able to do this by taking *suo motu* notice of pricing issues and ordering the regulatory body of the sector to introduce a new pricing policy. The reason why the media and judiciary have been able to influence the nature and allocation of rents is because of their growing organisational power, as described in section 2.1.

The sector as a whole – represented through the Pakistan Pharmaceutical Manufacturers Association (PPMA) and the Pharma Bureau – has not been able to collectively bargain for any major policy changes that could affect the ways in which rents are generated or captured. Nevertheless, they have used the opportunity provided by judicial intervention to use the judiciary's power to introduce policies (of uniform and predictable pricing) that, in theory, are more favourable to future investment. Whether this happens in practice remains to be seen, however. In fact, as we note in Section 3.1, the price increases that should be granted are still not being approved. This is in significant part because of the hybrid nature of the political settlement, where the ruling coalition has been using corruption to hound opposition politicians and those bureaucrats who may be seen as partisan. This has resulted in bureaucratic inertia across many government functions, including drug pricing, and firms have been told to circumvent the inertia through courts, which is a longer and costlier route.

At a more micro level, there is fragmentation within firms in the pharmaceutical sector along the lines of those that use personal networks to capture rents through breaking rules (embedded firms), and those that are more productive and forward looking with respect to the quality of their products (technocratic firms).⁶ Although technocratic firms have grown significantly over the years, as reflected in their increasing market concentration, they are not able to wield significant power in influencing the nature and direction of rents. This is partially because they do not contribute significantly to exports and the larger macro-economy; pharmaceutical products contributed less than 1% as a share of total exports in the 2019 fiscal year.

Embedded firms are not able to wield much power either, and many are not very powerful despite their connections. Nevertheless, they have been able to use their personal networks to capture rents through prices with high margins as well as weak enforcement of rules with respect to quality standards. This explains the existence of the long tail of firms surviving with a small market share.

However, between the two, the technocratic firms carry weight in voicing concerns and influencing the direction the associational bodies take on various issues on account of their large size and significant market share. They are also involved in other industrial bodies, such as local Chambers of Commerce and the Pakistan Business Council, which are able to voice issues with the government.

⁶ We develop this idea more fully in section 3.4.

3. Pakistan's pricing regime and rents captured by pharmaceutical manufacturers

This section details the rents captured through pricing and quality of medicines and attempts to quantify some of the costs of these rents.

3.1. Pakistan's pricing regime

Globally, the pharmaceutical sector is a highly regulated industry in terms of production requirements and quality controls. In addition to these regulations, Pakistan also imposes price controls on the *universe* of products. Such strict controls in the form of price ceilings that are also uniformly enforced make Pakistan's regulation of this industry unique. This section provides a brief overview of the regulation and the resultant rents created and captured, borrowing from our earlier analysis in Dawani and Sayeed (2019), before highlighting recent regulatory changes and their implications.

Regulation, including price controls, was initiated in the 1970s by Zulfikar Ali Bhutto's government for two reasons: first, to prevent 'dangerous or substandard' medicines from being consumed, and second, to keep medicine prices affordable for citizens (Naseemullah, 2010: 108).⁷ The Drugs Act of 1976 was introduced by Bhutto's government to achieve these two goals, and remains the primary legislation governing this sector.

Under this policy of price controls, the maximum retail price (MRP) of a drug was established largely in an ad hoc manner. In addition, price revisions were also granted arbitrarily rather than based on any rules-based criteria. A natural consequence of the discretion in pricing is that price setting and price revisions became prone to classical rent-seeking.

This rent-seeking was further compounded by another distinctive feature of Pakistan's regulation: rigidity in pricing. Once established, prices were rarely increased. In fact, from 2001 to 2013, there was a price freeze – no prices were increased in that period. Furthermore, after 12 years of unchanged nominal prices, despite inflation and rising costs of production, the prices increased in 2013 were revoked a mere two days later after the government faced popular criticism. There is thus an underlying element of public pressure to keep prices of medicines suppressed, which are considered essential goods.

⁷ In addition, Dawani and Sayeed (2019) also note that price controls may be introduced in markets where price competition is reduced due to branded generics.

This arbitrary practice of pricing changed following the introduction of the Drug Pricing Policy in 2015 as a result of judicial intervention. A revised policy⁸ was introduced in 2018 after another intervention by the Supreme Court of Pakistan, which ordered that a pricing policy be established by the Drug Regulatory Authority of Pakistan (DRAP) after due consultations with industry and other key stakeholders.

Despite the establishment of clear rules, however, in April 2019 the Federal Minister for National Health Services, Aamir Kiani, was removed from office by the Prime Minister of Pakistan for alleged corruption in increasing prices for medicines earlier that year (*Express Tribune*, 2019), even though these increases were largely legitimate (Dawani, 2019).⁹ The new de facto Minister, Dr Zafar Mirza, upon taking office on 23 April 2019, was ordered by the Prime Minister to reduce prices 'within 72 hours' (Junaidi, 2019a). He was unable to achieve this, and the government had only been able to reduce prices of 89 drugs by 15% on 1 January 2020 through a statutory notification (S.R.O 9(I)2020) (Junaidi, 2019b).

This discussion serves to underline the fact that politicians face pressures to keep prices in check. A recent Chairman of the PPMA, the main associational body for Pakistani manufacturers, summed it up as follows: 'The entire pricing issue is a populist one'.¹⁰

Moreover, the pharmaceutical industry has weak relative power – both individually and collectively – to affect policy (although they have been able to use the courts to garner some influence). Below, we discuss the nature of the rents that industry captures from these rigid price controls, and why they are developmentally damaging in two important ways. In doing so, we also explain the puzzle posed at the outset: how 650 firms survive on only 3% of market share.

3.2. Who benefits from price controls?¹¹

Price controls are subject to rent seeking in their implementation. Prior to the 2015 policy, the regulator and the pharmaceutical company would 'negotiate' to determine the price of a medicine, implying that the bureaucrat was bribed to get a favourable price.¹² The aim of the pharmaceutical companies was to get the highest possible MRP for new drug registrations so as to maximise profits. While it is natural for a business to maximise profit, this is further incentivised due to the rigidity in the price regulation in Pakistan because future increases are uncertain. As costs of production rise much faster than price increases – especially with currency depreciation which makes raw material imports more expensive – margins are

⁸ https://www.dra.gov.pk/Home/Download?ImageName=Drug%20Pricing%20Policy%202018_new.pdf

⁹ KII 43 and 47.

¹⁰ KII 47.

¹¹ This section largely borrows from our previous paper, which discusses this in more detail (Dawani and Sayeed, 2019).

¹² FGD 1.

squeezed and the manufacture of medicines becomes unprofitable over time. Therefore, firms seek to get MRPs at very high margins, even up to and above 1000%.¹³ In this way, producers can continue to produce medicines even without any significant increases in the MRP for many years.

This rent thus creates a large initial producer surplus (although over a time period of 10–15 years, this is reversed). While a large producer surplus is not in itself a problem, it does become a concern when it serves no useful social purpose (Khan, 2000). In this case, the high producer surplus goes against the stated aim of the government of ensuring that medicines are available at affordable prices to the general population. However, as costs rise and MRPs persist at their originally determined value, the social loss is reduced and the producer's margins are squeezed.

Social loss as a consequence of this policy regime eventually occurs again in the form of the non-availability of essential medicines (Zaidi et al., 2013; Mansoor, 2016; Lee et al., 2017). This was true in 2006 (TNCP, 2006), and also as recently as January 2020, when 60 essential medicines were unavailable in the market (Junaidi, 2020). One former chairman of the PPMA said:

'The prices of a number of medicines were fixed when \$1 was Rs40, and the prices are almost the same when \$1 is more than Rs150. Even nowadays the prices of some tablets are in paisas, rather than in rupees. We are here to do business. How can we manufacture medicines that are being sold at rates many times lower than the manufacturing cost?' (ibid.).

The unavailability of medicines can be illustrated in another way: there are more than 80,000 drug products registered with DRAP, but approximately 10,000 are actually manufactured.¹⁴ While some of these products may now be obsolete due to innovation and technological development globally, many of these medicines are also unavailable because they are not viable to produce. One large manufacturer – in the top-100 in Pakistan – told us that their company has 450 drugs registered but they only produce about 70,¹⁵ while a pharmacist who previously worked for a small manufacturer said that they had more than 200 registrations but only produced 4 drugs.¹⁶

Furthermore, once a medicine is not profitable to produce anymore, rents are also captured by producers in other ways which are welfare-reducing. This includes registering new medicines of the same family of drugs at a much higher MRP. Some medicines are also substituted by importing them, which again have much higher prices. However, we did not

¹³ KII 3 and 44. Also see Dawani and Sayeed (2019: 16) for more details.

¹⁴ KII 43.

¹⁵ KII 46.

¹⁶ KII 45.

find any evidence of a powerful importers lobby that would seek to capture rents by making local production unviable through rigid pricing. The pricing policy is possibly not itself a result of rent seeking, though it supports value reducing rent-seeking strategies in pricing and affects the profitability of domestic production.

Companies have also recently started producing nutraceuticals (also known as enlisted medicines) as a substitute for some medicines. Prices for these are unregulated, and companies are able to sell at very high margins. The example of folic acid was commonly cited by our respondents, and most major companies have ventured into nutraceutical production.¹⁷ By using existing marketing links with doctors, they are able to get doctors to 'prescribe' over-the-counter products. In fact, one official of DRAP said the following about nutraceuticals, which are registered without price controls:

'[S]ome of the companies have stopped manufacturing regular drugs because enlisted drugs are sold at higher rates and [promoters of enlisted drugs] can easily "convince" doctors to prescribe the enlisted medicines.' (Junaidi, 2019b)

In addition to consumers spending more on higher priced products (that they may not even need but are forced to consume because a doctor has prescribed it), this also results in companies being incentivised to move away from the production of essential medicines.

Finally, we note in our earlier paper (Dawani and Sayeed, 2019) that some drugs in short supply are smuggled or hoarded and sold on the black market at very high prices. However, this particular rent is not captured by firms but by informal smuggling networks, and it is also idiosyncratic and limited to specific medicines.

3.2.1. *The impact of the rent seeking*

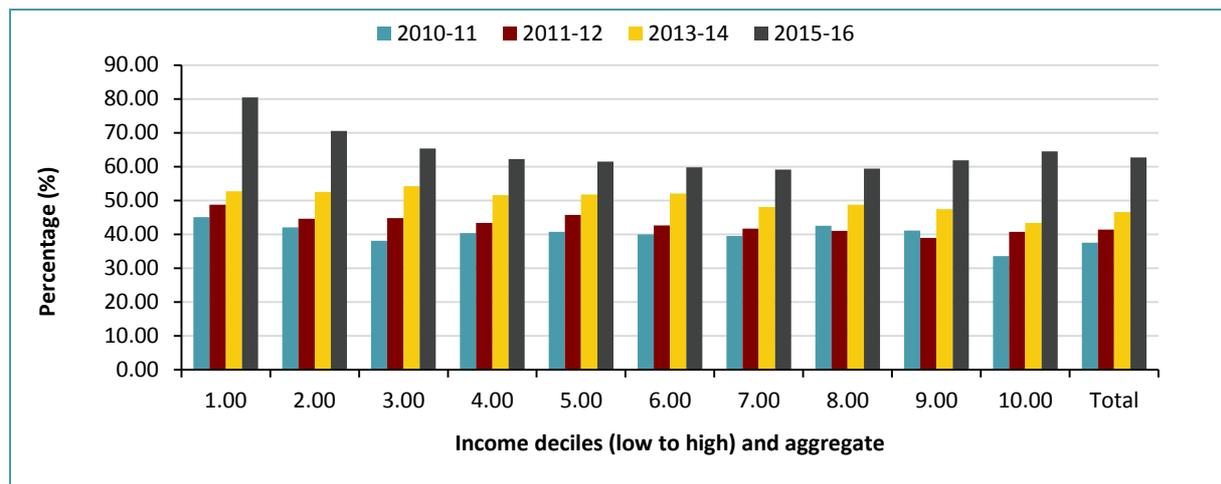
The effects of these rent-seeking strategies are developmentally damaging for two reasons: first, consumers lose out as they have to pay higher prices for a long time, and second, they lose out through ill-health because of the unavailability of particular medicines when the cost of production finally catches up with the fixed prices.

In an attempt to quantify the impact of these rents, we used the Household and Income Expenditure Survey (HIES) carried out by the Pakistan Bureau of Statistics to illustrate rising out-of-pocket expenditures. To our knowledge, these are the first estimates for Pakistan. As Figure 4 below shows, there has been a significant increase in expenditure on medicines as a percentage share of expenditure on health across income cohorts. In fact, there has been a secular increase across income deciles. Furthermore, lower-income households spend more on medicines than higher-income groups, thereby implying that higher medicine prices affect low-income households more.

¹⁷ See Dawani and Sayeed (2019: 17-18) for more details.

To put these numbers in broader comparative perspective, total expenditure on medicines as a share of total health expenditure in low- and lower-middle-income countries is approximately 30% (WHO, 2011). In India, low-income households spend 76% of their total health expenditure on pharmaceuticals (Hammond et al., 2008). According to the latest numbers available for 2015–16, the figures for India are broadly comparable to Pakistan's.

Figure 4. Total expenditure on medicines as percentage share of total expenditure on health across income cohorts and in the aggregate



Source: Authors' calculations based on the HIES (various years)

3.2.2. Pakistan's new pricing policy

Thus far our discussion has highlighted rents created as a consequence of discretionary price setting and price rigidity. However, it is worth noting that the rent-seeking described above – setting high initial margins when determining prices for new medicines – has been mostly eliminated due to the introduction of the Drug Pricing Policy 2018.¹⁸ This is because the new policy, introduced after an intervention by the judiciary, sets MRPs through reference pricing. That is, the average price for the same product in Bangladesh and India is used to set the price in Pakistan. By eliminating discretion, the rent-seeking in determining high prices at the time of registration of a new medicine has been eliminated. Nevertheless, the legacy effect of rents captured through the previous pricing regime persists.

Even though rents may no longer be captured through high margins for new drug registrations, they are still created as a result of market distortions in the pricing of medicines through price controls. Furthermore, the rigidity in pricing that stems from its political appeal still persists, as evidenced by the earlier discussion of a change in the Federal Minister and efforts of the government to reduce prices. Both factors, therefore, lead to incentives for firms to capture rents in additional ways. We now turn to how this is done through compromising on quality.

¹⁸ See Annex 3 for salient features of this policy.

3.3. Quality of medicines

Estimates about the quality of medicines in Pakistan vary greatly, and there is a 'negligible amount of scientific data' for estimating the prevalence of sub-standard, spurious, counterfeit or falsified medicines (Rasheed et al., 2019: 9).

Government data suggests that poor quality medicines – the umbrella term we use for sub-standard, spurious and counterfeit drugs – are very low. Each provincial government and the federal government tests samples of medicines they procure and those collected by their respective drug inspectors. Data from these government laboratories for poor quality drugs vary from 1% to 5% (Dawani and Sayeed, 2019).

However, our qualitative evidence suggests that the government's data underestimates the scale of the problem significantly. In the three FGDs we conducted, and in follow-up KIs, there was widespread agreement across participants that firms compromise on 'good manufacturing practices' (GMPs), which are a necessary (but not sufficient) condition for producing medicines of acceptable quality (Woodcock, 2004). In fact, drugs produced under conditions that do not comply with GMPs are considered 'adulterated' by the United States' Food and Drug Administration (ibid: 10).

The violation of GMPs is particularly acute in the bottom 650 firms in Pakistan. Even though the MRP they have received from the government should, in theory, enable them to produce medicines at the appropriate specification (mostly based on the British Pharmacopeia [BP] and United States Pharmacopeia [USP]), by compromising on GMPs they are able to cut costs and capture rents. Rent-seeking activities, in turn, involve making sure drug inspectors are bribed to not enforce the GMPs.¹⁹

As a former employee of the WHO explained, the primary cost of production of drugs is the cost of maintaining quality and maintaining GMPs:

'API (Active Pharmaceutical Ingredient) prices do not have an important impact on the prices of pharmaceutical drugs. The actual cost of making a medicine is maintaining its quality. For example, the HVAC (Heating, Ventilation, and Air Conditioning) system needs to be operational around the clock; however, it is only used when production is taking place to save costs. This is just one example. Knowledge of GMPs is very low across companies *and* within DRAP. In 2015, 145 medicines were sent to a lab in the UK (United Kingdom) and more or less 50% were out of specification.'²⁰

¹⁹ FGD 3

²⁰ FGD 3

Thus, by cutting costs in production standards, firms are able to capture a rent. A senior DRAP official pointed out the scale well: 'Overall there is very low quality. 90% of firms do not enforce GMPs.'²¹ This was reinforced by a former PPMA Chairman and chief executive officer (CEO) of a large manufacturing firm, who when asked how the bottom 650 firms survive on 3% market share said: 'They do not follow GMPs'.²²

Additionally, cost-cutting also takes place in the quality of APIs. An employee of a large manufacturer said: 'How can there be the same MRP for us, when we use the \$300/kg API and others who use a lower quality one costing \$100/kg?'²³ This is also another way to increase margins and may result in lower quality of medicines, although this can only be determined through appropriate testing and quality assurance checks.

Our discussion so far has highlighted how producers are able to capture rents from price margins by cutting costs of production. This is how the long tail of 650 producers is able to survive on a 3% market share. The prominent case of the Punjab Institute of Cardiology in 2012 is one example of not following GMPs (see Box 1 below).

Broadly, the top 100 firms comply with GMPs and produce medicines of acceptable quality. It is the smaller firms that produce lower quality medicines. There is thus a broad differentiation within the industry along quality of medicines produced, which we elaborate on in the next sub-section.

To be sure, the top 100 firms are certainly not completely free of GMP violations and may have some lapses. Even within the top 100, the top 20 companies are able to produce medicines of much higher quality than the others and may be able to export competitively in the near future.²⁴ Despite that caveat, there is a sufficient gap in quality between the top 100 and the bottom 650 to divide the industry into two groups.²⁵

²¹ KII 43.

²² KII 47.

²³ KII 48.

²⁴ FGD 3.

²⁵ There will undoubtedly be inclusion and exclusion errors in both groups, and this is a stylised depiction.

Box 1. The case of the Punjab Institute of Cardiology

Between December 2011 and February 2012, more than 200 people died and approximately 1,000 others became seriously ill as a result of consuming a contaminated drug that had been prescribed and dispensed to patients at the Punjab Institute of Cardiology in Lahore (Chaudhry, 2013; WHO, 2013).

The drug responsible for these deaths was Isotab 20 mg, manufactured by Efroze Chemical Industries (Private) Limited, which is based in Karachi. The WHO (2013) has called the firm a 'well-established manufacturer'. Isotab is a cardiovascular drug (for angina) that had been given to some of the patients of the Punjab Institute of Cardiology.

Multiple investigations by the government and the WHO found that a specific batch of Isotab had been contaminated by the drug pyrimethamine. This latter drug, which is used to treat malaria, is not a part of Isotab but was detected in the medicine at 14 times the recommended dosage (Ahsan and Nasir, 2012; WHO, 2013). Unless treated immediately, this level of overdose can be lethal. Decisive action by the government in testing the medicines and locating the source of these deaths prevented further fatalities.

A judicial tribunal (Ahsan and Nasir, 2012) set up to investigate this case independently found multiple violations of GMPs by the manufacturer. In fact, the investigation sent two commissions comprising experts to inspect Efroze's manufacturing facility and 'found serious violations of cGMPs (current good manufacturing practices) and unanimously opined that the factory was not cGMP compliant' (ibid: 114).

These violations included, among others, having daily contractors without the requisite skills; inappropriate storage of chemicals and active pharmaceutical ingredients; negligent inventory management; poor procurement practices; and lax quality control systems.

As one illustrative example, an employee of Efroze admitted to the tribunal that 'the storage area of the factory was not organized, there was no segregation of active ingredients and excipients, there was no separate quarantine area and there was no separate store for finished goods' (ibid: 126).

Efroze chemicals, according to IQVIA data from September 2019 is the 117th largest firm in Pakistan in terms of market share. They have been in operation for more than 40 years and export to several countries (ibid.). Despite being a firm of significant size, the lack of GMPs at its manufacturing facility resulted in the contamination of one of its products, and this contamination was not detected at later production stages because the firm did not follow GMPs.

However, as the tribunal's extensive investigative report noted, Efroze is symptomatic of a broader regulatory failure whereby enforcement of GMPs is uneven. 'It has transpired that a large number of manufacturers ... all over the country are not cGMP compliant' (ibid: 144).

3.4. Industrial strategies

Naseemullah (2010) examines the various industrial strategies in South Asia, including the pharmaceutical sector, and identifies two types based on the differing perspectives of entrepreneurs: namely, **embedded** and **technocratic** strategies. We have touched on these in Section 2.4 and discuss them in more detail here.

An embedded perspective is based on a dense network of personal ties and arises out of the manufacturers' local (restricted to the subcontinent) education and professional experiences. On the other hand, those who are educated abroad or possess international professional experiences have a technocratic perspective which entails viewing manufacturing as a 'set of rules and norms that are shared by firms all over the world' (ibid: 104).

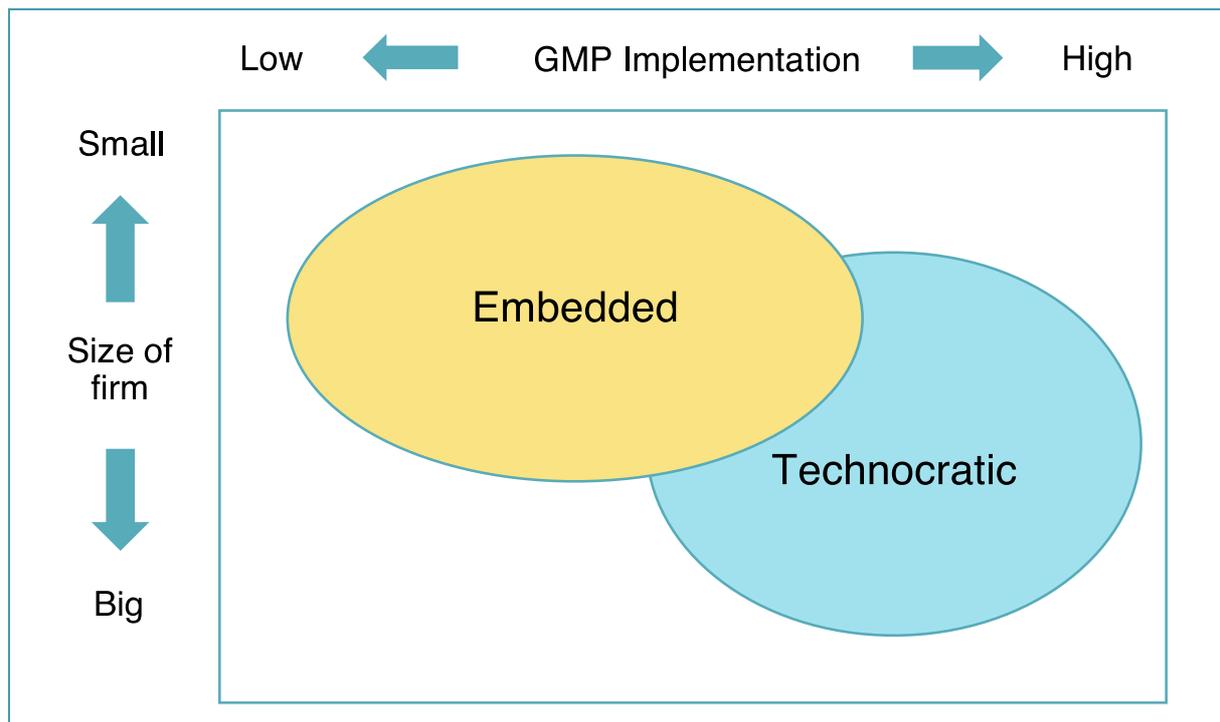
The two differing perspectives have implications for how firms approach capital and state regulation. Firms with embedded perspectives are averse to investing through formal finance and prefer to reinvest profits. They favour less regulation and were opposed to the setting up of DRAP, an autonomous regulatory body, because of the effect this would have on their established networks and relationships with the state. Firms with a technocratic perspective, on the other hand, are in favour of imposing higher standards and 'viewed the establishment of DRA[P] as a means to forcing indigenous industry towards global compliance, in the service of creating [an] internationally competitive sector' (ibid: 110).

One technocratic respondent illustrated this to Naseemullah in 2007, in the days while the creation of DRAP was being debated:

[T]wenty big pharmas are all for [the DRA(P)], but 600 smaller companies were against it; it was all rhetoric-oriented. It's a one-window operation for us, and if it's structured in a modern manner, then modern people will come in ... The 600 companies, they don't have those issues. They're not thinking globally. It's not in their business model to be a globally compliant company' (ibid: 109).

This differentiation of industrial strategy maps (although not perfectly) onto the differentiation of firms that follow GMPs and those that do not. In other words, the bottom 650 pharmaceutical firms with a small market share broadly possess an embedded perspective, while the larger firms with significant market share possess a technocratic perspective. This is particularly true for how they view state regulation, with the smaller firms breaking rules of GMPs and the larger ones following GMPs, which are based on international standards. We show this stylised division in the figure below.

Figure 5: Stylised depiction of technocratic and embedded firms along size and quality axes



Source: The authors.

It is worth pointing out that there are likely to be overlaps – embedded firms can become big and follow GMPs, while technocratic firms can compromise on GMPs due to oversight or lax regulation. However, since embedded firms will do this by reinvesting profits, reducing their margins – which the new pricing policy does – lessens the likelihood of them making this jump. Following GMPs requires significant investments, and it is only over time that embedded firms can accumulate the capital required for this.

In the past, this is how many firms grew. One large manufacturer said that when he started his company in the early 1990s, his plant had open windows and a fan; it was many years later that they invested in a heating, ventilation and air conditioning (HVAC) system which is necessary for controlling the environment in which the drug is produced in.²⁶

Thus, by restricting pricing margins, the space for growth – especially for embedded firms that will reinvest profits – has reduced. This, in turn, creates the perverse incentive for firms to compromise on quality further to increase their margins. This is developmentally damaging as consumers may be buying medicines that are harmful for their health. In addition, consumers may also be spending more (as shown in Figure 4) because they have to take medicines for a longer period of time since what they are consuming is of a poorer quality and therefore less effective.

²⁶ KII 46.

3.5. Rents in summary

Before we turn to discussing feasible anti-corruption strategies, it is worth summarising the discussion so far and reiterating the rents that have been eliminated and those that have remained after the new pricing policy was introduced in 2015.

Until 2015, arbitrary price controls had resulted in classical rent-seeking, with pharmaceutical companies bribing bureaucrats in a variety of ways to get higher MRPs and price increases. This, coupled with the more than decade-long price freeze from the early 2000s, resulted in four types of rents:

- 1 through high prices because of the incentive to secure high initial margins
- 2 through the introduction of higher-priced substitutes (locally manufactured and imported)
- 3 by compromising on GMPs
- 4 through scarcity rents due to hoarding and creating market shortages.

Since 2015, rules-based pricing has been introduced through a Drug Pricing Policy (first in 2015, and then revised in 2018). By introducing clear rules for pricing (see Annex 3), the first and fourth rents (high margins and scarcity rents, respectively) should be eliminated. However, enforcement of the pricing policy has been inadequate, with some evidence that this is a populist measure. While the second rent (higher-priced substitutes) should be eliminated also, a lack of informed enforcement of the policy can result in its continuation. Our political settlement analysis in section 2 also suggests that this is the likeliest outcome because the state has weak enforcement capabilities.

The third rent (captured by violating GMPs) persists, however. By not complying with minimum quality standards, margins are increased. This is the most important way in which small firms can compete with large firms that have the advantage of economies of scale in production and marketing. Capturing these rents leads to profits for small firms, which in theory can lead to investments by them that lead to better compliance on GMPs, but may in practice not have that effect.

4. Anti-corruption strategies

We have shown how price controls along with rigidity in pricing have resulted in developmentally damaging rents for the private sector. Specifically, these rents lead to: (1) increased out-of-pocket expenditures for consumers, which affect lower-income households more, and (2) prolonged illnesses due to less effective medicines. Any strategy that attempts to address these developmentally harmful problems will need to target the underlying policy drivers of these rents. Accordingly, we discuss feasible anti-corruption strategies in this section.

At the outset, we note that improvements in the quality of medicines through firm audits are improbable. This is because regulatory strengthening is unlikely to work in developing countries, which are characterised by weak enforcement.

In Dawani and Sayeed (2019) we suggested that a first-best policy to address the rents created through price controls and rigidity could be deregulating prices for non-essential medicines. By introducing dynamic price competition, prices should reduce over time along with a rationalisation of the industry structure because firms working on tight margins will not survive. However, while this policy may have the necessary effect, it is not a feasible outcome because of the consensus across the political spectrum to control prices. Furthermore, given the existing political settlement where firms have limited power, it is also unlikely for the private sector to lobby for this policy change.

4.1. Using the media: a feasible anti-corruption strategy

Rigidity in pricing may be driven by rent-seekers or by populism. But because it has happened across governments and price freezes have affected firms across the board, it is highly probable that the driver of this rigidity is a political consensus to keep inflationary pressures low – especially on medicine prices.²⁷

One important reason why this consensus persists, despite the harmful rents it creates as we have shown, is because of the role of the media. As we outlined in section 2, the media has some power to shape political and economic outcomes. In the Pakistani media, the pharmaceutical sector is reported on by two desks: the economy or business desk and the city news desk. However, knowledge and capacity among reporters and editorial staff on both desks is low, which leads to uncritical journalism²⁸ that does not appreciate the bigger picture around the harmful outcomes of price controls. The media, which wields considerable power in shaping the narrative and influencing politicians' behaviour by placing reputational costs on them, therefore reinforces populist pressure to keep medicine prices in check.

²⁷ But this is not restricted to medicines. In fact, in Pakistan there are broader political pressures to control prices for essential commodities. For instance, see Gazdar (2015) for a discussion on the politics of food prices in Pakistan.

²⁸ FGD 1 and KII 50.

We propose that if the media can report on issues of pricing more critically, interrogate questionable policy decisions, and highlight stories of the harmful outcomes of rents, this will lead to decreased pressure to keep prices rigid. In turn, this would increase the space for the enforcement of the Drug Pricing Policy 2018, which relatively powerful players in the industry are in favour of.²⁹ A rule-based and predictable pricing regime will then allow firms to make investment decisions over a longer term and should lead to fewer shortages of medicines.

This anti-corruption strategy, which engages the media to correct the information gaps of pricing decisions, is politically feasible and in the interest of large firms who are rule-following. Small firms do not have the financial clout to pay off the media at a large scale to credibly oppose this. Some of the top-20 firms as well as the Pharma Bureau, which is the association representing multinational companies, have already shown interest in this approach.³⁰

Implementing this strategy would involve using journalism schools that provide workshops and trainings to journalists on various topics. If financing can be arranged, either by pooling resources from interested firms or some other way, these trainings can be conducted at a significant scale and have representation from all the major media houses in Pakistan. The trainings will be credible because they will be conducted independently by the school and not the industry, who will not have editorial input. Moreover, the school will engage experts outside the industry as well.

Our proposed anti-corruption strategy to address damaging pricing rents in Pakistan's pharmaceutical sector is in line with what Khan et al. (2019) identify as 'building coalitions'. They note that any coalition that is built must have some power to impose costs on violators if rules are not enforced. In Pakistan, as we have explained, the media has a powerful role in influencing politicians' behaviour, as they have done in keeping price increases suppressed.

It will require time to build this coalition by training journalists across the media spectrum – especially among print and television outlets. In addition, a certain threshold of trained journalists will be needed to influence others and to achieve more critical reporting of the pharmaceutical sector across the Pakistani media landscape. This threshold is also required to decrease the chances of journalists being bribed by some pharmaceutical firms to not report on corruption stories. However, this will be supported by the larger pharmaceutical firms that can help identify particularly damaging types of infractions.

Such a strategy will not be effective immediately. But it will incrementally reduce opposition to price increases and lessen the current information asymmetry associated with the effects of price controls. In doing so, it will reduce the pressure on politicians to keep prices rigid. Moreover, by highlighting shortages and expensive substitutes of key medicines, more critical journalism can also trigger pricing decisions that improve access to medicines by the public.

²⁹ FGD 1 and FGD 2

³⁰ FGD 1 and KIIs 48 and 49.

5. Conclusion

Pakistan's political settlement, or its distribution of power, has been one of competitive clientelism, although this has in recent times shifted towards vulnerable authoritarianism and presently is a hybrid between the two types. Broadly, however, the political settlement can be characterised by weak enforcement of rules and short-term horizons. This, combined with the centralisation of rents from geo-politics, has meant that manufacturing, and in particular technologically intensive industries like pharmaceuticals, have not been able to capture any significant rents to grow.

Despite experiencing growth, the pharmaceutical industry in Pakistan has not been able to perform efficiently, as evidenced by a long-tail of firms that survive on a small market share. Due to a populist policy of price rigidity, firms have captured rents through high margins and have compromised on the quality of medicines. In fact, our analysis shows that the industry is fragmented along the lines of quality: on the one hand, large technocratic firms that are in the top 100 in terms of market share follow GMPs; while embedded firms, on the other hand, that are small and in the bottom 650 in terms of market share, do not follow GMPs. By compromising on GMPs, many firms are thus able to capture rents.

These rents are developmentally harmful in two ways. First, consumers have to spend more on medicines either because they are priced higher or because individuals consume medicines for longer than required due to the lower efficacy of the drugs. Second, when price increases are not granted, firms stop producing particular medicines which results in shortages for many essential drugs. This negatively impacts the health of those who need these medicines.

The media has emerged as a powerful organisation in Pakistan and has been partly responsible for reinforcing the political consensus on keeping prices rigid. Although the political settlement in Pakistan restricts the enforcement of rules to improve the quality of medicines, a more informed public discourse on pricing policies is possible through the media. This discourse would also be supported by larger pharmaceutical firms, who have some power in the industry and are in favour of the new pricing policy that was introduced in 2018.

Therefore, a feasible anti-corruption strategy is to build a coalition between the media and large firms. These firms can provide financial support to independent journalism schools to train journalists working in print and electronic media on the impact of price controls on social welfare, who in turn can improve the policy discourse on pricing issues. By highlighting the harmful impacts of price rigidities, this coalition can incrementally decrease opposition to price increases and open up the space for politicians to achieve changes. In this way, access to medicines can slowly be improved in Pakistan.

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Annex 1: List of key informant interviews

No.	Date	Details	Location
1	8/9/2018	CEO, large-scale manufacturer	Karachi
2	10/9/2018	Senior official, Health Department, Government of Sindh	Karachi
3	15/9/2018	Retired pharmacist who worked in various multinational pharmaceutical companies; currently faculty member at a private university	Karachi
4	25/9/2018	Head of small distribution company	Karachi
5	25/9/2018	Head of small distribution company	Karachi
6	24/11/2018	Former Federal Drug Controller, Secretary Health, Government of Sindh; and currently part of a private pharmaceutical importer	Karachi
7	24/11/2018	Managing director, pharmaceutical importer	Karachi
8	24/11/2018	Official at DRAP, Sindh	Karachi
9	2/12/2018	Wholesaler	Karachi
10	5/12/2018	Senior official, DRAP	Islamabad
11	5/12/2018	Pharmacist, formerly with WHO, and currently at a non-governmental organisation	Islamabad
12	6/12/2018	CEO, medium-scale manufacturer	Islamabad
13	6/12/2018	Wholesaler	Islamabad
14	7/12/2018	Pharmacist at private university	Islamabad
15	15/12/2018	CEO, large-scale distributor	Karachi
16	22/01/2019	CEO, medium-scale manufacturer	Lahore
17	22/01/2019	Director, medium-scale manufacturer	Lahore
18	22/01/2019	Pharmacist with experience in multinational corporations, and currently part of a drug testing laboratory	Lahore
19	22/01/2019	CEO, alternative medicine manufacturer (medium-scale)	Lahore
20	23/01/2019	Official, Directorate General Health Services, Primary and Secondary Healthcare Department, Government of Punjab	Lahore
21	23/01/2019	Senior official, Primary and Secondary Healthcare Department, Government of Punjab	Lahore
22	23/01/2019	Senior official, Primary and Secondary Healthcare Department, Government of Punjab	Lahore
23	24/01/2019	Pharmacist and senior official at drug testing laboratory, Government of Punjab	Lahore
24	18/02/2019	Senior representative, Pharma Bureau	Karachi
25	1/3/2019	Former Secretary, Health Department, Government of Sindh	Karachi
26	27/3/2019	Senior Pharmacist, Lady Reading Hospital	Peshawar
27	27/3/2019	Senior official, Health Department, Government of Khyber Pakhtunkhwa	Peshawar
28	27/3/2019	Senior official, Health Department, Government of Khyber Pakhtunkhwa	Peshawar
29	28/3/2019	CEO, small-scale manufacturer	Peshawar
30	29/3/2019	CEO, medium-scale manufacturer	Peshawar
31	1/4/2019	Director, legal department, large-scale manufacturer	Karachi
32	6/4/2019	CEO, alternative medicine manufacturer (large-scale) and drug manufacturer (small-scale)	Karachi

No.	Date	Details	Location
33	12/4/2019	Managing Director, chemicals manufacturer	Lahore
34	12/4/2019	CEO, large-scale manufacturer	Lahore
35	12/6/2019	Former Director-General Health, Government of Pakistan	Karachi
36	22/6/2019	Associate Professor of Pharmacy at public-sector university	Karachi
37	22/6/2019	Medical store owner in Hyderabad	Karachi
38	28/6/2019	CEO, alternative medicine manufacturer (medium-scale)	Lahore
39	1/7/2019	Pharmacist with experience in multinational corporations and currently part of a drug testing laboratory	Lahore
40	26/7/2019	Senior Member of Sindh's Public Procurement Committee	Karachi
41	6/8/2019	Pharmacist and senior official, DRAP	Karachi
42	19/11/2019	CEO, large-scale distributor	Karachi
43	26/11/2019	Senior official, DRAP	Islamabad
44	26/11/2019	Pharmacist and has served in various senior roles in industry	Islamabad
45	27/11/2019	Manager at a major retail pharmacy, and previously worked at a small-scale manufacturer	Rawalpindi
46	28/11/2019	CEO, large-scale manufacturer	Lahore
47	7/12/2019	CEO, large-scale manufacturer and former Head of PPMA	Karachi
48	11/12/2019	Director, large-scale manufacturer	Karachi
49	11/12/2019	Head of communications, large-scale manufacturer	Karachi
50	15/1/2020	Head of journalism school at a major university	Karachi

Annex 2: List of focus group discussions (FGDs)

	Date	Location	Number of participants
FGD 1	22 August 2019	Karachi	11 (8 Male; 3 Female)
FGD 2	3 September 2019	Lahore	7 (6 Male; 1 Female)
FGD 3	5 September 2019	Islamabad	8 (8 Male)

Annex 3: Salient features of the Drug Pricing Policy 2018³¹

We briefly outline three features of the new pricing policy in Pakistan: (1) how price is set for new registrations, (2) how price increases are granted, and (3) price increases for hardship cases.

Price setting

The MRP of the originator brand will be based on the average price of the same brand in India and Bangladesh. MRPs of generics will be fixed at 30% less than the MRP of the originator brand. MRPs of originator brands are also reduced by 10% every year for the first three years.

For new registrations of molecules already in the Pakistani market, MRPs are given at the same price as previous registrations. In the case of differences across brands, MRPs are set at the highest priced one.

Price increases

MRPs of essential medicines are increased by 70% of annual inflation, with a cap of 7% per year. For non-essential medicines, MRPs can be increased by 100% of inflation; however, this is also capped at a maximum annual increase of 10%.

Hardship cases

A hardship case is when a manufacturer or importer of a drug is unable to recover its costs. A manufacturer can only apply for a hardship case once every three years, and a new MRP is determined by DRAP based on a set formula. For locally manufactured medicines, this formula takes into account the cost of the inputs and multiplies it by a set factor depending on the type of drug. For imported medicines, the formula takes the cost of importing to the manufacturer and gives it a markup of 45% to arrive at the trade price.

³¹ https://www.dra.gov.pk/Home/Download?ImageName=Drug%20Pricing%20Policy%202018_new.pdf

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Disclaimer: This publication is an output of a research programme funded by UK aid from the UK Government. The views presented in this paper are those of the author(s) and do not necessarily represent the views of UK Government's official policies.

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