

Developing a Diverse Industrial Structure for Long-Term Growth: A Critical Analysis of Pakistan's Industrial Planning

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Abstract

The central argument of our paper is that a country's long-term economic development depends upon the types of products it produces and exports. The East Asian countries (EACs) realized the importance of this fact long-ago and designed their industrial policies accordingly. In their case, a clear long-term vision of industrial and technological catch-up with the developed world was present. Thus, these countries gradually moved up the industrial ladder and developed capabilities for the production of more complex and sophisticated products. This in our view was the most important reason for their phenomenal economic performance. The recent literature on the Product Space and Economic Complexity provides strong empirical support to this view. This stream of literature also shows that the ability of a country to diversify its exports critically depends upon the kinds of industries that country specializes in. We have shown that Pakistan has failed to realize the importance of a long-term vision which involves industrial and technological catch up with more developed countries. This has been the fundamental reason that Pakistan has been unable to diversify its export structure into higher value-added products. This acts as an important reason for Pakistan's unstable economic growth. Therefore, we argue that Pakistan should develop productive capabilities in those sectors which have a higher scope for diversification as well as innovation.

1. Introduction

Looking back in history, one finds the industrial revolution of the 18th Century to be a turning point of economic fortunes of the early industrialized countries of Britain, Germany United States. It is extensively argued that the establishment of an industrial base during the industrial revolution was the cause of rapid economic growth achieved by these nations. But by looking deeper, a subtler characteristic – and perhaps more meaningful one – of this revolution comes into prominence. That is underlined the rapid industrial and economic growth during the industrial revolution was a process of continuous expansion in the range and type of products being produced. Technological change and innovation, to manufacture newer products and enhancing the efficiency of the existing production methods, were driving the industrial revolution and were, thus, strengthening the industrial structure of these countries.

A growing body of literature now seems to suggest that instead of specialization in specific industries, highly diversified industrial structure and production of broader range and type of goods and services leads to long-term economic growth and development.¹ Keeping this perspective in view, this paper analyzes Pakistan's case.

Pakistan, a developing country, has immense potential to develop and grow economically. There was a time in the second half of the 20th Century, when Pakistan was expected to become the next Asian Tiger, but it ended up being a South Asian Snail. Even now as we venture into the 17th year of the 21st Century, with an enviable demographic dividend – about 63% of the population is aged below 30 years – the potential and dream of becoming an Asian economic powerhouse is still intact, but yet unfulfilled. A report by PricewaterhouseCoppers (PwC), published in February of 2017, suggests that Pakistan can become the 16th biggest economy (in terms of PPP) in the world by the year 2030.

But Pakistan has been unable to sustain high economic growth rates; rather it has been growing in spurts: high GDP growth rate in one period is followed by low or negative growth rate in another period. It is also interesting to note that high GDP growth rate almost always ends up in a subsequent balance of payment crisis (McCartney, 2012; Hussain, 2013). Even the recent surge in the rate of economic growth since 2014 is leading towards a balance of

¹ See for example the empirical work of Imbs and Wacziarg (2003). More recently, similar evidence is also presented in the Atlas of Economic Complexity (Hausmann et. al., 2014).

payment crisis. During financial year 2017 the Current Account deficit reached USD 12.1 billion and the Trade Deficit reached to USD 30.5 billion, highest in the history of Pakistan².

We believe that a major cause behind these BOP crises is Pakistan's inability to manufacture a diverse range of high value-added products that are essential for earning the export revenues to balance our demand for petroleum, machinery and other capital goods.

Therefore, in this exploratory paper, we investigate the industrial planning of Pakistan in a historical perspective. This is achieved by discussing Pakistan's Five Year Plans which are the principal planning documents about Pakistan's Economy. We probe into the question that why Pakistan has been unable to diversify its industries and products into higher value-added commodities. While answering this question, we identify four major issues with Pakistan's industrial planning: (i) absence of a long-term vision; (ii) failure to achieve time-bound targets; (iii) lack of performance oriented incentive; and (iv) protection of uncompetitive and rent-seeking industries. Finally, we analyze the *Product Space* of Pakistan in comparison with some East Asian Countries and discuss its implications. *Product Space* a visualization of all the products being traded globally, their interrelationships, and level of their complexity and diversification; see section 4.2 for further details.

This paper is arranged as follows: in section 2, the role of industrial diversification in the East Asian development experience is discussed; section 3 gives the historical perspective of Pakistan's industrial planning with respect to the four issues identified above; the concept of product space is presented in section 4 along with a comparative analysis of Pakistan's industrial sector with East Asian countries; and finally the paper is concluded in in section 5.

2. East Asian Developmental Vision

The economic growth achieved by some of the East and Southeast Asian Countries (EACs) is perhaps the most remarkable story of development during the last 50 years. These EACs include South Korea, Taiwan, Singapore, China and Malaysia. In terms of its speed and dynamism (especially in the case of South Korea, Singapore and China), such an economic performance is "unparalleled in human history" (Chang, 2006, p.2). A single generation has witnessed the miraculous socio-economic transformation of their countries within a span of 30 to 40 years.

² Summary of Balance of Payments as per BMP6. State Bank of Pakistan. URL: http://www.sbp.org.pk/ecodata/BPM6_c.pdf

However, the debate among the economists since the past two to three decades is that whether the rise of these countries as economic powerhouses is a manifestation of the benefits of free markets and free trade, or, on the contrary, an example of the role of state leading the process economic development. The debate itself is beyond the scope of this paper, but the fact that state played an important role – although differently in case of each EAC – in successfully transforming their industrial structures towards highly sophisticated sectors cannot be underemphasized (Page, 1994; Stiglitz, 1996; Rodrik, 2007; Chang, 2006)

Despite facing different political and socio-economic conditions and pursuing distinct development policies, these economically successful countries shared some common elements. These common characteristics in their developmental strategy can be identified to be a significant feature of their development planning. In this regard, the presence of a long term vision of industrial transformation, a national consensus and a strong commitment towards fulfilling that vision are the most important factors (Evans 1998; Aukuz et al., 1998).

We argue that all development policies in these countries, specifically the industrial policy, were a natural outcome of a commitment borne out of this long-term vision. Dahlam (2007) too compliments this by concluding that a common strategy followed by high performing East Asian countries involved a gradual movement of their industrial structures towards more sophisticated products.

As the section 4 of this paper demonstrates, EACs were not very complex³ economies during 1960s and 1970s, their export structures were mainly dominated by either primary commodities or basic manufactures. The important factor which separates the EACs from Pakistan, as well as from a number of other underdeveloped countries, is the *continuous* upgradation of their productive structures towards more sophisticated sectors and products. Industrialization, for EACs, was not merely seen as building static productive capabilities in certain sectors, but rather as a process which involves gradually moving up the industrial and technological ladder and, thus, enabling the development of new products and production processes.

Some important common features which can be identified in the EAC's strategies for industrial development are as following:

³ A country's economic complexity depends upon two things: (i) the extent to which the export structure of an economy is diversified and (ii) the level of sophistication of the export structure. Section 4 discusses this in detail.

2.1. *Long Term Vision of Industrial Transformation*

As mentioned above, the most important aspect of development strategies of the EACs, is the presence of a clear long term vision of industrial and technological catch-up with the developed world. This vision included not just a process of industrialization, but a gradual, yet continuous, progression towards more sophisticated and high tech sectors. It was essentially a vision of gradually moving up the industrial and technological ladder and eventually reaching the top. These countries realized the importance of such a vision for the long term economic growth as well as for the process of economic catch-up with the developed world. Thus development of indigenous technological capabilities was the main goal of the industrial (as well as trade) policies and protection was mainly given to new industries in the high technology sectors which were dynamic in nature and where there was a higher scope for innovation. Chang (2006, p.101), for example, notes in the case of South Korea that a “constant upgrading of industrial structure based on the development of local technological and managerial capabilities was seen by the Korean policy-makers as the surest way to achieve sustained growth and efficient structural change and hence higher living standards”.

2.2. *Protection: Only for the New Industries in Specific Sectors*

Due to the presence of a long term vision of industrial transformation and a commitment to fulfill it, protection was given only to the new industries in sectors which were thought to be dynamic and innovative (e.g. electronics). Although EACs used the infant industry logic to protect certain industries, but *not all infants were considered worthy of protection*, only those were protected which had the potential to grow and be innovative in the long run (sectors such as electronics, automobiles, ship building, heavy machinery etc.). While discussing East Asian economies, Rodrik (2007, p.21) notes that an industrial base which can generate high long term economic growth “requires strategic policies directed specifically to *new economic activities*” (authors’ emphasis).

2.3. *Conditional, Target Oriented Protection*

In the case of EACs, protection given to certain industries has been conditional upon the achievement of certain targets (such as export related conditions or efficiency targets). These targets were in line with the long term vision of these countries. If a particular firm fulfilled certain criteria and met the specific targets, government’s support continued, but if it failed to do so, government withheld any kind of protection or benefits given to that firm. Chang

(2006, p.37) notes that disciplining the beneficiaries of government's protection is perhaps the most important difference between the East Asian Countries and others which have given protection to their industries and failed.

2.4. Protection for a Limited Time Period

The policymakers in EATs were well aware that infant industries cannot remain infant forever. Thus the protection given to certain industries has always been for a limited time period. Although the time period varied for different industries, but these countries ensured that protection given should be for a limited time. Once a particular industry became mature and stood on its feet, government's focus shifted to another sector. However, in case of Pakistan, it can be easily observed that industries which were heavily protected 60 years ago, still enjoy a great deal of protection from the state⁴.

The example of these countries shows that the process of industrial upgradation itself leads to the development of new capabilities. Industrial specialization is important but not at the cost of industrial diversification. For example, Taiwanese government conjointly developed its electronics industry by first establishing special science-based industrial parks (such as Hsinchu Industrial Park) in the vicinity of a university and a large public research institute (Industrial Research Institute). According to Dahlman (2007), this was instrumental in the development of electronics industry in Taiwan. The country's electronic industry was also successful in moving from simple assembly of electronic products for foreign firms to developing its own capabilities in chip making and other electronic items. A number of Taiwanese brands also emerged globally in these sectors.

Having discussed the industrial planning processes of East Asian countries (EACs), let us now move on to see that in case of Pakistan in the next section.

3. Pakistan's Industrial Planning in a Historical Perspective

In this section, we discuss Pakistan's industrial planning specifically focusing on its failure to achieve diversification and move into higher-value added industrial production. Since technological developments and innovation contributes significantly towards diversification and higher-value added production, we also probe into lack of R&D and innovation in Pakistan. To provide a perspective to our discussion, we analyze relevant literature along with Pakistan's five year plans, a direct source to understand country's industrial planning.

⁴ Further comparison of Pakistan with EACs is presented in section 3.

The discussion about economic and industrial performance of Pakistan in various decades is out of the scope of this paper. However, for an overview, we give the growth rates of real GDP and industrial sector in Table 1⁵.

Period	Industry				GDP
	Industry (Overall)	Manufacturing			
		<i>Manufacturing (Overall)</i>	<i>Large-Scale</i>	<i>Small-Scale</i>	
1951-55	10.2	10.3	23.7	2.3	3.2
1956-60	6.1	5.2	7.8	2.3	3.1
1961-65	13.2	11.7	16.9	2.9	6.8
1966-70	8.8	8.1	9.9	2.9	6.7
1971-75	5.1	4.7	3.9	7.3	4.3
1971-77*	4.8	3.8	2.7	7.3	4.0
1978-83**	8.8	10.0	10.6	8.4	6.9
1984-88	8.3	8.2	8.1	8.4	6.3
1989-93	6.2	5.9	4.9	8.4	5.0
1994-98	3.1	2.7	2.9	2.6	4.1
1999-03	3.5	5.3	5.0	6.6	3.6
2004-08	9.7	10.7	12.4	8.1	6.6
2009-13	1.2	1.3	0.3	8.4	2.8
2014-15	4.0	3.8	3.2	8.3	4.1

Source: SBP Handbook of Statistics 2015 (authors' estimates)

*Nationalization Period

**Non-Plan Period

Unsurprisingly, our analysis reveals that plans for development of higher value-added products and establishment of new industries with inherent capacity for research and innovation were always a part of five year plans. But such targets were never met in their entirety. We observe that absence of a long-term vision - where Pakistan's economy would be standing on the ladder of production specialization in, let's say, next 30 or 40 years - was largely absent. In addition, failure to achieve time-bound targets, lack of performance oriented incentives (conditional protection), and protection of uncompetitive and rent-seeking industries, have been the hallmark of Pakistan's industrial policy. We discuss each issue in turn.

3.1. Absence of a Long-Term Vision

⁵ For a summary of Pakistan's economic and industrial performance during various decades see Zaidi (2015), Hussain (2012).

As cliché as it may sound, for any country to progress its government and policymakers must have a vivid idea of the direction in which to develop their industry. To do this, both short-run and long-term planning is required. For example, a country with a high volume of textile exports, like Pakistan, must know that it must adapt to the changing global trends and demands in the short-run and develop the capacity to be a world leader in textile and clothing high-value added products in the long-run. It might not, in fact, become a world's leading high-value added textile and clothing exporter, but with a vision to do so and proper policy implementation, it might end up in the top three. A similar visionary approach is required to develop other manufacturing industries such as silicon chips, etc. This vision has largely been absent in Pakistan's case. In fact, plans made in one period were discontinued in the next; and economic policies have also never been consistent: government led private growth in 1960s to nationalization of 1970s to neo-liberal economic reforms of 1980s and 1990s. Let us now examine this proposition.

The First Five Year Plan was made for a period of only five years. It did not contain any long-term plan. As compared to the first one, the second plan contained a longer aim to double and eventually quadruple national income by fourth and sixth plan periods. But, a long-term vision, i.e., where Pakistan's economy would be standing on the ladder of production specialization in the next 30 or 40 years, was largely absent. This arbitrariness by government to achieve the objectives of the Second Plan can be clearly understood from following two statements: "The economic and social objectives of Pakistan are long-range goals...The nation aspires to a standard of living for all its people *as high as can be achieved* (author's emphasis) with resources available to it", and, "... The Second Five Year Plan may be said to have a single underlying purpose: *to advance the country as far as possible* (author's emphasis) within the next five years, along the road of these long-range objectives". The emphasized phrases from the previous two sentences clearly show that government planning, at least till 1960s, was for the short-run; a long-term policy was rather missing.

The Perspective Plan, a long-term plan prepared for the next 20 years, was introduced for the first time in the Third Five Year Plan (1965-70). In this plan, future targets were set to be achieved by 1985 included quadrupling of GNP, provision of full employment, parity in income levels, and universal literacy, etc. It was proposed that as socio-economic changes will occur overtime, the Perspective Plan will be altered and reoriented with each five-year plan. The Fourth Five Year Plan (1970-75), however, neither contained its revision nor its restatement, an evidence of government's discontinuity in economic planning.

The policy makers and government's lack of commitment towards economic development in general and industrial research, productivity and innovation, in particular can best be explained from the fact that a significant portion of both Third and Fourth Year Plans had the same exact wording. The writers of the plan were only kind enough to change the word 'Third' by 'Fourth'. Two The following are two selected extracts from Third and Fourth Plans, respectively (differences are underlined):

1(a). "The pace of applied industrial research will be accelerated. Industry is a changing field and it behoves responsible and progressive elements in private industry to join hands with Government to ensure that Pakistan keeps up with external development which may be used to advantage and also that the country contributes its own measure of research in the interest of greater productivity from Pakistan's industry... Some of these like the ones for the production of water proofing material for jute, water proofing additive for cement, lightweight concrete, Vitamin-A concentrate from shark liver, dry distemper, printing ink, insulation board from baggasse, chipboard from wood waste and synthetic marble are already in commercial uses. The Council already has its laboratories at Karachi, Dacca, Rajshahi, Lahore and Peshawar comprising 21 Divisions. During the Third Plan period the activities of the Council will not only be continued but its facilities will be expanded to undertake research on fuels, minerals processes, building materials, food technology, leather, etc."

1(b). "The pace of applied industrial research will be accelerated. Industry is a changing field and it behoves responsible and progressive elements in private industry to join hands with Government to ensure that Pakistan keeps up with external development which may be used to advantage and also that the country contributes its own measure of research in the interest of greater productivity from Pakistan's industry... Some of these like the ones for the production of water proofing material for jute, water proofing additive for cement, lightweight concrete, Vitamin-A concentrate from shark liver, dry distemper, printing ink, insulation board from baggasse, chipboard from wood waste and synthetic marble are already in commercial uses. The Council already has its laboratories at Karachi, Dacca, Rajshahi, Lahore and Peshawar comprising 21 Divisions. During the Fourth Plan period the activities of the Council will not only be continued but its facilities will be expanded to undertake research on fuels, minerals processes, building materials, food technology, leather, etc."

As mentioned before, during the period between 1970-77 and afterwards, two major paradigm shifts occurred in Pakistan's economic structure, due to a change in political

regime. From a partially closed economy with government playing an active role in both public and private sector development, the economy went on to be driven primarily by the public sector. The nationalization⁶ of 1970s was followed by privatization and economic liberalization (neo-liberal) policies which marked another policy paradigm shift in Pakistan's economic history. Keeping the merits and demerits of these three economic approaches on one side, the above discussion shows that neither our politicians nor the policymakers were on the same page when it came to economic planning, an indicator of absence of long-term vision.

Having said this, the Seventh Plan (1988-93) was the second plan to contain a long-term Perspective Plan. This new Perspective Plan set targets up to 2003. The plan also acknowledged that in previous plans "R&D set up in the country has developed without any systematic planning and has, therefore, resulted in a proliferation of institutes with overlapping functions and duplication of efforts." (Planning Commission, 1988). The eighth plan (1993-98), building upon the seventh plan revised the Perspective Plan, but there were severe problems in its implementation.

Thus, we can say, industrial planning in Pakistan was formulated arbitrarily "in response to some crisis or other the country faced with", were short to medium-term, and lacked a long-term vision (Burki, 2008). Similarly, Haque (2015) has summarized this quite well, "In short, Pakistan's early industrialization was essentially reactive, not born out of a *grand vision* of turning the country into an industrial power, as was the case in India and many other developing and socialist countries at the time. Pakistan adopted five-year plans, but its approach to economic development remained more or less ad hoc, eclectic, non-ideological, and nonstrategic, fashioning policies and approaches 'on the fly,' as it were... With the government's effectively hands-off approach to industrialization, it is no wonder that Pakistan was more or less left out of the historic transformation of the world economy and, today, finds itself stuck in producing low-technology, low value-added, labor-intensive products." (authors' emphasis)

In the case of EACs, especially South Korea, there was a clear long-term vision of not just industrialization, but gradually moving up the industrial and technological ladder. They realized that long term economic growth as well as the process of economic catchup requires

⁶ Nationalization, here, is the process through which government acquires a majority share in private sector enterprises. This is done as a part of national industrial policy. The private businessmen, if not willing to comply, is forced to give up its majority share in ownership of their enterprises.

a gradual, yet continuous, shift toward more advanced and high tech sectors. Thus development of indigenous technological capabilities was the main goal of the industrial (as well as trade) policies and protection was given only to particular types of industries. These were mainly high technology sectors which were dynamic in nature and had a higher scope for innovation. Unfortunately, Pakistan's industrial planning lacked such a long-term vision.

Keeping in view the above discussion, it can also be said that these plans lacked the kind of focus and consistency which is required to achieve the goals of industrial diversification. There is no consistency when it comes to certain goals. It seems that these plans were written only as a formality; there was never an intention to implement them in entirety – hence the same wording of whole paragraphs in third and fourth plans.

In the same way, when a particular plan envisages technological upgradation and industrial diversification and sets goals in this regard, it can be expected that at least some steps would be taken by the government to achieve these goals. As a result, it is reasonable to expect that the subsequent plan would revisit the goals specified in the previous plan and would mention some of the steps taken in this regard. Pakistan's industrial plans made a habit of repeating the same goals over and over again. This means that Pakistan never had any direction when it comes to 'moving up the industrial ladder'. A mere mention of 'long-term goals' in isolated plans cannot be constituted as a 'long-term vision'. Thus, it is safe to conclude that we never had any long-term vision despite of the fact that some the plans claim that they do.

3.2. Failure to Achieve of Time-Bound Targets

Another feature of Pakistan's economic and industrial planning has been its inability to meet the set targets. Targets were set in each plan, and in each plan it was recognized that those targets have not been achieved.

To begin with, Pakistan's first two five year plans were successful to the extent of setting up the basic industrial infrastructure. However, certain specific economic targets, such as increasing GDP from Rs. 12,102 million in 1958-59 to Rs. 14,390 million in 1964-65, were not met.

While evaluating the performance of the pervious plan, it was stated in the opening chapters of the Third Five Year Plan (1965-1970) that "The first plan was over optimistic in certain respects and its implementation seriously suffered because of absence of adequate Government support for the planning process." (Planning Commission, 1965). The high GDP

and income growth rates during the second plan period were attributed to “*larger inflow of foreign assistance* (author’s emphasis) and increased domestic savings.”, in the third plan.

The Sixth Five Year Plan (1983-88) ⁷, while commenting on the industrial performance of past decades, “Some industries remain uncompetitive even after long periods of operation. Studies carried out at different stages of development indicate that the value added in a number of cases may be negative, if international prices are used for analysis. This implies that, in cold reality, a part of the industrial sector is using more of the national resources than it is contributing to the national pool. The main justification for such industries is to provide a base for acquiring modern skills and technology. But over the long run, they must improve efficiency in order to survive and to contribute meaningfully to national prosperity.” (Planning Commission, 1984). For a review of such studies, refer to Kemal (1978) and Naqvi and Kemal (1983).

Conservative comments by government itself in the Seventh Plan (1988-93) highlighted the failure to achieve required industrial investment and diversification towards capital goods and ‘sophisticated and precision items’ including transmission equipment, engines, etc. during the Sixth Plan. At one point it is written, “The policy package that was developed for the electronics industry has so far been ineffective.” It further stresses on the need to develop manufacturing industries of microchips, circuits, small electronic equipment and computers. Also during the seventh plan period, a system of R&D was announced which was to operate on three tiers: national level public sector organization, R&D units in large industries and R&D units for small industries. However comprehensive it may sound, it was never implemented in its entirety in 1990s.

Similarly, the Eighth Five Year Plan (1993-98) accepts that “The Seventh Plan could not achieve fully the integration of Science and Technology with development plans and production sector... No attractive incentives were given to the private sector to encourage investment in R&D.” (Planning Commission, 1988). Similarly, the Eighth Plan was no different from the Seventh Plan for it too assured the manufacturing value-addition, modernization of production process, upgradation of technology, technology transfer and industrial R&D. However, during the 1990s, “There was not attempt at product innovation, not much attention given to technological improvement, and very little effort made at market penetration” (Burki, 2008).

⁷ Here, we are skipping a discussion about nationalization period and the non-plan period.

McCartney (2011) argues that if ever, problems in the industrial sector were correctly identified, their solutions were never proposed. In minority of the cases where an action plan was made, it was never implemented in its letter and spirit.

Thus, the characteristic feature of all the five year industrial plans have been: first, identifying the problems (low value-added, low productivity, need for innovation and technological upgradation, etc.); second, planning to solve those problems; and third, humbly admitting that those problems were not solved.

East Asian Tigers, on the other hand, created a “a series of formal and informal links with the entrepreneurial classes to assist in the design, implementation and coordination of policy measures, including sector-specific agencies within existing bureaucracies or the creation of specialised sector-specific institutions.” (Akyüz,1998).

3.3. Lack of Performance Oriented Incentives (Conditional Protection)

In the case of EACs, protection given to some industries/sectors has always been conditional upon the achievement of certain targets (such as export related conditions or efficiency targets). These targets were in line with the long term vision of these countries. If a particular firm meets the target, government’s support continued, but if it fails to do so, government would no longer give protection or any kind of benefit to that firm. For example, in Japan, projects to firms were granted based on their performance on pervious projects. Similarly, the government distributed rents to those participants who have behaved cooperatively in business councils (see Stiglitz, 1996 for an overview).

The level of technology in developing countries typically far below than that of industrial economies due a lack of incentives to invest in acquiring and upgrading technology “because it is difficult to appropriate the returns to knowledge” (Stiglitz, *ibid*). But, when rewards are tied with performance of firms, like that in Japan and other EACs, they face an incentive to upgrade their technology and become more competitive by diversifying and innovating into higher value-added products. This incentive when coupled with government policies to advance towards a technologically advanced and highly innovative knowledge economy where technological upgradation by the firms is subsidized by the government, an economy’s productivity and hence GDP grows rapidly.

In Pakistan’s case, state’s protective measures have been unconditional and a target oriented approach has rarely been employed. In 1960s, Pakistan economic strategy was very similar to

that of EACs, in fact it is said that Korea adopted its five year plans from Pakistan. However, Pakistan was “ultimately unable to attach performance conditions to subsidies and large firms were able to form alliances with powerful political factions to prevent subsidies being reallocated once given.” (McCartney, 2014).

3.4. Protection of Uncompetitive and Rent-Seeking Industries

Typically, protection of certain industries is justified by the infant industry argument. The argument goes on to suggest that some recently established industries which cannot compete against the cheap imports from abroad must be protected from foreign competition. Various measures are employed for this purpose such as granting subsidies and financial packages to the, so called, infant industry and by placing import restrictions through tariffs and quotas, etc. on competing goods and services.

In Pakistan industries such as textile and clothing have been protected almost since the time of their establishment in 1949-50. Automobile industry is another recent example of industrial protectionism in Pakistan. No doubt, the infant industry argument is plausible and has been used by the EACs to justify their industrial and trade policies. But the important question is that which industries can be categorized as infants and up to what point?

In the case of EACs, the infant industry logic as a basis of protection has been used mainly for the sunrise industries. Sunrise industries are those industries for which income elasticity of demand is positive globally; so as people’s income increases they demand more goods from those industries. The policymakers in EACs were well aware that infant industries cannot remain infant forever. Thus the protection given to certain industries has always been for a limited time period. Although the time period varied in case different industries, but these countries ensured that protection given should be for a limited time. Once a particular industry became mature and stood on its feet, government’s focus shifted to another sector.

We argue, that particularly, three indications, in tandem, can be observed to identify a rent-seeking industry in Pakistan’s case: (a) if certain industries/sectors are protected for longer periods of time than otherwise necessary, (b) in particular sunset industries, and (c) which, even after continued protection, has been unable to diversify and move into higher-value added production, lacking innovative and technology enhancing capabilities.

In Pakistan, firstly, it can be easily observed that industries which were heavily protected 70 years ago, still enjoy a great deal of protection from the state. Secondly, the state’s protective

measures have been unconditional and a target oriented approach has rarely been employed. Thirdly, in Pakistan, mainly sunset industries have been protected historically. Sunset industries are those industries for which income elasticity of demand is globally negative; hence, when there is an increase in people's income they start to buy less of a commodity.

Once the protection was given to certain industries, these industries started to earn abnormal profits in many cases. As Kemal (1979) has shown that a number of industries which were given extremely high degree of protection in 1960s and 70s, were efficient enough to produce (and even export in some cases) without such excessive protection. This excessive protection resulted in generation of a negative value-addition by these industries when adjusted for the protection during that time (Soligo & Stern, 1965; Lewis and Guisinger, 1968). According to Alavi (1973)⁸, certain 'parasitic' groups of people called 'contactors' due to their contacts with political figures, accumulated wealth for themselves while contributing little to Pakistan's industrial development. Another group, called 'contractors', who were small businessmen, were funded by Industrial Development Bank to set up industries. They were given preferential treatment in the sense that they only had to show 10% of the investment funds required to establish an industry. To help them become industrialists, they were also provided loans on easy conditions.

Kemal (1999) estimates that even as late as 1990-91, subsidies amounting to about 7% of GDP were transferred to industrialists by the government. The government's excessive attention to large-scale industry and its confused idea of large-scale industrial entrepreneurship pointed out by Haque (2007), due to which the government "has been unable to promote genuine entrepreneurship and promoted cartelization and rent-seeking instead."

Khawaja and Mian (2004) has estimated economy wide costs of rent-seeking to be 0.3% - 1.9% of GDP every year. They further show that politicians themselves and politically powerful firms extract rents from the government banks using their political influence enabling them to either "threaten bank officers with transfers and removals or reward them with appointments and promotions." Similarly, Hussain (2013) argues that 'government patronage' is one important reason of lack of higher-value added industrial diversification in Pakistan.

⁸ Cited from Qadir (2016).

According to Hussain and Ahmed (2012), some industries including textiles were given undue protection, which continues till date. Similarly, Nazeer and Rasiah (2016) points out that government policy was not focused on diversification, building international competitiveness, technological catch-up and distribution of rents in the form of incentives, rather it was shaped by ‘clientlist interests’.

Hence, as a consequence, we ended up spoiling our infants. If the example of EACs is considered, only those industries can be categorized as infants which have a potential to be dynamic and innovative in the long run. Seen in this context, it seems that we ended up giving a high degree of protection to those industries and sectors which needed it the least.

In conclusion, it is imperative to highlight that neither extremes, i.e., nationalization and neo-liberalization, ever effectively worked for Pakistan. The way towards growth and development lied somewhere in the middle. We would gladly have said that Pakistan’s economic policy approach in 1960s was the best had it not been for an increase in inequality during that decade. We believe, the recipe for economic development is a balanced one where governments conceive a long-term vision, set goals and targets accordingly, and then in sync with the private sector, take steps to ensure the nation’s success. This is exactly what East Asian Tigers did along with tackling the inequality. This is what Pakistan was trying to do in 1960s albeit unconsciously and without a sense of economic equality.

It becomes clear from the above discussion that Pakistan has been unable to effectively design policies which could have contributed in product diversification and high-value addition in its manufacturing sector. Pakistan’s arbitrary policies, left it far from becoming a diverse economy.

Now, that we have seen the issues in Pakistan’s industrial planning, it is time that we discuss Pakistan’s industrial diversification and compare it with other East Asian Countries by observing the *Product Space* in the next section. The analysis in the next section shows the importance of a long-term vision of changing the industrial structure towards more sophisticated products, something that we have been emphasizing throughout this paper.

4. Product Space and the Logic of Industrial Diversification: Implication for Pakistan

"The first order of business in development is to learn how to do new things, not to focus on what one already does well." Dani Rodrik⁹

So far, we have discussed the importance of a long term vision in devising successful industrial strategies, which led to the phenomenal growth in the East Asian countries (EACs). We have also critically analyzed Pakistan's industrial planning of the past and have identified some key differences between the policies of Pakistan and that of the East Asian Tigers. More specifically, we have highlighted that in the case of Pakistan, there has been an absence of a long-term vision of industrial and technological catch-up with the developed world. The process of industrialization has been merely seen as developing production capabilities in certain manufacturing sectors (mainly textiles), rather than a continuous process, which involves gradually moving up the industrial and technological ladder.

A growing body of empirical literature now shows that the long-term economic development of countries critically depends upon the kinds of products they produce and export (See for example: Hausmann, Hwang and Rodrik, 2007; Hausmann and Klinger, 2007; Hidalgo et. al., 2007; Hidalgo and Hausmann, 2008 & 2009). This fact was also highlighted, though in a different manner, by the early development economists (e.g. Schumpeter, 1948; Singer, 1950; Prebisch, 1950; Lewis, 1954; Hirschman, 1957; Kaldor, 1970).

In this regard, this section first discusses the theories of these early development economist and then goes on to analyze the relatively recent literature and evidence on the issue of industrial diversification. This is done by examining the newly developed *Product Space*, which is a visualization of all the goods being traded internationally, their interrelationships, and their level of complexity and diversification. We believe, that the new evidence provided by the Product Space is quite remarkable and clearly demonstrates the need and importance of industrial diversification in developing countries. This evidence gives us a context within which we analyze Pakistan's industrial structure and its evolution over the years, and most importantly, the future prospects for the country. We also analyze the "economic complexity"

⁹ Rodrik, 2007, p. 10

indicators for Pakistan and their historical evolution and then draw comparisons with some other countries.

4.1. Early Development Economists and Industrialization

Many of the early development economists argued that if the underdeveloped countries want to catch-up with the developed world, they must industrialize and develop a strong manufacturing base (e.g. Singer, 1950; Prebisch, 1950; Lewis, 1954; Hirschman, 1957; Kaldor, 1970). These economists made a number of arguments were made in favor of industrialization. Some of them were as follows:

4.1.1. Linkages, Multiplier Effects and Positive Externalities

Some economists argued that development of a strong industrial base especially in the manufacturing sector is essential for the underdeveloped world because, along number of positive externalities, these industries develop backward and forward linkages with the rest of the economy (Hirschman, 1957). Manufacturing industries, thus, generate a demand for a large number inputs in the form of goods and services leading to increased production other sectors through backward linkages. Similarly, products of some manufacturing industries end up as essential inputs for some other industries leading to an increased overall production through forward linkages. Naturally, the more linkages a particular industry has, the higher would be the secondary multiplier effects generated by the economic activities of that industry.

4.1.2. Absorption of Surplus Labor

Underdeveloped countries have a large amount of surplus labor underemployed in the low productivity sectors such as agriculture and basic industries. Therefore, Lewis (1954) argued that absorption of this surplus labor in highly productive modern industrial sectors is essential for increasing overall productivity growth in the underdeveloped countries. It is quite evident that the more linkages a particular industry has with the rest of the economy, more labor would be absorbed. Since the modern manufacturing industries have more linkages, these sectors would absorb more labor directly as well as indirectly, leading to higher overall productivity growth in the economy.

4.1.3. Innovation and Industrialization.

Schumpeter (1948) argued that capitalism is driven by technological change and innovations; more specifically though a process which he called as ‘creative destruction’. Firms within an economy operate under a competitive pressure to develop new products and production processes. Emergence of new products through technological change and innovations has a negative impact on the demand for existing products; the old technologies also become obsolete. According to Schumpeter (*ibid.*), this process makes capitalism a dynamic and evolutionary system driven by the creation of new products and production processes by the firms competing for their survival.

If the development of capitalism within countries is driven by innovations and ‘creative destruction’, then this process is also likely to operate at the global level, i.e., emergence of new products and technologies in one country can have a negative impact on the productive structure of other countries.¹⁰

It is a fact that since the Industrial Revolution, majority of innovations have occurred in the manufacturing industries, therefore, development of this sector is essential for the underdeveloped countries if they want to reap the benefits of an innovation driven economy. Innovations in other sectors (i.e. agriculture and services) are also usually a result of innovations in the manufacturing sector. For example, development of machinery and fertilizers for agricultural activities led to new farming techniques which further led to higher productivity and growth in the agriculture sector.

4.1.4. The Terms of Trade Aspect

Some development economists also emphasized the importance of terms of trade for the underdeveloped countries. Starting from the seminal works of Raul Prebisch and Hans Singer during the 1950s, it was observed that the terms of trade of the underdeveloped countries have a systematic tendency to deteriorate with the passage of time (Singer 1950; Prebisch 1950). The proponents of this view argue that underdeveloped countries must industrialize if they want to avoid a systematic deterioration in their terms of trade. Recent evidence has indicated that in order for the terms of trade to improve, it is not only essential for the developing countries to decrease their reliance on primary commodities and develop a manufacturing base, but also to gradually diversify towards more sophisticated and advance products (Chakraborty, 2012). This implies that industrialization should not just be seen as

¹⁰ See Singer (1998) for a brief discussion on the phenomenon of creative destruction at the global level.

building static capabilities in certain sectors, but, diversifying towards new products and sectors with the passage of time.

4.2. Product Space and its Implications for Industrial Planning

The idea of *Product Space*, first introduced by Hidalgo et. al. (2007), is a novel way of looking at the types of products being traded globally and the relationship among these products. Since then, a number of studies have emerged which have extended the original work of Hidalgo et. al. (*ibid.*) (For example: Hausmann and Klinger, 2007; Hidalgo and Hausmann, 2009; Hausmann et. al., 2014; Felipe, Kumar and Abdon, 2014; Hartmann et. al., 2017). Product Space is essentially a graphical representation of all the products traded in the world. It is the application of Network Theory to economics and it depicts how different products are connected to each other within a network called Product Space (see Figure 4.5). Apart from different types of products, countries can also be mapped within this product space according to the types of products they export. The conclusion which can be drawn from this relatively recent stream of literature is that different products have different consequences for development. Furthermore, the extent to which an economy can diversify its exports is also determined by the types of products that economy specializes in.

The new evidence which has emerged from this stream of literature lends remarkable support to the ideas extended by the pioneers of development economics who had emphasized industrialization in the underdeveloped world. But it also gives us some valuable new insights and helps us to see things from a new perspective.

The first thing which can be observed from the Product Space is that some sets of products are more connected to each other whereas others are not as well connected. More advanced and sophisticated products can be found in the densely connected *core* of the Product Space, whereas less sophisticated products can be found in the least connected *periphery* (See Figure 4.5 & 4.6). Well-connected products are defined as those having a high probability of being produced and exported together by countries¹¹. Therefore, the observation that different types of products have different degrees of connectedness, implies, that the extent to which an economy can diversify its productive structure depends on the types of products it specializes in. Furthermore, the core of the Product Space is occupied by the high income countries whereas the low income countries are at the periphery. In other words, different areas of Product Space are associated with different levels of development.

¹¹ See Hidalgo et. al. (2007) for details.

So an important question here is, that, given sufficient time, can all countries reach the dense parts of the Product Space without an intervention from the state? The traditional economic theories would imply that yes they can. If markets are allowed to function without much government intervention and there are no restrictions on trade, then, with the passage of time countries would accumulate the required factors of production and would gradually diversify their export structures towards more sophisticated products. Furthermore, according to traditional view, since it is the specialization according to comparative advantage which makes economies efficient and enable them to grow to their full potential, diversification doesn't really count much. However, this tradition view is firmly challenged by a study conducted by Imbs and Wacziarg (2003). They present strong evidence against this traditional view and shows that as incomes increase, economies become more diversified and less concentrated. Their cross-sectional econometric analysis for a large number of countries, as well as time series analysis for various individual countries, reveals that *higher economic growth is strongly associated with increased diversification* and not specialization within a narrow set of products.

The literature on Product Space, on the other hand, has established that countries which are stuck at the 'periphery' (of the Product Space) have to take measures beyond what is dictated by the traditional economic theory in order to change the productive structure of their economies (and to reach the 'core' of the Product Space)¹². This is because the productive capabilities of countries at the periphery are insufficient for the production of more sophisticated products at the core (as depicted by the low degree of connectedness of their products). These countries can only diversify to a certain extent after which they will be unable to produce any new products unless they change their industrial structure and develop new productive capabilities.¹³ Therefore states have to play an active role in changing the economic structure of countries at the periphery.¹⁴

The position of countries within the Product Space is also an important determinant of their future growth. Hidalgo and Hausmann (2009) have shown that the degree of complexity of an economy is strongly correlated with the level of income. More importantly, deviations from this relationship predict the future growth of an economy i.e. "countries tend to approach the

¹² See for example: Hidalgo et. al. (2007); Hidalgo and Hausmann (2009);

¹³ *ibid.*

¹⁴ This is a logical conclusion which can be drawn from the evidence presented in the literature on Product Space. Hidalgo (2009), and almost all other studies referred in this paper (related to Product Space), have emphasized an active role of state in moving the economies from the periphery towards the core of the Product Space.

level of income dictated by the complexity of their productive structures”. Hidalgo and Hausmann (*ibid.*) contest the view of the mainstream literature (including the literature on endogenous growth theory) where more emphasis is laid on accumulating certain “highly aggregated” factors of production (e.g. physical capital; human capital; institutions etc.). Capabilities required for complex economic activities cannot be understood in highly aggregated terms such as human capital (mostly measured through years of schooling) or institutions (measured through some proxy of rule of law). Countries acquire these capabilities mainly through a learning-by-doing process. Development strategies should aim to promote new products as a way to create incentives for the accumulation of capabilities that could further result in a “coevolution of new products and capabilities”.

4.3. The Economic Complexity Index (ECI)

Economic Complexity Index (ECI) is a numeric measure which shows the relative position of countries within the Product Space i.e. countries which are ranked higher in terms of this index are found at the core of the Product Space whereas the ones with a low ranking are found at the periphery. Published by the MIT Observatory of Economic Complexity, ECI captures the degree of complexity of the productive structures of countries.¹⁵ Economic Complexity of countries is determined by the sophistication and knowledge intensity of the products they export. According to Hausmann et. al. (2014), products produced in an economy reflect the knowledge and capabilities possessed by that economy. Therefore, complexity of an economy is “expressed in the composition of a country’s productive output” (*ibid.*, p. 18).

Two important elements on the basis of which ECI is calculated are “Diversity” and “Ubiquity”. Keeping other factors constant, if an economy is more diverse (i.e. it can produce and export large number of products), it’s ECI would be higher. On the other hand, Ubiquity of a product is defined as the number of countries exporting that particular product. If other factors remain constant and the products exported by a country are produced by many other countries, then the ECI of that country would be lower. Measures of Diversity and Ubiquity are also used to correct each other while calculating the ECI of countries. For example, diamonds are exported only by a few countries, so, does this imply that these countries are complex economies? No, because these countries are not very diverse (i.e. they do not export many products), therefore, the ECI for such countries would be lower. On the other hand, not

¹⁵ See Hausmann et. al. (2014, pp. 19-25) for a detailed methodology of ECI. MIT Observatory of Economic Complexity can be accessed at: <http://atlas.media.mit.edu>

all diverse economies are necessarily the complex ones. If a country exports large number of products, but these products are also exported by a large number of other countries, then such an economy would also have a lower ECI. For example, Pakistan and Singapore are equally diverse (i.e. they export same number of products) but the products exported by Pakistan are exported by large number of countries whereas the products exported by Singapore are only exported by a few countries. Thus Singapore is ranked much higher than Pakistan in terms of economic complexity.¹⁶

ECI is also an important determinant of economic growth. Some of the econometric models presented in Hausmann et. al. (2014) show that ECI is strongly associated with higher per capita income growth in countries. Furthermore, it is found to be a much better predictor of future per capita income growth than the traditional measures of institutions, competitiveness and human capital¹⁷.

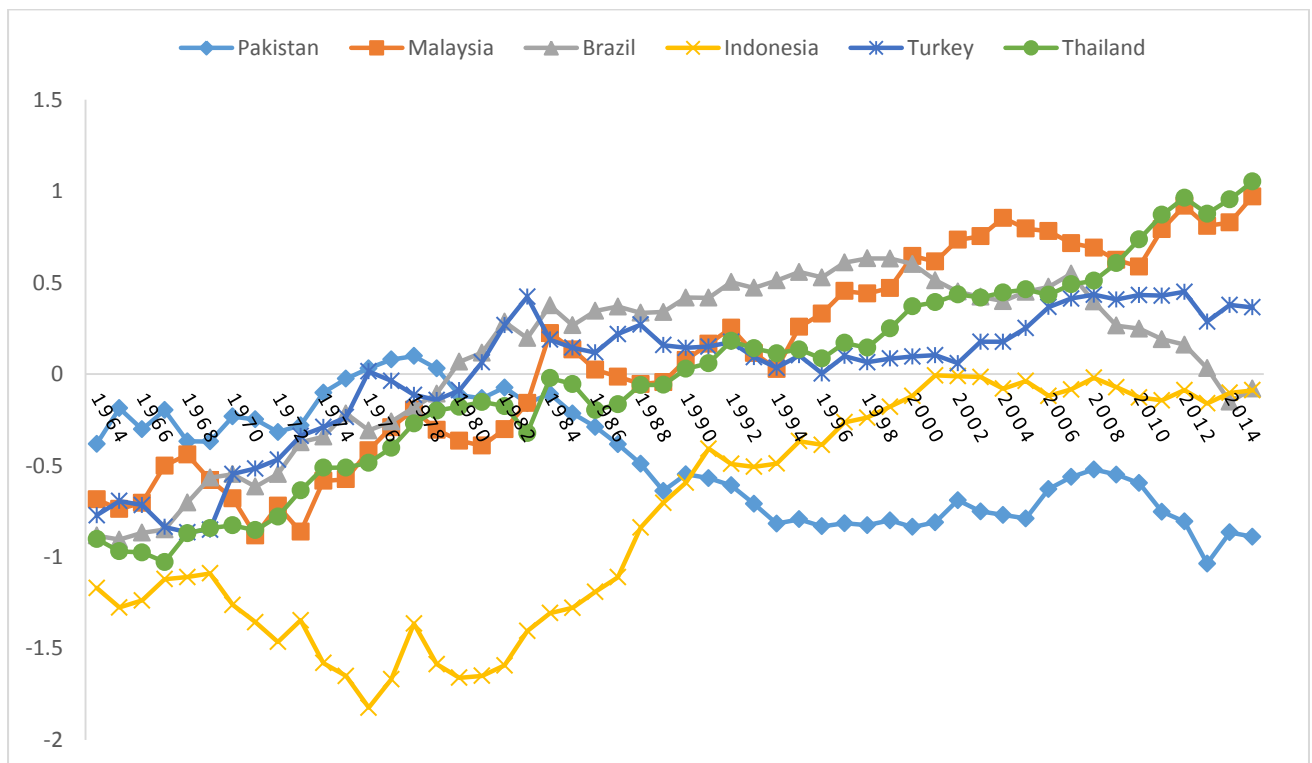
4.4. Pakistan within the Product Space

Pakistan is ranked 87th in the world in terms of economic complexity out of 108 countries for which the ECI was calculated in the year 2015. In 1970, country's ranking in terms of ECI was 52nd in the world (out of 96 countries). An analysis of historical patterns of ECI of Pakistan reveals that the country was *relatively* a more complex economy during the 1960s and 1970, then it is today.

¹⁶ Product Complexity Index (PCI) is also calculated on the basis of Diversity and Ubiquity using the same logic as in case of ECI. Assuming other factors to be constant, if a product is exported by a large number of countries, then, this product would have a lower PCI. On the other hand, if the countries exporting a particular product are very diverse, then that product would have a higher PCI.

¹⁷ Hausmann et. al. (2014) have used World Bank's Worldwide Governance Indicators (WGI) as a measure of institutions; World Economic Forum's Global Competitiveness Index (GCI) as a measure of competitiveness; and Barro and Lee's data on the years of schooling of working age population as a measure of human capital.

Figure 4.1
Economic Complexity Index: Pakistan's Comparison with selected Countries
1964 – 2015



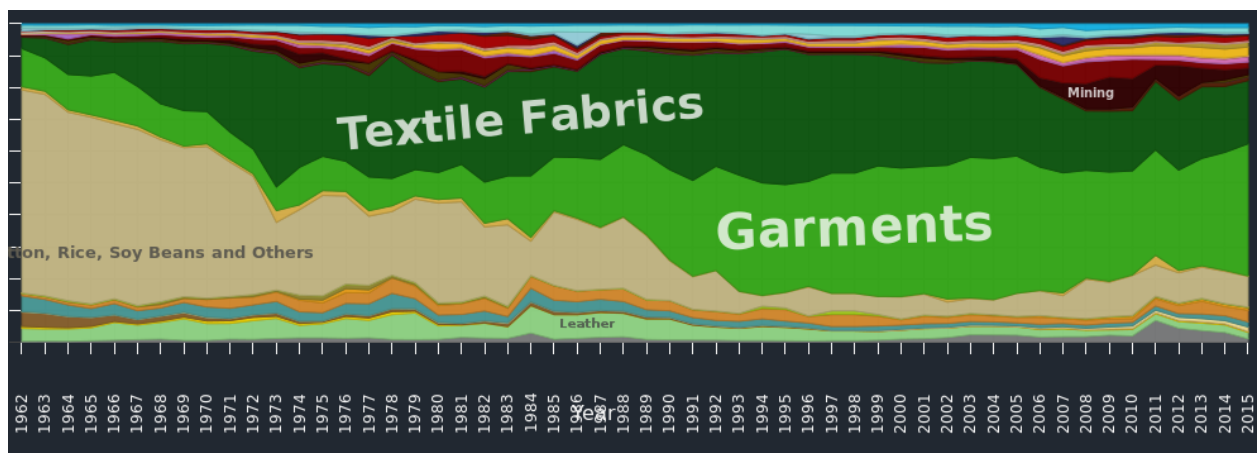
Source: Authors' calculations based on the data obtained from the MIT Observatory of Economic Complexity

As the above Figure 4.1 clearly shows that various countries which were relatively less complex economies than Pakistan, gradually overtook it and also performed much better economically. Why? Perhaps the answer to this question would tell us a great deal about the weak economic performance of Pakistan during the last four decades. We attempt to explain this next.

As discussed above, ECI captures the complexity of the productive structure of countries on the basis of the types of products these countries export. The more diverse an economy is and the less ubiquitous its exports are, higher would be its ECI. So the historical pattern of Pakistan's ECI shows that during the 1960s and 1970s, the country's productive structure was relatively more diverse and the products it exported were relatively less ubiquitous than Brazil, Malaysia, Indonesia, Turkey and Thailand. The reason that these countries overtook

Pakistan is because they radically changed their export structures towards more sophisticated and knowledge intensive products. This can be easily verified by looking at the changes in the export structures of these countries and by observing their evolution within the Product Space.¹⁸ On the other hand, Pakistan’s productive structure remained more-or-less stagnant, especially since the 1980s.

Figure 4.2: Evolution of Pakistan’s Export Structure (1962-2015)



Source: Visualization generated from the web application of the MIT Observatory of Economic Complexity

The above Figure 4.2 clearly depicts the point which we have been trying to highlight in this paper. Pakistan initially managed to decrease the share of primary products in exports. The country managed to increase the share of manufactured items in its exports but this increase was mainly led by textile fabrics and garments. But the most important point which needs to be highlighted is that since the 1990, country’s export structure has remained stagnant. This is in contrast with the EACs. The following figures (4.3 & 4.4) depict the evolution of the export structures of Malaysia and South Korea. It can be clearly observed from these visualizations that unlike Pakistan, these countries managed to significantly change their export structures towards more sophisticated products.

Figure 4.3: Evolution of Malaysia’s Export Structure (1962-2015)

¹⁸ However, due to space constraints, Product Space visualizations for all these countries cannot be shown in this paper. Interested readers can obtain the Product Space visualizations for these countries through the following link: <http://atlas.media.mit.edu/en/visualize>

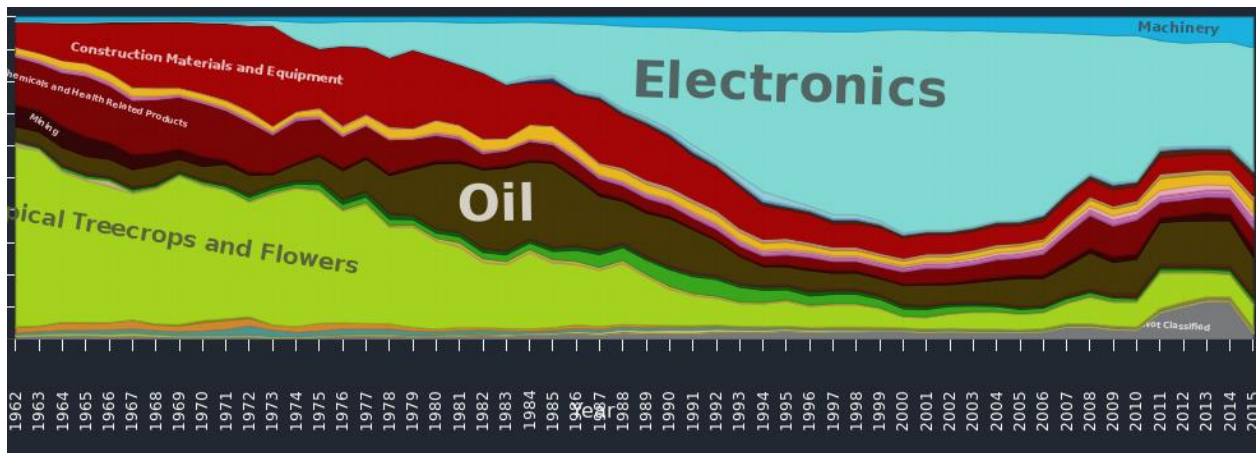
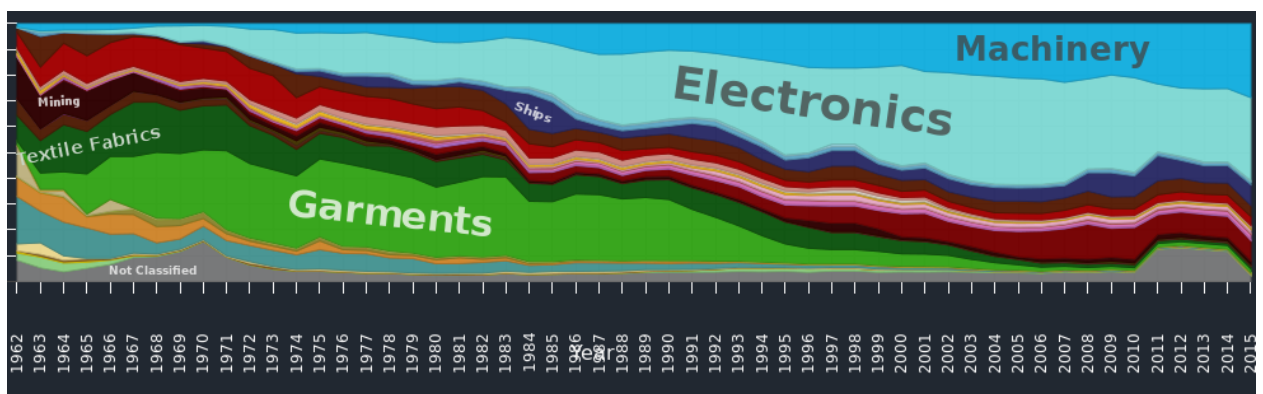


Figure 4.4: Evolution of South Korea's Export Structure



The above visualizations show that both Malaysia and South Korea were able radically change their export structures over the years.

In the case of Malaysia, the country's export structure was initially dominated by primary commodities and some basic manufactures. However, since 1970, Malaysia started to develop an industrial base in electronics and over the years, the share of this sector in exports has increased a great deal.

As discussed above, the kinds of goods in which a country specializes have important consequences for future development. This could explain the growth differences between Pakistan and Malaysia. The position of electronic products within the Product Space allow the countries specializing in this sector a greater opportunity for diversification and innovation which are in turn important for future growth. On the other hand, the position of textiles and garments within the Product Space allow the countries specializing in these sectors limited opportunities for diversification and innovation.

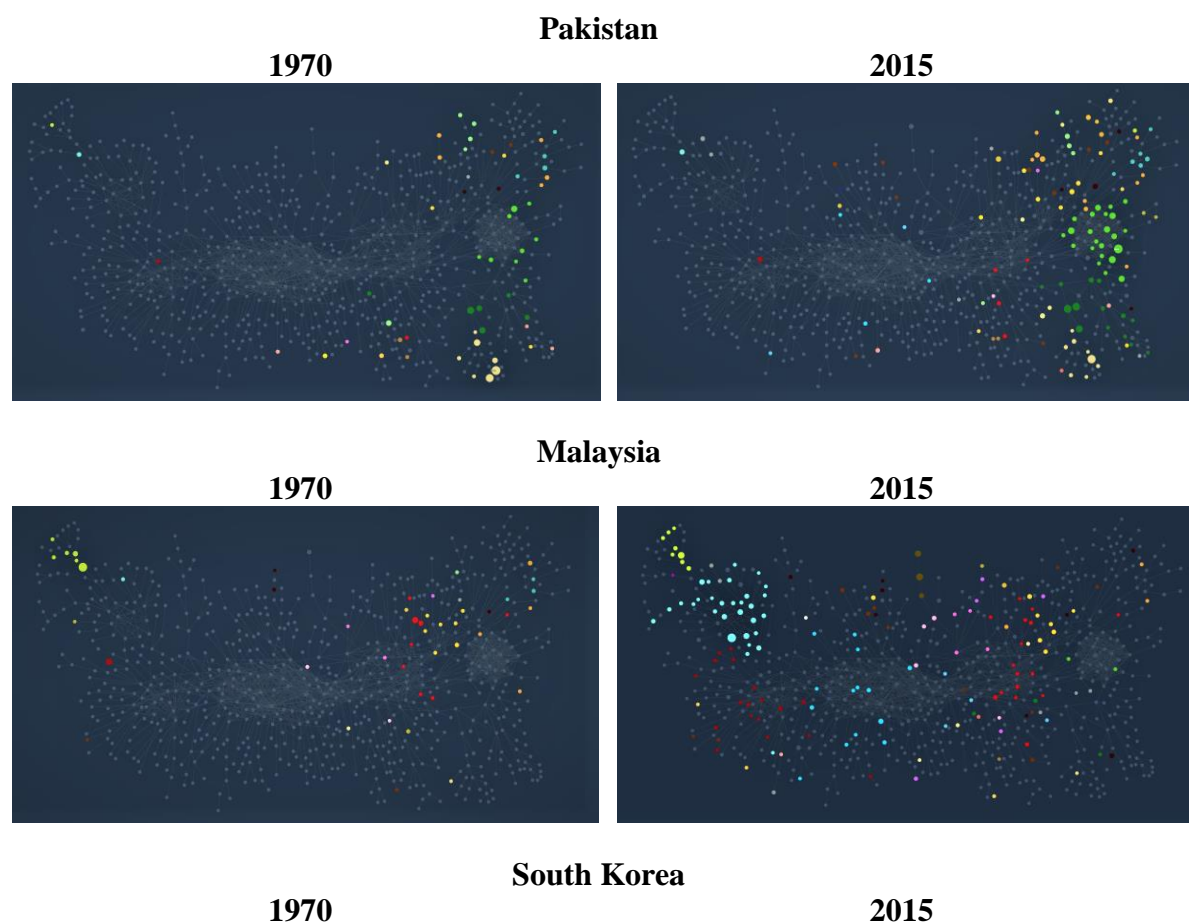
South Korea, on the other hand, had a higher share of textiles and garments in its exports till 1980. But starting 1970, the country also started building industrial capabilities in electronics,

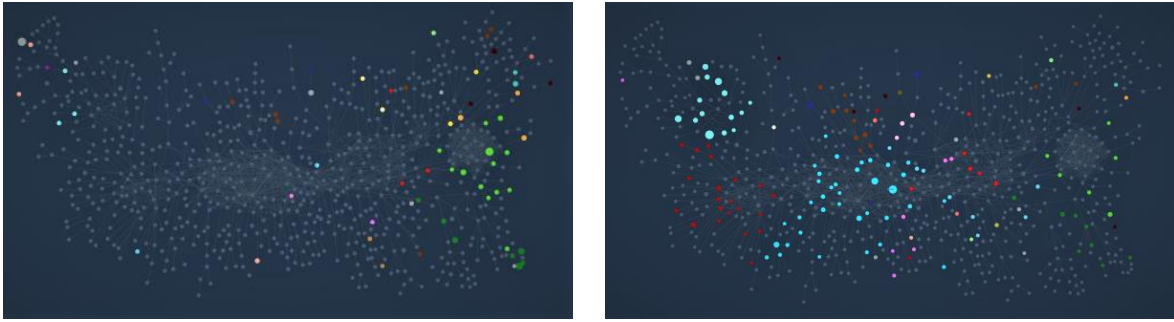
machinery and ships. Over the years the share of electronics became highest in exports. A recent trend which can be observed is the rising share of machinery in the country's exports which would further strengthen the growth prospects since machinery is the most complex sector within the product space.

The same logic can be used to explain the growth differences between South Korea and Malaysia which we used to explain the differences between Malaysia and Pakistan. Unlike Malaysia, South Korea managed to significantly increase the share of machinery in its exports. Since this sector occupies the "core" of the product space and is the most complex (as well as the most well-connected) sector within it, Korea was able to diversify and innovate more than Malaysia and was thus able to reach a higher growth trajectory.

The following Figure 4.5 show the position of Pakistan, Malaysia and South Korea within the Product Space and the evolution of the productive structures of these countries since 1970.

Figure 4.5: Visualization of Product Space for Position, Malaysia and South Korea



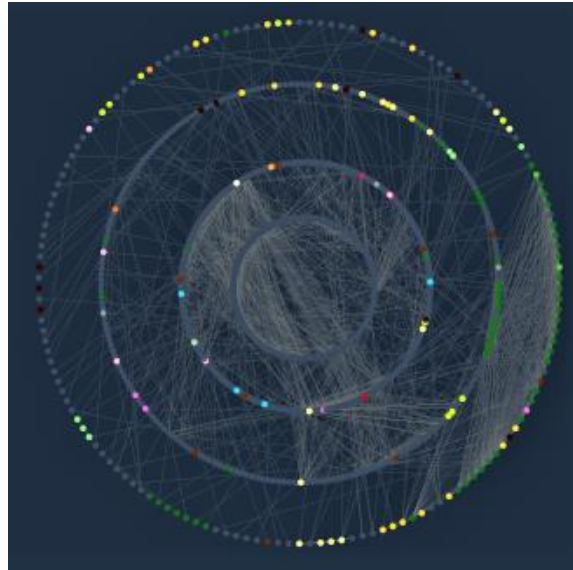


*Source: Authors' calculations based on data on Economic Complexity obtained from
MIT Observatory of Economic Complexity*

The above visualizations of Product Space which we generated for Pakistan, Malaysia and South Korea further strengthen the central argument of this paper i.e. economic development critically depends upon the kind of productive capabilities a country has and the products which it exports. In 1970, all three countries mainly specialized in the products which were at the periphery of the Product Space. However, over the years, both Malaysia and South Korea have been able to penetrate the core of the Product Space (although to a different extent). Whereas Malaysia has mainly exploited the electronics segment of the Product Space, South Korea has also managed to move into the machinery segment situated deep into the core. Pakistan, on the other hand, largely remained at the periphery, populating mostly the textiles and garments related areas.

Pakistan's case can be further elaborated through the following visualization (Figure 4.6) of the Complexity Circles for Pakistan which are based on the country's position within the product space. The outer circles show the products which are at the periphery of the Product Space. As we move inwards, we move towards the core of the Product Space and towards more complex products. It can be observed that Pakistan's productive structure largely consists of products with low complexity.

Figure 4.6: Complexity Circles for Pakistan (2015)



In this section we have attempted to show that the kinds of sectors in which a country develops its productive capabilities, determine its long term growth. This argument is backed by strong empirical evidence presented by the literature on the Product Space. Our analysis revealed that the kinds of products in which Pakistan specializes are situated at the periphery of the Product Space. These products have a low level of sophistication and are poorly connected which means that there are limited opportunities for Pakistan to diversify its exports based on its current productive structure. Pakistan's comparison with Malaysia and South Korea has revealed that unlike Pakistan, these countries have managed penetrate the core of the product space, towards more sophisticated and highly connected products. Thus, the export structure of these countries is more diversified than Pakistan and they have also managed to achieve higher growth rates. Pakistan's inability to move out of the textiles sector has meant that the country has been unable to diversify its exports and thus has been unable to sustain high growth rates.

5. Conclusion

A strong industrial base is one of the most important aspects for the growth and development of an economy. A majority of the developed countries of the world rely on their industrial structure to foster better economic conditions for their people. Pakistan's industrial sector, as we know, has failed to deliver its promise. We ask why?

The aim of this paper was to explore the reasons behind the lack of industrial diversification in Pakistan and its failure to move into the production of more sophisticated and high-technology products. For this purpose, we adopted an exploratory approach.

We first compared Pakistan with other high performing East Asian countries and identified four distinct problems with Pakistan's industrial development strategy. An analysis of Pakistan's Five Year Plans showed that Pakistani governments and policymakers, throughout the years, lacked a clear-cut long-term vision regarding the industrial development in Pakistan. Moreover, setting targets but not meeting those targets, providing no incentives for the firms to enhance their performance, and protecting uncompetitive and rent-seeking industries, have been the hallmark of Pakistan's industrial policies. The industrial planning and benchmarks set in the Five Year Plans, although looking very good on paper, were never achieved. This clearly shows that the industrial planning in Pakistan has been quite arbitrary.

Secondly, drawing from the recent evidence, we argued a case for decreasing reliance on the traditional textile and clothing sector, while diversifying the overall industrial structure of the economy. We discussed the recent evidence which shows that it is not industrial specialization but the establishment of new type of industries, i.e., industrial diversification which is more important for long-run economic growth. Therefore, while examining the *Products Space* – which is a visualization of all the goods being traded internationally, their interrelationships, and their level of complexity and diversification – it is argued, that a country's position within this space determines the extent to which it can diversify.

In this regard, we analyzed the level of Pakistan's product diversification and sophistication to find that it ranks 87th among 108 countries on the Economic Complexity Index. We further observed that Pakistan's industrial diversification has deteriorated over-time from 1970s when the economic structure was relatively more complex in relative to the other comparable countries of the time.

To conclude, based on our discussion, we suggest that for Pakistan's long-term development, it is imperative to have lucid vision for moving up the industrial and technological ladder and building capabilities for the production and export of more sophisticated items. It is also necessary for Pakistanis to develop a national commitment and consensus regarding the industrial development strategy. And most importantly, it should be recognized that a plan is as good as its implantation, thus, focus should be on implementation of the industrial plans.

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