



The Economy Of Modern Sindh

Opportunities Lost & Lessons for Future

A detailed book Review by Research & Training Wing

PRODUCED BY

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Summary

‘The Economy of Modern Sindh: Opportunities Lost and Lessons for Future’ is an informative book on the evolution of Sindh’s Economy over time. The economic path of Sindh has not been that of a linear improvement, but a wayward one with crests and troughs. In addition to the history of land, people and administration, the book documents snapshots of historical data pertaining to the following sectors/thematic areas of province’s economy:

- Population
- Education
- Health
- Labor and Employment
- Poverty and Inequality
- Agriculture
- Irrigation
- Infrastructure
- Industrial Structure
- Energy and Mineral Resources
- Public Finance

The chapter-wise summaries below critically analyze the arguments and propositions of authors in relation to the historical perspective to sectors contributing towards Sindh’s modern economy.

There are plenty of laudable features that make this book quite appealing from an academic standpoint. Firstly, the book neatly summarizes the evolution of major sectors of the provincial economy over time. Secondly, the authors have focused their energies on describing the breadth of the entire spectrum of sectors. Thirdly, the book describes the provincial sectors through a dualistic (urban-rural) lens that permeates the collective consciousness of the populace. Fourthly, the authors mostly attempt to substantiate the claims with data rather than rhetoric. Lastly, the authors provide a rich and coherent narrative to the different sectors of Sindh’s economy that will help provide learners with a bird’s eye view perspective to the different pieces of puzzle to the province.

From a reader’s perspective, the book helps develop a historical narrative through descriptive data to document the 11 Five-Year Plans and 5 Waves of Major Industrial Policies that informed the socio-economic development imperatives of Pakistan. When describing the sectoral evolution of Sindh, Punjab is used as a benchmark to show how the province progressed relative to Punjab for different socio-economic indicators. Dual economy perspective of the province also helps with a nuanced analysis of Karachi (and

Hyderabad) and the rest of Sindh. The changing demographic trends, rural-urban migration, disproportional incidence of poverty, infrastructure and industrial development are all seen through this dualistic perspective to highlight the stark inequalities of different socio-economic indicators within the province.

With all the features that might excite a learner, the book (with a stellar line-up of authors) lacks the analytical depth that could help deconstruct the underlying determinants of complex issues facing the province. This observation especially holds for the chapters on health and education which are replete with descriptive statistics on budgetary allocation, expenditures, physical and human resources, but do not cite any studies that look at the predictive models to identify and highlight significant determinants of socio-economic outcomes.

In terms of the data presented in the book, it has to be said that most of the data focuses on physical and financial inputs, and does not go beyond outputs in most cases. This means that the outcomes pertaining to different socio-economic sectors are not discussed or analyzed. This essentially means that limited analytical insights can be gained from this book about the contributing factors towards improvement or deterioration in outcomes. For example, the chapter on education is devoid of any discussion on learning outcomes and whether the increased investments in education have translated into improved learning outcomes in Sindh. Although the descriptive details for individual chapters should be acknowledged, the inter-connectedness among different sectors is glaringly missing. For example, all the chapters (population, health, education, agriculture, industrial development, public finance) are deeply interlinked and are linked to poverty and inequality. However, no attempt has been made to explore and analyze the interlinkages.

Finally, the underpinnings of the book are not without some normative claims that are not necessarily evidence-based. For example, the poverty reduction is attributed to certain political tenures without examining the policies initiated by the predecessors that might have resulted in the poverty reduction in subsequent years. Similarly, policies of nationalization are criticized and deemed an outright failure without a deep examination of the counter-factual. This essentially means that the *laissez-faire* economy is implicitly termed superior to any other economic principles without analyzing the stage of development at which the country stands. Similarly, Gross Domestic Product is used as the benchmark to determine the encompassing socio-economic development of the country without analyzing the exacerbating inequalities associated with the growth. It has to be acknowledged that any economic policy cannot be proposed as a panacea for all countries.

Similarly, it is not self-evident that free-market economy is suitable for all countries, regardless of the corresponding stage of development or the existing inequalities that may exacerbate with a free-market approach.

Chapter 1: Land and People

The authors provide a brief overview of Sindh's location, topography, types of water bodies, climate, culture, administrative setups and its historical evolution through different eras from Indus civilization to Post-Independence Era.

Sindh ranks 3rd in size among Pakistan's four provinces with an area of 54,407.2 square miles. The province of Sindh is part of the lower Indus Basin and lies between 23-40 degree and 28-30 degree north latitude and 66-40 degree and 71-05 degree east longitude. It is about 540 km in length from north to south and nearly 250 km in its extreme breadth (281 km average).

In the extreme west, Sindh is a dominantly flat region. The mountainous region consists of the Kohistan section of the barren Kirthar Mountains. To the east, the sand belt stretches from borders of Bahawalpur to Rann of Kutch. Between these tracts lies Indus Valley, terminating in the deltaic area in Southwest. These areas have rich alluvial soil and central portion has a perennial water supply from Sukkur Barrage which provides province with enormous agriculture and kindred potentialities. The coastal region of Sindh is spread over southern and eastern part of the country between the Indian border along Sir Creek on the east and the Hub River along Balochistan coast on the west. This coastal line which is approximately 350 km long and can be separated into Indus Delta/Creek and Karachi coast in the south, is located along the Arabian Sea. A significant portion of Sindh's land is desert. The eastern border of the province is Tharparkar with large sand dunes. The desert is called Rajistan and has an area of 13,100 square miles.

Sindh is a depository of coal, iron and large quantities of limestone and salt. A large quantity of coal has been found in Tharparkar and Lakhra. In Thar, it is being excavated by the government for generating electricity. Iron Ore is also extracted from multiple regions. Gypsum is another kind of mineral found in large quantities near Maripur, where it is being mined. It is also found on the banks of Nain Gaj in Kohistan near Bhago Thoro Mountain. Petroleum, oil and gas have been found in copious amounts and are being utilized as resources for the entire country. In the Thar Desert, there is fine sand, china clay and granite stone.

The chapter goes on to briefly describe Sindh's flora, fauna, types of water bodies, climate, culture and administrative setup.

The chapter provides a brief insight into Sindh's history through different eras along with an overview of its location, topography, types of water bodies, climate, culture and administrative setup. Because this is an introductory chapter, the authors do not delve into the contemporary issues for different sectors of Sindh from a planning or policy standpoint.

Chapter 2: Administrative & Economic History

The population in the period of 1856 excluding Khairpur region was recorded at 1.77 million by the British Mission in Sindh. According to their record, Sindh region had the highest concentrates of Muslim population followed by Hindus and other religions. The annul population rate in that era was recorded at 1.31%. However, between 13 years this rate increased to 22.7% from 1859 to 1872. The Gazetteer (1876) laid down the population of Khairpur for the first time and recorded it

at 130,350. The aggregate population of Sindh in the period of 1872 was recorded at 2.33 million. Population of Sindh Between 1901 to 1941, increased to more than three folds at 6.05 million.

According to the gazetteer's information, the **male to female** gender ratio was recorded at 55:45 throughout the period between 1901 -51. The population census of Karachi between 1881 and 1951 showed a massive thirteen times increase in overall population rate. However, the figures of 1951 showed a significantly high percentage increase of 152 points primarily because of the vast migration that took place in event of Indo-Pak Independence in 1947.

As according to the 1951 census, Sindh was predominantly considered as an agrarian economy with almost 68% of the population directly engaged in agriculture. According to figures of 1951, the kharif crop accounted for almost 72% and remaining 78% was cultivated under the Rabi crop. The cotton contributed to almost 99.9% of the fiber crops. Tharparkar, Nawabshah were considered as its major growth regions. Despite promising weather and soil conditions not much attention was paid to the cultivation of fruits.

As far as the livestock is concerned in early part of 1940s, Sindh had highest concentrates of cattle, buffaloes, horses and camels. Sukkar, Larkana, and Karachi had 228, 227 and 196 milche cattle per thousand of the human population respectively. This large number of cattle was the primary source to provide dairy product to the Ceylon, and Zanzibar. Karachi had the highest quality cattle available at that time. Camels were more common in the region of Tharparkar and Hyderabad and were once used as a chief mode of transport.

Before partition, trade was mostly handled between Bombay and Karachi port because of their geo-strategic importance and deep water access. Trade in Sindh region expanded many folds after the intrusion of British. The import volume expanded to a massive 2619% increase and exports up-to 57% as compared to post British era.

In the mid-19th century, a third of tax collected was allocated to education which means that almost 34% of the total budget was spent on education. This shows that in between 1850 and 1900, education was given a top priority. However, if we analyze today's scenario, education is still a top priority sector of Sindh government but the current allocations still not suffice in terms of the actual needs of this sector.

This chapter provides a good comprehensive snapshot of Sindh's administrative and economic overview between the period of 1850 and 1951. However, the author must have made a comparative analysis between the current and the mentioned period (1850 – 1950).

Chapter 3: Population

In the book 'The Economy Of Modern Sindh' the authors have analyzed the broader perspective of Pakistan's second most populous province Sindh and have discussed the socio-economic indicators and have widely explained their impact of rapid population growth rate.

The chapter on 'Population' incorporates the data from 1891, the era of British Empire when Sindh's population was **2.9 million**. The authors have taken the population of Sindh of that time-period because Sindh was part of Bombay presidency and was separated in 1936. The population of Sindh started to rise from **3.5 million** in 1911 to **4.5 million** in **1941** as of the census held in that period. It was a drastic change after 1891 due to migration of Muslims from India and there were better economic conditions in Sindh at that time when Sukkur Barrage had also been constructed.

Along with it people of different race and religious communities such as Christians, Jews, Bahias, Parsis had been living in peace and harmony.

Before partition, Sindhi was a dominant language up to **70%** but after arrival of **1.5 million** Urdu-speaking migrants it decreased to **58%**.

After independence of Pakistan, **six** censuses are conducted. The last census held in 2017 shows that Pakistan's population is **207,774,520** ranking it as **5th** populous nation of world. The average annual growth rate of Pakistan from 1998-2017 is **2.4 %**. According to the last census of 2017, the population of Sindh is **47,886,051**. After partition, there has been almost eight times increase in population till date. According to authors, 'the rate of increase of population is largely because of inter-provincial and urban-rural migration'. The population growth has decreased from **4.63%** in 1961-72 to **2.4%** in 1998-2017. Here the author has not clearly explained how population increased in 1961-1972 and how the annual growth of population had undergone such decline from 4.9% to 2.4%. This would have helped deconstruct the underlying determinants to stem the tide of population growth in Pakistan, specifically in Sindh.

The writer on "**page 45 paragraph 3rd**" discusses that 'over-population is bad for economy and social development. The unskilled population is a burden on society; whereas, educated masses may find employment or move to foreign countries where there is scarce labor.' Exponential population growth has made the resources scarce coupled with increased unemployment. A significant youth-based population means that unless sufficient employment opportunities are generated, this demographic dividend may turn into a demographic curse.

The population density (person per sq.km) for Sindh as a whole has increased from **135/sq. km** in 1981 to **339 sq.km** in 2017.

The author has presented the gender population in which there are **24.9 million** males and **23 million** females in Sindh province. The male-female ratio turns out to be **0.92%**. According to author, this may be due to socio-cultural norms.

The rural-urban distribution shows that in Sindh there is **52.02%** urban population and **47.98%** rural population. The writer here has proposed that if conditions of such under-privileged districts are improved, then there would be sufficient resources with opportunities and social infrastructure to stem the tide of rapid rural to urban migration. According to author, **trend of rapid urbanization in recent years has led to existence of many secondary pre-urban and satellite districts such as N.feroz, Ghotki, Mirpurkhas, Umerkot, Jamshoro etc.** These districts are termed by the authors as attractive centers for manufacturing and employment. However, no evidence is provided to substantiate the aforementioned claims.

The sex-ratio (male-to-female ratio) of Sindh is **108.58** in 2017. In rural areas it is **107.8** and **109.31** in urban areas. For age structure, the writers had provided the data of 1998 census as no details of 2017 census are provided yet. The dependent population is **38.3%** whereas working population is **61.7%** of total population. Similarly, for marital status and reproductive age, the data has been taken from 1998 census. Even in the absence of disaggregated data of 2017 census, representative survey findings could have been cited for the key demographic characteristics of Sindh.

In 1998, the female participation rate was very low i.e. **3%** as compared to males whose rate was **58.8%** in the labor force.

In reasons for high growth rate in Sindh, especially in Karachi, *the writers highlight strategic location (i.e. seaports), economic institutions and foreign investment.* The agricultural sector became stagnant and low real wage pushed labor towards urban areas for better opportunities. Improved health facilities have reduced mortality rate; however, due to a lack of contraceptives prevalence, the population growth is uncontrollable. The high fertility rate and early marriages are also determinants for increased population. **Illiteracy and poverty** are also causes of over-population. The government is not proactive in curbing the population growth rate. Reproduction rates are high in low-income families who view more children as a source of augmenting family income.

The writer has given example of **Malthusian population theory** which states that the resources increase in arithmetic rate whereas population increases at geometric (exponential) rate.

The average population growth rate for Sindh in 2017 became equal to the growth rate of Pakistan i.e. **2.4%**. The writer then concludes that the government has failed to control the over-population which can be attributed to a lack of strategic planning. The over-population has led to urban sprawl and it has created more issues such as congestion, pollution, environmental degradation, impure drinking water, sanitation, lack of transport and crime. Sindh is the most urbanized province with **52.02%** urban population according to 2017 census. Thus, it is indicated that per capita income rise is creating more income inequality in the dual economy of Sindh.

To control the population one should start working to control rural-to-urban migration and for this we have to government needs to prioritize rural investment to create economic opportunities in the rural areas to mitigate the increasing pressure on the infrastructure of urban areas of Pakistan.

It is worth mentioning that most of the disaggregated characteristics were taken from 1998 census. However, the crucial data for demographic characteristics of Sindh's population could also have been cited from representative surveys (e.g. Pakistan Demographic and Health Survey, Labor Force Survey, Multiple Indicators Cluster Survey, etc.). More recent trends would have provided a more accurate depiction of demographic characteristics of the population.

Chapter 4: Education

GENERAL COMMENTS:

- The chapter on education gives a thorough overview of the multiple streams of education systems in Sindh. It follows a systematic and logical layout elucidating all levels and forms of education. The author has broadly sketched the current state of education in Sindh while also tracing its historical roots and progression over time.
- Sindh is the first province that enacted Free and Compulsory Education Act 2013 post 18th amendment. There has been same historical focus on education on both national and provincial level. Considering this legislative promptness and persistent focus on education, the chapter timely presents a reality-check for the provincial administration to understand and respond to educational challenges.
- Despite all, as of 2015, over 6.6 million children (53 %) out of 12.7 million children are still out of school in Sindh.
- The entire chapter is supported by authentic data published by government sources. Therefore, analysis given in the chapter based on such publications presents a valuable insight into pressing educational problems arresting provincial progress.
- A glaring omission is the lack of focus on the impact of investment on learning outcomes. The analysis would have been enriched with studies comprising of representative samples to examine how the province has fared over time in terms of key learning outcomes.

PUBLIC EDUCATION:

While giving a quick snapshot of Public Education, the chapter highlights both quantitative and qualitative perspective. Trend analysis of quantitative data from 1947 onwards has identified reasons for the current state of educational challenges.

For instance, the chapter measures the percentage change in number of teachers, students and institutions at various levels over time. The highest percentage of enrolment increase had been at the medium level of education that is 1686% from year 1970-71 to 2015-16.

Similarly percentage increase in institutions and teachers is greater than the percentage increase in enrolment at the primary, colleges and university level. These variations in percentages also explain the current problem of drastic difference between the number of primary and post-primary schools – primary schools make 90 percent of the total schools in Sindh.

Pre-primary & Primary

Pre-primary in Sindh is known as Katchi, which has enrolment of 15 % in Sindh out of total pre-primary in Pakistan. There are a total of 45,447 schools in Sindh. Almost 90 percent of them at the primary level.

Primary is where the maximum number of students are enrolled. The adjusted net enrolment rate for the year 2015-16 is 77%, whereas the out of school children is 23 %. With regards to percentage change, there has been 310 % increase in number of primary institutes from 1970-

71 to 2015-16. Whereas, enrolment has had an increase of 192 % from 1970-71 to 2016-17. Sindh has share of 22 % of primary enrolment.

70 percent of the enrolment is in primary schools. Whereas, Middle schools make only 5 percent of the total schools. This shows a significant hindrance at the student transition post-primary.

Middle Education

Primary is followed by middle where the adjusted net enrolment rate for the year 2015-16 is 49% and unfortunately the authors argue that it is during primary and middle that most of the children attending school leave the school and become out-of-school children. There has been an increase of 327 % in number of institutes and 1686 % increase in enrolment from year 1970-71 to 2015-16. Sindh has share of 15 % of Pakistan's total middle-going children of Pakistan.

While there are 41,131 primary schools in Sindh, the number of middle schools in the province is paltry 2,329.

Quality of post-primary education is compromised due to lack of facilities. Of 4.685 billion allocations for non-salary expenditures, only 5 percent was utilized in 2015-16

One of the reasons for poor utilization is complex procedure involved in releasing the funds.

Secondary Education

Middle is followed by secondary school (widely known as matriculation), where the student enrolment is less than primary, followed by higher secondary, and then university. The number of institutes increased by 205 %, while enrolment increased by 66 % from 1970-71 to 2015-16. At secondary level, Sindh has 17 % share of national student enrolment at the secondary level.

Matriculation and intermediate students do not have the liberty to choose their careers and in fact they need to choose their field at an early stage, whereas in O & A levels, the students have a greater liberty to choose their fields.

COLLEGES

With regards to colleges, there has been an increase of 109 % institutes and 509 % in enrolment from year 1970-71 to 2015-16. Sindh has 27% of share of higher secondary of total higher secondary education of Pakistan.

UNIVERSITIES

The number of university has increased from 2 to 17, which makes 750 %, and enrolment increased by 4247 % from year 1970-71 to 2015-16.

A nuanced analysis with juxtaposition of current focus on college education rather than on doctoral degree in recent past could have been analyzed to provide useful insights.

STATE OF LEARNING IN PUBLIC EDUCATION

Underscoring the aspect of learning the chapter identifies that there are 9,499 one-room schools and 18,293 one-teacher schools. It reflects compromised learning outcomes as one teacher teaches multiple grades or students from multiple grades are accommodated in the same classroom.

Learning is determined by the quality of education which is defined as a provision of safe and gender-sensitive environment with basic essential facilities. However, 50 percent of the schools in Sindh are without drinking water, 46 percent without toilet, 41 percent without boundary wall and 63 percent without electricity.

There is a noticeable difference in Student Teacher Ratio between rural and urban areas. The STR in rural areas is 1:30 whereas it is 1:20 in urban areas. Similarly there are also variations between districts. For instance STR in Ghotki is 1:37.

PRIVATE SCHOOL

There has been a surge in private schools. Almost 40% percent of the national enrolment is in private schools at all levels. That is 1 out of 3 children is going to private schools.

Low-cost households prefer low-cost private schools over government schools due to perceived better outcomes.

Even in school systems there is an urban and rural divide which reflects the choice of elite or high cost private schools mostly in urban areas.

Enrolment in private schools is greater in urban areas than in rural areas. This is also reflected in gender differences.

EARLY CHILDHOOD CARE & EDUCATION

First time this aspect was touched upon in 1947. However, the curriculum was devised in 2002 which reflects low priority attributed to this aspect.

PRIMARY EDUCATION

National Education Commission in 1947 focused on universal primary education. The deadline for this kept on changing. In 1970 it was stated that by 2010 universal primary education will be achieved.

5 year Education plans focused on building primary schools which is why we have 91 percent primary schools today. Gender disparity seeping in the primary remains in post-primary (40 percent females)

There are only 430 schools in Sindh that have all the required amenities – Boundary walls, library, playground, electricity, washroom and water.

Learning through SAT score at grade 5 is at 22 to 24 percent, which hints at compromised quality of teaching.

Almost 40 percent of the students in Primary schools drop out before they transition to post-primary education.

Transition rate from primary to post primary is not only below national average but also below Balochistan. The national transition rate is 82 percent, whereas that of Sindh's it is 69 percent.

NON-FORMAL BASIC EDUCATION

Low quality due to low capacity of teaching staff. Directorate for Literacy and Non-formal was set up in 2002. However a proper policy on NFBE & ALP and a new curriculum still do not exist.

Not possible for all to attain vocational and technical training since it requires basic qualification of matriculation which is not accessible to all.

However, the number of institutes have increased 1446 % and enrolment has increased 1484 % from 1970-71 to 2015-16.

TECHNICAL AND VOCATIONAL

Preference of private institutions is also visible in TV

16 percent of the national number of these institutions is in Sindh. 25 percent of the total enrolment contribution is by Sindh. Role of these institutions is important since student drop out until grade the time they reach grade 10 is 30 percent. This leaves Technical & Vocational Institutes as an alternate option.

HIGHER EDUCATION

Enrolment majorly increased in tertiary institutions post 2000. It increased by 550 times since inception in 1947.

18th amendment is the bone of contention since it has created a confusion of power and authority between federal and provincial institutions.

Universities have Internal control by politicians as Provincial Governors become Vice Chancellors. They exercise power over hiring, removal and promotion

PUBLIC PRIVATE PARTNERSHIP (PPP)

PPP started in 1980s has helped in improving the education standards in the province. At another place, authors have discussed about Sindh Education Foundation which had started in 1992, and has now over 2000 schools.

DEENI MADRASAS

Most of them are not regulated by the state and after the conflict in Afghanistan, have rather become notorious. Parents send their children to madrasas due to free lodging, education and food for students which is perhaps expensive for parents otherwise.

EDUCATION POLICIES

There has never been a dearth of Education policies in Pakistan. In 1947 first conference was organized which aimed for universal primary education in 20 years. Since then the deadline kept changing from 1980 to 1984 then 1992 to 2010 and eventually 2015

There has been very less focus on policy implementation.

HIGHLIGHTED PROBLEMS

Problems range from teacher absenteeism, mismanagement, misappropriation of funds, low quality construction, poor environment across schools in Sindh, and lack of inter department coordination.

Allocations of funds and how complex the procedures are in release of funds is also a problem in terms of specific investments in cost-effective programs and schemes that may have an amplified impact on learning outcomes.

The emergence of biometric attendance of teaching and non-teaching staff at public schools which although was result-oriented yet had a mixed reaction from the teaching and non-teaching staff – where the policy worked for most of the employees, however, a few could still bypass due to political connections and affiliations. It might be construed that teachers have taken their jobs for granted.

The case of teachers' recruitment in the past proved to be flawed as it was based on political affiliation thus posting to urban areas created further imbalance in the ratio of students to teachers in different areas.

It is not always the teachers to blame, at times it has been the policy which is perhaps not inclusive and not included all the stakeholders, where they have cited the example of campus schools, where it was occasional to see drift between teachers on who is to control. Similarly, the authors write that it should be realized that large organizations are complex and need bureaucratic channels to be followed for proper check and balance. However, the authors have concluded the chapter by arguing that regular monitoring and rigid academic plans are necessary.

The authors present an alternate discourse that financial allocations had not been the issue. It is the disproportionate difference between recurrent and non-recurrent expenses. Recurrent expenses make almost 88% of the total budget leaving a small chunk for the development budget. The chapter would have been enriched if it also focused on the trends of learning outcomes in Sindh over time, especially the underlying determinants that need to be focused upon for substantial improvements.

Chapter 5: Health

GENERAL COMMENTS/ STATISTICS

- Infant mortality in Sindh 82 per 1000 live births in 2015, whereas MDG target was of 52.
- Maternal mortality in Sindh 214 per 100,000 live births in 2015 compared to national average of 178, whereas SDGs push to attain goal of 70 per 100,000 births.
- Under-five mortality in Sindh 105 per 1000 live births in 2015, whereas SDG goal is 25 per 1000 births, and MDG target was 40.
- Malaria treatment using ACT for children under age 5 in Sindh 15.9
- Nurses and midwives in Sindh 2.8 per 1000
- Hospitals in Sindh 1.7 per 1000
- Physicians in Sindh 0.59 per 1000 population
- Full immunization coverage of 35% in Sindh.
- Contraceptive prevalence rate 29 in Sindh in year 2014, whereas MDG target was 55

PUBLIC HEALTH CARE

The authors have laid importance to public health care facilities which exist at primary, secondary and tertiary level.

There has been a six-fold increase in spending on health from PKR 8.2 billion in 2005-06, it reached PKR 48.4 billion in 2015-16 which is 490 % increase. Whereas, if we analyze total health budget from 1970-71 to year 2015-16, it increased from PKR 53.425 million to PKR 66,503.90 million.

With regards to public sector hospital facilities in Sindh, the usage is 22 % compared with 29 % at national level. In 1970, there were 2 teaching hospitals, which had 1775 beds, in 2015, the number rose to 7 which could accommodate 6017 beds. Therefore, there has been an increase of 250 % hospitals and hospital beds have expanded more than twice since 1970. The number of dispensaries increased from 44 in 1970 to 865 in 2015. From 19 Rural Health Centres in 1970, the number increased to 129 in 2015. The number of Tuberculosis Clinics increased from 9 in 1970 to 187 in 2015. Basic health units which started in 1985 grew from 33 to 798 in 2015. Maternal and Child Health Centres data from 2000 shows that there were 36 in year 2000 and in year 2015 the number grew to 94. In 1970, there were 21 civil, specialized, taluka and other hospital with 2084 beds, in 2015 the number rose to 99 such hospitals with 6499 beds.

Data from 2011 to 2016 suggests that population per doctor increased from 3017 in 2011 to 3159 in 2016 which is 4.7 % increase. Similarly, the population per nurse increased from 11413 in 2011 to 12441 in 2016 which is 4.7 %. Whereas, the population per bed increased from 1406 in 2011 to 1455 in 2016.

The total number of medical personnel in public sector in the province of Sindh shows that conditions are improving. The number of doctors increased 8 times from 926 in 1975 to 7990 in 2015. There were 415 nurses in 1975, whereas in 2015, the number of nurses reached 1630. The number of LHV technicians also increased from 107 technicians in 1975 to 786 in 2015. While the latest data available of health technicians is till year 2000, the number of health technicians increased from 95 in 1975 to 1369 in year 2000.

PRIVATE SECTOR

Most of the healthcare across Sindh is public, except urban centres where there is private healthcare available, mostly expensive and thus becoming unaffordable for masses. Private healthcare is run for profit and used due to weaknesses in public sector. However to fill the gap, charitable services led by individuals and organizations, NGOs such as Edhi, Aman Foundation, SIUT, Indus Health and LRBT are providing health care and are running novel projects in Sindh thus providing relief to masses – however, this is not sustainable.

Number of private medical colleges has increased in the province over the period of time, but the same problem of quality in all educational institutes persists.

First rate facilities exist but the problem of preventive services such as immunization vaccination and prenatal care in rural areas lag behind and require serious attention. Similarly, the authors write about malnutrition and how it affects stunting. Stunting can be reduced if integrated approach towards nutrition and food, along with proper monitoring and supervision is carried out.

Private and public sector should not work in silos. There should be devolution to local governments which helps in good governance.

STRUCTURAL ISSUES

The authors point out four main areas which restrict people to go to public sector health facilities. The foremost is access to healthcare facilities, followed by no facility, lack of medicines and last but not the least being staff not courteous.

Amongst reasons why people do not opt for public health services, Sindh is faring ahead of Punjab as only 25 % opined that health facilities are too far, whereas in Punjab 30 % did not opt for public health facilities due to being too far. Similarly, the absence of facility is at 18 % in Punjab, and only 9 % in Sindh. With regards to having not enough medicines the percentages are higher in Punjab at 15 % and only 12 % in Sindh.

Public sector facilities are designed properly but are underutilized due to poor maintenance, staff shortage and mediocre management of equipment and facilities. Reason for poor management is that primary healthcare facilities are not properly utilized which results in burdening tertiary level facilities, which is utilized beyond its maximum capacity.

Due to influx of migrants in the province, uneasy access to health facilities, poor quality of healthcare, absenteeism amongst medical staff and lack of diagnostic services all contributed to the decline of healthcare services in the province.

While giving some points on how healthcare could be improved, the authors argue that communication should be in regional languages

There are unfilled vacancies of doctors, and there is dearth of medical staff. Due to political connections, specialists get themselves posted in urban areas and therefore a vacuum exists in rural areas which results in neglect of immediate help to poor patients in rural areas.

LADY HEALTH WORKERS AND THE ROLE OF WOMEN

Number of nurses and Lady Health Workers should be increased. As in 2014, it was 52.3 percentage of women aged 15-49 years who had been visited by lady health workers during the past three months, compared with MDG target of 100.

There is a direct relationship between empowering women through education and their family planning. This of course helps in controlling population which thereby reduces the burden on resources. Due to conservative mindsets, family planning has had backlash. The authors opine that since most of the children die, women choose to have more children.

Population and number of hospitals is increasing but they are not in proportion and the population outranks existing number of beds in hospitals. It is again, not just the population but altogether the infrastructure which is not able to cope up with the increasing population.

Lady Health Workers (LHW) had started in 1994 and its main purpose was to advice women of rural areas regarding health issues. These LHWs inform women about the risks associated with pregnancy, of labor and delivery, and the importance of breastfeeding, and how birth spacing is important for child survival. The LHW program is a commendable initiative on the preventive side but its coverage extends to 20 – 43 per cent.

Empowerment and education enable women not only in improvement of their economic status but with confidence and knowledge to better take care of their children. This further helps not only in diagnosing a child's disease but also helps in monitoring the nutritional intake of their families. Lack of awareness aggravates health.

DISEASE PREVENTION

Detection of tuberculosis (TB) cases amount to 57 % on an average. However, Sindh has an above national average

Much recent achievements from the period 2008-09 to 2011-12 include:

- The Hepatitis Control and Prevention Program was initiated, through which at least 4.572 million people were vaccinated, of which 0.75 million were children. Around 93,664 patients were treated for Hepatitis B, C and D.
- In secondary and tertiary care hospitals, 43 specialized units were built, and 2,800 of health staff trained to improve service delivery in Sindh.
- Public-Private Health Initiative was established in 2007. It operates in 21 districts, manages 1135 health facilities, comprising 651 BHUs, 34 MCHs, 429 dispensaries, 9 RHCs, and 12 other facilities.

Thar is the most health-stressed district in Sindh where the living conditions are challenging which comprise of poor sanitation, inadequate supply of food, sparse health service, lack of awareness of diseases, and unhealthy lifestyle. While the authors have rightly blamed lack of water to be root cause of problems in Thar, and have explained how lack of water leads to, shortage of food, poor sanitation, diarrhea, fever, malaria, cough, respiratory tract infection, skin diseases, curtailed breastfeeding and malnutrition; they emphasize how government needs to undertake water conservation projects, reinstall water facilities and take other measures such as initiating mobile health teams, and awareness programs. After the alarming rates of malnutrition in Thar, organizations such as WHO, WFP, and UNICEF have worked to improve situation.

With this intervention, eighty children were admitted at the nutrition stabilization center at DHQ Mithi. As many as seventy-one children were cured. However, the authors argue that worst-stricken areas need to be provided with food supplements to mitigate malnutrition amongst children.

Glaring omissions include missing trends analysis of key health outcomes (comparative analysis of PDHS 2012-13 and PDHS 2017-18); furthermore, public-private partnership initiatives are not mentioned.

Chapter 6: Labour & Employment

In developing Countries like Pakistan, labour is the only factor of production that is variable in nature. Factors like land, Capital and Entrepreneurship are mostly scarce & fixed in nature inside Pakistan and cannot be changed to a more productive extent.

The level of employment has increased substantially over the period of 70 years at national as well as provincial level. Thus, low levels of unemployment in Pakistan is majorly due to disguised unemployment that means labour is excessively employed on a fixed piece of land that yields low to no productivity. Although, figures of rural and urban employment are not 100% accurate as per the reference made from the book (PBS). **The authentic value for labor force participation in Pakistan 2014-15 is 57.42 million at national level and 13.65 million people at Sindh level. (Check Labour force survey report 2014-15) <http://www.pbs.gov.pk/content/labour-force-survey-2014-15-annual-report>**

Since 1990s, the labor force participation rate for Pakistan has increased only marginally from 43.2 % in 1990 to 45.2% in 2014. The average rate during this period has been 45 %. More than a half of the country's potential population is not engaged in monetized activities. Pakistan and Sindh fares poorly in labor force participation in comparison to the other developing countries that have the same income levels. The main reason of this low levels of employment is dismal participation of women in the labour markets. Most of the female workers in the rural part of Sindh work on the fields of their family and provide mostly unpaid family help that does not yield much to the productivity. It is surprising to see that only 10% of the women are part of active labor force in urban areas and rural seems to be doing well in comparison to this at 28.8%.

This chapter states that Sindh has the worst rate of female employment in Pakistan although it is the most urbanized province in Pakistan. **This statement is a sweeping because this is not backed by any proper evidence, since, Karachi and Hyderabad has a very high utility of female in corporate, healthcare, education, financial services and sales industry carried within the boundaries of Sindh. The low figures of female employment is contrary to the actual scenario.** The overall female employment trend has increased over time as compared to rural men in terms of Sindh.

The unemployment rate of Sindh has stood around 4% for past 25 years. **This is surprising, given that inflation and lack on employment opportunities over time. One might speculate that this might be due to 'disguised employment' with low wages and low productivity.**

Unemployment rate between the ages of 15 – 25 (youth population) is the highest. This rate is even higher in urban areas as compared to rural since most of the youth between these ages are either dependent on family or are employed in part time employment which is not considered in employment rate. Underemployment has also similar reasons for its prevalence, as almost 75% of the population between the ages of 15 and 44 are either working as a part time worker or are freshman (just graduated from college & university).

There has been a noticeable change in the occupational mix of Pakistan and Sindh region in specific. The strength of professionals, managers, associated professionals and technician has significantly increased to 10 % from 6 % within past 15 years which is a positive sign. This is good as more specialized work force is being developed.

In Sindh, the non-agricultural activities (Tertiary & Industrial/Manufacturing) has increased significantly. Hence, it has collectively employed more population than agriculture sector and the share of employment in agriculture has reduced from 60 % to 40 % within 3 decades.

The informal sector of Pakistan shares almost three-fourths of total employment in country. The informal sector in Sindh has increased from 55.2 % to 66.4% within past 17 years which is problematic because undocumented economy results in losses to government revenues.

In Sindh, the 3rd highest sector that is employed is Wholesale & Retail, Restaurants industry at 15.8 % as of 2015. But it is questionable that as the share of wholesale and retail, restaurant sector has not at all increased since 1990 and shows same figure of (15.8%) in 2015 as well. However, the discussed sector has increased many folds in real time as of 2015.

In terms of Rural to Urban migration Sindh scores 2nd highest in all of Pakistan. Almost 32% of the population migrated within the province of Sindh in the year 2015.

It is suggested that medium scaled /secondary city are developed and economic activities in rural areas are initiated with initiatives such as rural growth centers to stop rural-urban migration.

Wage is a motivational factor that drives an individual towards work & efforts. However, if we analyze the wage rate between various occupational groups in past 5 years the results would be astonishing. According to the information, managers, technical associates and clerical support staff have received the highest increment in their wage rates (more than 50%). The occupational group (sales and services/skilled agriculture and forestry/ plant operators and other low literate staff) has only received an increment in wage that is below 30 % within past 5 years.

One of the major correlates of poverty reduction is the rate at which real wage rate increases. To reduce poverty and inequality, it is essential that we must increase wage rate of that occupational group that is the most deprived and struggling to make ends meet i.e. (sales and services/skilled agriculture and forestry/ plant operators and other low literate staff) and not professionals like managers, and technical associates as they are already being paid hefty.

The author(s) did not suggest any minimum Wage rate or wage floorings to say the least, they must have given their own opinion as well. (Opinion missing)

Bonded labor is present almost in all the provinces but Sindh has the worst case in terms of bonded labour as feudal system is extremely dominant in Sindh. The poor landless farmers are consistently being exploited by the zameendars. Hari's women are also at the verge of exploitation because the zameendar uses this as a tool to control their voices and neglects them to become self-sufficient so that they can always be under their control. Though, steps have been taken as special labor act law has been passed against bonded labor by the Sindh assembly in 2015. However, implementation is lacking to control bondage labor which has seeped into the roots of rural part of Sindh.

As a policy tool, bonded labor must completely be banned (in implementation) by the government and state must provide the farmer with flexible-term loans in a sufficient manner that is most suitable to the borrower. State must also ordain the land owners especially (Zameendars) to allow their land on profit sharing basis with only a part of the total produce given to the land owner in terms of its fee.

The author(s) has made a positive recommendation to reduce unemployment rate between the ages of 15 to 25 years. Aligning the academic curriculum with the employer's needs is proposed to develop a more specialized workforce with employable skills that can be put into use from day one. However, on the critical side much needed prescriptions for improving female labor force participation is missing. Furthermore, the analysis of potential impact of Sindh Government's increase in women quota from 5% to 15% in public sector is missing from the chapter. Gender-specific and gender-sensitive strategic programming might be the key in reducing disparities in labor force participation indicators for Sindh. Increased female labor force participation can have a major impact on Sindh's macro-economy.

Chapter 7: Poverty & Inequality

Sindh is considered to be the poorest province in the entire Pakistan. Almost 4 out of 10 people living in Sindh fall under the MPI (Multidimensional poverty index). Out of 8 millennium development goals, Poverty is the only goal that Pakistan has managed to reduce but at a very slow rate. Between 1960 and 2000, urban poverty showed a much higher decline in comparison to rural poverty. However, the highest decline recorded was in the era of 1980s because it was a period of high growth. The poverty measuring tools and methods has been evolving over time due to changing patterns of human needs. The World Bank and UNDP has constructed a new poverty line that is based on cost of basic needs (caloric + basic utilities/Necessities), that also takes into account the inflation.

According to the WB & UNDP poverty line estimates, 29.5 percent population is considered to be below poverty line that estimates at 60.35 million of 206 million total population of Pakistan recorded in 2017 census. **However, 29.5 percent poverty figure was estimated in 2013 whereas, in 2017-18 latest data was available which was recorded at 24.3 percent. If we calculate it, it would sum up to 48.41 million people living below the poverty line. That is significantly low amount as compared to the figures recorded in 2013. So the figures quoted in this part has ambiguity and are outdated.** (For reference check <https://data.worldbank.org/indicator/SI.POV.NAHC?locations=PK>)

Almost 43% of Sindh's population is estimated to be living below the poverty line with 75% of rural population afflicted with severe poverty. However, a visible decline can be witnessed in Sindh's poverty headcount rate within the past decade from 57% to 43%. Despite decreasing poverty numbers, the stark inequality remains a big challenge for provincial government as gini-coefficient shows a very high rate of inequality between the poor and non-poor population.

It is suggested to include social justice and socio-political aspect (justice, rights & participation) in the MPI's 15 pillars. Incorporating additional dimensions of deprivations will eventually increase the authenticity of the projected values of poverty head count.

The HDI of Sindh is much worse in comparison to Punjab. Sindh scores at 64% in HDI, however, Punjab is at 73%, almost 10% more than the former. Another report highlighted that during the period 2001-14, Sindh had lowest growth rate in HDI due to law and order, weak governance and skewed priorities.

The author(s) did not present any analytical findings to deconstruct the underlying determinants of poverty.

The poverty indicators in southern districts, except Karachi & Hyderabad shows extreme poverty in the districts like Tharparkar, Sujawal, Umerkot with Tharparkar with the highest concentrates of poor. According to the author, poor governance has resulted in inefficient service delivery in education & health which has led to the lower levels of Human Development in these areas.

Pakistan suffers from a high rate of income inequality which is evident from the fact in 2013, the top 20% of the population shared 40.3% of the total income. While the lowest 20% population shared only 9.3% of the total income. According to the author the income inequality in Pakistan is widely fluctuated throughout the period of 1960 to 2010. Though, in the era of Ayyub Khan that had the highest growth credentials showed inverted effects as the both Gini as well as the relative

income ratio (top 20% and bottom 20%) recorded to its lowest values in 1969-70. So the author argues that growth is to necessarily correlate to poverty reduction. There are a group of factor that collectively brings poverty incidence in control.

In terms of income distribution Punjab leads the table as more than 50% of the population comes under the banner of top 20% income group. However, in Sindh things are a bit better since 37% of the population is under top 20% income group. But this does not at all means that things are moving in the right direction. As almost 10% of the Sindh's population is receiving the lowest wage rate in the entire Pakistan; Punjab fares good in this section as only 7% are under the bottom 20% group.

The year 2011-12 had the highest consumption inequality as the top 20% quintile made a massive 43% of consumption expenditure. On the other hand, the lowest quantile made 9% of the total consumption throughout Sindh, however, comparatively Punjab had a much higher consumption inequality in the same period. Although a surprising fact was also discovered that the bottom 20% population of Sindh spends ever more than what they actually earns. This means that to meet their day to day affairs the bottom 20% quantile population are dependent on progressive borrowing which will eventually lead to a complete bankruptcy of that group further pushing this segment into the most hostile poverty condition.

The book also shed light over inequality between the consumption and income in urban centers of Sindh. As the urban centers are more populous and have a higher cost of living, the gap between the consumption and income is much higher than that of rural.

To reduce stark inequality between these groups; it is essential that income of the bottom quantile must be increased significantly that can suffice in meeting basic needs. The minimum wage rate must be set at least Rs. 25,000/Household.

The projected figures of comparison between monthly incomes to consumption ratio are a bit puzzling as according to the information presented in the book; highest income quintile group ends up having only 2 % of the amount being saved out of the entire income. This figure is questionable as it's extremely unlikely for the income group that controls almost 80% of the wealth to save only 2 percent of the wealth? This figure is questionable that needs to be substantiated.

The per Capita income of Sindh was estimated at Rs. 119,724/person p.a. in 2011-12; that is more than the collective per capita of Pakistan and Punjab in the same period. This is primarily because Karachi is the economic hub of Pakistan and all the trading via port are handled mostly from this part of the country. Karachi's per capita income alone is about four times in comparison to per capita income of Pakistan.

The figures quoted of per capita income of Sindh in this table are questionable. As the per capita income of Sindh in the year 2010-11 was near Rs. 104,000 by the books of SBoS, however, the figure quoted by the author(s) is Rs. 119,000 and was driven by a supplication of SPDC which was published in 2014. The source and veracity of these figures need to be ascertained. **(Check for reference <http://sindhbos.gov.pk/wp-content/uploads/2018/08/Development-Statistics-of-Sindh-2017.pdf>)**

In Sindh, on average 2 persons earns for a family household that accommodates 6 persons. Thus, the lowering income earned coupled with larger number of dependents have made the poverty indices more prevalent for Sindh in specific.

As a corrective measure; the family size must be controlled and/or household income must be supplemented by non-earning adult male members along with the females of the family.

The latest survey shows that only a quarter of the population of Pakistan has access to tap water with half of urban population having access to tap water. In urban areas of Sindh access to tap water is only available to 69%, however, 63% of rural population draws their water from hand pumps.

The land reforms of Ayub Khan and ZA Bhutto could not make a positive dent in minimizing the power of the feudal and landlords. Between the era of 1980s and 2005, the poverty head- count ratio of the agricultural groups has increased significantly. If comparisons are made among different occupational groups, the agriculture group are found to be the worst performer in terms of poverty reduction.

The author(s) have described the social sector expenditure of Pakistan Sindh and, Punjab in specific. However, criticism of the governance and management system for underperformance has not been supplemented with any proposed corrective measures. The authors mentioned that the total allocated amount to social sector that includes (Health, Education, and Water & Sanitation) is more than our defense expenditures of recent times, but still no positive results have been produced in this sector. However, the aforementioned assertion of author is not substantiated by any evidence. Moreover, the authors have aptly captured the poverty and inequality indicators of Sindh across several dimensions; however, a glaring omission is that of the poverty reduction strategies or policies adopted by GoS (e.g. CDLD Policy, Union Council Based Poverty Reduction Program (now People's Poverty Reduction Program)) that is predicated on social mobilization and adopts a multi-pronged approach to reducing poverty in Sindh. More needs to be said about the evolution of social protection and poverty reduction initiatives undertaken in Sindh over time and its associated impact.

Chapter 8: Agriculture

The chapter 8, Agriculture, is written in detail by the author of the book. In this Chapter, important agriculture issues of the Sindh province are carefully touched, by using old and recent facts and figures, and far-reaching practical implications, are also made a part of this chapter. The chapter proceeds in a logical manner and the topics covered in the chapter, capture the deep attention of the reader. The chapter has been divided into different sections, which are as follows:

Agriculture Contribution to GDP, Agriculture Production and Crops Pattern

- In 1949, share of agriculture in the GDP was 53%, which has reached less than 20% in 2017-18.
- Sindh agriculture contribution to gross provincial product has come down to 17%
- In 1949-50, major crop share was 52%, minor 12.5%, livestock 34.4% and forest and fisheries 1.2% respectively, but, in 2015-16, the major crop share was 26.2%, minor 11.1%, livestock 58.3% and forest and fisheries was 4.4%.

Note: This week's performance is attributed to the less contribution of crops, irrigation and climate, landlord and tenancy relations, state policies, state-society interactions and market models, etc.

- From 1980-81 to 2010-11, the index of agricultural production relative to Pakistan has been impressive, throughout Pakistan it was 3.6% for all crops whereas, for Sindh it was 4.4%. However, Sindh has lagged behind and has hardly been able to double food production over a forty-year period compared to more than a three times increase at the national level.

Note: The better performance in agriculture can be attributed to the increase in cash crop production that multiplied by a factor of 6.4, far exceeding the national average of 4.8. In addition, it was also noted that during this decade new varieties were introduced under the Green Revolution.

- The cropping pattern in Sindh is documented as Kharif crops and Rabi Crops. Kharif Crops are as rice, cotton, etc. while Rabi Crops are wheat, etc.

Note: As per the author, the cropping pattern of Sindh has been disturbed due the shortage of water and climate change.

- The author had also discussed in detail the agriculture credit. For instance, he has expressed that in 2000-01, the entire credit disbursed by all financial institutions was Rs. 45bn, but in 2015-16, it has reached Rs.600bn. The author has said that the farmers in Sindh have been behind their counterparts in Punjab in total credit disbursement.

Note: It is attributed to the late issuing of pass books by the Sindh Board of Revenue.

- The yield per hectare went up from 811 kg per hectare to 2,119 kg per hectare between 1957-58 and 1995-96 – an exceptional increase of 261%. There was again a hiatus between 1995-96 and 2010-11 as there was no perceptible expansion in the area under cultivation.

Note: This has happened due to the water shortage, quantity and timing of rainfall, inadequate supply of inputs and a rise in input prices.

- Sindh share of cotton production has declined from approximately 33% in 1947 to 20% in 2005-06. There was some pick up in the mid - 2000s, but it could not be sustained.

Note: According to the Sindh Cotton Commission, the fall in the area sown and the volume produced is due to the shortage of water at the time of sowing, and growers' preference to cultivate more profitable crops like wheat and sugarcane in area around Ghotki, a traditionally cotton-growing district of Sindh.

- In Sindh rice area, production and per acre yield has increased since last decade. It is attributed to the incentives enjoyed by the farmers in the form of relatively higher profitability by growing rice and sugarcane, but this has left no choice for tail-enders to grow crops.
- In Sindh, three major fruit crops are mango, banana and guava. Pakistan produces approximately 1.7 million tons of mangoes annually, of which almost 40% comes from Sindh. Around 50% of the date production in Pakistan takes place in the province of Sindh. Sindh produced 134,000 tons of banana in 2005-06 and 70,000 tons of Guava out of 490,000 tons throughout Pakistan.

Note: Since last decade, the area, production and yield of these fruits in Sindh has decreased due to the insufficient knowledge of appropriate amounts of nitrogen-based fertilizers, pest control methods, etc.

- The cultivation and production of vegetables in Sindh have progressed well. The total area under vegetable cultivation has increased since the 1950s to 51,769 hectares in 2014-15. Correspondingly, total production has increased to 356,879 tonnes.

Note: This has happened due to climate and better farming techniques, but it is also expected that the production upsurge has been possible due to the introduction of subsidies fertilizers, harvesting methods and improved seed varieties.

- The production as well as area figures of pluses have been consistently falling in Sindh in the recent years.

Note: This has happened due to inappropriate weather conditions in the region, the production of pulses has remained significantly low.

- The forests are fast decreasing in Sindh due to the lack of proper water flow, illegal cutting of trees, encroachment of land and inadequate state regulations to conserve forests.
- Poultry and Fisheries production could not increase due to the lack of interest of government.

AYUB AND BHUTTO LAND REFORMS

- Since 1961-62 to 1972 there was a substantial shift in the pattern of land ownership. In 1959, the top 8% of the owners had 54% share in land ownership, which reduced in 1972, and reached at 32%. Similarly, a huge upsurge was observed in other slabs, i.e. 5-25 acres, and major decline took place in those below 5 acres, as their proportion went down from 30% to 18.4%. But, the author argued that this pattern does not depict the actual reality because this land area was subdivided among the individual family members. In addition, during 1980 and 2010, a record change was recorded in the number of all farms, owners, tenant, owner cum tenant, farm area and cultivated area, but again author argued that the

mechanization and subdivision of land resulting from inheritance were the main factors behind this shift.

GREEN REVOLUTION

- The author has discussed the “Green Revolution” in his chapter. During the green revolution period (1960s), new varieties of wheat and rice were imported from Mexico and Philippines. As per the author, this revolution increased food production of Pakistan by three times between the mid-1960s to 1980s. During this period, the agriculture and economic growth also increased, but author argued that this revolution could not benefit small farmers.

PROBLEM

1. Enforcement of Landowners in rural areas
2. Nexus between the state and big landlords
3. Productivity gap is high between large and small farmers
4. Diversion of water from the tail-enders to large landholders

SUGGESTED RECOMMENDATIONS BY THE AUTHOR:

1. To allocate state land to landless and peasant
2. To provide timely inputs and credit to the poor farmers

Anyone who chooses to read this chapter will get valuable insights. However, one thing that has been noted in this chapter is that the data which has been used is not the most recent. Secondly, comparative analysis of outcomes with other provinces is missing. Furthermore, the authors only provide snapshots of data with no analysis or proposed prescriptions. There needs to be a deeper analysis of the strategies employed by the government to improve yields and productivity. For example, have support prices provided protection for certain crops against market volatility which in turn has incentivized the growers to improve yields and production of crops? This type of analysis would have helped introduce a nuanced analysis of the effectiveness of policy options and strategic levers.

Chapter 9: Irrigation

The chapter 9, Irrigation, is written in detail by the author of the book. In this Chapter, important key irrigation-related issues of the Sindh province have been presented. The chapter has been divided into different sections and sub-section as follows:

Introduction: Under this section, the author has briefed about the traditional methods (Wells, Canals, Tanks, Tubewells and Nars) of Irrigation and Barrages as well as land, which is cultivated by these Barrages.

- Total land cultivated through the Barrages – 13.5 million acres
- Sukkur Barrage was built in 1932, and it cultivates 7.63 million acres through seven Canals, including Northwestern Canal, Dadu Canal, Khairpur Feeder West, Rohri Canal, Khairpur Feeder East and the Nara Canal.
- Kotri Barrage was built in 1955, and it cultivates 3.0 million acres through Kalri Baghar Feeder, Lower Pinyari Feeder and Fuleli New
- Guddu Barrage was built in 1962, and cultivates 3.0 million acres through four Canals including Beghari Sindh Feeder, Desert Far Feeder, Ghoti Feeder and Raineer Canal.

WATER DISPUTES:

- In 1945, a Sindh-Punjab agreement was signed, but could not get the approval of the Governor General
- In 1960, Indus Water Treaty with the help of the World Bank was signed between India and Pakistan, and case of provinces was discussed. According to the agreement, three eastern rivers were given to the India and three western rivers to Pakistan. During the negotiation, no representative from Sindh was made.
- 1991 water accord, a formula for the water accord on the basis of water calculation was developed, and agreed a ratio: Punjab 37%, Sindh 37%, Balochistan 12% and KPK 14%.
- Authority – Indus River System (IRSA) in 1991, to manage water distribution among the provinces.

Sindh province has been blaming that Punjab is diverting its water which is a violation of the 1945 Punjab-Sindh agreement and others such as 1991.

STUDIES FOR DOWNSTREAM KOTRI NEEDS

- During 2005, two studies recommended that downstream Kotri need a 1. Flow of 5,000 cusecs throughout the year, and 2. A quantum of 25 MAF in five years. However, there is no progress due to the provinces' objections regarding the distribution of water.

CONSTRUCTION OF NEW DAMS – VIEWPOINT OF THE PROVINCES:

- Due to the water over-use of Punjab, three provinces, Sindh in particular and the rest in general, have objections regarding the construction of Dams.
- In order to resolve this problem, various committees were formed during the tenure of Pervez Musharraf, but the problem remains unresolved till date.

Left Bank Outfall Drain (LBOD): As per the author, the LBOD project was initiated by the government of Pakistan and government of Sindh in the 1970s with the help of the World Bank. The purpose of this project was to drain water from more than two million hectares of land of Nawabshah, Sanghar, Mirpurkhas and Badin into the Arabian Sea, but this project does not serve the purpose due the following problems:

- Lack of clarity about the agency responsible for its operation and maintenance
- Lack of funds
- Sea intrusion in tidal link and bed erosion
- Backflow of drainage
- Enforcement of local people
- Drainage from sugar mills and industrial effluents

THE AUTHORS' SUGGESTIONS FOR THE IMPROVEMENT OF LBOD

- The capacity of the LBOD should be further expanded
- The banks and bed should be lined, if possible
- Like irrigation network, drainage network should also be continuously operated, maintained and repaired.
- The groundwater quality of the coastal belt should be continuously monitored in order to assess and keep watch on the sea water intrusion.
- A scientific study should be carried out on the mitigation of impacts of soil salinization. The land reclamation programme for coastal soils should be initiated.
- Mangroves should be planted along the coastal belt in order to minimize erosion along tidal creeks
- A comprehensive strategy should be prepared for protection.

Right Bank Outfall Drain (RBOD): This mega drainage project was considered for the right bank districts such as Larkana, Qambar- Shahdakot, Dadu and Jamshoro, and divided into three phases, but still it has not been completed.

Institutional Reforms: The author has discussed in detail the institutional reforms undertaken by federal and provincial government as follows

- In 1996, government of Pakistan decided to establish provincial irrigation and drainage authorities in each province
- In 1997, a new program of a self-sustaining irrigation was established which involved a). Transforming provincial irrigation department into provincial irrigation and drainage authorities (PIDDAs), b). Creating Area Water Board (AWBs), and c). Organizing farmers into Farmer Organizations (FOs).
- In 1998, SIDA was established in 1998

Water Sector Improvement Project: In 2006, with the help of the World Bank, Sindh government implemented this project. The main purpose of this project was to increase agricultural production and employment and incomes of the farmers, and enhance long-term sustainability of the irrigation system. As per the author, this project has left a positive impact. *Anyone who chooses to read this chapter will positively get valuable insights from a historical perspective with an overview of the irrigation issues from 1947 to 2015-16. The chapter discusses in detail the evolution of irrigation systems in Sindh. Furthermore, the chapter also highlights issues in institutional arrangements and water governance in the context of water scarcity in the country and in the province.*

Chapter 10: Infrastructure

Under this chapter, the author has given a detail of infrastructure development from 1947 to 2015-16. In addition, he has highlighted all the Five-Years Plan.

ROADS

- Pakistan ranks 79 out of 137 countries on the quality of roads, and for road density, it stands at just 33% compared to 113% in India.
- The total road network in Pakistan is approximately 259,618 km, of which 12,000 km consists of national highway and 2,207 km of motorway.
- 180,000 km of high quality roads exists
- At the time of independence, the share of Sindh in the national road network was 1039 km of blacktopped road. The National Highway (that accounted for 63% of this inheritance) was the only properly constructed road.
- Despite the increase in total high type road mileage to 19, 673 km, Sindh lags far behind the standard road length of 1 km per square km of area.
- From 2000-01 to 2014-15, the total road mileage of roads (km) increased from 7099 to 33,428 km and total motor vehicles on road increased from 973,516 to 1,008,255.

DEVELOPMENT WORK UNDERTAKEN THROUGH DIFFERENT FIVE YEAR PLAN

1st Five Year Plan

- The improvement of the Karachi-Lahore-Peshawar-Landi Kotal road was given priority.

2nd & 3rd Five Year Plan

- The Focus remained on road development, expansion and improvement of existing roads. Malir Bridge, Karachi-Hyderabad highway and Thatta-Sujawal bridge on Indus River were achieved.

4th Five Year Plan

- Concentration was given to the roads instead of railway. Out of total Fourth Plan allocation of Rs. 2,200 million, the allocation for roads was 50%, surpassing that of railways. The share of the roads, in the Annual Development Programme of Sindh in 1970-71 was 39%. Upgradation of the Peshawar to Karachi road to a two-lane super highway and improvement of the West Circular Route connecting Karachi Port with the terminal of Karachi-Hyderabad highway was completed.

5th Five Year Plan Period

- Dadu-Moro Bridge over the Indus River was undertaken

6th Five Year Plan

- The major highway project (Karachi-Hyderabad Super highway and 850 km of second carriage-way along the Karachi-Peshawar Highway) was considered.

7th Five Year Plan

- Karachi-Hyderabad and Hyderabad-Hala section completed under IBRD Project, and work was initiated on the Nuriabad-Sehwan section of the Indus Highway

8th Five Year Plan

- Under this plan, focus was given to improve the infrastructure of roads. Dualisation and rehabilitation of N-5 to a considerable extent had been achieved by 1995-96. Haro-Keti Bandar Road and Sukkur Bypass were initiated under this plan.

9th Five Year Plan

- Dualisation of N-5 was extended till 2000-01. The same year saw the completion of Kotri-Manjhand-Sehwan, Khrappa Chowk-Badabher and Ratodero-Ghouspur-Shori Nullah Sections of Indus Highway, Khuzdar-Shahdadkot Road, and ongoing work on the improvement of N-65 and Ratodero-Shahdadkot-Quba Saeed Khan Road.
- In 2005-06, began the upgradation of Karachi-Hyderabad Super Highway to a motorway

10th Five Year Plan

- The road maintenance plans in Sindh were largely curtailed, and only 750 km of road network was envisioned to be improved out of the total 9,610 km of road network across Pakistan
- The new projects envisaged were the construction and improvement of Hyderabad-Mirpurkhas-Umerkot-Khokhropar Road, and construction of bridges over the Indus River at Kandhot-Ghotki and Jherruk-Mulla Katyar.
- Between 2007-2012, the mileage of high type roads increased by more than 7,000 km.
- Between 2014-15, the total mileage of roads was 33,427 km in Sindh

RAILWAYS

- Till 1980-81 the performance of Pakistan Railway was up to the mark. Later, a substantial decline in both passengers and freight, in 2015-16 a negative 20% change in passengers was witnessed. This all happened due to the slow speed and insignificant tracks. However, in the Eleventh five year plan, the government has given priority to railway under the China-Pakistan Economic Corridor, and the work of upgradation, expansion, reconstruction and laying of new tracks are being initiated across the country.

PORTS

- In 1947, Karachi Port was the only port in West Pakistan and had to handle a large influx of international and coastal traffic directed to and from West Pakistan.
- In 1973, Port Qasim was established
- In mid 2000s, Gwadar Port was established

AIR TRANSPORT

This chapter also discusses the Air Transport sector. The author has reported the facts and figures regarding this sector. He said the PIA performance was well till 1990s, but, later, the performance of this sector is continuously becoming weak. The reasons behind are as:

- The frequent changes in the top management and the boards of PIA lead to heavy financial losses.
- Poor service as compared to other airlines
- Lack of new plane

NOTE: THE AUTHOR HAS SUGGESTED THE FOLLOWING RECOMMENDATIONS

- PIA's downward slide can only be averted if it is either privatized or other private airlines are provided a level playing field to compete with PIA. For instance, as Air India.

TELECOMMUNICATION, INTERNET AND BROADBAND

- As per the author of the book, this is the only sector, which has performed outstandingly. For instance:
- Accessibility of telecommunication, especially in rural areas, has improved the price discovery and bargaining power of small and medium farmers.
- Tele-density has made a spectacular jump from 4 to 80% between 2003 to 2013
- Broadband growth has boomed after the introduction of the 3G and 4G spectrum
- Due to the introduction of 3G/4G technology, the number of mobile broadband and internet users to over 44 million up from 26,000 in 2005-06.

TELEVISION

- As per the author, the television industry has improved over time. For instance, during the 2000s, established a number of private television channels. Due to this, the number of television licenses jumped almost fourfold between 1995 and 2010, and revenue collected from television, from television set holders rose to almost fourteen times in the same period.

HOUSING SECTOR

The authors of this book have discussed in detail the housing sector. They have pointed out that the government of Sindh has taken various steps. For instance,

- 150,000 housing units constructed during the Second Plan
- Developed Korangi and North Karachi housing schemes for low income groups
- Housing scheme for industrial workers was initiated by the government of Sindh
- Housing and Physical Planning Department was established by the government of Sindh to strengthen this sector.
- Development authority at Hyderabad, Sindh Development Authority and Regional planning Organization for Sindh created.
- Katchi Abadi Improvement and Regularization Programme
- The Sindh Katchi Abadi Authority established in 1987.
- Sindh Goth Abad Scheme.

Despite all these steps, housing, particularly for low income people, has not kept pace with the demand. The authors have argued that the private sector and defence authorities are playing an active role in providing housing for upper and upper-middle income groups. However, affordable housing for low- income families in the urban areas has been neglected.

Chapter 11: Sindh's Industrial Structure: Past and Present

Five Waves of significant policy changes:

1. Import substitution after India imposed restrictions on imports to Pakistan in 1948. Pakistan adopted import substitution spearheaded by consumers industry.
2. Under Pres. Ayub Khan during 2nd and 3rd Five-Year Plan, Pakistan implemented industrial licensing policy to fund and facilitate industrialization; Industrial Development Bank of Pakistan (IDBP), Pakistan Industrial Credit and Investment Corporation(PICIC), Pakistan Industrial Development Corporation (PIDC).
3. Nationalization of large scale manufacturing under Zulfikar Ali Bhutto. Board of Industrial Management and PIDC took over 32 major manufacturing units. Nationalization deemed inefficient
4. Deletion policy, deregulation and privatization in 1989. Deletion policy aimed at achieving import substitution in engineering to promote tech transfers. SMEDA was also established.
5. Private sector came to the frontline (1999-2008). Better fiscal and monetary policies, and structural reforms. Major developments in automobile and consumer electronic industries. Upward trend in agriculture and manufacturing sector.

-According to Census of Manufacturing Industries (CMI), share of Sindh in terms of industrial establishments in Pakistan has decreased from 43.2 percent to 28.4 percent. This is attributed to the deterioration of law and order situation in Karachi which had the majority of these establishments.

-Industrialization in Sindh concentration in urban areas (Karachi Hyderabad and Sukkur) with combined shared of 95 percent in 1975-76 dwindling to 74 percent in 2005-06. In 2005-06, Sindh's share in total employment in the sector was about 30 percent. However, this might be underreported because informal employment is not reported. Most of these establishments are in Karachi whose share declined from 75 to 65 percent during 1970-2005 (owing to law and order situation). Rigid labor laws and rising minimum wages are said to have contributed to the expansion of informal employment at the expense of organized sector.

-Sindh's average wage growth has been higher than the national average. For 15 years until 1990, Sindh produced one-half of manufacturing output and is now around 40 percent. Textile, and Food and Beverages accounted for two-thirds of manufacturing output in 1970-71. In 2005-06, they form around two-fifths of total output while chemicals, rubber and plastics are one-thirds of total output. Employment in manufacturing sector has been lackluster because industrial growth has been relatively capital-intensive as the total value of fixed assets increased from Rs. 2.2 Billion to Rs. 351.6 Billion from 1970 to 2005. Unskilled or semi-skilled labor might not be absorbed in the capital-intensive manufacturing sector.

-Sindh has 5 out of 6 auto-assembling plants in Pakistan with an annual growth rate of 7.1 percent from 1975 to 2015. 35 percent of edible oil processing units are in Sindh with annual growth rate of 4.7 percent from 1970-2015. 41 percent of total sugar mills of Pakistan (32 out of 78) are in Sindh with annual growth rate of 5 percent from 1970-2015.

-Cotton fabric production has been on the decline from 324 million sq. meter in 1970 to 224 million sq. meter in 2015. Cotton yarn has seen an annual growth rate of 2 percent from 1970 to 2015.

-Cement industry production in Sindh has increased from 1.4 million tons in 1970 to 10 million tons in 2015 with an annual growth rate of 4.66 percent. Fertilizer production peaked from 176,000 tons in 1970 to 2.341 million tons in 2010 but it declined to 1.15 million tons in 2015 due to sales tax and shortage of natural gas. Chemical production has grown from Rs. 338 million in 1970 to Rs. 384 billion (estimated today) with average annual growth rate of 16.9 percent.

-Sindh has 92 of 386 local pharmaceutical companies and 23 of 30 multinational companies in Pakistan. Top five pharma companies (26% markets share) are all located in Karachi. The present estimate of national production value of pharma in Pakistan is Rs. 315 billion out of which Rs. 120-130 billion is in Sindh. Scope of export is limited because there are no FDA approved plants in Pakistan

-Electrical machinery and electronics industry grew from Rs. 163 million in 1970 to Rs. 29.5 billion with an annual growth rate of 15.9 percent. Value of iron, steel and non-ferrous metal production in Pakistan increased from Rs. 228 million in 1970 to Rs. 61 billion in 2005 with average annual growth rate of 17.3 percent. However, Pakistan Steel Mill is a glaring problem with total accumulated losses of Rs. 166 billion in 2015-16.

-There are currently thirty-three producers of leather and leather goods in Sindh with production of Rs. 104 million in 1970 to Rs. 8 billion in 2005 with annual growth rate of 13.4%.

-Though industrialization started later in Punjab than Sindh, Punjab has fared well over time across all variables (e.g. no. of establishments, average daily employment, value of fixed assets, value of production, industrial cost, etc.).

-In terms of overall progression, Sindh's share in industrial output has dwindled with a parallel increase in Punjab which can be attributed to the deteriorating security situation in Karachi where most of Sindh's industries are concentrated.

-Following prescriptions are proposed for accelerating industrial growth:

1. Infrastructure deficiencies and constraints need to be overcome
2. Ease of doing business should be given utmost attention
3. Efforts to improve human capital and train labor forces should be increased.
4. Upgradation of machinery and equipment

The chapter aptly summarizes different sectors within Sindh's industrial portfolio with descriptive statistics. Overall, the evolution of industrialization has been divided into 5 broad phases. However, there seems to be an inclination to portray public sector investments and nationalization in 1970s negatively without any substantive claims to back the assertion. Furthermore, the laissez-faire approach to industrialization is lauded as a panacea to promote industrialization in Sindh without any supporting evidence. Even if the free market theory to industrialization is accepted at face value,

there must be concrete propositions for creating missing markets and/or rectifying market failures through institutional arrangements. Such analytical perspective is missing from the chapter.

Chapter 12: Energy and Mineral Resources

In the span of three years since 2013, 83 oil and gas discoveries have been made. These have added 631 million cubic feet per day (mmcf) gas and 27,359 barrels per day crude oil to total reserves of Pakistan. In 2015, 1,095 bpd crude oil supply was found at Tando Allahyar by OGDC. In 2016, a total of 6 discoveries were made across Pakistan, adding 50.1 mmcf of gas and 2,359 of crude oil to existing production levels. Out of these 6 discoveries, 4 were made in Sindh (one by PEL, one by UEP and 2 by OGDC). These discoveries comprised more than 63 percent of gas, but only 14 percent of crude oil. The focus of oil and gas exploration has shifted from Sindh with only 12 percent of 50 new exploration blocks (created in 2014) within Sindh.

-From almost no production in 1980, Sindh started providing 47 percent of total oil production of country in 1985-86 with up to 65 percent in 2000. However, this trend has been decreasing as this went down to 38 percent by 2014 as KP replaced Sindh as top domestic producer of oil. Petroleum consumption has come down from 42 percent in 1980 to 23 percent of national consumption in 2014-15. Income and price elasticity of demand play a key role in petroleum consumption.

-Sindh is now the major supplier of country's natural gas with an increase from 14 percent of national production in 1980 to 67.2 percent in 2015-16. On the consumption side, Sindh consumed 47 percent of natural gas (62 percent for power generation and general industry). Division of roles and responsibilities following the 18th amendment has been a contentious issue with lack of clarity over province's role in constructing power houses and grid stations, laying transmission lines, impose taxes or determining distribution preferences. LNG imports and pricing of natural gas for fertilizer industry is also an issue.

-Total coal reserves in Sindh are 185,456 million tons, of which 95 percent are in Thar. Total production of coal in Pakistan was 3.71 million tons in Pakistan out of which one-third was in Sindh. The production in Sindh is expected to increase with current mining explorations at several blocks in Thar (175.5 million ton reserves).

-Operating and proposed coal fired power plants in Sindh include: -Lakhra Coal Power Station, -Jamshoro Coal Power Project, -Siddiqsons Energy Ltd., -K-Electric Coal Power Plant, -Pakistan Port Qasim Power Project, -Thar Coal Power Plant, -Underground Coal Gasification, -SECMC Power Plant, -Hub Coal Power Plant, -Thal-Nova Coal Power Plant.

-Govt. of Pakistan has issued LOIs with SCATEC, SSJD, Bagasse Energy and Solar Energy Pakistan Ltd. to set up solar power plans in the district Thatta in Sindh.

-First wind power plant was installed in Jhimpir in Sindh in 2009 with a generation capacity of 56.4 MW today. The Jhimpir Wind Energy Project (FFCEL) with total installed capacity of 49.5 MW, and Three Gorges First Wind Farm Pakistan Ltd., with an initial installed capacity of 50 MW, have been operational in same district. Plans are afoot to produce 2477.5 MW of electricity from wind.

-There are 89 dams producing hydropower in Pakistan out of which only one hydro plant (Darawat Dam) across Nai Baran River near village of Jhangri (Jamshoro) producing only 0.45 MW of electricity. Only 3 barrages (Guddu, Sukkur and Kotri) exist in Sindh which is a challenge to set up hydro plants in Sindh.

-The electricity was historically controlled by two public utilities, WAPDA and KESC. NEPRA was initiated before unbundling of WAPDA into separate generation, transmission, dispatch and distribution companies in 1997 (Four GENCOs, Ten DISCOs, One Transco (NTDC)). K-Electric met its demand from own installed generation capacity plus purchases from NTDC, IPPs, and Karachi Nuclear Power Plant.

-Currently, there are 3 public corporate entities (WAPDA, PAEC, PEPCO). WAPDA generates electricity from dams, PAEC from nuclear resources and PEPCO which purchases energy from private and public sector thermal generating plants. Generated electricity is sold by energy producers to single buyer, Central Power Purchasing Agency which then sells it to national grid owned by NTDC. There are 10 power distribution companies. 2 of these distribution companies (HESC, SEPCO) are in Sindh while K-Electric is an independent entity solely responsible for supplying electricity to Karachi. Sindh's consumption of electricity of country's consumption has decreased from 31% in 1976 to 23% in 2014-15.

-Since its privatization in 2009, KE's distribution system has been sub-divided into 28 integrated business centers. Transmission and distribution losses have been brought down from 35.9% in 2009 to 22.2% in 2016 with recovery rate ratio improving to 90.8%. KE has increased its electricity generation capacity by 1,010 MW and is generating 52% electricity through independent power stations. Company generates 2247 MW from its own installed capacity and receives supply of 1,016 MW from purchase agreements with IPPs and NTDC. KE's transmission system consists of 1,253 km of 220 KV, 132 KV and 66 KV lines with 64 grid stations and 138 power transformers (2.2 million consumers)

-HESCO caters to 1.2 million consumers with maximum demand of 1285 MW with 111 grid stations. SEPCO covers 12 districts in upper Sindh. However, its poor operational performance (huge line loss and poor recovery) has made the company financially unviable.

-There are 4 Independent Power Producers in Sindh with installed capacity of 682 MW. In 1990, 58.7% of Pakistan's population had access to electricity which has now improved to 97.5% of population.

-Out of 26 minerals extracted in bulk quantities in Pakistan, only 6 are extracted from Sindh in significant quantities (China Clay, Fuller's Earth, Limestone, Salica Sand, Crude Oil and Natural Gas).

Overall, the chapter details the historical evolution of energy portfolio in Sindh along with its emergence as a major supplier of natural gas and now as the coal-powered energy from Thar. However, the operational delivery of HESCO and SEPCO is criticized for its sub-par performance. Although K-Electric has been lauded for improved recovery rate after its privatization, the public sector has been criticized for poor distribution and transmission systems within Sindh. In terms of the mineral resources, the chapter does not inform much about the trend analysis of extraction, the sector's potential or strategies to develop the mining sector with upstream and downstream linkages.

Chapter 13: Public Finance: Taxation and Resource Mobilization

Pakistan does not record data of regional income accounts; therefore, actual composition of provincial economies is not known. Sindh is second largest contributor to Pakistani economy with about 30% of GDP (size of Rs. 1686.7 Billion in 2014-15) which is higher than its relative share in population (i.e. 23%).

-Sindh's share in agriculture sector decreased from 22.5% in 1999 to 16.1% in 2014. Sindh's share in industrial sector increased from 24.5% in 1999 to 29.3% in 2014. Sindh's share in services sector stayed stable from 53% in 1999 to 54.6% in 2014.

-7th NFC Award of 2009 showed multiplication and divisional factors and functions in respect to following listed issues: -Inverse population decay and exponential rate (82%), -Derivative change of poverty and societal backwardness (10.3%), -provincial GDP growth and revenue collection (5%), -Urban density factor (2.7%).

-Under 7th NFC Award 2009, percentage share of provinces for distribution of provincial share in divisible pool taxes: Punjab (51.74%), Sindh (24.55%), KP (14.62%), Balochistan (9.09%).

-Sindh has been responsive to fiscal decentralization as it passed 133 laws (highest) after 18th amendment. Sindh Revenue Board was also formed in 2010 to ensure effective working of taxation system in Sindh.

-Revenue mobilization efforts in Sindh remain lackluster with Sindh operating below the capacity of generating Own Source Revenue. Lack of proper tax administration (outside SRB) has distorted and fragmented tax collection efforts.

-Sindh has 15 major taxes and other minor levies under its mandate. 3 agencies primarily responsible for collecting these taxes are Sindh Board of Revenue, Board of Revenue, and Excise, Taxation & Narcotics (ET&N). Sindh mostly gets revenue from indirect taxes from sales tax on services (49%) and Infrastructure cess (31%). Agriculture income tax, land revenue and property tax collectively contribute to about 20% of provincial tax revenues. Agriculture contributes to about 16% of provincial GDP but contributes only 0.5% to total provincial tax collection.

-SRB (sales tax on services), BoR (Registration fee, Stamp duty, capital value tax, agriculture income tax, land revenue) and ET&N (Property tax, professional tax, infrastructure and development cess, entertainment duty, excise duty and motor vehicle tax).

-Post 7th NFC award, Sindh's revenue collection increased by 132.4% in the first year and 20.6% in the next year due to transfer of sales tax on services to province's jurisdiction from FBR.

-The contribution of property tax on province's own source revenue is quite low (i.e. 4% of total revenue).

-Sindh has undertaken 2 major public financial management reforms: -Project for Improvement of Financial Reporting and Auditing (PIFRA) and -Procurement and Regulatory Authority Support (SPPRA).

-Similar to NFC, provinces are obligated to distribute resources to the local governments. The weights allocated to each domain under last PFC were as follow: -Population (40%), Service infrastructure (35%), -Deprivation index (5%), Development Needs (10%) and Previous Progress (10%).

This chapter provides a clear snapshot of the public finance system in Sindh, especially after the 7th NFC Award (2009). Sindh's progress in terms of responding to fiscal decentralization has also been lauded in terms of legislations for catalyze resource mobilization. PIFRA and SPPRA are recognized as the 2 major public financial management reforms. However, the sub-optimal tax collection has also been highlighted which is attributed to very low tax collection from the agriculture sector and property tax while majority of taxes collection is through indirect taxes (sales tax on services and infrastructure tax)

Overall Conclusion

6 pillars of proposed growth strategy for Sindh should consist of:

1. Improving the governance and institutional capacity of the provincial and district governments by enhancing accountability, transparency and rule of law
2. Introducing a citizen's feedback system and robust freedom of information law
3. Making the urban economy more competitive and efficient by removing distortions in land, labor and goods markets and removing infrastructure bottlenecks.
4. Raising the productivity of water, livestock and agricultural land through water course lining, precision land levelling, new varieties of seeds, improve crop and animal husbandry practices, promotion of fisheries and marine products, and value-added horticulture, vegetables and oilseeds.
5. Mobilizing province's own revenues by reforming urban property, agriculture income tax, local cesses, and user charges on irrigation water
6. Improving access of the poor, particularly rural female population and those living in backward districts to basic services such as education and health by giving scholarships, free lunches, and conditional cash grants for female students, subsidies, free medicines, etc.

Overall conclusion is reflective of the surface level analysis of Sindh's Economy which is mostly descriptive in nature. Although the book can be termed informative in terms of documenting the trend along different sectors of the provincial economy over time, it lacks a dynamic analysis for interface and connectivity of different sectors of the economy which seldom operates in silos. The 6 pillars of proposed growth strategy for Sindh succinctly summarize the broad policies that need to be adopted to catalyze growth like 'improving governance and institutional capacity of the provincial and district governments by enhancing accountability, transparency and rule of law'. However, a more robust analysis with a proposed strategic plan or phase-wise roadmap would have added substantive value to the book. A glaring omission is focusing on resources and outputs with little or no attention given to outcome/impact indicators. Furthermore, for many sectors the latest data has not been used for sectoral analysis (e.g. MICS 2014 instead of PDHS 2017-18 is used throughout the health sector). The official statistics are correctly used to describe the overall sectoral indicator; however, no other sources (global or local) have been used in the book which makes it devoid of a holistic analysis to help deconstruct the underlying determinants of stated phenomena using eclectic sources.