Where we are going? Empirical Analysis of Pakistan's Economy

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Abstract

Since, Pakistan achieved independence, socio-economic development has faced various challenges. The human development index (HDI), published annually, shows several weaknesses. Furthermore, the HDI does not take into account several important indicators, and is an inappropriate mechanism by which to measure human development. The present study assess the level of Pakistan's social economic development (SED) based on 20 developing countries and using new variables. Socio-economic development is the process of social and economic development in a society which is measured by indicators, such as mean years of schooling, education expenditure (%GDP), life expectancy, health expenditure (%GDP), crime, corruption, GDP, level of employment, GINI index, agriculture, industries, services, exports, investment, and total reserves. In the light of these variables Pakistan's economic development is i n much better condition as compared to social development. Pakistan is socially and economically very backward in latest year.

Keywords: Health, Education, Economic Development

Introduction

There has been an explosion of interest in recent years in Pakistan and other countries in macro-indicators and composite indexes of economic and social well-being. This reflects growing recognition of the important role macro-indicators can play as a tool for evaluating trends in and levels of economic and social development and for assessing the impact of policy on well-being. In recent years, many scholars and development organization have attempted to create a broader composite measure of economic and social well-being at the community, national and international levels. In the past few years Pakistan has faced troubles with socio-economic development. Human Development Index (HDI), best known macro- indicator in the world, has been severely criticized such as, weights are arbitrary and unjustified and on the grounds that the three components of the index are highly correlated and hence give redundant results. Most of vital indicators are missing in index for instance crime, GNI index, whether development based on agricultural or industrial sector. This rigorous index provides a clear picture of Pakistan's each sector and also informs which sectors are more problematic. In the context of Pakistan, it is very important to assessing social and economic trends for the analysis or evaluation of public policy. This paper provides insights for the development of macro-indicators that provide an assessment of social and economic indicators.

Literature review

There are several parameters under which the regional social scene can be studied, namely, development index. Development index is a criterion to understand the development level of any country. Nowadays researchers and policy makers determine the standard level for any country. It is determined on the different objective and gain main purpose of these indexes. Such as, HDI account the three indicators and measure the level of human development. So in this study we use different variable to obtain objective of study. Similarly, Ghaus *et al. (*1996) used eleven indicators relating to the health, education and water supply sectors to rank districts Pakistan in terms of social development. Overall, Punjab appears to have the highest level of social development followed by Baluchistan, NWFP and Sindh. Since, t h e concept of health and education become crucial determinants of human wellbeing, human capital can be measured in terms of education level and health. So , education and health are important elements to assess the economic development for country. Gallup et al. (1998) and Barro and Lee (1993) finds a strong relationship between health and economic growth, using life expectancy at birth as basic measure of overall health of the population. They concluded that improved health is associated with faster economic development. Sach and Warner (1997) and Becker et al. (1998) are supported in term of empirical research.

Later, attempts to construct a measure of social welfare include Camp and Speidel's (1987)

International Human Suffering Index, which employed ten indicators including adult literacy, income, infant mortality, nutrition and personal freedom. Similarly, Biswas and Caliendo (2001) use the PCA method and give equal weights for the three components; GDP Index 32 percent, Life Expectancy Index 34 percent and Education Index 34 percent. Development of macro-indicators (Rahman, Mittelhammer, & Wandschneider, 2003) measuring quality of life or well-being at the broadest level domains can include basic dimensions of quality of life, such as economic, social, and political, and environmental well- being as well as education and health.

Many proposals have been put forth in the past to construct an index reflecting either human development or the level of wellbeing. Some of these proposals didn't even include a measure of income per capita; for example, the Level of Living Index (Drewnowski & Scott, 1966) includes dimensions of nutrition, housing, education, health, environment, and others; and the Physical Quality of Life Index (PQLI) (Morris, 1970) which combines literacy rates, infant mortality and longevity. In the context of Pakistan we sum up all majors indicators and measure the level of Pakistan.

Several types of indexes of economic and social well-being are identified, such as, Index of Economic Well-Being (IEWB) developed by the Centre for the Study of Living Standards (Osberg & Sharpe, 1998, 2002); the Genuine Progress Indicator (GPI) developed by the San Francisco think tank, Redefining Progress (Cobb, Halstead, & Rowe, 1995); the Index of Social Progress (ISP) developed by Richard (1997) and the Quality of Life Index (QOL) by Morris (1970) and Economic Welfare (MEW) developed by William Nordhaus and James Tobin (1972). These indexes are part of literature and provide sound methodology for new index developers.

Methodology on Socio-Economic Development Index

In the literature on development, a number of techniques have been used to measure the composite index of development indicator. The first is the Z-sum technique which is the latest one famous for measuring each indicators performance. The Z score is the standardized score, which has different mean and different variance. The higher the Z scores means more developed is the region.

In this approach, equation for the normalized value (Kothari, 1978) is as follows:

$$z = \frac{x - \mu}{\sigma}$$

- *Z* is called the standard variation number of standard deviations from x to the mean of the distribution.
- X represents value you want to normalize

- μ represents mean of the distribution
- σ represents standard deviation (S.D) of the distribution. The Number of Homicides and GINI index standardized scores must be changed because they are inversely associated to development, so positive score become negative and negative score become positive. Finally, we find the average of the area under the curves previous normalized. These vales replace in socio- economic development equation.

$$\mathbf{SED = SD + ED}$$

The values of the SED index vary between 0 and 1, values close to 0 indicate that Pakistan have very low level of Socio-Economic development. On the other hand, values close to 1 indicate that the Pakistan has a very high level of Socio-Economic development. Sub-indices

$$\mathbf{SED = 50\ \%(\ SD) + 50\ \%(\ ED)}$$

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Data and Descriptive Analysis

In this paper, we used sample based panel dataset of 20 developing countries (Afghanistan, Bahrain, Bangladesh, Botswana, Egypt, Ethiopia, Indonesia, Iran, Kuwait, Malaysia, Mauritius Morocco, Pakistan, Qatar, Saudi Arabia, Syria, Tunisia, Turkey and U.A.E) to analyze social and economic level of development in Pakistan, however we could not measure the other 19 countries index. The datasets include detailed information on each variable in tables 1. The data of 2008-2012 was used and was provided by the World Bank, CPI Index, UNDP and UNODC. Unfortunately, the World Bank does not provide GINI index data in time series, so one maximum number within five year was used. All other data given is completed in estimation and the average of each variable was used.

Before proceeding to empirical analysis, it is very important to have an overview of social and economic indicators of Pakistan. Approximately Pakistan has Grade 5 year of education. Majority of the Pakistanis have life expectancy of 65 years, it is tremendous. Education and health expenditure (%GDP) is quite low as compared to developed countries. Similarly, crime and corruption is prevalent in Pakistan. In crime Pakistan is leading among the selected panel.

The number of new entrants per decade increased gradually. Table 3 also shows that Pakistan's economy basically i s labor intensive. These sectors grew very satisfactorily as compared to other countries: employment to population ratio, agriculture value added (%GDP) and service value added (%GDP). There is no doubt that the exports of goods & services and Industries have poor performance as compared to other countries.

Table 1. Major Sources of Indicators

Indicators	Data Source
Mean years of schooling	UNDP
Education expenditure (%GDP)	World Bank
Life expectancyat birth, total (years)	World Bank
Health expenditure (%GDP)	World Bank
Number of Homicides	UNODC
Corruption	CPI Index
GDP per capita, PPP (constant 2005 international $)	World Bank
Employment to population ratio, 15+, total (%)	World Bank
GINI index	World Bank
Agriculture value added (%GDP)	World Bank
Industries value added (%GDP)	World Bank
Service value added (%GDP)	World Bank
Exports of goods and services	World Bank
Investment	World Bank
Total reserves (includes gold, current US$) Million	World Bank

Table 2. Social Development Index (SD) in Pakistan

Social Development Indicators	Value
Mean years of schooling	4.8
Education expenditure (%GDP)	2.48
Life expectancy at birth, total (years)	65
Health expenditure (%GDP)	2.88
Number of Homicides	12905
Corruption	27

Table 3. Economic Development Index (ED) in Pakistan

Economic Development Indicators	Value
GDP per capita, PPP (constant 2005 international $)	234
Employment to population ratio, 15+, total (%)	51.1
GINI index	30.02
Agriculture value added (%GDP)	24.35
Industries value added (%GDP)	21.27
Service value added (%GDP)	54.37
Exports of goods and services	12.91
Investment	16.31
Total reserves (includes gold, current US$) Million	14254.4

Results

Basically there are four scenarios that emerge following the calculation of the social and economic development level for the Pakistan under study. In first scenario country attains a level of social and economic more than 0.50. The second scenario country attains a level of social more than 0.50 and economic less than 0.50. The third scenario country attains a level of social and economic development less than 0.50. Unfortunately, Pakistan lies in third scenario where both social and economic development is miserable. Relatively economic development is much better to social development in Pakistan. Last scenario country attains a level of social development less than 0.50 and economic development more than 0.50.

Area under the curve values depends on the Standardized (z) values, if Standardized (z) increase the area under the curves values also increase and vice versa. Same as, if a Standardized (z) value is negative then area under the curves vary between 0 - .50; if a Standardized (z) value is positive then area under the curves vary between 0.50 to 1. Such as, we see all the social indicators Standardized (z) value is negative and Area under the curve values lie in 0 to 50.

Table 4. Social Development Index (SD) in Pakistan

Indicators	Mean(μ)	STDV(σ)	Standardized	Area under curve
Mean years of schooling	6.38	2.10	-0.75	0.22
Education expenditure (%GDP)	4.05	1.86	-0.84	0.20
Life expectancy at birth, total (years)	68	8.95	-0.44	0.33

Indicators	Mean(μ)	STDV(σ)	Standardized	Area under curve
Health expenditure (%GDP)	4.7	1.82	-1.015	0.146
Number of Homicides	3216.8	5976.5	-1.62	0.052
Corruption	41.1	15.76	-0.89	0.186
			Average	**0.19**

Note: The sign of standardized Number of Homicides change because the indicators are inversely related with development. Mean for all countries under study ( ), Standard Deviation for all Countries under study ( ).

The Table 4 acknowledged the performance of social parameters and asses the performance of economic indicators. As it can be seen that Standardized (z) has both positive and negative values. No doubt, Agriculture, Service and GINI index Standardized (z) are positive Area under the curve values lie in 0.50 to 1. Remaining indicators values vary between 0 - 0.50 because Standardized (z) are negative.

Table 5. Economic Development Index (ED) in Pakistan

Indicators	Mean(μ)	STDV(σ)	Standardized	Area under curve
GDP per capita, PPP (constant 2005 $)	15169.3	17485.54	0.73	0.23
Employment to population ratio, 15+, total (%)	55.5	14.2	0.30	0.38
GINI index	37.9	9.4	0.84	0.79
Agriculture value added (%GDP)	11.6	11.9	1.06	0.85
Industries value added (%GDP)	36.8	13.2	1.1	0.12
Service value added (%GDP)	51.1	10.2	0.311	0.62
Exports of goods and services	41.9	24.3	1.18	0.11
Investment (Gross capital formation)	25.4	6.2	1.46	0.07
Total reserves (includes gold) Million US$	52828	113699	0.33	0.37
			Average	**0.40**

Note: The sign of standardized GINI index change because the indicators are inversely related with development. Mean for all countries under study (μ), Standard Deviation for all Countries under study (σ)

Figure 1. Classification of the SD and ED

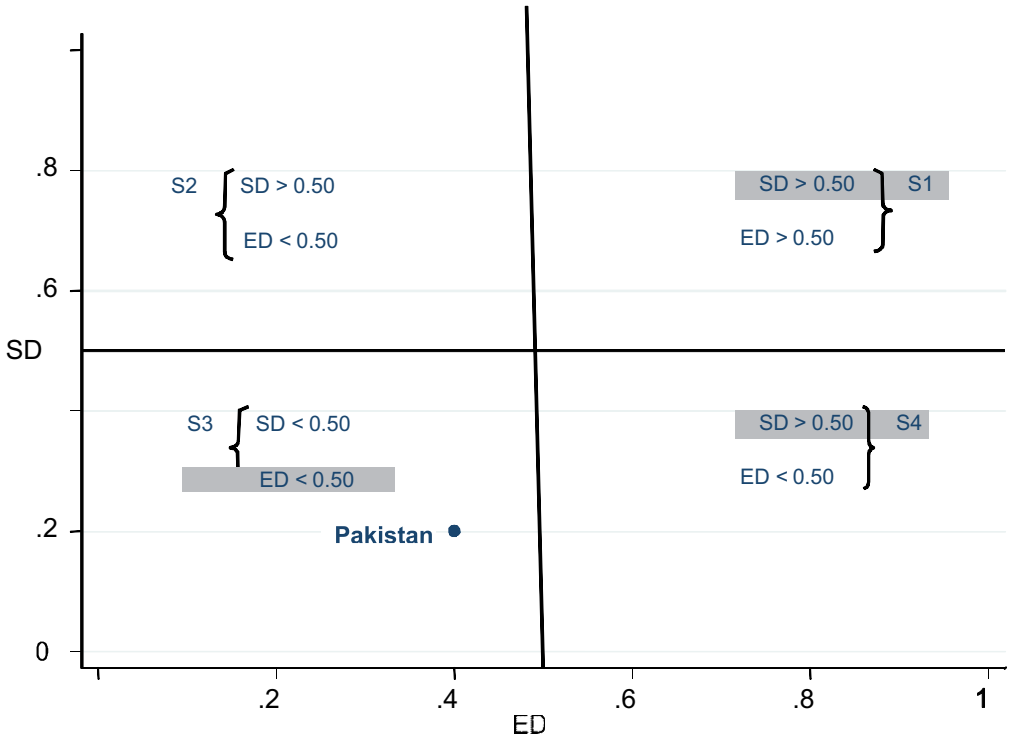

Table 6. Pakistan Social-Economic Development Index (SED) and the Development Status Matrix (DSM)

Pakistan	level
Social Development (SD)	0.19
Economic Development (ED)	0.40
Socio-Economic Development (SED)	0.30
Development Status Matrix (DSM)	S3

As stated in the start of paper, no country is free from socio-economic problems. It is very important f o r policy-makers and development professionals to gauge social and economic indicators. As expected, Pakistan's economic development is much better as compared to social developed (Ayasrah, 2012; UNDP, 2012). But we cannot image very less level of social development (0.19) in Pakistan. Why social developed is less? There are several reasons, such as, one of the major bottleneck of Pakistan's development is slow rate of progress in thebasic fields of education and health. Rates of net primary enrolment and completion increased up to the mid -2000s but, thereafter,

slowed and fluctuated in 2011- 2012 (Pakistan Millennium Development Goals Reports, 2013). Basic social development indicators of Pakistan gain no Government incentive**.** Every year thousands of people die due to several diseases and millions of people don't get to go to school. Pakistan has shown considerable yet insufficient progress for achieving the targets set for 2015 (Pakistan Millennium Development Goals Repots, 2013). Overall, Pakistan is off track on all social indicators (Pakistan millennium development goal reports, 2013). Education is one of the indicators that i f improved, can promote social, economic, political condition of the nation.

Conclusion

The main contribution of this paper is that it measures the level of development in the context of social and economic indicators. It is clear that Pakistan's socio-economic development is miserable, as it was found that Pakistan has poor social development when compared to economic development. Pakistan has been unsuccessful to improve the social and economic variable such as, number of homicides, education expenditure (%GDP), health expenditure (%GDP), corruption, exports of goods and services, investment (Gross Capital Formation) and industries value added (%GDP). These conclusions have very clear policy implications for Pakistan. Social and Economic recovery is a priority for Pakistan. It is very important for socio economic development and should be addressed by government. The Pakistan's government should, therefore, take note of these issues, where indicator's poor performance exists.

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