

ANALYSING THE IMPACT OF SOCIAL SECTOR EXPENDITURE ON HUMAN DEVELOPMENT AND GROWTH: A STATE-LEVEL STUDY IN INDIA

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Abstract

Investment in human capital is considered as one of the most important pillars of economic growth in any economy. A positive correlation has been found in many cases between the government expenditure in the social sector and human capital development.

In this paper, we aim to reinstate the positive correlation between government expenditure in the social sector and Human Development Index on one hand and between Human Development Index and economic growth on the other for major Indian states in the period 2005-06 to 2018-19. Furthermore, we try to examine whether there is a two-way relationship between expenditure in the social sector and economic growth.

We have proved the theoretically valid framework of the relation between social sector expenditure, Human Development Index and economic growth statistically in the case of India.

Keywords: human development index, economic growth, social sector expenditure, state level analyses, holistic growth, Indian economy

Introduction

“Sustained and inclusive economic growth can drive progress, create decent jobs for all and improve living standards” – United Nations.

In the recent past, focus has shifted from merely boosting economic growth to a more holistic concept of economic development. It is evident that human capital development is a guaranteed way of attaining consistent and sustainable economic growth which translates into economic development. The Human Development Index, or HDI, embodies Amartya Sen’s “capabilities approach” to understanding human well-being, which emphasises the importance of “ends” (like a decent standard of living) over “means” (like income per capita). “It is believed that HDI is a credible index for providing us with an alternative view of human development”^[2]. Keeping the importance of HDI as an indicator of overall welfare in the economy, we see how social sector expenditure affects it.

In this paper, we have considered social sector expenditure as the expenses on education, health, water supply, sanitation, nutrition, family welfare, housing, urban development, art and culture, sports, relief for calamities, social security and labour welfare ^[19].

Firstly, we aim to see whether HDI and social sector expenditure are related or not. If they are, then what is the approximate nature of this relation.

Coming to our second objective; in the context of HDI and economic growth, from Growth and Human Development: Comparative Latin American Experience ^[17], we know that HDI and economic growth are related. The HDI affects the GDP per capita of a country. A higher HDI indicates better access to healthcare facilities, improved attainment of education and a higher quality of life. Robust human capital increases the avenues for economic growth. Economic growth influences the GDP per capita, which further boosts the HDI.

We wish to examine the correlation of HDI and GDP in the context of Indian states under the period of consideration. Hence, we analyse the relation between HDI and growth rate of gross state domestic product or GSDP for four years, 2005-06, 2010-11, 2015-16, and 2018-19.

We can consider our model to be made up of two chains, one linking social sector spending with HDI and another joining HDI and economic growth. From the available data we examine whether the ends of these straight chains can be connected, that is, we aim to establish if social sector spending has any bearing on economic growth or not.

Literature Review

With regards to HDI and economic growth, existing literature ^{[17][18][21]} have established a two-way relation between these two variables. "The causal relationship between economic growth and human development becomes a mutually influential relationship", Elista and Syahzuni ^[6]. For analysing the relation between social sector expenditure and HDI of individual states, ^[15] studied the government financing of social sectors from 1974-75 to 1990-91. In ^[7], Goswami and Bezbaruah has considered the period of 1990-91 to 2009-10. In ^[13] Mittal analysed the trends in the expenditure and HDI for the period 2000-01 to 2014-15. "It is observed that there is a positive relation between social sector spending and the human development index of the states", Mittal ^[13].

Economic Growth and Economic Development

Economic growth can be defined as the increase or improvement in the inflation-adjusted market value of the goods and services produced by an economy over time. Statisticians

conventionally measure such growth as the percentage increase in the real gross domestic product, or real GDP. Previously, policymakers and economists often treated economic growth as an all-encompassing unit to signify a nation's development, combining its economic prosperity and societal well-being. Economic growth had emerged as both a leading objective, and indicator, of national progress in many countries, even though GDP was never intended to be used as a measure of wellbeing. As a result, policies that resulted in economic growth were seen to be beneficial for society. However, with time it was observed that economic growth falls short of measuring the holistic development of the economy and the wellbeing of the society. This is because economic growth is merely a measure of the increase in real GDP of the nation as a whole, and it does not take into account income inequality, environmental quality, levels of health and education, unemployment rate, gender discrimination and other such factors which directly determine the standard of living and wellbeing of the society.

Thus, over the last two decades the focus has been shifted to the much broader concept of economic development. Economic development is defined as the process by which the economic wellbeing and quality of life of a nation can be improved according to the targeted goals and objectives. In Amartya Sen's words, economic growth is the "means" of attaining economic development which is the "ends" or the objective of the economy. The broader concept of economic development has been adopted by the United Nations, first through the Millennium Development Goals (MDGs) of 2000, and then through the Sustainable Development Goals (SDGs) of 2015. The eight MDGs were expanded and modified to seventeen SDGs, which include conventional economic measures such as income growth and income poverty, but also inequality, gender disparities, and environmental degradation ^[10] The conceptualization of this all-encompassing "economic development", has been one of the sure advances during the past decade of thinking, and represents a move toward a "new enlightenment" in assessing trajectories of achievement.

Human Development

The United Nations Development Programme (UNDP) defines human development as "the process of enlarging people's choices", said choices allowing them to "lead a long and healthy life, to be educated, to enjoy a decent standard of living", as well as "political freedom, other guaranteed human rights and various ingredients of self-respect". Thus, human development is about much more than economic growth, which is only a means of enlarging people's choices. Fundamental to enlarging these choices is building human capabilities—the range of things that people can do or be in life. Capabilities are "the substantive freedoms

[a person] enjoys to lead the kind of life [they have] reason to value”. The concept of human development grew out of global discussions on the links between economic growth and development during the second half of the 20th century. Debates to go beyond economic growth paved the way for the human development approach, which is about expanding the “richness of human life, rather than simply the richness of the economy in which human beings live”. It is an approach that is focused on creating fair opportunities and choices for all people. Human development is considered to be a guaranteed way of attaining sustainable development.

Human Development Index

Human development is measured with the help of the Human Development Index (HDI). The Human Development Index (HDI) is a summary measure of achievement in three key dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. The HDI is the geometric mean of normalised indices for each of the three dimensions. The health dimension is assessed by life expectancy at birth, the education dimension is measured by the mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age. The standard of living dimension is measured by gross national income per capita. The HDI uses the logarithm of income, to reflect the diminishing importance of income with increasing GNI. The scores for the three HDI dimension indices are then aggregated into a composite index using geometric mean.



Figure 1: Construction of the Human Development Index

Importance of Social Sector Expenditure

Social sector expenditure can be defined as the total expenditure incurred by the government on social promotional and protective measures. It includes the expenses on education, health, water supply, sanitation, nutrition, family welfare, housing, urban development, art and culture, sports, relief for calamities, social security and labour welfare. Social sector expenditure is a key instrument for the development of the country.

Public spending on the social sector is given importance for at least two reasons. First, the extent of deprivation in developing countries like India is too large to be left to market forces alone to take care of sufficient spending required for human development. Second, the poor utilise government services to a greater extent as compared to the richer households and thus public spending on the social sector helps in attaining an equitable distribution of opportunities. Social sector expenditure leads to human capital development and thus helps in attaining sustainable development in an economy.

Theoretical Framework

The objective of this study is to analyse the relation between social sector expenditure, human development and economic growth. It can be divided into three sections:

1. The relation between social sector expenditure and human development: Intuitively, it follows from the previous discussions that social sector expenditure affects human development positively- an increase in the per capita social sector expenditure should lead to an increase in the HDI. We shall check the validity of this intuition in the case of the major Indian states over the period of 2005-2018 in our study.

2. The relation between human development and economic growth: The quintessential notion regarding the relation between human development and economic growth is that economic growth is the “means” to attain human development which is the “ends” in this regard. However, the paper Growth and human development: comparative Latin American Experience by Gustav Ranis and Frances Stewart suggests that the converse of this is also true—human development can lead to consistent economic growth. This is intuitively consistent as well—increase in human development improves the productivity and efficiency of human capital which is the core of all economic activity and thus it leads to increase in economic growth. Thus, a two-way relationship is observed between human development and economic growth which we try to statistically analyse in our study.

3. The relation between economic growth and social sector expenditure: Here again a two-way relation between economic growth and social sector expenditure relationship is evident between economic growth and social sector expenditure.

Firstly, an increase in economic growth results in an increase in the social sector expenditure because higher GDP would mean that the government will have more funds available to spend on the social sector.

However, the converse of this relation is not so simple. Intuitively, an increase in social sector expenditure should lead to higher economic growth through the human development channel. However, the review of studies on the relationship between public expenditure and economic growth observed mixed evidence. Public spending in the social sector positively influences economic development by creating socially inclusive, healthy, and economically solid societies and enhances productivity ^{[14] [3] [4] [5] [11] [20]}. There is a negative causal relationship between state spending on education and health on economic growth in African nations, mostly due to corruption, bureaucratic defects, and under-investment ^[9]. The studies made by Kormendi and Meguire ^[12] witnessed no relationship between social sector expenditure and economic growth. In our study we will explore the nature of the relationship between social sector expenditure and economic growth for the major Indian states over the period of 2005-2018.

To summarise it all, in our study we have analysed the validity of the following flow diagram for the major Indian states over the period of 2005-2018. We have arrived at this flow diagram intuitively from referencing the existing theory and we try to statistically prove it in this study.



Figure 2: Theoretical framework of the study

Data Source and Variables Used

All data used in the study is secondary data, collected from the Handbook of Statistics of the Reserve Bank of India, ^[22] The Census of India and from the Annual Publications of the Ministry of Health and Family Welfare of India. The variables used and their descriptions are as follows:

- **GSDP:** The Gross State Domestic Product calculated at constant prices with base year 2011-12. The GSDP for 4 years has been considered (2005-06, 2010-11, 2015-16, 2018-19). The unit is in Rs. crore.
- **GSDPP:** The Gross State Domestic Product per capita of each state, calculated by dividing the Gross State Domestic Product by population of the states in the corresponding year. The unit is in Rs.
- **HDI:** The Human Development Index has been considered for 28 Indian states, for the years 2005-06, 2010-11, 2015-16, 2018-19. Its value ranges from 0 to 1.

- **SSE:** The Social Sector Expenditure has been considered for 4 years: 2005-06, 2010-11, 2015-16, 2018-19. It comprises the spending on elementary education, public health, safe drinking water, rural sanitation, and family welfare ^[23]. The unit is in Rs crore.
- **SSEP:** This is the Social Sector Expenditure per Capita of each state, calculated by dividing the Social Sector Expenditure by the population of the states in the corresponding year. The unit is in Rs.
- **LSSEP:** This is the Social Sector Expenditure, scaled down by the logarithmic function.

Methodology

The panel data was pooled and analysed. We used the correlation statistic on the pooled data to establish the relationship between the GSDP, SSE and HDI. To further examine the extent of the relationship and to estimate the marginal effect of GSDP, SSE, as well as LSSE on each other, we performed a pooled regression using OLS on the panel data. Our study can be broken down into three sections:

1. Finding the relationship between Social Sector Expenditure Per Capita and Human Development Index
2. Finding the relationship between Human Development Index and Economic Growth, represented by Gross State Domestic Product
3. Finding the relationship between Social Sector Expenditure and Economic Development

The Relation between Social Sector Expenditure and Human Development Index

In our study, we aim to establish the extent to which expenditure in the social sector by the government can bring about an improvement in the Human Development Index. We have correlated the values of Human Development Index and Per Capita Social Sector Expenditure for the pooled data, to find the extent to which the two variables are related. The following results were obtained.

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. corr LSSEP HDI
(obs=112)

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	LSSEP	HDI
LSSEP	1.0000	
HDI	0.6416	1.0000

Figure 3: The correlation coefficient between HDI and the logarithm of Per Capita Social Sector Expenditure is 0.6416

The correlation coefficient of 0.6416 signifies a moderate positive correlation between Human Development Index and the logarithm of Per Capita Social Sector Spending. A possible interpretation of this might be that as Social Sector Expenditure per capita increases, the HDI increases. Although the extent of relation can be determined by the correlation coefficient, it is not possible to determine the direction of the relationship, that is, if an increase in the per capita Social Sector Expenditure causes the increase in Human Development Index or if an exogenous increase in Human Development Index, bolsters economic growth which in turn increases the per capita Social Sector Expenditure. We must, however, take into account certain instances in which such a positive correlation does not hold a negative change in per capita Social Sector Expenditure and does not result in a negative change in HDI.

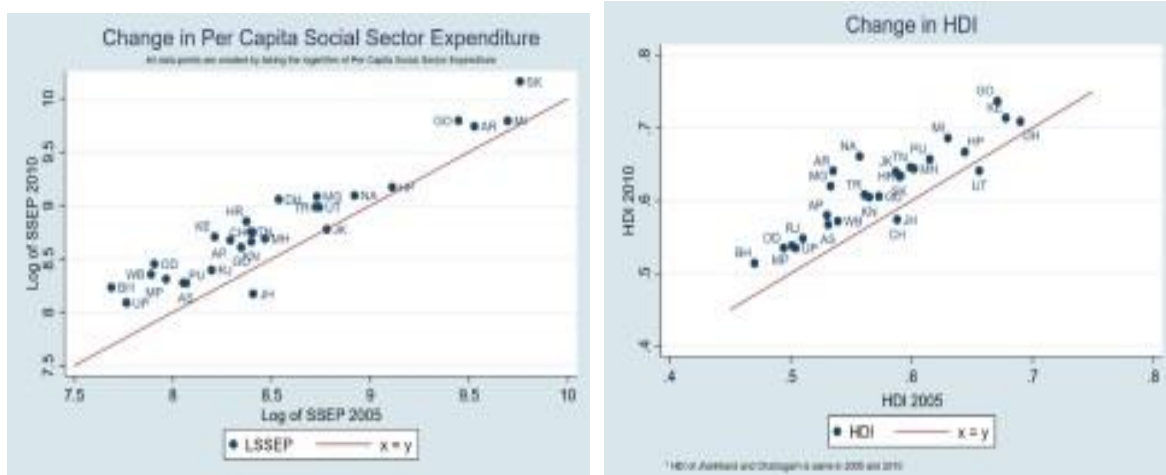
To analyse this, we have constructed three scatter plot graphs, each consisting of a forty-five-degree reference line to measure the initial HDI, final HDI and the change in HDI for the four years. We have carried out a similar exercise in regards to the Social Sector Expenditure. The forty-five degree represents the locus of points for which the HDI and per capita Social Sector Expenditure are the same for two subsequent years. Any point above the line represents the states for which HDI or per capita Social Sector Expenditure have increased for two subsequent years and any point below the line represents the states for which HDI or per capita Social Sector Expenditure have decreased for two subsequent years.

The following are the observations:

- From Figure 4, we can see that although there was an increase in per capita Social Sector Expenditure for Uttarakhand from 2005-06 to 2010-11, its Human Development Index decreased from 2005-06 to 2010-11. This is in contrast to the positive correlation

which was calculated from the data. Another state, in which such an increase in per capita Social Sector Expenditure is contrasted by a decrease in HDI is Chhattisgarh.

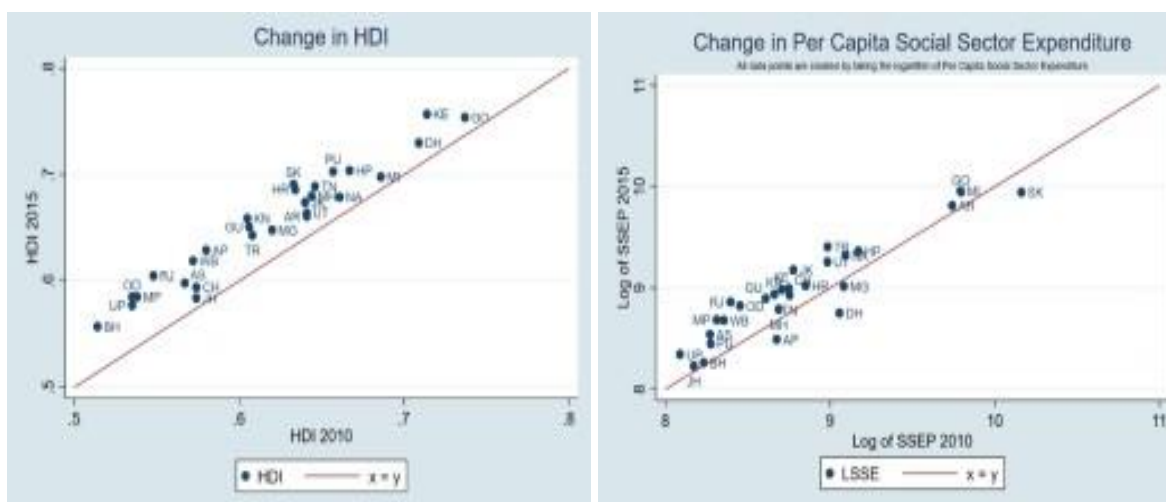
- From Figure 5, we can see that for the years 2010-11 and 2015-16, the states of Sikkim, Delhi, Andhra Pradesh and Meghalaya show deviations from the positive correlation between per capita Social Sector Expenditure and Human Development Index.
- From Figure 6, we can see that for the years 2015-16 and 2018-19, although there were no deviations from the expected positive relation between per capita Social Sector Expenditure and Human Development Index, some states did not show an increase in Human Development Index, even though they experienced a positive growth in per capita Social Sector Expenditure.



(a) HDI

(b) LSSEP

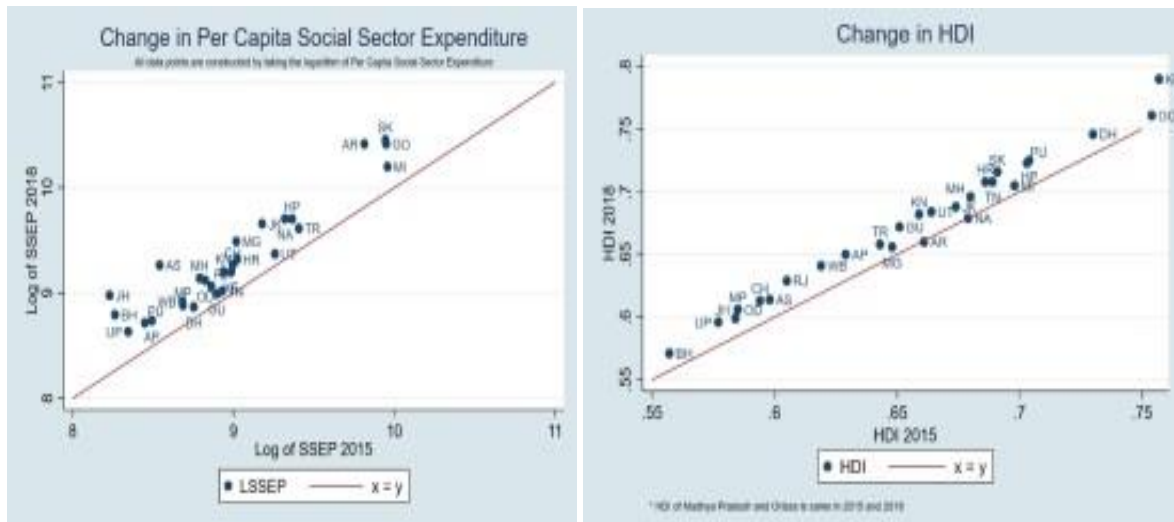
Figure 4: The relationship between HDI and LSSEP for 2005-06 and 2010-11



(a) HDI

(b) LSSEP

Figure 5: The relationship between HDI and LSSEP for 2010-11 and 2015-16



(a) HDI (b) LSSEP
 Figure 6: The relationship between HDI and LSSEP for 2015-16 and 2018-19

Relation between Human Development Index and Gross State Domestic Product

The relationship between Human Development Index and Economic Growth has been already established as a two-way relationship [16]. We have correlated the values of Human Development Index and Gross State Domestic Product and the values to find the extent to which the variables were related. The results were as follows.

. corr HDI GSDP (obs=112)		
	HDI	GSDP
HDI	1.0000	
GSDP	0.1067	1.0000

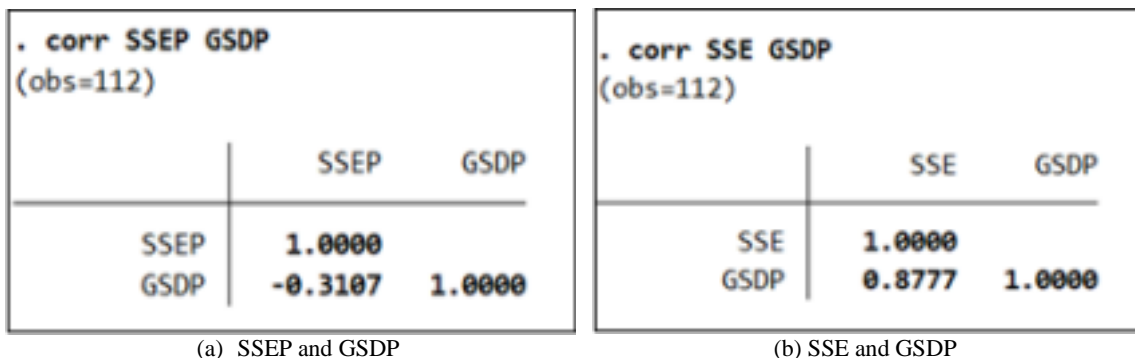
Figure 7: The coefficient of correlation between HDI and GSDP is 0.1067.

The correlation coefficient of 0.1067 signifies a weak positive correlation between Human Development Index and Gross State Domestic Product. This weak correlation can be substantiated by stating the economy of Sri Lanka. The Human Development Index of Sri Lanka was 0.782 in 2019, an increase of 24.3% from 1990. The Gross Domestic Product of Sri Lanka on the other hand has grown only by 6.4% from 1990 to 2019.

Relation between Social Sector Expenditure and Gross State Domestic Product

To estimate the relationship between Social Sector Expenditure and Economic Growth, we have performed correlation analyses as well as regression analysis. We have correlated the Social Sector Expenditure (SSE) with Gross State Domestic Product (GSDP) as well as Social Sector Expenditure per capita (SSEP) and Gross State Domestic Product (GSDP) to check for any contradictory relation between the variables. The results were as follows. The correlation coefficient of -0.3107 signifies a weakly negative relation between SSEP and GSDP. The correlation coefficient of 0.8777 signifies a strongly positive relation between SSE and GSDP.

The contrast in the coefficients can be explained by taking the growth rate of the population into consideration. The positive correlation between Gross State Domestic Product and Social Sector Expenditure states that an increase in one variable must indicate an increase in the other variable. The correlation does not state the order of increase, that is if an increase in Gross State Domestic Product must be followed by an increase in Social Sector Expenditure or if an increase in Social Sector Expenditure leads to an increase in Gross State Domestic Product.



(a) SSEP and GSDP
(b) SSE and GSDP
Figure 8: The comparison of correlation coefficients between SSEP, SSE and GSDP

When considering the correlation between Social Sector Expenditure per capita and Gross State Domestic Product, the negative correlation can be explained by an increase in the population. An increase in population increases the number of citizens between whom the Social Sector Expenditure is distributed. Thus, if the growth rate of the population is larger than the growth rate of the Gross State Domestic Product, the per capita Social Sector Expenditure decreases instead of increasing.

Regression

To estimate the extent of the effect of GSDP on SSE and SSEP, as well as the extent of the effect of SSE and SSEP on GSDP we formulated two regression models based on the pooled data and not taking into account the heterogeneity of the between group data.

GSDP and SSE

Pooled OLS Model: $GSDP = \beta^0 + \beta^1 SSE$

The pooled ordinary least square regression result signifies that SSE is significant in explaining GSDP and has a positive coefficient of 10.88, that is, for every one unit increase in Social Sector Expenditure, the Gross State Domestic Product increases by 10.88 units. Since the data comprises GSDP and SSE for various states across 4 time periods, we use panel data regression to take into account the heterogeneity in the data, that is, the variation of the data between the states.

Two types of panel data regression were performed, one with fixed effects and one with random effects.

. reg GSDP SSE						
Source	SS	df	MS			
Model	6.7826e+12	1	6.7826e+12	Number of obs =	108	
Residual	2.2139e+12	106	2.0886e+10	F(1, 106) =	324.74	
Total	8.9966e+12	107	8.4080e+10	Prob > F =	0.0000	
				R-squared =	0.7539	
				Adj R-squared =	0.7516	
				Root MSE =	1.4e+05	
GSDP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
SSE	10.88794	.6041953	18.02	0.000	9.690069	12.08582
_cons	32810.97	19785.73	1.66	0.100	-6416.159	72038.11

Figure 9: Coefficients table for the regression between GSDP and SSE

A panel regression with fixed effects is used when there is a correlation between the independent variables and the residual values, leading to omitted variable bias. To counter such a bias, the model assumes a time invariant factor, specific to each cross section in the panel data, which cannot be observed or is difficult to measure. This time invariant factor is then discounted from the model by using a technique akin to that of a first difference model. Such a discounting does not allow the time invariant factors to explain any of the variation in the dependent variable. A panel regression with random effects can be used when there is no

correlation between the independent variables and the residual values. A random effects model takes into account the variability between the cross-sectional data and also allows for the inclusion of time invariant factors as explanatory variables, which were discounted and absorbed into the intercept term in the fixed model. The hypothesised data generating process is given by the following equations:

$$\text{Fixed Effects Model: } GSDP_{it} = (\beta_i)SSE_{it} + \alpha_i + \epsilon_i$$

$$\text{Random Effects Model: } GSDP_{it} = (\beta)SSE_{it} + \alpha + u_{it} + v_{it}$$

In the fixed effects equation, α_i stands for the time invariant factor within the groups. In the random effects equation, u_{it} stands for the between group error and v_{it} stands for the within group error.

The fixed effects panel regression result signifies that SSE is significant in explaining GSDP, and SSE has a positive coefficient of 9.62, that is, for every one unit increase in SSE, GSDP increases by 9.62 units. The random effects panel regression result states that SSE is significant in explaining GSDP, and SSE has a positive coefficient of 10.00, that is for every one unit of increase in SSE, GSDP increases by 10.00.

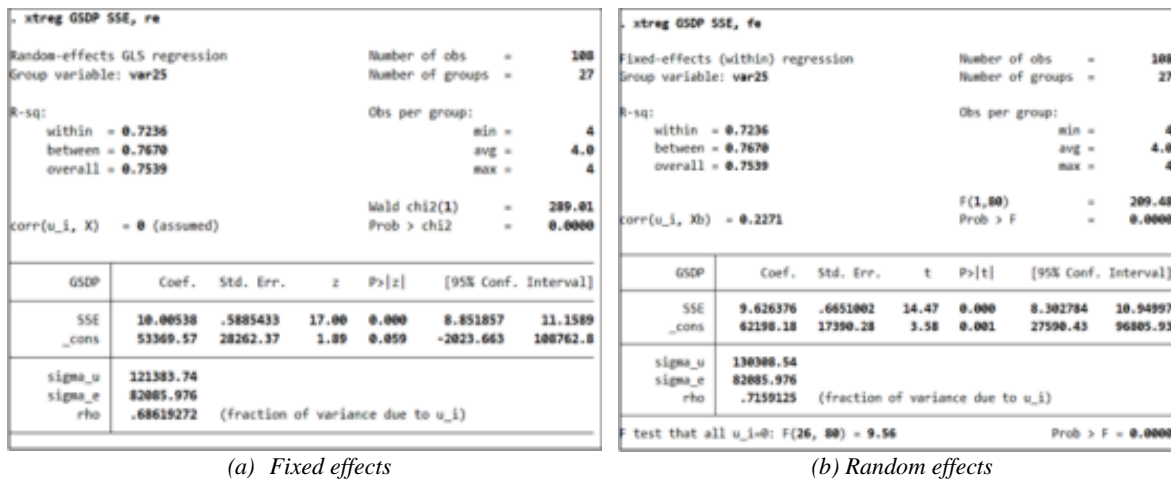


Figure 10: Panel data regression coefficients for GSDP and SSE

GSDP and SSEP

$$\text{Pooled OLS Model: } SSEP = \beta_0 + \beta_1 GSDP + \epsilon$$

The regression result signifies that GSDP is significant in explaining SSEP and has a negative coefficient of -0.00778, that is, for every one unit increase in Gross State Domestic Product, the Social Sector Expenditure per capita decreases by 0.00778 units.

Source	SS	df	MS	Number of obs	=	108
Model	544835378	1	544835378	F(1, 106)	=	13.75
Residual	4.1988e+09	106	39611222.2	Prob > F	=	0.0003
Total	4.7436e+09	107	44332943.2	R-squared	=	0.1149
				Adj R-squared	=	0.1065
				Root MSE	=	6293.7

SSEP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
GSDP	-.0077821	.0020983	-3.71	0.000	-.0119422 - .0036219
_cons	11518.4	853.2369	13.50	0.000	9826.773 13210.02

Figure 11: Coefficients table for regression between GSDP and SSEP

The hypothesised data generating process is given by the following equations:

Fixed Effects Model: $SSEP_{it} = (\beta_i)GSDP_{it} + \alpha_i + \epsilon_i$ Random

Effects Model: $SSEP_{it} = (\beta)GSDP_{it} + \alpha + u_{it} + v_{it}$

. xtreg SSEP GSDP, fe						. xtreg SSEP GSDP, re							
Fixed-effects (within) regression			Number of obs = 108			Random-effects GLS regression			Number of obs = 108				
Group variable: var25			Number of groups = 27			Group variable: var25			Number of groups = 27				
R-sq:			Obs per group:			R-sq:			Obs per group:				
within	=	0.1535	min	=	4	within	=	0.1535	min	=	4		
between	=	0.3357	avg	=	4.0	between	=	0.3357	avg	=	4.0		
overall	=	0.1149	max	=	4	overall	=	0.1149	max	=	4		
corr(u_i, Xb) = -0.6973			F(1,80) = 14.51			corr(u_i, X) = 0 (assumed)			Wald chi2(1) = 0.69				
			Prob > F = 0.0003						Prob > chi2 = 0.4052				
SSEP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	SSEP	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]		
GSDP	.0102097	.0026804	3.81	0.000	.0048755 .0155439	GSDP	.00199	.0023905	0.83	0.405	-.0026953 .0066752		
_cons	6364.897	848.0761	7.51	0.000	4677.172 8052.622	_cons	8719.334	1229.136	7.09	0.000	6310.273 11128.4		
sigma_u	7589.1315					sigma_u	4383.0266						
sigma_e	3743.5565					sigma_e	3743.5565						
rho	.8042957	(fraction of variance due to u_i)					rho	.57820445	(fraction of variance due to u_i)				
F test that all u_i=0: F(26, 80) = 8.45 Prob > F = 0.0000													

(a) Fixed effects

(b) Random effects

Figure 12: Panel data regression coefficients for SSEP and GSDP

The fixed effects panel regression result signifies that GSDP is significant in explaining SSEP, and GSDP has a positive coefficient of 0.01020, that is for every one unit increase in GSDP, SSEP increases by 0.01020.

The random effects panel regression result signifies that GSDP is not significant in explaining SSEP. Hence the regression results are consistent with the correlation coefficients and establish the extent of the relationship between SSEP, SSE and GSDP.

Key Findings

- Firstly, a moderately strong correlation has been found between per capita social sector expenditure and HDI which is consistent with our intuitive explanation - social sector expenditure invests in human capital formation and helps in attaining an equitable distribution of opportunities for all. However, in our study a few exceptions have also been observed in this regard where HDI has decreased in spite of increase in per capita social sector expenditure. This can be due to corruption, bureaucratic defects, and under investment in the pivotal social sectors which causes inefficiency in the social sector framework.
- Secondly, a weakly positive correlation has been found between HDI and economic growth. This is again consistent with our intuitive theory- increase in human development improves the productivity and efficiency of human capital which is the core of all economic activity and thus it leads to increase in economic growth. Therefore, Gustav Ranis and Frances Stewart's findings in the paper -Growth and human development: comparative Latin American Experience weakly holds for the major Indian states as well.
- Thirdly, a positive correlation has been found between absolute social sector expenditure and economic growth which again coincides with our intuitive explanation-increase in absolute social sector expenditure leads to increase in economic growth through the human development channel. Conversely, an increase in economic growth results in an increase in the social sector expenditure because higher GDP would mean that the government will have more funds available to spend on the social sector. However, a negative correlation has been found between per capita social sector expenditure and economic growth. This can be explained as follows- if the growth rate of population is greater than the economic growth rate then even though the absolute social sector expenditure increases with increase in economic growth, the per capita social sector expenditure decreases as the increase in funds available for social sector expenditure falls short for the growing population.

Therefore, according to our study it has been proved that the intuitive flow diagram in figure-2 holds valid for the major Indian states over the period of 2005-2018.

Conclusion

The study attempts to establish the relationship between the three major indicators of economic development of an economy. Through this study we were able to show the scalar relationship between the indicators - the moderately positive correlation between Social Sector Expenditure and Human Development Index, the weakly positive correlation between the Human Development Index and Gross State Domestic Product, as well as the positive relationship between Gross State Domestic Product and Social Sector Expenditure and the negative relationship between Gross State Domestic Product and Social Sector Expenditure per capita to help us theoretically validate the framework we attempted to prove in our study.

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