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Determinants of Impact of Natural Disaster in SAARC Countries with Special Reference to India

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Abstract
Natural disaster is a natural event like earthquake, flood, landslide or hurricane, which leads to significant human fatalities, damages to property and environment. This study looks into the determinants of the impact of natural disasters by considering the SAARC countries and India. The period of study ranges from 1960 to 2018 for the 8 SAARC countries and 28 Indian states using panel data analysis. The study indicates that variables like population density, urban population and education affect natural disaster fatalities.

Keywords: Natural disaster, Panel data analysis, SAARC countries, India, Education

JEL classification: C2, H8

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1. Introduction

Natural disaster is often related with loss of life and property along with social and environmental disruption. The United Nations Strategy for Disaster Risk Reduction (UNSDR) defines a disaster as "a serious disruption of the functioning of a community or society involving widespread human, material, or environmental losses and impacts which exceeds the ability of the affected community to cope using its resources" (United Nations, 2009). A large impact of natural disaster can be seen on the public health and welfare of people and inhabitants of the place affected by the disaster, and it also results in huge economic burden. Around $891 billion damage was caused worldwide during 2000 to 2009 due to natural disaster (Kellet and Sparks, 2012). The critical and expensive infrastructures are destroyed during disaster. When it comes to low-income countries the negative impact of disaster on health and economy is severe and especially the burden can be seen on poor sections of the society. Policies aiming towards sustainable development can help developing countries to adapt and to cope with disaster and also will help them to be less vulnerable to future disasters (Ludwig et al., 2007). In low-income countries, disaster leads to

higher financial burden whereas higher income countries are faced with large industrial damage (McDermott, Frank and Tol, 2014). Generally, additional disaster reduces GDP growth by 24 per cent in the short-term (Heger, Julca and Paddison, 2008) while (Skidmore and Toya, 2002) taking into account the disaster effects, growth has a positive relation with climatic disasters but negative relation with geologic disasters in the long term. Each year in the last decade, the natural disaster claimed and affected millions of lives along with huge damages due to increasing climate change and vulnerable population across the world. Development policies which include disaster management strategies like investments in reducing disaster risk can reduce disaster risk (Haen and Hemrich, 2007). Rapid urbanisation results in overflowing of rivers and floods (Du, Shi, Rompaey and Wen, 2015). Sustainable urban development should be promoted to recover from climate change (Leichenko, 2011). SAARC countries which are almost similar in terms of GDP growth, with almost similar export basket are highly responsive to external and natural shocks (Jain and Singh, 2009)

India is becoming more vulnerable to disaster every year because of its high population and increasing urbanisation (UNDRR & CRED, 2019). Floods, landslides, cyclone, earthquakes and droughts repeatedly occur across India every year (Bahadur, Lovell and Pichon, 2016). The unplanned and low standard infrastructure can lead to higher human, physical and economic losses during and after a disaster. India falls within the group of countries which faces high risk from natural hazards, and for long it lacked the ability to manage and adapt to these hazards leading to significant steps taken by India's national and state governments to deal with disaster risk. To efficiently deal with natural disaster, The Disaster Management Act provided a framework, which helped to improve disaster risk management (Bahadur, Lovell and Pichon, 2016). India gradually understood the need to incorporate disaster management in the development plans. As this realization was made into practice, now in India's policy framework Disaster Management has an important place (Patil, 2012).

Floods occur frequently in India (EM-DAT, 2019). Heavy monsoon rain often leads to flooding and landslides. India gets 1150 mm average rainfall with a significant difference across the country (Ministry of Home Affairs, 2011). From 1900 to 2018, flood-prone regions in India are Andhra Pradesh, Assam, Bihar, Gujarat, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal (EM-DAT, 2019).

Through this study we are trying to discover the determinants of the impact of natural disaster in SAARC countries and India using disaster data from EM-DAT database between 1969 to 2018 using panel data analysis. This study tries to uncover how the variable like GDP, population density, urban population, education and gross capital formation influences disaster impacts in these countries using the EM-DAT.

The next section, section 2 analyses some available literature related to disaster studies. Section 3 discusses the objective. Section 4 provides the data and methodology used for the study. Section 5 reports the results and section 6 involves discussions. Section 7 conclusion with the implications of the study.

2. Literature review

Natural disasters often cause negative effect on economic growth, particularly for developing countries (Klomp and Valckx, 2014; Strobl, 2012). The impact of natural disaster on the development and growth of different regions, countries differs and its impact on people and

gender is different based on their vulnerability and ability to cope up with such disasters. It can be seen that growth in developing countries is often sensitive to disaster (Loaysa et al. 2012). Financial aid during the recovery period of natural disaster helps to reduce the decline in GDP in countries with strong institutions (Barone and Mocetti, 2014). There exists a temporary slowdown in GDP per capita as the result of natural disaster, and less developed countries will be suffering from more significant loss (Felbermayr and Groschl, 2014). Based on a study conducted in Vietnam, it shows that more destructive natural disaster tends to decrease the output growth and destruction of capital and property improves the economy in short term (Noy and Vu, 2010).

Investment in education can reduce natural disaster risk (Cuaresma, 2009). Higher-income countries will be able to overcome disaster risk due to the increase in per capita income (Kellenberg and Mobarak, 2008). In Nigeria, GDP per capita and urban population determines the impact of disaster (Okon, 2018). Population, economic development, education-these variables can have an influence on the impact of disaster (Padli, Habibullah and Baharom, 2007). Better institution can reduce the harmful impact of disaster (Noy, 2009; Skidmore and Toya, 2007; Skidmore and Toya, 2007; Raschky, 2008; Kahn, 2005). Also, education can be helpful in reducing disaster risk (Yamauchi, Yohannes and Quisumbing, 2009).

A study conducted in 5 major cities of India shows that investment in infrastructure suited for climate risk specific to these cities will help to recover from the natural disaster, and low infrastructure gaps will reduce the disaster risk (Govindarajulu, 2020). Owing to the climate change, natural disaster impacts lots of people around the world and the burden is borne by the people in developing countries than in developed countries. Through a study done in Odisha, India, we can see that educating people regarding the risk of disaster and giving warnings can help to reduce disaster risk (Ray-Bennett, 2018). Rapid urbanisation causes flooding, which should be corrected through effective urban planning and flood management (Suriya and Mudgal, 2012). Over the years, we can see that there has been a huge increase urban population of India which went up from 17.97 per cent in 1961 to almost 31.16 per cent in 2011 (Tripathi 2013), which led to rapid urbanisation and vulnerability of the local population. Sustainable and inclusive development can be planned to reduce disaster risk (Parikh, Sandal and Jindal, 2014).

As a country moves towards development, it will be capable in lowering human and economic losses due to natural disaster (Toya and Skidmore, 2007). Disaster impact and development of a country has a negative relation. i.e., as a country develops it can reduce the number of fatalities and damages due to disaster (Albala-Bertrand, 1993). During natural disasters, less developed countries are faced with huge number of fatalities, while developed countries suffer from more significant economic losses. More people are affected in counties with greater income inequality whereas better social welfare measures help in reducing adverse disaster impacts on people. Moreover, the disaster impact on people can delay or even reduce the economic growth of developing countries (Tselios and Tompkins, 2019). Exposure to disaster hazard determines the relation between wealth and disaster in a country. As an economy develops, the countries that face the low hazard of disaster initially face high losses, and then less.

Similarly, countries facing high hazard of disaster initially faces low losses and then high (Schumacher Strobl, 2011). In high-income countries, the losses due to natural disaster are low in terms of affected people and high in terms of damages. Education tends to decrease the loss of natural disaster, and high urban population has a positive relation with disaster loss. Also, larger area reduces disaster impact as land area has negative relation with disaster impact (Songwathana, 2018). Disaster impacts seems to reduce with long-run economic growth (Kim, 2010). Income, geography and institution of a country determine the death due to natural disaster in a country.

Developed countries experience lower death compared to developing countries when faced with disaster with the same intensity. Deaths from natural disaster are lesser in countries closer to the equator, which implies that geography also plays an important part in determining disaster death. Countries with strong institutions and less income inequality often experiences a smaller number of deaths during (Kahn, 2005). Level of human development determines the effects of natural disaster in a country, i.e., the number of deaths, people affected and total damages due to the natural disaster. Unemployment, education, population density, investment determine the effects caused by natural disaster in a country. It has been observed from (Padlia, Habibullahb and Baharomc, 2018) that education, government consumption, openness and investment have negative, and population density have a positive relationship with the effect of natural disasters. Our study adds in to the existing literature by focusing on SAARC countries and Indian states, which to the best of our knowledge remains an understudied area. As the SAARC countries and India house large human population and are developing economically, the study of the factors associated with disasters induced damages is important for policy formulations for disaster management. Hence, focus on this region and India is an important contribution to disaster related literature.

3. Objective

Through this study, we are trying to examine what are the factors which determines the impact of natural disaster and how these variables intensify or lessen disaster impacts if they are significant enough to influence the disaster impacts in any way.

For this, we have selected SAARC Countries giving detailed attention to India. India and SAARC countries are almost similar as they are the fastest-growing economies in terms of GDP growth, also with growing savings and doubling gross capital formation over the years. These countries have HDI values ranging from 0.4 to 0.7. So, it will be interesting to analyse how variables like GDP, Gross capital formation, urban population, education and population density affect impact of natural disaster in these countries. First, we consider the SAARC countries, and then we come to the analysis of Indian states.

4. Data and methodology

Data on impact of natural disaster, i.e., deaths, affected people and economic losses happened due to natural disaster, is taken from EM-DAT data source. Though EM-DAT provides information on type of disaster, in our analysis we do not separate disaster into different types. Because in case of SAARC countries and India there is a huge difference in geography and climate which results in different types of disaster. Also, we excluded epidemics from our analysis. We excluded nations and states in the EM-DAT data if there were many missing values for disaster death, affected and damages counts. Since in EM-DAT, the estimated damage value is provided in Dollars (US $). So, in the analysis the monetary damages have been converted to real terms using deflator indexes using 2015 as the reference year.

Our study covers the analysis of SAARC countries from 1969 to2018 and Indian states from 1990 to 2018 separately. SAARC (The South Asian Association for Regional Cooperation) includes eight countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka). From these we are dropping the Maldives due to data constraint. For the analysis of SAARC countries, the development indicators (real per capita GDP, Population density, Urban

population, Gross capital formation) are taken from World Development Indicators database (WDI, 2019), Barro-Lee educational attainment database has been used to obtain average years of total schooling (Barro-Lee, 2016; Barro-Lee, 2018).

Indian union comprises of 28 states (Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand and West Bengal) and 8 Union Territories (Andaman and Nicobar Islands, Chandigarh, Daman & Diu, Delhi, Jammu & Kashmir, Ladakh, Lakshadweep and Puducherry). In this study, we do not include every state and UTs into consideration due to data constraint. Our sample excludes some states; they are, Arunachal Pradesh, Mizoram, Sikkim and Telangana. For Union Territories, only Jammu & Kashmir is included. For the Indian states, data on population density and urban population are taken from the census of India (India Census, 2011) and Gross capital formation is taken from Annual survey of industries (Annual Survey of Industries, 2016-17) and GSDP and gross enrolment ratio are taken from Indiastat database, (Indiastat, 2018).

Based on the literature, we propose the equation 1.

$$\log(\text{Natural Disaster})_{it} = \alpha_{it} + \beta_1 \log(\text{GDP per capita})_{it} + \beta_2 \text{Education}_{it} + \beta_3 \text{Gross capital formation}_{it} + \beta_4 \log(\text{Population Density})_{it} + \beta_5 \text{Urban Population}_{it} + e_{it} \quad (1)$$

In the above equation, i stands for country 1, 2, 3, … n and e_{it} is the error term. Natural Disaster represents the total number of deaths (D), total affected (A) and total economic losses (EL) due to disaster

Due to missing values, we are analysing four models in the study based on our equations.[1] For SAARC countries, two models are used, and for Indian states also two models are used.

Model I: SAARC countries from 1969 to 2018. Here we are taking only 5 SAARC countries as we do not have data for Afghanistan, Bhutan and Maldives from 1969.
Model II: SAARC countries from 2000 to 2018. Here we are taking 7 SAARC countries as we do not have data for the Maldives.
Model III: Indian states from 1990 to 2018. Here we are taking Indian states except for Arunachal Pradesh, Chhattisgarh, Jharkhand, Mizoram, Sikkim, Telangana and Uttarakhand as we do not have data for these states.
Model IV: Indian states from 2000 to 2018. Here we are taking Indian states except for Arunachal Pradesh, Mizoram, Sikkim and Telangana as we do not have data for these states.

For the model I and II, average years of total schooling has been taken as the proxy for education and for model III and IV, gross enrollment ratio has been taken as a proxy for education.

For each model, we run the panel regression, and after comparing the fixed and random effects model using Hausman test, the random effect model is selected. We also use the Breusch-Pagan Lagrange multiplier (LM) test to check for the evidence of significant differences across countries. We have also checked whether multicollinearity, autocorrelation and

[1] As we don't have data for some countries and states, the list of countries and states included in each model can be found in appendix.

Heteroskedasticity and made necessary changes in the model wherever necessary. Before applying the panel data models, unit root tests were used to check for the stationarity of the series.

5. Results

Descriptive statistics of all the variables used in the analysis is included in the appendix. Panel data discussion has been divided into two parts. In the first part, we discuss the results for SAARC countries followed by the discussion for the states of India. For all the models, Hausman test have been used to select between fixed or random effect models. Unit root test has also been conducted to check for stationarity and wherever necessary, non-stationary series has been converted to stationary series through first difference.

5.1. Determinants of the impact of natural disaster in SAARC countries

Table 1 - Determinants of impact of natural disaster in SAARC countries

Variables	Model I			Model II		
	Log Total death	Log Total affected	Log Total damages	Log Total death	Log Total affected	Log Total damages
Log GDP percapita	-5.70 (10.34)	-3.32 (10.00)	-9.89 (18.06)	-2.28 (6.11)	-6.21 (6.89)	26.54 (33.60)
Log (Population density)	0.52* (.16)	1.55* (.61)	0.91* (.42)	0.34 (.38)	1.69*** (.44)	-1.35* (.65)
Urban population	0.03 (.05)	0.07 (.06)	0.13 (.06)	-0.72 (2.23)	-2.20 (1.64)	4.81** (1.61)
Average years of schooling	0.40 (.33)	0.37 (.41)	0.25 (1.07)	1.85* (.78)	1.58** (.56)	-0.61 (2.09)
Gross capital formation	0.05 (.08)	0.09 (.08)	0.13 (.14)	-0.06 (.04)	0.05 (.06)	0.14 (.12)
Constant	2.44 (1.57)	3.21 (3.37)	-0.52 (2.41)	4.09* (1.47)	4.68* (2.24)	5.18** (1.97)
No. of observations	221	218	138	109	108	48

Robust standard error is given in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

From Table 1, we observed that for the model I population density is significant and have a positive relation with disaster death, total affected people and damages. Here we can see that gross capital formation is not significant, however it is having a negative relation with damages. Model II shows that population density, urban population and education are significant. Population density and affected people have a positive relation while population density and damages have negative relation, while urban population has positive relation with damages. Education shows positive relation with total affected people and damages. GDP shows the expected sign as per the literature even though the variable is not significant in both models.

5.2. Determinants of the impact of natural disaster in Indian states.

Table 2 - Determinants of impact of natural disaster in Indian states

Variables	Model III			Model IV		
	Log Total death	Log Total affected	Log Total damages	Log Total death	Log Total affected	Log Total damages
Log (GSDP)	2.97	-1.83	2.38	3.37	-0.22	-2.03
	(2.89)	(2.92)	(4.98)	(4.35)	(6.17)	(7.58)
Log (population density)	0.12	0.60	-0.54	-0.19	-0.78	-0.69
	(.60)	(.45)	(.35)	(.75)	(.45)	(.71)
Log (Urban population)	-0.16	0.70***	0.67	-0.02	-0.09***	-0.03
	(.34)	(.22)	(.43)	(.02)	(.03)	(.02)
Gross Enrollment Ratio(I-V)	0.01	0.05*	0.04	-0.01	0.01	-0.01
	(.01)	(.03)	(.03)	(.01)	(.02)	(.02)
Log (Gross capital formation)	0.01	0.00	-0.00	0.01	0.01	-0.00
	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Constant	-2.44	9.92***	2.73	1.22	12.19***	6.43
	(3.61)	(2.52)	(1.97)	(5.67)	(3.89)	(6.15)
No. of observations	314	277	193	236	200	141

Robust standard error is given in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

From Table 2, we observed that for model III, urban population and education are significant. Urban population and education are positively related to affected people. For model IV, we can see that there is a negative relation between affected people and urban population. GDP shows the expected sign i.e., high GDP lessens the disaster impact as per the literature, even though the variable is not significant in both models.

Overall, from the four models, we observed that urban population and population density have greater influence on disaster impacts.

6. Discussion

Natural disaster leads to human fatalities, damages to property and environment. Although the frequency of natural disaster across the world is increasing, the number of people died, the number of affected people, and economic losses differ across countries and regions. In some places, the impact is higher, and in some other places, it is lesser. Here our analysis becomes essential, i.e., what are the factors which determine the impact of natural disaster in different countries and regions. From our analysis, we can see that population density and disaster impacts

are positively related, i.e., if population density increases, disaster impact will also increase. This mostly happens in urban areas where people live close. Also, the study shows a positive relationship between urban population and disaster damages. Over the year the disaster death and damages are increasing, owing to the growing population and expansion of cities.
We can see these similar kinds of the relation of variables like urban population, population density and education on the impact of natural disaster in the study conducted by (Cuaresma, 2009; Songwathana, 2018; Kellenberg and Mobarak, 2008; Kim, 2010; Okon, 2018; Padlia, Habibullahb and Baharomc, 2018).

While analysing the SAARC countries and Indian states, as data for some were not available, the study did not include every SAARC country or Indian states. EM-DAT is the data source used for the study, which has its limitations. The information on EM-DAT database is based on different resources which includes, non-governmental organisations, insurance companies, press releases, UN agencies and research institutes. The indirect cost of disasters is not included. Also, the poor from developing countries will not be having any insurance or access to formal markets, thus making it difficult to obtain their information during natural disasters (Tol and Leek, 1999).

7. Conclusion

This paper intends to consider the determinants of the impact of natural disaster in SAARC region especially in India and how these variables affect the disaster impact in this region. Some economic variables which can affect disaster fatalities are education, urban population and population density based on this study. As indicated by the study increased urban population where people live nearby, during disaster due to high population density, the disaster impacts will also be higher.

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Appendix

Table 1- List of SAARC Countries included

Afghanistan#	Bhutan #	Nepal	Sri Lanka
Bangladesh	India	Pakistan	

# Denotes whether a country is only included in 2000 model.

Table 2- List of Indian states and UTs included

Andhra Pradesh	Jharkhand#	Punjab
Assam	Karnataka	Rajasthan
Bihar	Kerala	Tamil Nadu
Chhattisgarh#	Madhya Pradesh	Tripura
Goa	Maharashtra	Uttar Pradesh
Gujarat	Manipur	Uttarakhand#
Haryana	Meghalaya	West Bengal
Himachal Pradesh	Nagaland	
Jammu & Kashmir	Odisha	

# Denotes whether a state or UT is included in only 2000 model.

Table 3- Data sources used: SAARC countries

Variable	Description	Source
Total deaths	"Number of people who lost their life because the event happened." (EM-DAT)	EM-DAT https://www.emdat.be
Total people affected	"People requiring immediate assistance during a period of emergency, i.e. requiring basic survival needs such as food, water, shelter, sanitation and immediate medical assistance." (EM-DAT)	EM-DAT https://www.emdat.be
Economic losses	"The amount of damage to property, crops, and livestock. In EM-DAT estimated damage are given in US$ ('000). For each disaster, the registered figure corresponds to the damage value at the moment of the event, i.e. the figures are shown true to the year of the event. In EM-DAT, the value of estimated damage in monetary terms is given in Dollars (US $). So, in the analysis the monetary damages have been converted to real terms using deflator indexes using 2015 as the reference year". (EM-DAT)	EM-DAT https://www.emdat.be
Real per capita GDP	"GDP per capita growth (annual %)" (WDI)	WDI https://datacatalog.worldbank.org/dataset/ world-development-indicators
Population density	"Population density (people per sq. km of land area)" (WDI)	WDI https://datacatalog.worldbank.org/dataset/world-development-indicators
Gross capital formation	"Gross capital formation (% of GDP)" (WDI)	WDI https://datacatalog.worldbank.org/dataset/world-development-indicators

Urban population	"Urban population (% of total population)" (WDI)	WDI https://datacatalog.worldbank.org/dataset/world-development-indicators
Average years of total schooling	Average years of schooling attained	Barro-Lee Data http://www.barrolee.com/update.htm#2016_4_Feb_Update http://www.barrolee.com/update.htm#2018_6_June_Update

Table 3- Data sources used: Indian states

Variable	Description	Source
Total deaths	"Number of people who lost their life because the event happened." (EM-DAT)	EM-DAT https://www.emdat.be
Total people affected	"People requiring immediate assistance during a period of emergency, i.e. requiring basic survival needs such as food, water, shelter, sanitation and immediate medical assistance." (EM-DAT)	EM-DAT https://www.emdat.be
Economic losses	"The amount of damage to property, crops, and livestock. In EM-DAT estimated damage are given in US$ ('000). For each disaster, the registered figure corresponds to the damage value at the moment of the event, i.e. the figures are shown true to the year of the event. In EM-DAT, the value of estimated damage in monetary terms is given in Dollars (US $). So, in the analysis the monetary damages have been converted to real terms using deflator indexes using 2015 as the reference year." (EM-DAT)	EM-DAT https://www.emdat.be
GSDP	State wise Gross Domestic Product (GSDP) in India (At constant 2011-12 prices, in ₹crore)	Indiastat https://www.indiastat.com/
Population density	State wise density of population (per square km)	Census of India https://censusindia.gov.in/
Gross capital formation	State wise gross capital formation (% of GDP)	Annual survey of Industries http://mospi.nic.in/annual-survey-industries
Urban population	State wise population in urban area (% of total population)	Census of India https://censusindia.gov.in/
Gross enrolment ratio	State wise Gross Enrollment Ratio (GER) in India (Primary education, class I-V)	Indiastat https://www.indiastat.com/

Table 4- Descriptive statistics

	SAARC 1969				SAARC 2000			
Variable	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Log (total deaths)	5.997	1.983	.693	12.613	5.823	1.723	.693	11.215
Log (total affected)	13.603	2.951	1.609	19.664	13.193	3.096	1.609	19.664
Log (total real damages)	7.441	2.975	-.965	12.318	7.126	3.607	-1.973	12.318
Log (per capita GDP)	5.595	.706	4.296	7.123	5.153	1.307	2.698	7.123
Gross Capital Formation (% of GDP)	22.304	7.688	4.698	51.756	12.445	1.445	10.548	14.914
Urban population (% of total population)	12.633	1.409	11.046	14.914	29.974	12.723	12.557	67.91
Log (population density)	21.609	8.515	3.911	36.666	26.782	7.319	13.397	40.895
Average years of schooling	6.542	.609	5.602	8.278	6.951	.651	5.8	8.278
	India 1990				India 2000			
Variable	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Log (total deaths)	-1.473	4.269	-8.714	9.187	-1.688	4.299	-8.714	7.352
Log (total affected)	6.236	4.365	-8.164	15.808	6.109	4.43	-8.164	15.761
Log (total real damages)	-.07	4.257	-8.08	11.956	-.321	3.726	-7.033	11.956
Log (per capita GSDP)	1.662	.599	.173	3.666	1.861	.564	.304	3.666
Gross Capital Formation (% of GDP)	22.83	26.573	-204.288	144.956	27.534	11.194	8.683	62.166
Urban population (% of total population)	26.538	11.035	7.615	62.166	28.699	30.849	-24.604	151.596
Log (population density)	5.616	.734	3.85	7.009	5.671	.688	4.29	7.009
Gross Enrollment Ratio	105.376	20.52	62.3	195	108.008	21.233	62.86	195