

Investigating the Impact of Various Institutional Qualities and Investment on Economic Growth: Evidence from India

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ABSTRACT : The roles of institutional quality and gross domestic formation on economic growth are still heavily debated in the literature. This paper investigates the impacts of institutional quality and gross domestic formation on economic growth for India over the period 2002-2021. period by simple linear regression model. We find the significant positive impacts of institutional quality on economic growth. The institutional quality impedes the positive effects of gross capital formation on economic growth. However, institutional quality improvement can mitigate the competition brought by gross capital formation operate to optimize their spill-over effect.

Keywords : Investigating, Impact, various, Institutional, Qualities, Investment, Economic, Growth, Evidence, India.

Introduction: In any economy, capital formation is regarded as a key factor in determining the economic growth. Tangible products like machinery and tools and intangible products like education, health, improvement in science and technology are included in capital formation. Any economy's level of capital production is influenced by domestic saving and investment which accelerate the economic growth.

In comparison to the majority of the developed and fastest-growing economies in the world, India's rate of capital formation is low. The capital formation as a percentage of GDP appears to be declining for India due to huge population growth. The gross capital formation in developed economy is fastest compare to developing countries like India by a wide margin. Low rate of capital formation in India is a result of several factors, including ongoing issues with the economy, such as unemployment and poverty, the inflation; higher marginal propensity to consume, lack of financial inclusion; high liquidity preference due to lower interest rates on public saving deposits; and low per capita income.

Table : Gross Capital Formation (Constant US\$)

Country Name	1970	1980	1990	2000	2010	2020	2021
Pakistan	1.58E+09	4.18E+09	7.58E+09	1.44E+10	2.8E+10	4.45E+10	5.1E+10
Australia	1.36E+10	4.06E+10	9.01E+10	1.09E+11	3.08E+11	2.95E+11	3.53E+11
Bangladesh	1.02E+09	2.62E+09	5.2E+09	1.27E+10	3.03E+10	1.17E+11	1.29E+11
Brazil	8.69E+09	5.49E+10	7.88E+10	1.24E+11	4.82E+11	2.31E+11	3.04E+11

China	3.04E+10	6.61E+10	1.23E+11	4.07E+11	2.83E+12	6.37E+12	7.6E+12
United Kingdom	3.19E+10	1.21E+11	2.53E+11	3.05E+11	4.04E+11	4.67E+11	5.67E+11
India	1.14E+10	3.64E+10	8.77E+10	1.2E+11	6.67E+11	7.44E+11	9.91E+11
Japan	9.25E+10	3.97E+11	1.13E+12	1.41E+12	1.3E+12	1.28E+12	1.25E+12
United States	2.3E+11	6.66E+11	1.28E+12	2.43E+12	2.81E+12	4.43E+12	4.92E+12

*source- World Bank Data

The table shows gross capital formation (GCF) at constant US\$ of various nations. According to the table, developing countries like India, Brazil have performed well. China's preformation is excellent.

In economic literature, there has been debate over the factors that directly influence growth. Neoclassicals argued that capital accumulation and technology determine growth, but contemporary economics criticised this theory as having a limited perspective. They argue that factor accumulation may not be a sole determinant of growth (Acemoglu et al., 2001). Due to this, economists are now analysing how institutional quality and other non-economic factors can accelerate economic growth (Ades&Glaeser, 1999; Aron, 2000; Glaeser et al., 2004). In accordance to economic, political, and social institutional qualities of the countries, they are experiencing diverse economic trajectories. It is crucial to recognise that the institutional framework in this situation is an adopted supplement to development determinants rather than a replacement for them.

The nexus between institution, capital formation and economic growth is an essential subject for investigation, especially for developing nations like India. This is because institutional variables and gross capital formation is directly related to economic growth. Whether institutional variables, gross capital formation have a considerable or negligible effect on economic growth is a key area of this study.

Objective:

To empirically examine the combined effect of various institutional quality and gross capital formation on economic growth in India.

Review of Literature: Earlier neoclassical predicted that poor countries would grow faster because of technological advancement and diminishing returns to capital in wealthy countries. (Keefer & Knack, 1997) found that ability of poor countries to catch up various indicators of institutional quality is determined by various indicators of institutional quality is determined by including the rule of law, the pervasiveness of corruption and the risk of expropriation and contract reputation.

Kuncic, (2013) says institutions are in fact important determinants of bilateral trade, but not as uniformly as expected. Both origin's as well as destination's institutions matter. They imply that there is a push factor in the form of good legal environment on the exporter's side, and two pull factors in the form of good political and economic institutions on the importer's side. The marginal effect of economic and political institutions on the exporter's side is negative, that is trade reducing, which points to the fact that in a stable political and

good economic environment, domestic market becomes relatively more attractive. The most salient institutional factor is the quality of legal institutions in the origin country.

Loayza et al., (2005) examine how regulation affects economic growth and the proportion of the unorganised sector in both industrialised and developing nations. The authors come to the conclusion that increased regulation, particularly in the labour and product markets, inhibits growth and encourages informality. However, as the entire institutional framework strengthens, these effects are reduced.

Methodology:

1.1.1 Data description and model setup

The World Development Indicators database is the source for all institutional variables. The institutional variables are the important explanatory variables. We take into account all six governance indices created by (Kaufmann et al., n.d.) Kaufmann, Kraay(1999a, 1999b). The indicators are based on six dimensions of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. Each dimension is measured using a variety of sources, including expert surveys, household surveys, and objective data from organizations such as the World Bank and the International Monetary Fund.), who divided the available governance indicators into six distinct clusters and combined them into an equal number of composite indices. Every composite indicator refers to a unique aspect of governance. Its values vary from 2.5 to +2.5, with higher numbers indicating better governance.

variables are taken from World Bank governance indicators (WGI) Source: (Kaufmann et al.,) GDP per capita (constant 2015 US\$) Gross capital formation (current US\$), Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of law, Control of corruption.

1.1.2 Methodology:

This study will employ a simple linear regression model to examine the institutional role of growth in India. It includes basic variables like GDP per capita as dependent variable, gross capital formation and institutional variables as independent variables.

The magnitude of growth in India is proximate by GDP per capita, investment is proximated by gross capital formation. In this study, data of India nations from 2002 to 2021 are analysed.

1.1.3 Econometric Model:

The study used annual data of India for the years 2002 to 2021 to examine the impact of the governance indicator, a measure of institutional quality, and gross capital formation on economic growth.

$$GDPPC = f(GCF, GE, POL, REG, RUL, VOI) \quad --(1)$$

GCF = Gross capital formation of India

COR = Control of Corruption of India.

- GE = Government Effectiveness of India.
- POL = Political Stability and Absence of India.
- REG = Regulatory Quality of India.
- RUL = Rule of Law of India.
- VOI = Voice and Accountability of India.

Econometric model used for the analysis.

$$GDP = \alpha_1 + \beta_{11}GCF_i + \beta_{12}COR_i + \epsilon_1 \quad \text{---(2)}$$

$$GDP = \alpha_2 + \beta_{21}GCF_i + \beta_{22}GE_i + \epsilon_2 \quad \text{---(3)}$$

$$GDP = \alpha_3 + \beta_{31}GCF_i + \beta_{32}POL_i + \epsilon_3 \quad \text{---(4)}$$

$$GDP = \alpha_4 + \beta_{41}GCF_i + \beta_{42}REG_i + \epsilon_4 \quad \text{---(5)}$$

$$GDP = \alpha_5 + \beta_{51}GCF_i + \beta_{52}RUL_i + \epsilon_5 \quad \text{---(6)}$$

$$GDP = \alpha_6 + \beta_{61}GCF_i + \beta_{62}VOI_i + \epsilon_6 \quad \text{---(7)}$$

Results: According to model (2), R square is 0.916891, which indicates 91.69% of the variability observed in the target variable is explained by the regression model. The P value for GCF is significant at 1% level of significance and COR is 5% level of significant. The coefficient for GCF and COR is positive which shows both GCF and COR are positively related to GDP per capita

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.942461
R Square	0.888232
Adjusted R Square	0.875083
Standard Error	136.7824
Observations	20

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	574.7344	106.2082	5.411394	4.68E-05
GCF	1.32E-09	1.76E-10	7.487749	8.88E-07
GE	394.5106	233.8245	1.687208	0.109824

According to model (3), R square is 0.888232, which indicates 88.82% of the variability observed in the target variable is explained by the regression model. The P value for GCF is significant at 1% level of significance and GE is insignificant. The coefficient for GCF and GE is positive which shows both GCF and GE are positively related to GDP per capita.

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.951294

R Square	0.904961
Adjusted R Square	0.89378
Standard Error	126.1315
Observations	20

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	774.7497	145.4204	5.327654	5.55E-05
GCF	1.36E-09	1.35E-10	10.10631	1.33E-08
REG	684.4073	271.8128	2.517936	0.02212

According to model (4), R square is 0.915517, which indicates 91.56% of the variability observed in the target variable is explained by the regression model. The P value for GCF and POL are significant at 1% level of significance. The coefficient for GCF and POL is positive which shows both GCF and POL are positively related to GDP per capita.

According to model (5), R square is 0.904961, which indicates 90.49% of the variability observed in the target variable is explained by the regression model. The P value for GCF is significant at 1% level of significant and REG is significant at 5% level of significance. The coefficient for GCF and REG is positive which shows both GCF and REG are positively related to GDP per capita.

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.932835
R Square	0.870182
Adjusted R Square	0.854909
Standard Error	147.4143
Observations	20

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	440.3917	121.481	3.62519	0.002091
GCF	1.55E-09	1.93E-10	8.05889	3.3E-07
RUL	171.6236	581.4888	0.295145	0.771457

According to model (6), R square is 0.870182, which indicates 87.01% of the variability observed in the target variable is explained by the regression model. The P value for GCF is significant at 1% level of significant and RUL is insignificant. The coefficient for GCF and RUL is positive which shows both GCF and RUL are positively related to GDP per capita.

Table 0-1. SUMMARY
OUTPUT

<i>Regression Statistics</i>				
Multiple R	0.946162			
R Square	0.895223			
Adjusted R Square	0.882896			
Standard Error	132.436			
Observations	20			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	862.4451	211.0758	4.08595	0.00077
GCF	1.34E-09	1.54E-10	8.722533	1.1E-07
VOI	-758.037	371.1789	-2.04224	0.056956

According to model (7), R square is 0.895223, which indicates 89.52% of the variability observed in the target variable is explained by the regression model. The P value for GCF is significant at 1% level of significant and VOI is insignificant. The coefficient for GCF and VOI is positive which shows both GCF and VOI are positively related to GDP per capita.

Conclusion: Particularly in India where significant efforts have been made to increase institutional quality, institutional quality has a significant role in encouraging economic activity and accelerating economic growth. By conducting the simple liner regression model estimators, we find that the institutional quality and gross capital formation have positive impacts on economic growth in India.

References:

1. Kaufmann, D., Kraay, A., & Mastruzzi, M. (n.d.). The Worldwide Governance Indicators. 31.
2. Kuncic, A. (2013). Trade and institutions: Do not forget institutional distance. Research Paper.
3. Levchenko, A. A. (2007). Institutional quality and international trade. *The Review of Economic Studies*, 74(3), 791–819.
4. Loayza, N. V., Oviedo, A. M., & Servén, L. (2005). The Impact Of Regulation On Growth And Informality—Cross-Country Evidence, Vol. 1 Of 1. The World Bank. <https://doi.org/10.1596/1813-9450-3623>
5. Mauro, P. (1995). Corruption and Growth. *The Quarterly Journal of Economics*, 110(3), 681–712. <https://doi.org/10.2307/2946696>
6. McArthur, J., & Sachs, J. (2001). Institutions and Geography: Comment on Acemoglu, Johnson and Robinson (2000) (No. w8114; p. w8114). National Bureau of Economic Research. <https://doi.org/10.3386/w8114>
7. Méon, P.-G., & Sekkat, K. (2008). INSTITUTIONAL QUALITY AND TRADE: WHICH INSTITUTIONS? WHICH TRADE? *Economic Inquiry*, 46(2), 227–240. <https://doi.org/10.1111/j.1465-7295.2007.00064.x>