

MEANS AS AN INDICATOR OF DEVELOPMENT AND ITS RELATIONSHIP
WITH INSTITUTIONS IN SOCIETY

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ABHINAV TIWARY

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Thesis Advisory Committee

1. Prof. Ganesh Kumar Nidugala [Chairman]
2. Prof. Indrajit Thakurata [Member]
3. Prof. Sneha Thapliyal [Member]

Abstract

Sen (1985/2008) pointed out that actual development is in the freedom individuals acquire to do certain things or be someone they wish to achieve. This freedom is not provided by nature, and at least in the distant past, it was not there with us from birth. Therefore, we argue that development is an evolutionary process. What counts as development and what causes development are basic questions we want to explore. In this process, we introduce means as an indicator of development or potential for development. The means provide functioning, and we argue that they are similar to capabilities in Capabilities Approach but do not have problems associated with a utility-based, subjective well-being-based, or capabilities-based approach.

We consider the notion that institutions cause economic growth. We consider three of the means that indicate a potential for development: learning, entrepreneurship, and using financial services. We test for any empirical relationship between the quality of institutions in a country and its people's decisions regarding acquiring these means.

We used secondary data for analyses. We used the Worldwide Governance Indicators (WGI) as explanatory variables to denote the quality of institutions. We used the six components of WGI as well as their simple average. We analysed the effects of past explanatory variables on dependent variables and the reverse relationships. We relate institutions to the quality of education (Learning) from Institute for Health Metrics and Evaluation for 172 countries from 1991 to 2016. Further, we studied institutions' relationship with Entrepreneurial Framework Conditions (EFC) given by Global Entrepreneurship Monitor for 95 countries from 2000 to 2014. We used fixed-effects and generalised linear models (GLM) for analyses with Learning and EFC. Finally, we studied the relationship between past quality of institutions and financial inclusion from Global Findex data for 2011, 2014, and 2017. We used fixed effects, GLM, and pooled data regressions for 126 or 134 countries for different financial inclusion variables.

Using the means introduced here, one can measure and compare levels of development and guide policies. This study can help create a guideline for qualifying a dimension as a development indicator. We empirically show that institutions positively affect people's choices regarding creating means that indicate development. Therefore, improving institutions is key to the development of societies. This work is relevant to any agent: individual, policymakers, or organisation, for whom the quality of means in society matters.

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Abbreviations and Variables

List of Abbreviations

CA	Capabilities Approach
SWB	Subjective Well-Being
OWB	Objective Well-Being
WGI	Worldwide Governance Indicators
HDI	Human Development Index
DV	Dependent Variable
EV	Explanatory Variable
GEM	Global Entrepreneurship Monitor
EFC	Entrepreneurial Framework Conditions
NES	National Experts Survey
GDP	Gross Domestic Product
PPP	Purchasing Power Parity
obs	Observations
Std. Err. / SE	Standard Error
Std. Dev.	Standard Deviation
MSE	Mean Squared Error
CV	Coefficient Of Variation
GEE	Generalised Estimation Of Equation
GLM	Generalised Linear Model

Table of Variables

Variable	Variable Name
Year	Year
Id of country	id
Average of 5 lagged WGI	WGI2 ¹
WGI (mean of components for an id & year)	WGI ¹
Control of Corruption score	CC ¹
Rule of Law score	RL ¹
Government Effectiveness score	GE ¹
Voice and Accountability score	VA ¹
Score on Political Stability and Absence of Violence/Terrorism	PV ¹
Regulatory Quality score	RQ ¹
Average of 5 lagged Control of Corruption score	cc2 ¹
Average of 5 lagged Rule of Law score	rl2 ¹
Average of 5 lagged Government Effectiveness score	ge2 ¹
Average of 5 lagged Voice and Accountability score	va2 ¹
Average of 5 lagged score on Political Stability and Absence of Violence/Terrorism	pv2 ¹
Average of 5 lagged Regulatory Quality score	rq2 ¹
Composite rate of labour underutilization for population aged 15 years and above	LUU15T ²
Composite rate of labour underutilization for population aged 25 years and above	LUU25T ²
Combined rate of time-related underemployment and unemployment (15+ years old)	TU15T ²
Average of 5 lagged TU15T	TU15T2 ²
Combined rate of time-related underemployment and unemployment (25+ years old)	TU25T ²
Combined rate of unemployment and potential labour force (15+ years old)	UPLF15T ²
Combined rate of unemployment and potential labour force (25+ years old)	UPLF25T ²
Average of 5 lagged UPLF25T	UPLF25T2 ²
Percentage of employed persons above age 15 who fall in daily income category: less than 190 PPP USD	pE15Ty1 ²

Variable	Variable Name
Percentage of employed persons above age 15 who fall in daily income category: between 190 and 320 PPP USD	pE15Ty2 ²
Percentage of employed persons above age 15 who fall in daily income category: between 320 and 550 PPP USD	pE15Ty3 ²
GDP per-capita PPP	y ³
Average of 5 lagged y	y2 ³
Any variable 'x' lagged by 'n' years	Ln.x
Rescaled score on Maths, Science, & Reading of 5-19 years old	Learning ⁴
Percentage of respondents who reported having an account at a bank or any financial institution aged 15 or more	FinA ⁵
Percentage of respondents who reported having saved or set aside money to start, operate, or expand a farm or business in past 1 year (age 15+)	SavB ⁵
Percentage of respondents who reported having saved or set aside money for old age in past 1 year (age 15+)	SOld15 ⁵
Percentage of respondents who reported having saved or set aside any money at a bank or financial institution in the past 12 months (age 15+)	SFin ⁵
Among those who reported that in an emergency it was possible for them to come up with 1/20 of gross national income (GNI) per capita in local currency, the percentage who cite savings as their main source	SEmer ⁵
Mean of principal components of EFC measured and common to all years	EFC ⁶
Average of 5 lagged EFC	EFC2 ⁶
Time-averaged variable X	aX, avgX
Average of proportion of respondents who used various technology for doing transaction and who posses a credit or debit card	TechUse ⁵

Notes. The following data sources were used.

¹World Bank Worldwide Governance Indicators:

<http://info.worldbank.org/governance/wgi/Home/Documents#wgiDataSources>

²International Labour Organization: <https://ilostat.ilo.org/data/>

³World Bank GDP per capita, PPP:

<https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD>

⁴Institute for Health Metrics and Evaluation:

<http://ghdx.healthdata.org/record/ihme-data/global-human-capital-estimates-1990-2016>

⁵World Bank Global Findex Data: <https://globalfindex.worldbank.org/>

⁶GEM NES GLOBAL National Level Data: <https://www.gemconsortium.org/data/sets?id=nes> for 1999-2015

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