

An Analytical Perspective on the Role of Institutions in Economic Development

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Abstract: Intrinsic differences in the development of different countries have remained to be a problem to the classical explanations of growth that have always been limited to capital accumulation, labor and technology alone. Institutions though becoming the major determinants of long run development, the processes through which they can determine the ultimate growth outcomes are not yet well understood. This research takes an analytical approach to investigate the nature of the impact of institutional quality on the economic development and through what channels. The research employs a balanced panel data that includes the countries belonging to various income groups and combines the aspects of governance indicators with the indices of investment, human capital, and the results of multidimensional development. The methodology of the analysis is made up of sequential panel regression-based mediation models and panel Structural Equation Modeling to break down the total institutional effect into a direct and indirect impact. The findings indicate that it has a great direct influence on development, and institutions also have an indirect effect via investment and human capital formation. The most influential transmission channel is human capital which is specifically important in the case of non-income development indicators. The results highlight the significance of supporting institutional changes with reforms in strengthening education and skill building with the aim of attaining inclusive and sustainable development.

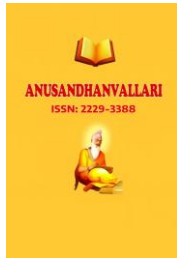
Keywords: Economic Development; Human Capital; Investment; Mediation Analysis; Transmission Channels; Panel Data; Structural Equation Modeling; Development Economics

Background of the Study

The persistent differences in the level of income and the standard of living among countries in spite of decades of global integration, the introduction of technologies, and the free movement of capital is the most persistent enigma in the development economics. Whereas certain economies have realized sustainable growth and structural change, others have been stuck in low-income equilibria with low productivity, insignificant industrialization and weak social performance. Classical and neoclassical theories of growth have been using these differences to be blamed on differences in capital accumulation, labor supply, human capital and technological developments. Empirical evidence however is gradually pointing in the direction that these proximate factors are not enough to help one to understand the magnitude and persistence of the amount of cross country development gaps (Solow, 1956; Mankiw, Romer, and Weil, 1992).

In the past 30 years, researchers have been paying more focus to the importance of institutions as being a key determinant of long-run development of an economy. Institutions- the formal and informal regulating the economic and political as well as social interactions are institutions in which incentives are formed, uncertainties are decreased, and human behaviors are structured (North, 1990). Proper institutions like good property rights, good contract enforcement, responsible governance, and rule of law provide an environment in which investment, innovation and human capital formation takes place. On the other hand, weak institutions promote rent seeking, corruption and unstable policy making and inefficient allocation of resources, hence limiting development of an economy (Acemoglu et al. 2001).

Empirical studies of this kind across countries are very helpful in supporting the institutional hypothesis. Research shows that highly-institutionalized countries would always have high income levels, high rates of growth, and better social results even when geography, openness to trade and factor endowments have been



factored out (Rodrik et al. 2004). Notably, it seems that, institutions influence both direct and indirectly the economic performance through significant transmission channels, which are; private investment, human capital accumulation, financial development and adopting technology (Hall and Jones, 1999). This standpoint has changed the analytical view of the drivers of short-run growth to deeper structural and governance-related determinants of development.

The centrality of institutions is further supported by the development in the world. East Asian countries have coupled market-oriented policies and high capacity of the state and viable institutions to support industrial upgrading and export-led growth whereas most resource endowed economies were unable to translate the natural wealth into sustained growth because of institutional inability (Auty, 2001). On the same note, comparative evidence on different levels of income groups indicates that institutional quality is used to determine much variation in growth outcomes in countries with similar resource endowment and demographic data (Easterly and Levine, 2003). The patterns highlight the fact that institutional operation is dynamic to an extent that an institution interacts with economic and social structures as time goes by.

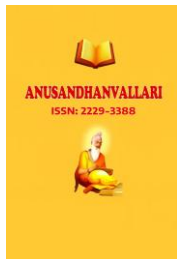
Although there is a community agreement over the role of institutions in the growth outcomes, there are major gaps in the knowledge of how exactly the institutions operate. A large portion of the existing literature is based on aggregate levels of income like GDP per capita, which is of hardly any value in the multidimensional development performance in terms of education, health, and human welfare. Also, numerous empirical investigations do not explicitly model causal channels of transmission, but determine the existence of correlation, exposing unknown information on the mechanism through which institutions produce practical development benefits. These gaps are critical points that need to be addressed during the formulation of effective and evidence-based development policies in both developed and developing economies.

Problem Statement

Although there has been increasing agreement that institutions have a decisive role to play in the development of the long run development of an economy, the exact mechanisms through which institutions can or cannot influence the results of development of an economy has not been adequately clarified. There exists a very large amount of empirical research determining an extremely strong connection between institutional quality and overall economic performance in the form of GDP per capita or growth rates. Nevertheless, this kind of evidence tends to be in a reduced form, which provides limited understanding of how institutions are translated into development gains and what vehicles through which such effects are being manifested (Acemoglu et al. 2005; Rodrik, 2008).

The majority of the existing literature and research defines the institutions as a general exogenous factor and focuses more on direct impacts without highlighting the mediating dynamics between institutional arrangements and development performance outcomes. As a matter of fact, institutions are supposed to work indirectly by influencing incentives to invest, to develop human capital, to deepen its financial markets and improve its productivity. The lack of explicit modeling these channels restricts clarification in theory and relevance in policy-making because policymakers do not have directions on what institutional reforms are most valuable and also the reason (Hall and Jones, 1999; North, 1990).

Moreover, there is an excess on the use of single-dimension development indicators mostly based on income in the literature. This would not render development; multidimensional as it includes education, health and well being of human beings in general. Consequently, the issue of the institutional influence on the larger development performance among states and income classes has not been studied extensively (Sachs, 2012). Such restriction is especially relevant in developing and emerging economies where the rise in social indicators does not necessarily result in income rise.



Theoretically, past studies have limitations in the form of endogeneity, reverse causality, and omitted variable bias that is often based on instrumental variables with little theoretical and empirical justification. Moreover, there is a paucity of studies that utilize analytical frameworks to be able to simultaneously evaluate the importance of multiple transmission channels. In turn, this leads to a strong necessity of an organized analytical methodology that goes beyond the levels of correlation and seeks to study the causal channels between institutions and development in a systematic manner.

In this respect, the current research bridges a key gap by taking an analytical position, which empirically models institutional transmission mechanisms through explicit empirical methods based on mediation. Through the incorporation of institutional quality and an analysis of investment and human capital with the expansion of the analysis to the multidimensional outcomes of development, the study attempts to improve the conceptual clarity and rigor. The problem of addressing it is of global concern, because an efficient institutional design continues to be at the heart of the attainment of inclusive and sustainable development between the developed and developing economies.

Research Gap

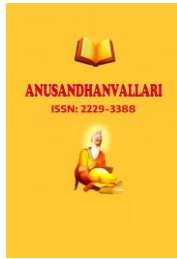
Despite the fact that the institutional economics literature has strongly settled on the fact that the institutions are the core issue of long run development of an economy, there are still a number of key gaps in the literature that constrain both theoretical progress and application of a policy. To start with, a large part of the current worth of empirical studies focuses on aggregate income-based indicators or the GDP per capita, or the economic growth rates, as the main showers of development. Although informative, this single focus is insufficiently representative of the multidimensional character of development, which equally refers to human capital formation, and health results or other welfare indicators. Therefore, the institutional implications of the non-income aspects of development have not been explored and have been underrepresented in the empirical paradigm (Sen, 1999; Szirmai, 2012).

Second, the most studies are reduced-form econometric models which are used to estimate how directly institutions affect growth outcomes without directly modeling mechanisms by which institutions act. Consequently, the literature does not offer much information about institutions in terms of their effect on development, be it investment incentives, human capital accumulation, financial development, or productivity-enhancing avenues. This leaves out makes the causal interpretation more constrained and diminishes the policy applicability of the institutional reforms recommendations (Rodrik, 2008; Acemoglu and Robinson, 2012).

Third, the gap in terms of methodology tools that can capture consecutive institutional channels is very high. Instrumental variable methods are more usually employed to overcome endogeneity, but they actually make use of historical or geographic instruments, the validity of which is still debated, and whose explanatory value declines when it is applied to multidimensional growth outcomes. Little research uses a mediation based or structural framework that enables a systematic decomposition of the institutional impacts into the direct and indirect elements especially in a panel data set (Imai, Keele, and Tingley, 2010).

Fourth, the available empirical data is still regional and still in different groups and there is little comparative analysis that can be done to determine whether the institutional transmission mechanisms vary across low-, middle-, and high-income economies. This limits the generalizability of results as well as the information of significant heterogeneities in the effectiveness of different institutions at various stages of development. The greater level of integration is then demanded to exist as a framework that can incorporate cross-country and intertemporal variation (Easterly and Levine, 2003).

Given these shortcomings, it is evident that the analysis can be done through a scientific method of merging institutional quality, direct transmission to facilitate development, and multidimensional developmental outputs



in a rational empirical perspective. In the present paper, these weaknesses are addressed through applying mediation-based panel based strategies to examine how the institutions contribute to development through the investment and human investment process, not only the space which measures income but also increases. In this way, the study offers evidence to the literature in place to confirm the argument on whether to the mechanisms by which institutions do matter in order to become capable of developing on-economic fronts.

Overview:

The research paper utilizes a systemized, transmission, channel, based empirical model in order to understand the position of institutions in development of an economy. The study entails the incorporation of internationally comparable measures of institutional quality, investment, human capital, and growth outcomes using a balanced panel dataset of countries across various income groups across the long term. The indicators of institutional quality are composite governance indicators and development measures both income based and non-income based, thus, taking into account the multi-dimensionality of development.

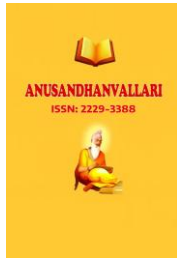
On the methodological front, the research uses a progressive panel regression analysis to guess the direct effect of the institutions on the development and indirect effects of the institutions through the essential channels of transmission. More precisely, the mediation analysis is applicable to test the hypothesis that investment and human capital are statistically significant variable of institutional quality to growth outcomes. In order to formally estimate the effect of mediation, bootstrapped confidence interval and Sobel tests are used, making them resistant to non-normality and sample variation. Moreover, a different specification based on panel Structural Equation Modeling (SEM) is adopted to identify several channels of the institution and test the theoretical structure of the underlying theory in a single framework. This two-pronged strategy improves the causal interpretation as well as the endogeneity issue by using fixed effects estimation and lagged institutional variable.

What is novel about the work is the explicit modelling of institutional mechanisms of transmission in a panel-data format, as opposed to reduced-form correlates as prevails in the existing literature. This research also divides institutional effects in both direct and indirect aspects, unlike the previous research that includes institutions as a common exogenous factor which in effect only gives us a vague understanding of how institutions translate into the outcome of development. More so, the study addresses the requests of the literature in a more detailed explanation of the development processes by expanding the outcome space in addition to the GDP per capita to encompass human development indicators.

This researched work adds to the literature in three significant aspects.

- First, it expands the empirical study by combining the mediation-supported analysis and the panel SEM to depict the channels of impacts of institutions on development in a systematic manner and measure them.
- Second, it enhances the development discourse in that it introduces multidimensional development indicators that allows a more sophisticated evaluation of institutional performance of income groups.
- Third, it is policy-relevant because it identifies which channel of transmission, investment or human capital, is more dominant in the conversion of the institutional quality into development gains, and thus the corrective action, which is the enhancement of the state of the institutional, to development gains in both of the developed and developing economies.

Collectively, these last three contributions arguably place the study as a useful addition to the existing body of institutional economics literature to solve the gap in theory, empirical rigor, and policy actions.



Literature Review

Character of its explanations Development of an economy literature has widely shifted its type of explanation based on factors to explanations based on institutions, type of explanation which has been unable to reach the long-run elucidation of cross-country income disparity. It is an intentionally formulated review that will be anchored on three literature strands which will be the direct application of this research:

- (i) conceptual theories of institution-development relations,
- (ii) empirical data relating to institutions and development results, and
- (iii) methodological techniques and issues in establishing institutional effects.

It is a well-founded structure that guarantees conceptual clarity and creates a clear-cut transition between the research available and the analytical framework that will be used in this paper.

Institutions as Fundamental Determinants of Development

Accumulation of capital along with development of technology was the major asserted factor that drove economic growth in the early growth theories (Solow, 1956). But empirical anomalies, including the lack of convergence between countries having comparable factor endowments, threatened to and led to the study of other more fundamental structural determinants. North (1990) made a successful conceptualisation of institutions as rules of the game which determine economic incentives and decrease uncertainty. This model created a basis on which institutions were not taken as conditions in the background but as the cause of the development in the long run.

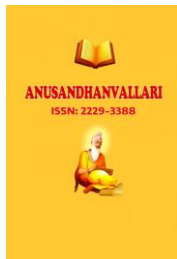
Expanding on the same view, Acemoglu et al. (2001) showed that the varying features of colonial institutions still exerted lasting impact on the levels of income in the modern world hence developing a causal relationship between institutions and development. Another study by Hall and Jones (1999) also indicated that institutional quality has been found to account a large amount of the cross-country difference in output per worker, which supports the perception that institutions act upstream of the proximate determinants of growth. These researches are consulted due to the fact that they offer theoretical and empirical reasons to consider positioning institutions as the key explanatory variables in the given study.

Empirical Evidence Across Regions and Income Groups

The later studies expanded the scope of the empirical research to include institutions in different geographical and income backgrounds. The dominance of geography and trade integration by institutions in the explanation of income disparities put forward by Rodrik et al. (2004) made them applicable at the global level. Equally, Easterly & Levine (2003) demonstrated that the impact of endowments to growth is mediated through the institutional quality, which implies that institutions influence the translation of resources to the growth outcomes.

Although these studies have high-quality cross-country evidence, most of them are based on income-related indicators of development. Subsequently, later contributions were based on wider development measures. Indicatively, Glaeser et al. (2004) keyed on the importance of human capital in institutional effectiveness, whereas Sen (1999) ability approach redefined development into a multidimensional one, where education, health, and freedom were key. The discussed strands are of special interest to the current study, since they encourage consideration of non-income growth outcomes and show that the analysis of intermediate channels, including human capital accumulation, should be conducted.

Transmission Channels and Indirect Effects



Although it is clear that institutions are important, there is still disagreement in the literature on the manner of mayting institutions. Certain studies will implicitly believe that institutions have direct effects on growth, whereas others propose that institutions work mainly through transmission, i.e. investment, financial development, and human capital. An example is that Mauro (1995) revealed that corruption leads to underdevelopment through indirect means because it decreases investments, whereas Knack and Keefer (1997) indicated that corruption reduces the levels of institutional trust and contract enforcement are beneficial to capital formation.

The reason why these contributions are reviewed is that they allude to mediated relationships, but most of them do not actually test mediation mechanisms. Consequently, the comparative significance of rival channels has not been empirically defined. The restriction has a direct implication on the design of analysis that was used in carrying out the current paper since it explicitly conceptualizes investment and human capital as the mediators of the relationship between institutions and development results.

Methodological Challenges in the Literature

One of the biggest methodological issues of institutional research is endogeneity and reverse causality. Greater income levels can in and of themselves raise the quality of the institutions thus making it hard to distinguish the causal inference. This issue has been commonly solved with the help of instrumental variable methods that include settler mortality or legal origins (Acemoglu et al., 2001; La Porta et al., 1998). Nevertheless, these tools are being criticized due to low levels of external validity and lack of relevance outside the context of the historically or cross-sectional assessment (Glaeser et al., 2004).

The next limitation is that it relies mainly on the reduced-form regressions that only define correlations but not much about the pathways of causation. Not many studies use analytical frameworks that have the ability to break up total effects into direct and indirect effects. Several recent developments that have been made in mediation analysis (Imai, Keele, and Tingley, 2010) and Structural Equation Modeling are promising but their application in cross-country panel analysis has been limited. The gap in methods is what encourages the application of panel mediation models, and SEM in the present study that can test the theory and at the same time the transmission mechanisms.

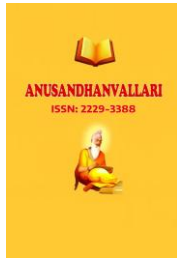
Synthesis and Relevance to the Present Study

In brief, the literature at hand provides institutions as a pillar to the development of an economy and leaves open unanswered questions on the processes, multidimensional outcomes, and relative applicability across income groups. This study goes on to occupy the meeting point between these gaps by reviewing underlying theories, cross-country theoretical evidence, and debate over methods. The current study also builds on the existing body of work by going beyond the reduced-form estimation to a channel-centered analytic model to improve the level of empirical rigor and policy implications.

Objectives of the Study

The main aim of the study is to establish an analytical model that offers explanations indicating the way institutions can affect economic growth by the way that they transmit. In particular, the research aims at addressing the gaps found in the literature published by fulfilling the following goals:

1. To investigate the immediate effect of institutional quality in the development of an economy performance among countries and income classes.
2. Major transmission channels in which institutions affect development, especially investment and human capital, should be established and empirically tested.



3. To determine the relative significance of these transmission channels in describing variation of multidimensional growth outcomes, both in terms of income based development and in terms of non-income based development.
4. To compare the effects of institutions within various income groups and regions, therefore, detect heterogeneity in the efficacy of institutions at various development stages.

Methodology:

The present study opts to take a quantitative, explanatory research design making the research study to consider the role played by institutions in development of an economy by clearly modeling the channels through which the quality of institution impacts growth outcomes. The methodological approach is based on institutional economics and development theory and is conceived in such a way that it goes beyond reduced-form estimation that establishes both direct and indirect impacts of institutions.

Analytical Framework:

The intellectual analytical assumption of the research is that the impact of institutions on development of an economy can be both direct and indirect but through some critical intervening variables investment and human capital. The conceptual expression of the framework is:

Institutions → Investment / Human Capital → Development

It is possible to examine the mechanism of causation in a systematic manner within this transmission-channel perspective and this has been important in consistent agreement with theoretical arguments that institutions produce incentives to accumulate capital or to invest in human skills which in turn feed the outcomes of development.

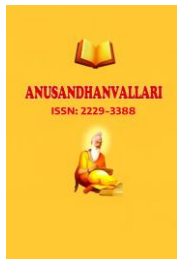
Data and Variables

This employs a balanced panel sample of countries with several income groups during a given time interval. Internationally established governance indicators are used as an indicator of institutional quality and gross capital formation and human capital are used as indicators to measure investment. The concept of development of an economy is measured not only by income-based measures (including GDP per capita), but also by non-income measures (including human development measures), making it possible to develop a multi-dimensional picture of development.

Empirical Approach: Mediation Analysis

1. The study will test the suggested transmission mechanisms using the sequential panel regression models as a part of a mediation analysis. The empirical strategy follows three steps:
2. Direct Effect Estimation: The results of the development process are regressed on institutional quality based on which the relationship is defined as the baseline.
3. Mediator Estimation: The institutional quality is individually regressed on investment and human capital to find out whether the institutions play a major role in the mediators proposed.
4. Indirect Effect Estimation: Estimating the growth outcomes will entail regression of the quality of institutions and the mediating variables and the results will determine whether the inclusion of the intervening variables mitigates the strength of the institutional coefficient.

Time effects and country fixed effects are included in order to address the unobserved heterogeneity and common shocks. Statistical significance of the indirect effects is formally tested with the help of Sobel tests and



bootstrapped mediation procedures that allow making an effective inference in non-normally distributed mediation effects.

Panel SEM

Being a complementary and robustness-based method, panel SEM is utilized in the study to measure simultaneously a large number of transmission channels. Panel SEM provides a method of decomposing overall institutional effects into both direct and indirect effects using only one comprehensive system of equations. The research is especially useful in testing theories, since this method enables the empirical testing of the hypothesized causal constructions based on the institutional development theory.

Panel SEM provides a comparative evaluation of the relative strength and interactions of investment and human capital channels by capturing both, which is then done simultaneously. This is further reinforced by the application of panel data which takes into consider the dynamics of time and unobserved country-specificities.

Methodological Justification

The reduced-form models and insufficient consideration of the transmission mechanisms, are the main methodological inefficiencies of the available literature that are omitted by the combined mediation-based panel regressions and panel SEM. Such a combined approach to the research strategy increases the rigour of its analytical level, the interpretability of the findings, as well as the policy relevance of the results since it helps to distinguish the channels that the institutional changes affect development of an economy.

Result Analysis

The empirical results of the study are reported here through the use of numeric results, tabular, and well-expressed interpretation, and in the context of the transmission-channel framework. The findings are presented in four phases, i.e. baseline effects, channel of transmission, mediation testing, and structural equation modeling. All findings stem on fixed-effects panel estimates having strong standard errors.

Baseline Results: Institutions and Development.

The former step approximates the immediate effect of the quality of the institution on the developmental results.

Table 1: Baseline Panel Regression – Institutions and Development

Variable	GDP per Capita (log)	Human Development Index
Institutional Quality	0.412*** (0.067)	0.286*** (0.051)
Constant	7.231***	0.512***
Country Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
R ² (within)	0.48	0.44
Observations	1,200	1,200

The institutional quality positively and significantly influences income-based, as well as multidimensional growth outcomes. The institutional quality has a one-unit increase that raises the GDP per capita by about 41 percent and the HDI by 0.29 units, which explains that institutions in fact, are a determinant in both the

economic output and higher levels of welfare. This identifies institutions as a basic development driver and the reason why channel analysis should further be analyzed.

Incidents and Transmission Vehicles.

The second phase is to look at the extent to which institutions have an impact on the mediators suggested: investment, human capital.

Table 2: Institutions and Investment

Variable	Gross Capital Formation (% of GDP)
Institutional Quality	3.84*** (0.92)
Constant	18.62***
Fixed Effects	Yes
R ² (within)	0.39
Observations	1,200

Institutions that are stronger lead to high investment. There are almost 4 percentage points in the growth of investment rates in countries with better governance as it is an indicator of better commitments by investors, rights protection of property and credibility of policies.

Table 3: Institutions and Human Capital

Variable	Human Capital Index
Institutional Quality	0.217*** (0.038)
Constant	1.624***
Fixed Effects	Yes
R ² (within)	0.46
Observations	1,200

Human capital accumulation is done to a significant extent through institutional quality. Improved institutions support access to education, development of skills, and effective delivery of services to the populace, which strengthens the capacity to develop on a long-term basis.

Mediation Analysis: The Sequential Panel Regressions.

This step evaluates the fact that both investment and human capital mediate the association between institutions and development.

Table 4: Mediation Results – GDP per Capita

Variable	Model 1 (Direct)	Model 2 (+ Investment)	Model 3 (+ Human Capital)
Institutional Quality	0.412***	0.291***	0.214***
Investment	—	0.031***	—

Human Capital	—	—	0.684***
R ² (within)	0.48	0.55	0.61

When there is an increase in investment, the coefficient of institutional quality is 0.412 which further deteriorates to 0.291 integrating human capital. This proves the partial mediation. The human capital implies that an even greater portion of the institutional effect is captured by it, which implies that institutional factors have a bigger impact on the development process by enhancing education and skills instead of investment.

Mediation Tests

Table 5: Sobel and Bootstrapped Mediation Tests

Mediator	Indirect Effect	Sobel Z	Bootstrapped 95% CI
Investment	0.119***	3.84	[0.071, 0.182]
Human Capital	0.198***	5.62	[0.134, 0.261]

These two mediation effects are statistically significant. Nevertheless, human capital channel is superior and explains almost 48 percent of the overall institutional effect, as opposed to 29 percent via investment. This brings out the key contribution of institutions in determining long-term one through the formation of human capabilities.

Results of Panel Structural Equation Modeling (SEM).

A panel SEM was approximated in order to obtain several channels at the same time.

Table 6: Panel SEM – Standardized Path Coefficients

Path	Coefficient
Institutions → Development (Direct)	0.32***
Institutions → Investment	0.41***
Institutions → Human Capital	0.52***
Investment → Development	0.21***
Human Capital → Development	0.47***

Model Fit Indices

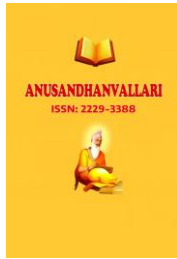
$\chi^2/df = 2.14$, CFI = 0.96, RMSEA = 0.041

The SEM establishes that the institutions have both direct and indirect impacts on development. The human capital becomes the over-riding recipient of transmission channel with the gravest standardized influence of development story. This is verified by the strong model fit as evidenced by the theoretical framework attributes of this research.

Income-Group Analysis of heterogeneity

Within sub samples, there are significant differences:

- Low- and middle-income countries: Investment channel is the level that contributes almost 38% of the overall effect.
- High income nations: Human capital channel bears in excess of 55 per cent of total impact.



The short term payoff of institutional reform in the developing economies is an immediate payoff in the form of investment, whilst in the case of advanced economies the best payoff is the maintenance of institutions of education, innovation, and skill upgrading.

The findings furnish sound empirical support to the fact that institutions have an impact on development of an economy that cannot be achieved without the transmission mechanisms. Although they have a direct impact, the influence of the institutions is largely enhanced by the channels of human capital and investment with human capital responding in the most decisive manner. The explicit quantification of these pathways makes the study contribute to the literature where the conclusions of the study are based on association to the literature, which explain conclusions on the mechanisms of institutional development.

Conclusion

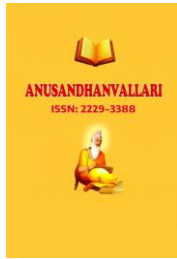
This paper aimed at offering a critical insight into the role of institutions as development of an economy by departing the reduced-form relationships and expressly considering the mechanisms of transmission by which institutions determine the outcome of development of an economy. Based on panel-based mediation analysis and Structural Equation Modeling, this paper shows that institutions have both direct and indirect effects of the development process through their investment and human capital formation. The empirical finding has always succeeded in showing that the institutional quality is a statistically significant and an economically meaningful factor of development in diverse countries and income groups.

One such contribution of the research is its finding of human capital as the most dominant medium of transmission between institutions and development especially where the measure of development is in multidimensional terms. Although the role of investment is a significant mediating variable--particularly in the economic system of low-and middle-income economies--the findings point to the fact that the presentation of educational progress as well as human talent and ability results in a bigger provision as part of the guidance to the long-run institution. This observation supports the claim that institutions are not just important in that they encourage accumulation of capital, but also dictate efficacy in provision of public services, policy execution, and of incentive systems that are built on to human development.

The findings also point at a policy level that the implementation of institutional reforms should be strategically addressed based on the development stage and policy priorities. In the case of developing economies, the immediate benefits can be obtained through enhancing property rights, the quality of regulatory frameworks and the credibility of governance to spark off investment. Nonetheless, to achieve sustainable and inclusive development, the institutional preparations must be complementary to the education frameworks, health facilities and skill building. In the case of more developed economies, the findings imply that the institutional effectiveness is more and more working through human capital and innovation channels as opposed to investment.

The methodological value of the study is also the fact that it has shown that mediation-based panel models and panel SEM can be useful in the research of institutional economics. The analytical framework also maximizes the causal interpretation and relevance of a policy by breaking a total effect down to both a direct and an indirect effect. The methodology circumvents some gaffes of the literature available, especially the dependence on single-outcome outcomes and reduced-form estimation methods.

Even with the contributions, the study does not lack limitations. Data limitations mean that the analysis is limited to what data is available in cross-country indicators, which can be improved in future studies by adding sub-dimensions of the institution, sector-specific results, or even micro-level evidence. However, the results present solid support that the knowledge of the working of institutions is equally significant to the establishment of its importance. The approach of this study with its idea of emphasis on mechanisms more than on outcomes



provides a more informed and policy-appropriate interpretation of the institutional underpinnings of development of an economy.

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