Rule of Law and Economic Growth: An Evidence from SAARC

Farooq Rasheed[a]
Sadaf Shahab[b]
Muhammad Tariq Mahmood[c]

Abstract

World Bank defines rule of law as how the general residents of a country abide by the rules and have confidence on the prevailing institution that manage it in the country. Usually it is reflected by access to property rights, police efficiencies, quality of contract enforcement, judiciary and the likelihood of control on crime rates. The growth of an economy depends on several factors. 'Rule of Law' is one the key factor that has the scope of public's protection of property and contractual rights. Using World Bank's annual data from 1999 to 2020 for a pool of SAARC member counties, by applying using Panel Generalized Method of Moments regression model, this study attempts to test whether the rule of law is effective in explaining economic growth or not. The index of "rule of law" is found significant in explaining GDP growth rate. As it is expected that developing/underdeveloped countries usually face the issues like poverty, corruption, political instability, etc., therefore the rule of law's effect on economic growth has to be a long-term policy to be applied.

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[a] Federal Urdu University of Arts, Science & Technology Islamabad. email: farooqeco@gmail.com
[b] Federal Urdu University of Arts, Science & Technology Islamabad. email: sadafshahab_leo@yahoo.com
[c] Federal Urdu University of Arts, Science & Technology Islamabad. email: tm76pk@gmail.com

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INTRODUCTION

In subcontinent Asia, there are unfavourable public perception about government's accountability measures. The public in general possess highly pessimistic views about the accountability practices. Findings also highlight that corruption across institutions are perceived as very high. Bribery is pervasive in great manner, low political and media freedoms is prevailing, crime rates index is generally on a higher degree, higher robbery and murder rates are a key concern for the public. Incompetence of criminal investigators is considered as one of the most serious problems in these economic regions. Figure 1 shows that except Bhutan all the other SAARC countries have a negative index of rule of law (average of 1996-2021).

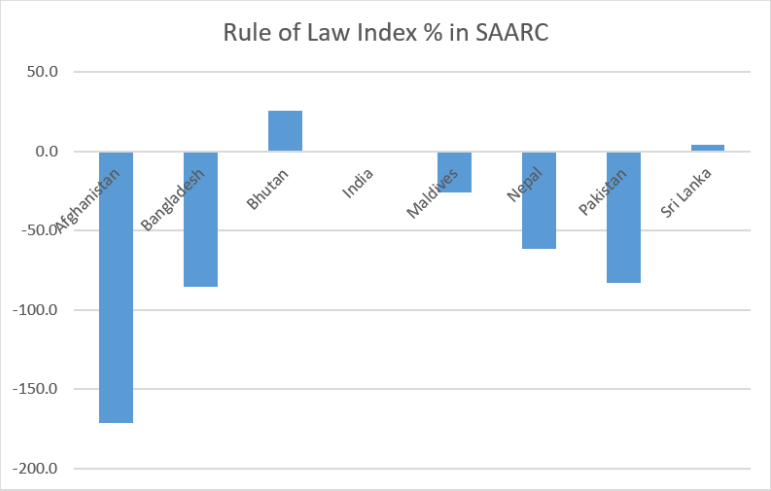

Figure 1: Authors' estimate using Data from Worldwide Governance Indicators (1996-2021)

Thus, such situations reflect that the rule of law is possibly prevailing at the low and receding in these economies and creating deficit of institutional efficiencies. The institutional efficiencies are vital to achieve economic growth, so in order to achieve better economic growth, the existence of practicing rule of law is highly important. For economic policy makers, apart from the objective of having an increase in the real economic growth, the growths in human development through factors like literacy and life expectancy has also been given importance to manage it. Economists also refer the importance of intangibles i.e., knowledge capital as a significant driver of growth and development.

The basic economic growth model includes the traditional factors like labour and capita, and over the time, the debate on economic growth has encompasses factors like technological innovations and investments in human capital in the forms of expenditures on Health & Education. Growth accounting has also stressed inclusion of the concept of economies of scale i.e., adopting efficient production techniques in the growth model. Further, the sensitivity of democracy, competition, globalization and corruption have also been attempted rigorously to explain fluctuations in economic growth. The literature on economic growth accounting also demonstrates the widen scope of possible relationship via issues related to wealth earning capacity, stock market wealth

effect, trade balance surplus, financial sector liberalization, human capital externality, endogenous labour leisure decision, institutional deficit, civil rights, inadequate legal frameworks, etc.

Economic Growth Models

The efforts presented in Ramsey-Cass-Koopmans Model, Harrod-Domar Model, Real Business Cycle Model, Solow Growth Model, Uzawa-Lucas Model and others remarkably demonstrate how dedicatedly the challenges of understanding economic growth behavior have been taken up. Solow growth model is used to define the economic growth accounting by using determinants like 'productivity', 'capital', 'labour' and 'technological constant'. Uzawa (1965) and Lucas (1988) model is based on endogenous growth theory. Concluding output is produced by utilizing the physical and human capital. The most important factor of this model used in education sector is human capital1which is highly human capital intensive, (with constant returns to scale is an underneath assumption) are due to the availability of the technology in the education sector. In standard Solow model human capital for producing technology is constant, whereas Uzawa-Lucas model assumes it as varying.

Harrod–Domar model by Harrod (1939) and Domar (1946), explains the rate at which of economic growth is taking place through savings and capital productivity and attempt to have a balanced economic growth. The 'Harrod–Domar' model led the development of exogenous growth model. One of the criticisms of the model is on the assumption that there is no justification for growth to establish full employment in the economy because the relative economic rentals of labor and capital are fixed. The growth model explains fluctuations in an economy via accelerator principle. In terms of economic development, the critics note that the original model could not differentiate between economic growth concept and economic development concept; not as that economic growth is a subset of economic development.

As we understand that any economies have ups and downs which is the concept of "business cycle". The temporary decrease in economic transactions declines the GDP and thus creates "recession". The vice versa is referred as "economic expansions". Real Business Cycle (RBC) models follow the monetarist tradition. There are numerous theories about why business cycles occur, and can be lumped into two main categories: i.e., supply led and demand led. Lucas (1988) presented an economic growth model in which the ultimate objective was to endogenise the actual presence of economic growth through the 'engine' of growth. Such an engine is referred as human capital accumulation which raises the labour productivity specifically. The significance of the Lucas model is based on a fact that it provides initial human capitalization to endogenous economic growth and this is possible if people allocate their time between training and work. It is thus a question of saving current income for future income accumulation. In this regards the decisions about dynamic economic activities and thus human capital as an 'engine' of growth itself endogenous.

Ramsey Cass Koopmans model is1an economic growth accounting model presented by Ramsey (1928), Cass (1965) and Koopmans (1971). The model by Ramsey is different from Solow growth model because of being linked with time t, as it provides the choices for consumption decisions and helps in determining savings and thus savings are not constant over the time. Economic growth

accounting has remained an area of key interest for the economists. According to Paul Krugman[1], "Productivity isn't everything, but in the long run it is almost everything". The statement above has provided food for thought for many economists to determine new arena for promoting economic growths. In this context, a concept of key institution of rule of law is considered as a very important factor toward economic growth improvements. Several studies by well-known economic philosophers have conducted scientific assessment of the importance of social welfare enhancement. Rule of Law as an institution is essentially associated with people's quality of life. Carol Graham of the Brookings Institute believes that the economic wellbeing is an approach to assess economic welfare by considering factors like life satisfaction, well-being, quality of life, etc. without compromising issues like unemployment, inflation, twin deficit etc.[2]

Public is passionate about the levels and growth of income because there is a potential connectivity between financial prosperity and socioeconomic wellbeing. An economic system without objectifying social well-being is unsustainable. Dam (2007), on the role of the rule of law in economic development, emphasizes the importance of rule of law that can enforce contracts, minority shareholders, a regulatory bodies for controlling markets, encourages banks to extend loans in developing part of the world and aiming at operating on commercially but not on political priorities. Rule of law effectively protects citizens of country. As per the World Bank's definition, the concept of "Rule of Law" is defined as how general residents of a country abide by the rules and have confidence on the prevailing "Rule of Law" in that country. Usually it is reflected by access to property rights, police efficiencies, quality of contract enforcement, judiciary and the likelihood of control on crime rates.

Objective of the Study

By developing a rationale behind the possible association between rule of law and economic growth, our study's key objective is to understand whether rule of law impacts the growth of the economy or not. The remaining study is ordered as follows. Next section discusses the eclectic review of literature; provided in section II. Section III provides a conceptual framework of possible amalgamation rule of law and economic growth under extended Solow growth model. Data and methodology is explained in section IV, the results and its discussion is provided in section V and section VI concludes the study.

LITERATURE REVIEW

The concern about growth in an economy focuses on improving standard of living. In an attempt to measure inputs role in the production processes, taking into account of enhancements of efficiencies of labour and capital over the time is positively related to the income. E.g., investment in human capital is reflected by expenditures on health and education. There are several studies establishing the role of factors other than labour and capital towards economic growth. A study by Emerson (2006) highlights the corruption, degree of competition and existence of democracy in the equation, found that corruption is anti-competitive, and thus hurdles an economic growth process.

[1]Krugman is a Nobel laureate (2008) and a distinguished Professor of Economics at the City University of New York.

[2] Graham, Carol. "The economics of happiness." World economics 6, no. 3 (2005): 41-55.

On the democracy's role towards growth, Knutsen (2011) investigates the role of democracy and its effects on bringing technological change and thus economic growth. Author presents a case where dictators restricted civil freedom and liberties and controlling information primarily of surviving. The key implication from the model is that dictators cause slower technological transfers than in the democracies. This led to lower economic growth. Sharma (2007) explored the institutional deficit. This is characterizes in so many countries which are in transitional state. This means the economic structures are transforming from arbitrary governance to better state of economic management. As these countries need productive investment for economic growth thus authors recommended the improvements in the quality of governance to achieve economic development. Supporting the democratic process, author believes that secure private property rights and institutionalization of the rule of law are vital for promoting growth.

Relevant changes in government recurrent expenses, current government capital and tax revenues from international trade are found to be significant for an economic growth[3]. On the other hand changes in tax revenues on domestic market goods and services, taxation international trade along with incomes and properties significantly matter. Private sector's capital investment also stimulate growth. Masoud and Hardaker (2012) observed that stock markets and their development are significant in affecting economic growth. Authors' findings backed the idea that long term equilibrium association exists between stock market and the economic growth. Meng and Ye (2009) introduce human capitalization externality. The endogenous labour-leisure decision was also incorporated into Uzawa (1965) and Lucas (1988) basic framework. The purpose was to explore the internal links among endogenous labour supply, human capitalization (government's education policy) and economic growth. Authors' study endorsed the significant role of time allocation by household and the impact of human capital's presence and its usage will increase the growth rates in the economy; the higher the subjective time preference and the higher the awareness of leisure, the lesser the economic growth would be.

Hanushek and Wobmann (2007), highlights improved schooling demand has become controversial, as such expansion of schooling is not found to be creating improved economic conditions. They analyses the role of educational activities in promoting society's well-being, with a center of attention on the educational excellence and found a strong evidence that the cognitive skills are strongly related to income earnings and this lead towards the better economic growth. They further reveals that cognitive skill are in lacking in developing countries and thus suggested some major structural changes in educational institutions specifically at school levels. Happier people's cognitive ability is better. More informed segment of the society prioritized their work in a better way. They able to have better teamwork, they have better relations with managers and thus improved work productivity. Amabile (2008) mentioned that if people are in a lively, they have strong creative ideas. Even if we take into account the next day, they are still creative. For a happiness to increase, obtaining higher income growth rate is not sufficient. The models discussed above are clearly focusing on higher and higher income levels rather than a greater economic happiness. Economic growth, development and progress are off course vital but can enhance the worth of life such that if it is chased along with having better economic happiness rankings. There

[3] Ogeh Soli, Vera, Simon Kwadzogah Harvey, and Edmond Hagan. "Fiscal policy, private investment and economic growth: the case of Ghana." Studies in Economics and Finance 25, no. 2 (2008): 112-130.

is a need to explore the potential of economic happiness to seek economic growth; i.e., to test if there is a link between economic growth and happiness.

There is a big gap in the literature that encompass the notion of rule of law and economic growth relationship especially in SAARC region. SAARC has eight member countries which includes Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri-Lanka and eight observer status countries i.e., China, the European Union, Iran, Japan, South Korea, Mauritius, Myanmar and the United States of America. We have failed to find studies covering the significance of rule of law along with traditional factors like capital and labor happiness in explaining economic growth. Our study thus attempts to determine a possible causal link between rule of law aspect and economic growth accounting.

Rule of Law Augmented Economic Growth Model

Neoclassical growth model by Solow (1956) and Swan (1956), assumes two-sector economy, production of one composite output,35constant returns to scale i.e., the production function is a first degree homogeneous function, labour and capital are paid as per their marginal productivities, input and output prices are flexible and the technological progress is neutral. Its algebraic derivation is as follows. Generally income growth is a function of capital and labour. Thus, we have the following model.

$$Y(t) = F[K(t), N(t)] \tag{3.1}$$

Where Y is output, K is capital and N is labour in time (t). Solow and Swan's technological factor augmented with labour, changes equation (4.1) as follows.

$$Y(t) = F[K(t), N(t)A(t)] \tag{3.2}$$

Where A is technology index that varies in time t.

Assuming savings dependent on output, we have

$S(t) = sY(t)$; Where s is saving function' slope (mps), such that $0 < s < 1$.

The saving-investment identity is…

$$I(t) = S(t) \tag{3.3}$$

For two-sector economy, Y function would be;

$$Y(t) = C(t) + I(t) \tag{3.4}$$

Equation (4.5) is representing net investment which is equal to total capital (K) minus the depreciation (δ) over time.

$$I(t) = K(t) + \delta K(t) \tag{3.5}$$

Assuming "Harrod Neutral" in technology growth; Solow model defines the effective form of labour (N) as N(t) = A(t)L(t), where A(t) denotes knowledge that being changing at the growth n_A, suggesting the effective labour is growing at the rate of $(n_A + n_L)$.

Introducing Rule of Law in (3.2)

Let W_t represents rule of law index and taken as an intervening variable as follows.

$$Y_t = F(K_t,\ W_t,\ A_t N_t) \tag{3.6}$$

$$\Rightarrow \quad Y_t = A_t F(K_t,\ W_t,\ N_t) \tag{3.7}$$

Derivative with respect to time period on (3.7) results in the following;

$$\Rightarrow \quad \frac{dY_t}{dt} = A_t \left[F_K \frac{dK}{dt} + F_w \frac{dW}{dt} + F_N \frac{dN}{dt}\right] + \frac{dA}{dt} F(K_t,\ W_t,\ N_t)$$

$$\Rightarrow \quad \frac{dY_t}{dt} = A_t \left[F_K \dot{K} + F_W \dot{W} + F_N \dot{N})\right] + \dot{A} F(K_t, W_t, N_t)$$

$$\Rightarrow \quad \frac{1}{Y_t}\frac{dY_t}{dt} = \frac{A_t \left[F_K \dot{K} + F_W \dot{W} + F_N \dot{N})\right] + \dot{A} F(K_t, W_t N_t)}{A_t F(K_t, W_{t,}, N_t)}$$

$$\Rightarrow \quad \frac{1}{Y_t}\frac{dY_t}{dt} = \frac{F_K \dot{K}_t}{F(K_t, W_t, N_t)} + \frac{F_L W_t}{F(K_t, W_{t,} N_t)} + \frac{F_L N_t \dot{H}_t}{F(K_t, W_t, N_t)} + \frac{\dot{A}_t}{A_t}$$

$$\Rightarrow \quad \frac{\dot{Y}}{Y_t} = \frac{F_K K}{F(K_t, W_t, N_t)}\frac{\dot{K}}{K_t} + \frac{F_L W_t}{F(K_t, W_t, N_t)}\frac{\dot{W}}{W_t} + \frac{F_L N_t}{F(K_t, W_t N_t)}\frac{\dot{N}_t}{H_t} + \frac{\dot{A}_t}{A_t} \tag{3.8}$$

$$\Rightarrow \quad g_y = \beta g_K + \gamma g_W + \theta g_N + g_A \tag{3.9}$$

In equation (3.9) g_Y is income growth, depends on g_K the capital growth, g_N the labor growth, g_W the rule of law growth and g_A is the Solow's technological growth component. Converting equation (3.9) into an econometric form of pooled regression parameters, we get (3.10) given below.

$$g_{yit} = \alpha i + \beta g_{Kit} + \gamma g_{Nit} + \theta g_{Wit} + \mu it \quad (3.10)$$

where g_A is decompsed into α, the intercept and μ, the Solow residual.

β, γ, θ in equation (3.10) are slope parameters of capital growth, labor growth and rule of law growth respectively. Subscript i and t represents i^{th} country cross section and t is the time. By assuming constant returns to scale we have $\{\beta + \gamma + \theta = 1\}$ as coefficients' restriction in the model (3.10). If $\{\beta + \gamma + \theta > 1\}$ it means it is a case of increasing returns to scale and it will be decreasing returns to scale if $\{\beta + \gamma + \theta < 1\}$.

Testing Hypotheses

On the basis of the model (3.10) which explains that income growths depends on labour growth, capital growth and rule of law growth. The hypotheses we intend to test are as follows:

H_a: There is a significant effect of capital growth on income growth

H_b: There is a significant effect of labour growth on income growth

H_c: There is a significant effect of rule of law growth on income growth

METHODOLOGY

Using World Bank's data source[4], we form a pool of 7 country-cross sections from SAARC region (Due to non-availability of full data on rule of law index, Afghanistan is excluded from the study) for the annual data from 1999 to 2020 (data on rule of law prior to 1999 is not available). The annual data of GDP at constant 2010 US$ taken. United Nations' data source describes Gross Domestic Product at purchaser's prices is the summation of gross value-added in the economy plus product's taxes and minus all subsidies. We obtained annual data on real gross formation (GCF) and transform it into capital stock data by discounting it with capital depreciation and compound real GDP growth rate. The data is in constant 2010 U.S. dollars. Gross Capital Formation (GCF) consists of expenditures on additions to the fixed assets, addition of net changes in the level of inventories. Inventories are stocks of goods kept by the firms to manage fluctuations in production, sales and the production in progress.

As per the World Bank's definition, the concept of "Rule of Law[5]" is defined as how general residents of a country abide by the rules and have confidence on the prevailing institution that provide "Rule of Law" in the country. Usually it is reflected by access to property rights, police efficiencies, quality of contract enforcement, judiciary and the likelihood of control on crime rates. Rule of law is an estimated unit less standardized score for a country and it ranges from -2.5 to 2.5. Not all the labour force in a country is employed all the time. GDP is necessarily contributed

[4] Website page: http://databank.worldbank.org/data
[5] http://databank.worldbank.org/data/

by the fraction of that total labour force which is employed. In order to get that labour force who is contributing in GDP, we deducted unemployment from the total labour force data to get country's employment data. United Nations data source defines that labour force comprises those people who are at least 15 years old who offer his labour hours for the production process for goods and services in a given time. The definition of unemployment covers those individual who are without work. This also covers searching work in a recent past period - including those who have voluntarily left their jobs. Our study carries a causal research design, which intends to estimates cause-and-effect relationships by estimation of equation 3.10. The model is estimated by using Panel Generalized Method of Moments (Panel GMM). The Panel GMM model is applied for panel type data set. If endogeneity issue exists, like "unobserved heterogeneity and dynamic endogeneity, Panel GMM gives more reliable results than panel least square.

RESULTS & FINDINGS

Table 1 discusses the estimates of equation (3.10) for the panel of 7 countries. It is found that the capital's impact on GDP, response of labour on GDP and rule of law are found to be significant.

Table 1
Panel Regression Estimates

Dependent Variable: GR Y

Method: Panel Generalized Method of Moments

Sample (adjusted): 1999 2020

Cross Sections: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.38	0.28	11.97	0.00
GR K	0.48	0.14	3.40	0.00
GR N	0.30	0.09	3.39	0.00
W index	0.04	0.18	2.15	0.03
R-squared		0.019436		
Adjusted R-squared		0.017329		

CONCLUSION & RECOMMENDATIONS

Considering the basic growth model, we introduced "rule of law" as an explanatory variable and hypothesized that it may explains the changes in output growth and thus attempted to test how rule of law measures are affecting economic growth. Our result shows that rule of law is effecting economic growth along with capital and labour. It is expected that developing and underdeveloped countries usually face the issues like poverty, corruption, political instability, etc. implementing Rule of law in the economies control these issues. In this context, promoting a better rule of law index in economies has to be a long-term pragmatic policy objective for the economic managers. The vast literature suggests quality of life, life satisfaction, social security, religious independence, access to justice, equality, health, education and more are vital determinants of higher index of rule of law that can be aimed in developing economic policies.

REFERENCES

Amabile, Teresa, and Steven Kramer. "Do happier people work harder." *New York Times* 4, no. 7 (2011): 32-45.

Cass, David. "Optimum growth in an aggregative model of capital accumulation." *The Review of economic studies* 32, no. 3 (1965): 233-240.

Dam, Kenneth W. The law-growth nexus: The rule of law and economic development. Rowman & Littlefield, 2007.

Domar, Evsey D. "Capital expansion, rate of growth, and employment." Econometrica, Journal of the Econometric Society (1946): 137-147.

Emerson, Patrick M. "Corruption, competition and democracy." Journal of Development Economics 81, no. 1 (2006): 193-212.

Graham, Carol. "The economics of happiness." World economics 6, no. 3 (2005): 41-55.

Hanushek, Eric A., and Ludger Wößmann. "The role of school improvement in economic development." (2007).

Harrod, Roy F. "An essay in dynamic theory." The economic journal 49, no. 193 (1939): 14-33.

Knutsen, Carl Henrik. "The economic effects of democracy and dictatorship. Institutt for statsvitenskap, Universitetet i Oslo." PhD diss., Ph. d.-avhandling, 2011.

Koopmans, Tjalling C. "A model of a continuing state with scarce capital." In Contributions to the Von Neumann Growth Model: Proceedings of a Conference Organized by the Institute for Advanced Studies Vienna, Austria, July 6 and 7, 1970, pp. 11-22. Springer Berlin Heidelberg, 1971.

Lucas Jr, Robert E. "On the mechanics of economic development." Journal of monetary economics 22, no. 1 (1988): 3-42.

Masoud, Najeb, and Glenn Hardaker. "The impact of financial development on economic growth: Empirical analysis of emerging market countries." Studies in economics and finance 29, no. 3 (2012): 148-173.

Meng, Xiangcai, and Azhong Ye. "Human Capital Externality, Knowledge Spillover, and Sustainable Economic Growth." Annals of Economics & Finance 10, no. 1 (2009).

Ogeh Soli, Vera, Simon Kwadzogah Harvey, and Edmond Hagan. "Fiscal policy, private investment and economic growth: the case of Ghana." Studies in Economics and Finance 25, no. 2 (2008): 112-130.

Ramsey, Frank Plumpton. "A mathematical theory of saving." The economic journal 38, no. 152 (1928): 543-559.

Sharma, Chandra Shekhar. "Bhutanese folktales: common man's media with missions for society." (2007).

Solow, Robert M. "A contribution to the theory of economic growth." The quarterly journal of economics 70, no. 1 (1956): 65-94.

Swan, Trevor W. "Economic growth and capital accumulation." Economic record 32, no. 2 (1956): 334-361.

Uzawa, Hirofumi. "Optimum technical change in an aggregative model of economic growth." International economic review 6, no. 1 (1965): 18-31.