



## The Impact Of Institutional Quality On Labour And Economic Growth

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### Abstract

*The seminal work of Daron Acemoglu, Simon Johnson and James Robinson, the Nobel Laureates in Economics in 2024, shows that institutional quality is the fundamental determinant of long-run economic growth across nations. Efficient institutions confer property rights and freedom of exchange, which enhance labour productivity, share of labour income in total output and GDP growth. Poor institutions are exploitative and divisive, often in favour of a minority of elites than the masses. A skewed distribution of resources reduces the incentives to work, save, innovate and invest. In this paper, we examine the impact of human capital and pro-labour institutional quality on GDP growth, in terms of a simple neoclassical model. We illustrate that higher labour productivity and share of labour income in total output, *cet. par.*, increase the steady-state output growth rate. These results have serious policy implications for the pattern of government expenditure and foreign aid, in order to accelerate GDP growth rates. They also highlight the need for appropriate institutional reforms, policy initiatives to address demand- side constraints and sustained efforts to reap demographic dividends.*

**JEL Classification:** J3, O3, O4

**Keywords:** Neoclassical Growth; Institutions; Human Capital; Labour Share

### Introduction:

The top 20% of the countries are thirty times richer today, than the bottom 20% of the nations (Nobel Committee 2024a). The gap between the per capita incomes of these two groups is also sustained. Various theories have been propounded to explain such large and persistent gulf in per capital incomes, between the rich and poor countries. In this context, the Nobel Prize in Economics for 2024 was awarded to Daron Acemoglu, Simon Johnson and James Robinson for their seminal work on the fundamental role of economic institutions in the determination of economic growth. The laureates claim that these institutions, rather than savings rates, knowledge, innovations or human capital, are the primary drivers of GDP growth.

This paper builds a simple model, to highlight the role of institutions in economic growth, and its persistence over the years. It shows that systems and processes which augment labour productivity and increase the share of labour in total income, also enhance the steady state GDP growth rate. Inclusive institutions add to the exogenous factors, viz. technological progress and labour force, which limit the rate of economic growth in neoclassical models. The contribution of this study is to develop a parsimonious model, which explains the relationship between institutions and economic growth.

The article is structured as follows. Section 2 presents a brief literature survey on the factors which drive economic growth. In Section 3, we extend the classic Solow model, to

include institutional factors. Section 4 draws the main policy lessons and concludes, with suggestions for future research.

**Literature Review:**

Solow (2000) presents a succinct description of growth theory. It begins with the familiar question: why do per capita incomes diverge across countries? The elegant little book sifts through neoclassical and endogenous growth models, to suggest a variety of possible answers: better technology, innovation, human capital and availability of new consumer goods. However, it is silent on the systems and processes which govern allocation of technology, human capital and propensity to innovate, across nations. In short, it does not explain why some countries focus on these factors while others do not.

Acemoglu et. al. (2005) compare three possible sources of differences in national growth rates: geography, culture and institutions. These factors dictate whether nations tend to emphasize on accumulation of technology, human capital, research and development facilities and the like. For instance, the geographical location of some nations may affect the ability of the population to work hard. Warm, tropical climates may be inimical to hard labour. Geography may also influence agricultural productivity, e.g., European technology may be superior to tropical ones. Finally, some locations may be more disease prone than others. Likewise, regional culture, e.g., Protestant or Confucian ethics, may drive the propensity to work and save.

The third hypothesis is that good economic and political institutions are the main reasons for economic growth.

In order to rule out the influence of geography or culture, the authors compare the growth rates of adjacent countries, like US and Mexico or North and South Korea. It is clear that better social and political systems and processes in the US and South Korea have elevated their per capita incomes and living standards, vis-à-vis those of Mexico and North Korea. Geography and culture are almost identical in both sets of nations. Acemoglu et.al. (2005) and Acemoglu and Robinson (2013) claim further that the countries where Europeans had settled were bestowed with better institutions. These structures encouraged a clear delineation of property rights, smooth contract enforcement, innovation and investment. In contrast, their colonies in Asia, North and South America and Africa were used for extraction of resources. Contract enforcement and property rights were weakened, in these countries, so that colonizers had a monopoly on local raw materials. As a result, incentives to work, save and invest remained poor, in these colonies, even after their independence. There was a reversal of fortune (Acemoglu et.al. 2005) across the world – some of the richest countries in the early sixteenth century became impoverished by the turn of the twentieth century. Geography and culture notwithstanding, some nations prospered while most others deteriorated. The extensive theoretical and empirical literature, on this topic, is surveyed in the detailed Nobel Committee press release for 2024 (Nobel Committee 2024b).

The preceding discussion shows how good institutions may augment labour productivity and transform it into human capital. The World Bank Human

Capital Project (World Bank 2021) explains how investments in healthcare, nutrition, education and skill upgradation help enhance human capital, in developing countries. Such institutions are also inclusive – they ensure more equitable distribution of resources and increase the share of labour in total output, rather than aggravate expropriation by the elite (Acemoglu et.al. 2005, Nobel Committee 2024b). Tebaldi and Mohan (2008) present a simple Institutions-Augmented Solow growth model, to depict how institutional quality can affect factor shares, in total output.

The insights from this section can be used to build a simple model, which links economic growth with institution-specific variables like human capital and share of labour income. The aim is to establish that there is an unambiguous

$$Y = AL^\alpha K^{1-\alpha} \dots\dots\dots(1)$$

Where  $Y$  is the total output or GDP per year,  $A$  is total factor productivity (due to exogenous technological progress),  $L$  is the amount of labour and  $K$  is the amount of physical capital employed. The terms  $\alpha$  and  $(1-\alpha)$  denote the output elasticities of labour and capital. By the product exhaustion theorem,  $\alpha + (1-\alpha) = 1$ . Taking natural logarithms

$$\ln\left(\frac{Y}{L}\right) = \ln A + (1 - \alpha)\left(\frac{K}{L}\right)$$

The proportional change or ‘hat’ operation (Jones 1965) follows:

Where  $\hat{A}$  is the rate of growth in technological progress and  $n$  is the rate of population growth.

In the standard neoclassical model, the rate of GDP or output growth is the sum

increase in the GDP growth rate due to the introduction of these factors. If the gains are not obvious, the incentive for institutional reforms may be reduced. Hence, in the next section, we try to examine how these drivers affect GDP growth.

**The Model:**

In this section, we posit the neoclassical growth model as a benchmark. We derive the familiar results on steady-state growth. Then, we extend the model, to incorporate human capital and an index of institutional quality. We examine how the main results change, once we include the institutional variables.

**Baseline**

We begin with a standard Cobb-Douglas production function that exhibits constant returns to scale

also represent the shares of labour and capital, in total output (Henderson and Quandt 1980).

In per capita terms, equation (1) appears as

$$\left(\frac{Y}{L}\right) = A \left(\frac{K}{L}\right)^{(1-\alpha)} \dots\dots\dots(2)$$

$$\left(\frac{\hat{Y}}{\hat{L}}\right) = \hat{A} + (1 - \alpha)\left(\frac{\hat{K}}{\hat{L}}\right) \dots\dots\dots(3)$$

$$\hat{Y} - \hat{L} = \hat{A} + (1 - \alpha)\left(\frac{\hat{K}}{\hat{L}}\right) \dots\dots\dots(4)$$

In the steady state, since the optimal capital-labour ratio is constant,  $\left(\frac{\hat{K}}{\hat{L}}\right) = 0$

$$\therefore \hat{Y} = \hat{A} + \hat{L} = \mu + n \dots\dots\dots(5)$$

of two exogenous factors, technological progress and population.

**The Influence of Institutions:**

In this subsection, we introduce two types of institutions. First, those which facilitate skill upgradation and the transformation of labour into human capital. These include academic institutions like the IITs and IIMs which augment labour productivity. Secondly, those which increase the share of labour income in total output. These include institutions which smoothen wage bargaining and indexation of wages to

$$Y = AH^{\alpha T} K^{1-\alpha T} \dots\dots\dots(6)$$

Where H stands for human capital and T is an index of distributive institutions (0≤T≤1). Higher values of T indicate greater share of labour in total output. Equation (6) is a modified version of the construct in Tebaldi and Mohan (2008), enriched with Human Capital (H), which

In per capita terms,  $\left(\frac{Y}{L}\right) = A(\theta)^{\alpha T} \left(\frac{K}{L}\right)^{1-\alpha T} \dots\dots\dots(7)$

∴  $\left(\frac{\hat{Y}}{\hat{L}}\right) = \hat{A} + \alpha T \hat{\theta} + (1 - \alpha T) \left(\frac{\hat{K}}{\hat{L}}\right) \dots\dots\dots(8)$

A comparison of equations (5) and (10) shows that steady-state output growth is always higher, with supportive institutions. The RHS of equation (10) is greater than the RHS of equation (5). The extent of increase in the GDP growth rate depends on αTθ, i.e., the presence of both distributive institutions (which raise T) and those which facilitate a sharper rise in labour productivity, i.e., θ.

**Proposition:** *Institutions augment steady-state GDP growth rate through a rise in share of labour income and labour productivity.*

expected inflation, to ensure higher real wages for labour. In short, the second category of institutions improve the distribution of resources and make growth more equitable. These are to be contrasted with extractive institutions, in colonial or dictatorial regimes, which exploit labour in favour of the elites or capitalists (Acemoglu et. al. 2013).

In this setup, equation (1) can be modified as follows:

$$H = \theta L, \theta > 1$$

is a more productive variant of unskilled labour L. For a simple exposition of the numerous endogenous growth models which focus on the role of human capital, see Solow (2000).

Hence  $\hat{Y} - \hat{L} = \hat{A} + \alpha T \hat{\theta} + (1 - \alpha T) \left(\frac{\hat{K}}{\hat{L}}\right) \dots\dots\dots(9)$

In the steady state, the optimal capital-labour ratio is constant, i.e.,  $\left(\frac{\hat{K}}{\hat{L}}\right) = 0$

∴  $\hat{Y} = \hat{A} + \hat{L} + \alpha T \hat{\theta} = \mu + n + \alpha T \hat{\theta} \dots\dots\dots(10)$

**Conclusion:**

In this paper, we develop a small model, to explore the impact of institutional variables on GDP growth. We find that human capital and the share of labour income, both of which can be improved with institutional reforms, increase the steady-state output growth rate above the threshold set by neoclassical models. The result has serious implications for government policy and future research.

First, our article provides a lucid explanation for the underdevelopment of nations. These are economies where institutional backwardness stunts labour

productivity and the stock of human capital. The share of labour in total income is also low in these countries. Hence, households do not have incentives to save and invest. It is necessary that governments in these countries build technical institutions for skill upgradation and enhancement of labour productivity. They should also strengthen their contract enforcement mechanisms for more equitable distribution of resources, which encourages labour force participation.

Secondly, the construct offers a case for intervention by multilateral development institutions like the World Bank. Initiatives like the Human Capital Project, mentioned earlier, can monitor institutional quality ( $T$ ) and labour productivity ( $\lambda$ ), on a regular basis, to provide necessary support to developing countries. The nations may be ranked in ascending order of institutional strength. The weakest countries receive maximum assistance and the best ones the least. In the long run, such strategies may enable growth rates of per capita incomes to converge.

The model can be extended in several directions. First, we may create an elaborate micro-linkage between institutional quality on the one hand, and the share of labour income and labour productivity on the other. We may investigate the conditions under which conducive institutions emerge, to encourage human capital and equitable income distribution. As a corollary, the roots of extractive institutions may be examined.

Secondly, there is ample evidence that augmentation of labour productivity is necessary, but not sufficient for higher output growth. For instance, skilled

labour may be unemployed due to demand constraints. Hence, higher education and productivity need not translate into higher GDP growth. For instance, in India, unemployment rates are the highest among the educated classes (Mukherjee et. al. 2019). It is important to examine the macroeconomic conditions, which transform institutional improvement into higher growth.

Finally, the model may be used to relate demographic dividends and economic growth. India exhibits a favourable age profile, at present, for the sustenance of high growth. We need to analyze the constraints on such growth prospects, in terms of an expanded version of the model developed in this paper. Once the opportunities and challenges are presented, in terms of the parameters, appropriate policy prescriptions may be made.

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