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A New Labor Productivity Growth Rate Equation

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By

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*This paper (the last series) is the summary of "Asian Studies (Part I)" conducted at Paul Kim's Asian Study Center at JCCC:

Series 1; Studies of Economic Development:
Series 2; A New Economic Growth Theory: An Obstacle to Economic Growth:
Series 3; An Economic Theory in Action in Asia:
Series 4; Right Perspective for U.S. Economic Growth Rate:
Series 5. A New Labor Productivity Growth Rate Equation:
(All five series are available through Google.)

Although Series 2 and 4 are written about Japan's economy and the U.S. economy, they are written to benefit newly emerging advanced nations in Asia such as South Korea. These series show how advanced nations stumble in an advanced stage of economic growth in the long run. Once an institution is firmly ingrained in the system, it will be difficult to change. However, any action to avoid any anticipated difficulty that they might encounter in the future will be effective.

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1. A NEW LABOR PRODUCTIVITY GROWTH EQUATION

I will present a new economic growth theory in this paper, which enables us to compute labor productivity growth rate (r) as follows:

$$r = r1 - r2 \quad \ldots.(1)$$

r1 indicates labor productivity growth rate contributed by the factors which promote or increase the labor productivity such as capital and technology.

r2 indicates labor productivity growth rate reduced by factors which hinder or decrease labor productivity growth rate. Such factors include activities of redistribution of power and income.

r1 can be estimated by the amount of capital stock including human capital, and the level of technology, while r2 can be estimated by the degree of activities of redistribution of power and income according the theory which I have recently developed[1].

For example, if an application of a special kind of technology (say high tech computer) into the production and distribution systems would increase the value of r1 (to 3% for example), later adapting such technology would induce excessive or unnecessary

[1] Paul Kim, "A New Economic Growth Theory: An Obstacle to Economic Growth," http://scholarspace.jccc.edu.econpapers/4 or Google. See also, "Right Perspective for U.S. Economic Growth Rate," http://scholarspace.jccc.edu.econpapers/8 or Google

specialization. Such (unnecessary us of) technology would lower the labor productivity and thus increase the value of r2 which creates the absolute value of r2 (to become 1% for example). The net result can be shown by

$r = (r1) - (r2) = 3\% - 1\% = 2\%$

In order to improve labor productivity and achieve a rapid economic growth, a nation must increase the value of r1 as well as decrease or control the absolute value of r2 (to slow down the growth of r2). The purpose of this paper is to focus on r2 (besides r1), which is a new approach to the subject of economic growth.

Traditionally, economists have looked at r1 only in regard to economic growth. Thus, traditional economic growth theories have been focused only on $(r1)^2$. They only paid attention to the advancement of technology and capital accumulation, including human capital as a way to achieving economic growth. However, they failed to pay attention to (r2). My theory presented recently[3], brings a new light into the topic of economic growth theory by focusing on (r2). I have done this new work both for a developing nation[4] as well as for an advanced nation[5].

If a nation happens to be a rapidly developing (to complete the transformation stage), preparing to become an advanced nation like China, I have recommended controlling r2 by removing the waste or dealing with the overcapacity issue. One year after the my publication, China adapted my recommendation, with its a 2014 economic goals. In this case, China made its top economic goal for 2014 to reduce the absolute value of r2[6].

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[2] See for examples, N. Gregory Mankiw, Macroeconomics, 4thed., Ch.4 and 5, Worth Publishers. See also Robert M. Solow, "A Contribution to the Theory of Economic Growth," Journal of Economic Perspective, Winter, 1994, pp. 3-22.

[3] See Paul Kim, "A New Economic Growth Theory: An Obstacle to Economic Growth," http://scholarspace.jccc.edu.econpapers/4 or Google. See also "Right Perspective for U.S. Economic Growth Rate," http://scholarspace.jccc.edu.econpapers/8 or Google

[4] See Paul Kim, "Studies of Economic Development," http://scholarspace.jccc.edu.econpapers/3 or Google.

[5] See Paul Kim, "A New Economic Growth Theory: An Obstacle to Economic Growth," http://scholarspace.jccc.edu.econpapers/4 or Google.

[6] See Paul Kim, "An Economic Theory in Action in Asia," http://scholarspace.jccc.edu.econpapers/5 or Google

On the other hand, if a nation is an advanced nation, I am recommending paying attention to control r2 by pointing to the fact that the activities of redistribution of power and income are the major determinant of the labor productivity, as I demonstrated for Japan in my other paper[7] as well as for the U.S.A[8].

2. The Long-Run Economic Growth of an Advanced Nation and its Destiny.

As a nation moves into the advanced stage and ages, more and more attention should be placed on r2 because as a nation becomes wealthier and wealthier, its interest for redistributing power and income will grow and become a major concern. Furthermore, achieving technological advancement becomes a lesser issue in a society of market internationalization where information of technology is transferred rapidly between nations. A more acute issue becomes whether or not a nation can create (1) motivational elements to utilize the fullest potential of technology and capital (and labor)[9], or (2) a high degree of labor mobility[10].

My new contribution to the economic growth theory, which I have presented[11] is that I have added r2 to the economic growth equation. Using such equation, a nation can increase labor productivity by controlling the factors, which prevent or reduce labor productivity growth rate. Because as a nation builds up more and more capital stock and advanced technology, the concern or need of how it can use its capital, technology, and labor (and other factors) to the fullest potential will grow and become critical. (Some technology may be over-utilized unnecessarily to create a good impression, or some

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[7] See Paul Kim, "A New Economic Growth Theory: An Obstacle to Economic Growth," http://scholarspace.jccc.edu.econpapers/4 or Google.
[8] See Paul Kim, "Right Perspective for U.S. Economic Growth Rate," http://scholarspace.jccc.edu.econpapers/8 or Google.
[9] See, Paul Kim, "A New Economic Growth Theory: An Obstacle to Economic Growth," http://scholarspace.jccc.edu.econpapers/4 or Google.
[10] See Paul Kim, "Right Perspective for U.S. Economic Growth Rate," http://scholarspace.jccc.edu.econpapers/8 or Google.
[11] See, Paul Kim, "A New Economic Growth Theory: An Obstacle to Economic Growth," http://scholarspace.jccc.edu.econpapers/4 or Google. See also "Right Perspective for U.S. Economic Growth Rate," http://scholarspace.jccc.edu.econpapers/8 or Google

capital may be underutilized for the same reason, because creating good impression is the result of activities of redistribution of power and income.) For an underdeveloped country, this is less of a concern than for developed nations

I have used r2 to point out the fact that the activities of the redistribution of power and income, which would become prevalent once a nation becomes economically advanced, must be properly controlled (or minimized) in order to achieve rapid economic growth. In my recent paper[12], labor mobility was highlighted to pay attention to r2. In my first paper[13] in this topic, the "motivational elements" were discussed to pay attention to r2. Even though a new kind of technology or an advanced level of technology is available, unless a nation has motivational elements, such technology would not be utilized to the fullest potential. The motivational elements indicate the degree to which maximum potentials of technology and labor (and other factors) are utilized. The motivational elements are adversely impacted by activities of redistribution of power and income. If a nation is busy or the people of a nation are busy in carrying out their activities of redistribution of power and income, the maximum potential of technology and other factors would not be utilized.

Today, it is fashionable to talk about why the economic growth rate is declining among all advanced nations. A clear answer is not given because they all pay attention only to r1. In order to discover the answer to the above question, we must pay attention to r2. R1 is the important topic for a nation growing in its early stage. However, once nations move into the aging stage, by looking at r2 we can discover the real nature of its decline in economic growth rate (to less than 3 %). Because more and more capital and technology are built up, the abundance of such capital and technology creates an opportunity to redistribute its wealth, which could become obstacles to the long-run economic growth. What intended to be good (when a nation builds up capital and technology) is causing harm to it or to become obstacles to economic growth at the latter stage or aging stage, although it did make the nation to prosper at the beginning stage and building up stage.

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[12] See Paul Kim, "Right Perspective for U.S. Economic Growth Rate," http://scholarspace.jccc.edu.econpapers/8 or Google.
[13] Paul Kim, "A New Economic Growth Theory: An Obstacle to Economic Growth," http://scholarspace.jccc.edu.econpapers/4 or Google.

References

Kim, Paul "Studies of Economic Development,"
http://scholarspace.jccc.edu.econpapers/3 or Google.

Kim, Paul "A New Economic Growth Theory: An Obstacle to Economic Growth,"
http://scholarspace.jccc.edu.econpapers/4 or Google.

Kim, Paul "An Economic Theory in Action in Asia,"
http://scholarspace.jccc.edu.econpapers/5 or Google

Kim, Paul "Right Perspective for U.S. Economic Growth Rate,"
http://scholarspace.jccc.edu.econpapers/8 or Google

Mankiw, N. Gregory, Macroeconomics, 4th ed., Ch. 4 and 5, Worth Publishers.

Romer, Paul, "Increasing Returns and Long-Run Growth, "Journal of Political Economy, October 1986, pp.1002-1037.

Romer, Paul, "The Origins of Endogenous Growth," Journal of Economic Perspective, Winter 1994, pp. 3-22.

Solow, Robert M., "A Contribution to the Theory of Economic growth," Quarterly Journal of Economics, February 1956, pp.65-95.

Young, Alwyn "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience," Quarterly Journal of Economics, August 1995, pp. 641-680.