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Income inequality and economic incentives: Is there an equity–efficiency tradeoff?

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ABSTRACT

What is the basis and direction of relationship between income inequality and economic growth? The *equity versus efficiency* dictum which predicts a positive relationship between inequality, capital formation, and real GDP growth—emphasizes the importance of economic incentives. Subsequently, this was challenged by the *incomplete markets* and *political outcomes* theories, because of increasing empirical evidence of an inverse relationship between income inequality and economic growth. In this paper, we offer a further explanation of the basis and nature of the inequality–capital–growth relationship which emphasizes the divergence between savings and investment. For the United States over the period 1970–2006, we have found no empirical evidence for the support of the *equity versus efficiency* hypothesis—that economic incentives are necessary for capital accumulation and growth. In fact, it was discovered that in most cases, inequality has had little or no impact on movements in the US capital stock, net investment, and consequently, economic growth. Another interesting finding of this study was that inequality exhibits hysteresis—implying that any positive shock, such as the dot-com boom, can lead to persistent and enduring increases in inequality.

1. Introduction

Can we have less inequality without reducing prosperity in the United States? In the US, the public finance literature has primarily focused on the measurement of "efficiency losses" associated with government programs and policies. According to Okun (1975), the efficiency cost of income redistribution or economic regulations may be large enough to result in less national income. Thus, the argument is that although inequality may be reduced, everyone will be worse-off because there would be less entrepreneurial-type or rent-seeking behavior and diminished labor/capital productivity-resulting in a lower standard of living.

From 1990 to 2000, the United States has exhibited a high rate of economic growth (3.3%) as compared to other industrialized nations, and contemporaneously the greatest increase in inequality since the late 1970s. In contrast, many East Asian economies in the post-World War period experienced relatively low levels of inequality (for countries of comparable income levels), yet grew at extraordinary rates and many Latin American countries had higher levels of inequality and grew at a fraction of the average East Asian rate. These phenomena prompted an interest in the relationship between inequality and growth, and in particular to a conundrum regarding the correlation between inequality and economic growth: what is the direction of relationship between inequality and economic growth? There is ample lip service paid to the disincentives and/or inefficiencies associated with redistribution and the resultant adverse effect on economic growth

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in popular media writings.[1] The notion that higher inequality is both a necessary and sufficient condition for increasing economic growth appears to be an uncontested truth. On the other hand, in contrast to the positive relationship posited by the equity–efficiency approach, a number of studies in the academic literature have found an inverse and statistically significant relationship between inequality and economic growth (Barro and Xavier, 1995). The theoretical construct behind these approaches is grounded in the notion that greater inequality either stimulates or discourages ''productive investment'' (depending on the policy involved) and ultimately GDP.[2] In this paper, a Keynesian *raison d'etre* will be offered as an alternative explanation of the relationship between inequality and a country's capital stock. Following this, the association between inequality and capital investment in the United States between 1970 and 2006 will be examined by using a time series approach incorporating both the effect of inequality on net investment (short-run) and capital formation (long-run). It is important to note that although policies changing inequality may also affect the labor market, only the impact on capital productivity will be studied here.[3]

2. Theory

In a perfectly competitive market, there would be no impact of inequality on productivity. The only relationship that may exist would result from policy attempts that influence inequality and also distort incentives. For example, a more progressive tax system would reduce inequality, but may also create a ''deadweight'' loss and diminish work-effort.[4] Okun (1975) has discussed the tradeoffs associated with equity and efficiency – a policy imposing more redistribution or less inequality may generate less national income – resulting in a positive relationship between inequality and economic growth.

In the 1990s, this view was challenged as a result of increasing cross-country empirical evidence of a negative relationship between income inequality and economic growth (Persson and Tabellini, 1994; Alesina and Rodrik, 1994; Deininger and Squire, 1996). The existence of this inverse relationship has led to the development of a number of theories to explain the empirical evidence. One is known as *incomplete markets*, which affirms that an impact (not induced) of inequality on productivity can only arise when there is market failure. This approach emphasizes the role of borrowing constraints and externalities in generating the observed negative relationship between inequality and growth. When there are decreasing returns to capital and credit rationing, the aggregate level of output may be affected by its distribution (Stiglitz, 1969). Credit rationing occurs when there exist individuals who could profitably invest borrowed funds and repay with interest, but lenders are unwilling to lend to them in full. When this market failure arises, it drives productive borrowers out of the loan market leading to an inefficient allocation of resources, underinvestment, and reduced productivity. In this approach, the poor are prevented from choosing the most productive activity available given their skills, because imperfect information and incomplete contracts cause a credit market failure. Loans that would have been good are not made, and applicants that are turned down remain poorer than they would otherwise be.

The political process also can explain the relationship among inequality, government policy, and economic growth. Political outcomes determining government policy are endogenous to the distribution of income and rational economic agents vote for or against tax policies which have redistributive consequences. Greater inequality would result in higher tax rates since a larger proportion of voters will favor redistributive policies. As a result, the after-tax return of capital is reduced, thus diminishing investment and economic growth (Bertola, 1991; Alesina and Rodrik, 1994; Persson and Tabellini, 1992, 1994). This approach also predicts a negative relationship between inequality and economic growth.

There is another way which changes in inequality can have little or no impact on economic growth through the capital markets (other than the aforementioned trivial case of a competitive market without government intervention). The equity–efficiency approach emphasizes the importance of *incentives*. For example, according to this argument, if tax rates for the rich are reduced, the argument is that this should create incentives for the rich to save and invest more, increasing the demand for capital goods, and thus expanding economic growth. Of course, this ''trickle-down'' depends in large part upon the linkage between inequality, savings, investment, the capital stock, and GDP. But a policy that augments inequality and concomitantly the savings of the rich may indeed result in little or no increase in net investment spending. This would result from any one (or both) of the following reasons: (1) since the decisions of savers and investors are essentially separate and distinct from one another, there is no reason to expect that additional savings will generate the requisite amount of investment spending in the economy, due to liquidity concerns[5]; and (2) even if the savings and investment of the rich increased, the investment schedule may be interest inelastic—responding more to changes in income than fluctuations in the interest rate. Consider the following empirical finding by Kopcke (1993),

> *Because all the models (in this study), either implicitly or explicitly, stress that investment is undertaken in anticipation of profit, the prospect of a greater demand for output is a principal spur for capital spending.*

1 See Roger Lowenstein, *The Inequality Conundrum, How can you promote inequality without killing off the genie of American prosperity?* The New York Times Magazine, 10 June 2007, pp. 11–14.

2 ''Productive investment'' is defined as real net investment in physical capital goods.

3 These would be the policies pronounced by the supply-siders in the 1980s, such as the Laffer Curve which professed increased work-effort (with an upward-sloping and elastic labor supply) when tax rates were reduced.

4 Of course, this depends upon the elasticity of labor demand and supply.

5 John Maynard Keynes, *The General Theory of Employment, Interest, and Money*, First Harvard, Harcourt, Inc.: 1936.