



Wealth and income distribution: New theories needed for a new era

Ravi Kanbur, Joseph Stiglitz 18 August 2015

Growth theories traditionally focus on the Kaldor-Kuznets stylised facts. Ravi Kanbur and Nobelist Joe Stiglitz argue that these no longer hold; new theory is needed. The new models need to drop competitive marginal productivity theories of factor returns in favour of rent-generating mechanism and wealth inequality by focusing on the 'rules of the game.' They also must model interactions among physical, financial, and human capital that influence the level and evolution of inequality. A third key component will be to capture mechanisms that transmit inequality from generation to generation.

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Six decades ago, Nicholas Kaldor (1957) put forward a set of stylised facts on growth and distribution for mature industrial economies. The first and most prominent of these was the constancy of the share of capital relative to that of wealth in national income. At about the same time, Simon Kuznets (1955) put forward a second set of stylised facts -- that while the interpersonal inequality of income distribution might increase in the early stages of development, it declines as industrialised economies mature.

These empirical formulations brought forth a generation of growth and development theories whose object was to explain the stylised facts. Kaldor himself presented a growth model which claimed to produce outcomes consistent with constancy of factor shares, as did Robert Solow. Kuznets also developed a model of rural-urban transition consistent with his prediction, as did many others (Kanbur 2012).

Kaldor-Kuznets facts no longer hold

However, the Kaldor-Kuznets stylised facts no longer hold for advanced economies. The share of capital as conventionally measured has been on the rise, as has interpersonal inequality of income and wealth. Of course, there are variations and subtleties of data and interpretation, and the pattern is not uniform. But these are the stylised facts of our time. Bringing these facts centre stage has been the achievement of research leading up to Piketty (2014).

It stands to reason that theories developed to explain constancy of factor shares cannot explain a rising share of capital. The theories developed to explain the earlier stylised facts cannot very easily explain the new trends, or the turnaround. At the same time, rising inequality has opened once again a set of questions on the normative significance of inequality of outcomes versus inequality of opportunity. New theoretical developments are needed for positive and normative analysis in this new era.

What sort of new theories? In the realm of positive analysis, Piketty has himself put forward a theory based on the empirical observation that the rate of return to capital, r , systematically exceeds the



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rate of growth, g ; the famous $r > g$ relation. Much of the commentary on Piketty's facts and theorising has tried to make the stylised fact of rising share of capital consistent with a standard production function $F(K, L)$ with capital 'K' and labour 'L'. But in this framework a rising share of capital can be consistent with the other stylised fact of rising capital-output ratio only if the elasticity of substitution between capital and labour is greater than unity, which is not consistent with the broad empirical findings (Stiglitz, 2014a). Further, what Piketty and others measure as wealth 'W' is a measure of control over resources, not a measure of capital K, in the sense that that is used in the context of a production function.

Differences between K and W

There is a fundamental distinction between capital K, thought of as physical inputs to production, and wealth W, thought of as including land and the capitalised value of other rents which give command over purchasing power. This distinction will be crucial in any theorising to explain the new stylised facts. 'K' can be going down even as 'W' increases; and some increases in W may actually lower economic productivity. In particular, new theories explaining the evolution of inequality will have to address directly changes in rents and their capitalised value (Stiglitz 2014). Two examples will illustrate what we have in mind.

- Consider first the case of all sea-front property on the French Riviera.

As demand for these properties rises, perhaps from rich foreigners seeking a refuge for their funds, the value of sea frontage will be bid up. The current owners will get rents from their ownership of this fixed factor. Their wealth will go up and their ability to command purchasing power in the economy will rise correspondingly. But the actual physical input to production has not increased. All else constant, national output will not rise; there will only be a pure distributional effect.

- Consider the case where the government gives an implicit guarantee to bail out banks.

This contingent support to income flows from ownership of bank shares will be capitalised into the value of these shares. Of course, there is an equal and opposite contingent liability on all others in the economy, in particular on workers -- the owners of human capital. Again, without any necessary impact on total output, the political economy has created rents for share owners, and the increase in their wealth will be reflected in rising inequality. One can see this without going through a conventional production function analysis. Of course, the rents once created will provide further resources for rentiers to lobby the political system to maintain and further increase rents. This will set in motion a spiral of increasing inequality, which again does not go through the production system at all -- except to the extent that the associated distortions represent a downward shift in the productivity of the economy (at any level of inputs of 'K' and labour).

Analysing the role of land rents in increases in inequality can be done in a variant of standard neoclassical models -- by expanding inputs to include land; but explaining increase in inequality as a result of an increase in other forms of rent will need a theory of rents which takes us beyond the competitive determination of factor rewards.

Differences in inequality: Capital income versus labour income

The translation from factor shares to interpersonal inequality has usually been made through the assumption that capital income is more unequally distributed than labour income. Inequality of capital ownership then translates into inequality of capital income, while inequality of income from labour is assumed to be much smaller. The assumption is made in its starkest form in models where there are owners of capital who save and workers who do not.

These stylised assumptions no longer provide a fully satisfactory explanation of income inequality because: (i) there is more widespread ownership of wealth through life cycle savings in various forms including pensions; and (ii) increasingly unequal returns to increasingly unequally distributed human capital has led to sharply rising inequality of labour income.

Sharply rising inequality of labour income focuses attention on inequality of human capital in its most general sense:

- Starting with unequal prenatal development of the foetus;
- Followed by unequal early childhood development and investments by parents;

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- Unequal educational investments by parents and society; and
- Unequal returns to human capital because of discrimination at one end and use of parental connections in the job market at the other end.

Discrimination continues to play a role, not only in the determination of factor returns given the ownership of assets, including human capital; but also on the distribution of asset ownership.

- At each step, inequality of parental resources is translated into inequality of children's outcomes.

An exploration of this type of inequality requires a different type of empirical and theoretical analysis from the conventional macro-level analysis of production functions and factor shares (Heckman and Mosso, 2014, Stiglitz, 2015).

In particular, intergenerational transmission of inequality is more than simple inheritance of physical and financial wealth. Layered upon genetic inequalities are the inequalities of parental resources. Income inequality across parents, due to inequality of income from physical and financial capital on the one hand, and inequality due to inequality of human capital on the other, is translated into inequality of financial and human capital of the next generation. Human capital inequality perpetuates itself through intergenerational transmission just as wealth inequality caused by politically created rents perpetuates itself.

Given such transmission across generations, it can be shown that the long-run, 'dynastic' inequality will also be higher (Kanbur and Stiglitz 2015). Although there have been advances in recent years, we still need fully developed theories of how the different mechanisms interact with each other to explain the dramatic rises in interpersonal inequality in advanced economies in the last three decades.¹

High inequality: New realities and old debates

The new realities of high inequality have revived old debates on policy interventions and their ethical and economic rationale (Stiglitz 2012). Standard analysis which balances the tradeoff between efficiency and equity would suggest that taxation should now become more progressive to balance the greater inherent inequality against the incentive effects of progressive taxation (Kanbur and Tuomala, 1994).

One counter argument is that what matters is not inequality of 'outcome' but inequality of 'opportunity'. According to this argument, so long as the prospects are the same for all children, the inequality of income across parents should not matter ethically. What we should aim for is equality of opportunity, not income equality. However, when income inequality across parents translates into inequality of prospects across children, even starting in the womb, then the distinction between opportunity and income begins to fade and the case for progressive taxation is not undermined by the 'equality of opportunity' objective (Kanbur and Wagstaff 2015).

Concluding remarks

Thus, the new stylised facts of our era demand new theories of income distribution.

- First, we need to break away from competitive marginal productivity theories of factor returns and model mechanisms which generate rents with consequences for wealth inequality.

This will entail a greater focus on the 'rules of the game.' (Stiglitz et al 2015).

- Second, we need to focus on the interaction between income from physical and financial capital and income from human capital in determining snapshot inequality, but also in determining the intergenerational transmission of inequality.
- Third, we need to further develop normative theories of equity which can address mechanisms of inequality transmission from generation to generation.²

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Footnotes

1 For early discussions of such transmission processes, see Stiglitz(1969) and Bevan and Stiglitz (1979).

2 Developments in this area are exemplified by Roemer and Trannoy (2014).

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