## N. GREGORY MANKIW TRIES TO DISCREDIT PIKETTY

In this paper, titled Yes, r > g. So What?. N. Gregory Mankiw tries to show that Thomas Piketty is wrong that if r > g wealth will accumulate in the hands of a tiny number of rich people. It's short and easy on the math, perhaps because it was part of a symposium rather than a standalone paper. For comparison, take a look at this by Piketty and Gabriel Zucman, which requires more than a passing familiarity with math. It seems unlikely that Mankiw had read this paper before he cranked out his, because Piketty addresses the issues Mankiw raises.

Mankiw makes three arguments. First, he says we need to have r > g. Second, he claims that the generational changes and taxation will prevent dynastic wealth. Third, he disagrees with Piketty's solution which is a wealth tax. Let's take them in turn.

1. The idea that r, the rate of return to capital, is greater than g, the rate of growth of the economy, is common in mainstream economic theory.

If the rate of return is less than the growth rate, the economy has accumulated an excessive amount of capital. In this dynamically inefficient situation, all generations can be made better off by reducing the economy's saving rate. From this perspective, we should be reassured that we live in a world in which r > g because it means we have not left any dynamic Pareto improvements unexploited.

Mankiw's standard is whether the economy can produce Pareto Improvements, meaning an improvement in the wealth of one or more people that doesn't reduce the wealth anyone else. Mankiw simply ignores the fact that fabulous wealth carries with it the ability to influence the political process to extract more wealth, which is what Piketty says. Surely Mankiw isn't arguing that won't happen, because it does. Take, for example, the pharmaceutical industry where the business model is to increase prices with no additional benefit to anyone.

Then look at his cure. How exactly will the bottom 60% benefit by saving less? They won't, because they are barely saving. They cannot come up with \$400 to fix a car. Most of the rest wouldn't be able to save less; they need to save for retirement, and to pay what their kids can't make in this rotten economy. What Mankiw means is that the very top, the .1%, would have to spend a lot more, But what are they going to buy? Expensive trips on private jets? Van Gogh paintings? That isn't going to help the economy or make anyone's life better. The fact is that this argument points directly to the need to hike taxes on the idle money of the rich.

2. Mankiw's second argument is an effort to show that taxes and generational changes will decrease dynastic wealth. Mankiw doesn't confront the detailed argument Piketty makes on those very points. I introduce it here, and link to the detailed argument for those interested. Instead, Mankiw offers a simple model that proves his point, and could be understood by anyone who read his introduction to economics textbook; for typographical reasons, subscripts are not used for cw and ck

To oversimplify a bit, let's just focus on this economy's steady state. Using mostly conventional notation, it is described by the following equations. (1)  $CW = W + \tau k$ (2)  $ck = (r - \tau - g)nk$ (3) r = f'(k)(4) w = f(k) - rk(5)  $g = \sigma(r - \tau - \rho)$ ,

where cw is consumption of each worker, ck is the consumption of each capitalist, w is the wage, r is the (before-tax) rate of return on capital, k is the capital stock per worker, n is the number of workers per capitalist (so nk is the capital stock per capitalist), f(k) is the production function for output (net of depreciation), g is the rate of labor-augmenting technological change and thus the steady-state growth rate,  $\sigma$  is the capitalists' intertemporal elasticity of substitution, and  $\rho$  is the capitalists' rate of time preference. Equation (1) says that workers consume their wages plus what is transferred by the government. Equation (2) says that capitalists consume the return on their capital after paying taxes and saving enough to maintain the steady-state ratio of capital to effective workers. Equation (3) says that capital earns its marginal product. Equation (4) says that workers are paid what is left after capital is compensated. Equation (5) is derived from the capitalists' Euler equation; it relates the growth rate of capitalist's consumption (which is g in steady state) to the after-tax rate of return.

Note that we didn't get a definition of the symbol  $\tau$ , which in conventional notation means taxes. As we learn a couple of paragraphs down, Mankiw means not general taxes, but taxes on returns to capital. As he tells us, all the money from taxes is consumed by the workers (equation (1)), that is, the total amount of taxes on capital is transferred directly, in the form of grants or indirectly in the form of services, to wage-earners and none of it is consumed by the capitalists. in the real world, capitalists consume a great deal of the expenditure on taxes, whether the taxes are on capital or income or otherwise. Obviously we

need to put a non-trivial number into equation (2) to show that capitalists consume a portion of the taxes, and make an appropriate modification to equation (1) if we want this model to make minimal contact with the real world.

Mankiw says that in this model, there is no steady increase in inequality.

In this economy, even though r > g, there is no "endless inegalitarian spiral." Instead, there is a steadystate level of inequality. (Optimizing capitalists consume enough to prevent their wealth from growing faster than labor income.)

This outcome was baked into the model with equation (2). If instead, we assume the same equations, but add a non-trivial number to equation (2), then the capitalist accumulates that non-trivial amount each year, and wealth inequality increases naturally even in his steady-state economy.

Also baked into this model is the remarkable idea that "capital earns its marginal product" and the rest of the money is paid out in wages. That's just so far from reality that it makes the whole exercise pointless. But it enables Mankiw to justify rejecting Piketty's recommendation of high wealth taxes. Mankiw explains that if the government wants to protect capital, it pushes the tax on capital into negative numbers, and the capitalists will push wages to subsistence level. But,

> Taxing capital and transferring the proceeds to workers reduces the steadystate consumption of both workers and capitalists, but it impoverishes the capitalists at a faster rate.

Taxing returns to capital hurts everyone in this model. Of course, if capitalists are taxed at the rate of their actual consumption of tax

receipts, the non-trivial amount that should be added to equation (2), then you would get Mankiw's desired outcome of a non-increasing inequality. Or you could go a bit higher, and start reducing inequality without resort to his suggestion of a consumption tax.

Mankiw's sterile model doesn't explain the facts documented by Piketty and his colleagues, but it does demonstrate nicely the state of mainstream economics. Obviously the American Economic Association wanted a paper from Mankiw challenging Piketty, no matter its quality. Mankiw is an established figure, and thus the beneficiary of the social structure of the field described by Marion Fourcade and her colleagues in the section of this paper headed Inequality Within, p. 96,

> Second, we document the pronounced hierarchy that exists within the discipline, especially in comparison with other social sciences. The authority exerted by the field's most powerful players, which fosters both intellectual cohesiveness and the active management of the discipline's internal affairs, has few equivalents elsewhere.