HAS *CAPITAL IN THE TWENTY-FIRST CENTURY* CHANGED ANYTHING?

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What is new in Thomas Piketty's book? The empirical data on trends in inequality are an enormous achievement, but they have been in the public arena for some time.[1] It is useful to have them compiled in one place; but it is common knowledge that income and wealth inequality has been rising for a couple of decades, that the top 1 per cent have been gaining hugely, and that corporate senior management incomes have gone into the stratosphere for reasons that are unclear.

Nor are Piketty's policy suggestions in Part 4 of the book new – wealth taxes, inheritance and gift taxes are all well-established ideas. These taxes played a major (though not singular) role in creating and sustaining the egalitarian era of the mid-twentieth century. In putting them back at the top of the policy agenda Piketty has plenty of company.[2]

None of this, however, is what *Capital* is really about. In the world of professional economics Piketty's book is a bombshell, promising a Kuhnian scientific revolution[3] – an intellectual breakthrough towards a unifying theory that can resolve accumulated puzzles from the past century's work in mainstream theory.[4]

INCOME AND WEALTH DISTRIBUTION

Economists have generally thought of the distribution of income as some sort of shifting equilibrium, such as:

- An unchallenged ruling class appropriating to itself the maximum share of income consistent with maintaining the sustainability of the economy (roughly speaking this is the Ricardian and Marxian position).
- The outcome of a contest amongst contending class forces, reflecting the balance of market power they are able to wield (the neo-Ricardian view).
- A mutually advantageous bargain amongst free and equal participants in the productive economy in which each player is paid its just share on the basis of its productive contribution (the neoclassical view).

The classical economists of the eighteenth and nineteenth centuries developed theories in which capitalists owned the productive enterprises, collected the revenues from sale of the product, and paid as little as possible for the two essential productive inputs – labour and land – taking as profit all revenues remaining after these payments of wages and rent. Profit was thus kept distinct from rent, and classical economists following the nineteenth-century British economist David Ricardo explained the profit share through the determination of wages and rent,[5] with output assumed to be at the maximum level attainable with given resources.

Labour must be fed, so the wage, according to classical theory, must be enough to support the required number of workers. The 'iron law of wages' held that the wage would therefore settle at subsistence. The owners of 'land' must be paid rent to make it available to capitalists; in a growing economy with fixed natural resources, rents would rise over time to command a growing share of the product. Profit would thus be progressively squeezed by rising rent as the economy expanded, eventually bringing accumulation to a halt.

For Karl Marx, another nineteenth-century classical economist, land scarcity had ceased to be a central concern, partly because imports of primary commodities from global frontiers (including New

Zealand) capped the rents on European land.[6] With rent set aside, profit was whatever revenue capitalists retained after paying their labour force; the profit rate would fall with diminishing marginal product as capital accumulated, which could be offset only by increased exploitation of labour. The falling profit tendency and growing worker resistance would ultimately doom the entire capitalist system, Marx thought, because it was not capable of a stationary state.[7]

The social-democratic (or neo-Ricardian) model of distribution was a revised version of the classical story, with the division of the product between capital and labour determined by a balance of countervailing forces. According to this model, weakening of the labour movement (such as has taken place in the last three decades in New Zealand) lowers the wage share and raises the capital share. Conversely, arrangements such as compulsory unionism and an award system for wage setting (as seen in New Zealand from the 1890s to the 1970s) can shift the distribution in labour's favour. Overlaid on this balance of forces, the social-democratic institutions of the welfare state redistribute incomes from rich to poor sections of the community – both capital and labour – by taxes and transfers.

Piketty's model absorbs and transforms those classical and social-democratic stories, while

unifying them with key elements of neoclassical growth theory.

In neoclassical theory, each factor of production – labour, capital, land – receives a 'just' reward equal to its marginal product, and competitive market forces impersonally allocate the product on that basis. Thus one thinks of labour as being employed up to the point where the next worker hired would contribute less to the value of the product than the cost of his or her wages. The same comparison of marginal (incremental) contribution to the product and the cost of hiring additional units applies equally to capital (conceived of as physical machinery, buildings, etc.), land and technology (such as patents). This idea of an economy in which reward is linked directly to productive contribution at the margin remains the core of neoclassical economists' defence of prevailing market outcomes. The neoclassical paradigm instinctively expects market forces to have an equalising effect, though if required, redistributive taxes and transfers can bring the after-tax distribution of disposable income into line with whatever social norms prevail.

In the long run, according to neoclassical theory, the economy grows at a rate determined by population growth and technical progress, neither of which can be explained by the theory itself.[8] Piketty treats this as a key 'stylised fact' of capitalist growth, which enables him to assume that production will grow at a steady pace of 2–3 per cent per year with no need to attribute growth to particular identifiable factors of production. This exogenous growth rate is his parameter g. Accumulation of physical capital can push up the *level* of income at each point in time, but not its long-run growth rate.

PIKETTY'S APPROACH

Piketty abandons the neoclassical idea that the overall income distribution is determined by an economy-wide 'production function', revealed through markets that pay rewards to labour, capital and land according to their marginal products. Instead, in Piketty's story, production trundles along at its annual growth rate of g while the rights of various groups in the community to shares of the product are determined by the economy's social and institutional architecture.[9]

Piketty divides the population into two groups: those with wealth and those without. Wealth in general he labels 'capital'. To own 'capital' is to be in possession of any asset that confers the right to collect a flow of income that is not directly and continually tied to human effort (such as to labour).[10] The rights of the owners of capital to: (i) hold it; (ii) pass it on by inheritance or gift; and (iii) collect a regular rate of return on it, enforceable

under law, are fundamental – a capitalist economy is one in which these property rights are entrenched.

Thus 'capital', for Piketty, is not a physical means of production. It is a social construct: a claim on society's income embodied in legally enforceable property rights, which entitle the owners to step into the marketplace and appropriate to themselves a pre-specified slice of the social product. The rest of the population then share out what's left – possibly, but not necessarily, on the basis of relative 'productive contributions'.

Capital's claim on the social product in each period is determined by the size of the national wealth portfolio times the rate of return on capital (r). Piketty assumes a stable 'rate of return on capital', of around 4–5 per cent, higher than the long-run growth rate. He treats this inequality ($r > g$) as an empirically observed fundamental law of capitalism. Just as g of around 2 per cent is what we see in the data, similarly the rent yield from wealth is derived not by logical deduction from first principles,[11] but from historical experience. 'To my way of thinking', Piketty says, 'the inequality $r > g$ should be analysed as a historical reality dependent on a variety of mechanisms and not as an absolute logical necessity.'[12] He goes on, 'in practice ... there appears never to have been a society in which the rate of return on capital fell naturally and persistently to less than 2–3 per cent, and the mean return we generally see (averaging over all types of investments) is generally closer to 4–5 per cent (before taxes).'[13]

By virtue simply of their ownership and control of legally enforceable rights to charge others for the ability to operate in the modern economy, the holders of Piketty's 'capital' collect a rent share of the product, constrained only by the fact that they don't and can't own *everything*. Most importantly, they can't own people: under capitalism the labour force, without which there is no product, is free.

'Labour', in Piketty's book, is any human effort put into producing things or supplying human needs, whether the worker is a humble cleaner or a company CEO. When labour is highly paid, the relevant individual is able to acquire wealth. Once acquired, that wealth confers the right to collect future rents. Thus, for an active entrepreneur in their prime, their income represents a direct reward to effort; in old age, living off rents from a wealth portfolio, 'the entrepreneur inevitably tends to become a rentier'.[14] Any of the accumulated fortune remaining at the end of the individual's life passes to heirs who become members of a patrimonial class of rentiers whose income flows from exercise of a property right with no need to work, and who have come into possession of that right by no merit of their own but simply because they belong to what Warren Buffet has called the 'lucky sperm club'.

When Piketty says that 'rent is a reality in any market economy where capital is privately owned',[15] he is referring to an economy in which the productive effort of the mass of the population is exercised subject always to the overriding claim of rentiers to collect their rents, so long as no shock disturbs the enjoyment of their wealth by the wealthy: no revolutions, taxes, wars, natural disasters. Over time the composition of wealth can change: eighteenth century portfolios were dominated by rural land whereas twentieth-century ones comprised mainly urban real estate, company shares and other financial assets. Each of these assets has a market value, and adding them together gives the monetary value of aggregate wealth, which in turn can be compared with the monetary value of the social product, part of which (the rent share) is appropriated by the owners of wealth (capital).

To track production, capital and rents over time, Piketty measures everything in 'income-years'.[16] Each year's production is equal to itself (its value is one) while capital in that year is some multiple of production (Piketty labels this β – a magnitude long familiar in the economic growth literature as the capital:output ratio). Similarly, the rental return on capital is some fraction of production, which Piketty labels α. A simple equation shows the share of rents in total national income: $\alpha = r \times \beta$.

If wealth ('capital') is equal to one year's annual income and $r = 5$ per cent then the share of each year's income appropriated by wealth-holders is 5 per cent. If wealth is five years' income, then the rent share is 25 per cent. If wealth is ten times income then the rent share is 50 per cent. If there were no limits to capital accumulation, then this equation would allow 100 per cent of the nation's income to go to wealth-holders and nothing at all to the rest.

Piketty's key insight is that there is a limit to the accumulation of a nation's wealth relative to its income – effectively, an equilibrium level of inequality, given that capital is held by a small group within society. Setting aside gains from revaluation, capital accumulation is driven by net saving,[17] which seems to be a fairly constant fraction of national income – around 12 per cent as a rough order of magnitude.

A net savings rate of 12 per cent of income means that 0.12 income-years are being added to capital each year. If capital is less than 6 income-years it will be growing faster than income; for example, if capital is 5, then it will be growing at a rate of 0.12/5 = 2.5 per cent > 2 per cent, which means the capital:income ratio will be rising. Conversely if capital is above 6 income-years the capital:income ratio will be falling. If capital is 6, it will be at a long-run, sustainable, equilibrium. The equation

describing this equilibrium is $\beta = s/g$, which is familiar in the economic growth literature as the general relationship among the growth rate, the savings rate (s) and the capital:income ratio. Piketty's contribution is to realise that if g and s are exogenously given, the capital:income ratio is thereby determined, which in turn determines the size of the economy's capital relative to its total income, and hence the share of the product that is appropriated by the owners of capital.

With wealth equal to six years of income, if $r = 5$ per cent rents will take 30 per cent of income, leaving 70 per cent for the non-wealth-owning population. Raising the savings rate will not affect the growth rate, but will increase the share of output going to capital. Raising the growth rate will reduce long-run inequality, and cutting the growth rate will lead to a more unequal distribution, so long as capital is owned privately by a small group rather than in common by the whole population.

THE MATTHEW PRINCIPLE

How, then, is the stock of wealth, and the associated right to collect rent, distributed across the population?[18] Here Piketty adds another proposition: the richest people with the largest chunks of capital get the highest rate of return – possibly double what the low-level wealth-holders can get – because larger fortunes can be managed more easily as well as more aggressively. They can therefore outbid others in the market for assets. That implies a cumulatively rising share of capital owned by the 1 per cent at the very top of the wealth pyramid. Simply leaving the logic of the free market economy to work without restraint, Piketty argues, will produce a society with a super-rich patrimonial elite owning the lion's share of the total wealth, and wielding the political power to go with it.

POLICY IMPLICATIONS

One obvious way to halt the trend towards oligarchy is to bring *r* down while offsetting in some way the special advantages of the super-rich. Here a progressive wealth tax comes in. If *r* is 5 per cent and the wealth tax is a flat 2 per cent per year, this brings the after-tax *r* down to 3 per cent. Narrowing the gap between *r* and *g* would slow down the rate at which top wealth, and hence top incomes, can grow, forestalling the concentration of wealth, income and power. (This, Piketty suggests, was what happened for a while in the twentieth century.) If larger fortunes command higher rates of return, then the wealth tax should be progressive.[19] This wealth/capital tax is not a punitive assault on the rich, but simply a way of keeping the endogenous dynamics of the market economy under control for the benefit of democracy.

What if there is no capital tax? Then, Piketty argues, the resulting social order could well become one that 'would not be tolerated indefinitely' – though it is unclear what determines the limits of social toleration.[20] The patrimonial elite of super-rich individuals may be able to purchase, or gain by persuasion, the consent of the majority of the population, in which case no revolutionary prospect would open up. Piketty does not develop this theme but it hangs over the book as a giant question mark.

If Piketty is right about the underlying distributional laws of capitalism but his wealth tax proposal is not politically feasible, then the alternative to a consolidated oligarchic order would eventually have to be expropriation of wealth – 'euthanasia of the rentier' – by some means other than his tax suggestions. Piketty does not pose as a successor to Marx, but the policy implications of his theories become more radical to the extent that his proposed moderate remedies are rejected as impractical.

The welfare state arose from the social-democratic proposition that workers' rights, taxes and transfers could ameliorate the condition of the majority of the population sufficiently to forestall the revolutionary overthrow of capitalism envisaged by nineteenth-century Marxian socialists. As the welfare state comes under frontal assault from neoliberalism, the Piketty model paints a trajectory that breathes new life into the old socialist agenda. A lot hinges, therefore, on whether his theory stands up to the inevitable flood of new research and empirical testing.

What are the key take-aways for a New Zealand reader? First there is a sea-change coming in the global intellectual climate, and New Zealand will as usual be swept along with it. Most economic policy ideas in this country are imported from the United Kingdom, United States and occasionally Australia, often with little adaptation to local conditions. One may dream of an autonomous local policy realm, but the reality is that the New Zealand policy elite's embedded neoliberalism is threatened more by changing overseas thinking than by the efforts of neoliberalism's critics here. Piketty's impact on the economics profession worldwide will help open the way for alternative policy thinking to gain traction in New Zealand.

Second, Piketty's data help New Zealanders to locate themselves in the global picture, as part of the Anglo-Saxon pattern of steeply rising inequality since 1980, but still one of the less-unequal Anglo economies. The continental Europeans and the developed Asian economies have been more resistant to the Piketty capitalist dynamics, the Scandinavians most dramatically so.

Third, New Zealand is an open economy in terms of the ownership of wealth; many assets are owned offshore, and many New Zealand wealth owners hold part of their portfolio offshore. A large component of the rents secured within New Zealand actually flow overseas, which limits the rate at which wealth accumulates within New Zealand. The taxation of rents and wealth, and other moves to expropriate rentiers, therefore, have an international dimension that makes policy even more difficult than in the core capitalist economies.