Critiques of Capital in the Twenty-First Century

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Introduction

Piketty's "Capital in the Twenty-First Century" became a bestseller and received a large amount of praise from many influential economists for its ideas

However the book also became the target of criticism from many other economists for a number of reasons

These critiques range from theoretical discussions, differences in measuring variables as well as normative discussions

Piketty does acknowledge imperfections in his study

"About Capital in the Twenty-First Century"

- Definitive judgements are not to be drawn from the study
- r > g does not capture institutional and political changes
- r > g is not a useful mechanism for discussing rising inequality of labour income

Defending the One Percent

In this article Harvard Macroeconomist Gregory Mankiw defends the one percent

Argues about the nature of income inequality and questions if income should be redistributed

Growing Inequality

According to Piketty and Saez, share of income excluding capital gains earned by top 1 percent rose from 7.7 percent in 1973 to 17.4 percent in 2010. Share earned by 0.01 percent that in 2010 required annual income exceeding 5.9 million total income rose from 0.5 percent to 3.3 percent

Other than r>g, what other reasons are causing this inequality?

“Superstars”

Consider a society with perfect equality, all of a sudden a great entrepreneur (Steve Jobs, J.K. Rowling, Steven Spielberg) appears with a product that many desire

In this environment (many buyers, one seller) the entrepreneur will become very wealthy

However as the transaction between the entrepreneur and the buyers is voluntary and mutually beneficial, is this form of inequality a bad thing? Should this be corrected?

Is inequality inefficient?

Redistributing wealth is not Pareto optimal

Is inequality inefficient as it arises from economic rent-seeking?

No evidence to suggest that economic rent-seeking has increased since the 1970's

If domestic producers are enriching themselves through quotas on imports, then trade policy is the solution not tax policy

If inequality is the result of skill-biased technological change increasing the earnings gap between skilled and unskilled workers, we should aim to increase the supply of skilled labor

Okun's leaky bucket and redistribution

"The money must be carried from the rich to the poor in a leaky bucket. Some of it will simply disappear in transit, so the poor will not receive all the money that is taken from the rich" *Equality and Efficiency, the Big Tradeoff*

These costs are due to administrative costs as well as incentive effects

Can create disincentives through redistribution as high productivity individuals act like low productivity individuals to optimize utility

Three arguments of the Left

Mankiw concludes with stating three arguments that the Left make about the necessity of income redistribution and offers his own take

Tax system is regressive

Incomes of the rich do not reflect their contributions to society

The rich benefit from physical, legal and social infrastructure that the government provides and thus should contribute to supporting it

Tax system is regressive

In reality the Congressional Budget Office states that: In 2009, the most recent year available, the poorest fifth of the population, with average annual income of $23,500, paid only 1.0 percent of its income in federal taxes. The middle fifth, with income of $64,300, paid 11.1 percent. And the top fifth, with income of $223,500, paid 23.2 percent. The richest 1 percent, with an average income of $1,219,700, paid 28.9 percent of its income to the federal government.

Thus in general the existing federal tax code is highly progressive, however obviously there are cases in which individuals can avoid taxation.

Contributions and benefits

Mankiw states that the evidence suggests that most of the very wealthy get that way by making substantial economic contributions, not by gaming the system or taking advantage of some market failure or the political process.

Mankiw also states that the progressive tax system stated previously should be enough to compensate for the value of government infrastructure,

Mankiw argues that over time an increasing share of government spending has been for transfer payments not investments in infrastructure.

Mankiw’s conclusion

Mankiw concludes that his issue with income redistribution lies in the factual basis for its necessity

Although he acknowledges income inequality he argues against the utility of redistributive efforts such as large tax rates on the top one percent stating that confiscatory tax rates are wrong and that their adverse incentive effects far outweigh the positives

N. Gregory Mankiw Critique Yes, r > g. So what?

The central contradiction of capitalism

- r exceeds g and will continue to
- the wealth of capital owners will grow at a faster rate than the income of the working class
- the “central contradiction of capitalism”, a natural conclusion of the Solow Growth model
- r > g is a steady state condition
- r < g is detrimental

An “endless inegalitarian spiral”

The assumption that an endless spiral follows is flawed due to wealth holder’s decisions

3 primary obstacles to the transfer of wealth

1. Heirs consume a portion of inheritance (approx. 3%)
2. Endless division of wealth
3. Taxation on bequests and capital income (common)

With r-7, r > g unlikely

- for the “endless inegalitarian spiral” to occur, r would have to exceed g by at least 7% per year
- Piketty estimates r to be 4-5%
- Avg. growth rate of U.S. economy approx. 3%
- r does not exceed g by 7%

If r remains constant

- growth would have to be negative (-2%)
- secular decline would be necessary
- were g to remain equal to 2%, an increase in r to 9% is not feasible

If Mankiw is wrong

Illustrating the issue of an additional tax on wealth

Using a neoclassical growth model

- 2 kinds of people, workers and capitalists
- workers supply labour inelastically and immediately consume earnings
- capitalists own capital stock, set their consumption according to the standard model of an optimizing infinitely lived consumer
- output is produced, and therefore the production function f(k), experiences labour augmenting technological change at a rate g
- inputs earn MP

If Mankiw is wrong

Supposes the gov follows Piketty, imposes tax on capital equal to τ per period and transfer revenue to workers

Focussing on steady state:

- *worker consumption = $w+\tau k$*
- *capitalist consumption = $(r-\tau-g)nk$*
- *before tax rate of return on capital = $r = f'(k)$*
- *wage = $w = f(k)-rk$*
- *steady state growth rate = $g = \sigma(r-\tau-\rho)$*
- *steady state return on capital = $r = g/\sigma+\tau+\rho$*

Setting the value of τ

Depends on the objective of the policy

If policymakers want to maximize worker consumption

- $\tau = 0$ as capital taxation reduces capital accumulation, labour productivity, and wages

Setting the value of τ

Depends on the objective of the policy

If the government is a plutocracy (concerned only about capitalists) τ is set to maximize consumption of capitalists (s.t. constraints)

- capital subsidy financed by tax on workers is desired

Setting the value of τ

Depends on the objective of the policy

If policymakers are concerned about inequality between workers and capitalists

- aiming to increase the ratio of worker consumption/ capitalist consumption
- positive τ optimal and as large as possible
- if $f' > 0$ and $f'' < 0$, a higher capital tax always raises worker consumption/ capitalist consumption (our measure of inequality in this economy)

Mankiw suggests

- a consumption tax would be a better alternative than a tax on capital
- other critics of Piketty have shared this opinion
- consumption taxes target wealth without compromising the incentive to save associated with the intertemporal terms of trade

Matthew Rognlie

26 year old graduate student at the Massachusetts Institute of Technology

Started as a 450-word blog comment, now regarded as the most serious and substantive critique on Piketty

Published his article, “Deciphering the Fall and Rise in the Net Capital Share” on Brookings Papers on Economic Activity on March 19, 2015

Rognlie's Criticism on Piketty

Piketty overestimated how high the returns to capital would be in the future.

According to Piketty, wealthy people would need to keep earning a high return on their capital over time.

Rognlie found that the returns to capital will decline over time unless it is very easy for the economy to substitute capital for labour

The wealth-inequality will slow itself down over time

Rognlie's Paper

Sections his paper into 5 different parts

1. Introduction
2. Evidence on factor income shares in developed countries
3. Decomposing the capital share
4. Influences on the capital share
5. Conclusion

Introduction

Argues that the recent behaviour of income shares is widely misunderstood: the net capital share for large developed economies has followed a U-shaped trajectory in the postwar era, and its long-term expansion originates entirely in the *housing* sector

when net capital income outside the housing sector is disaggregated between the return on fixed assets and a residual share of pure profits, the U-shaped trajectory is driven mainly by the residual

Applies various theories of factor shares and the role of elasticities of substitution to strengthen his argument

Rognlie’s Evidence

Explains various concepts very thoroughly

ex. decomposing gross value added - 1. labour income 2. taxes on production
3. gross capital income

Gross vs Net shares - concepts, measurement and history, mixed income and other concerns

Looks into income shares in the G7

Piketty = Gross, Rognlie = Net!

Criticizes Piketty for drawing too broad a conclusion about the nature of capital in postwar era than he should have based on the evidence.

An alternative to gross value added is *net* value added, which subtracts depreciation.

Choosing between gross value added and net value added, it depends on the question being asked.

When considering the ultimate breakdown of income between labour and capital, Rognlie argues the net measure is more relevant.

Evidence Continued

Estimated average shares

$$s_{i,t} = \phi_i + \alpha_t + \epsilon_{i,t}$$

Deal with the capital share rather than labour share

Assumes that the net capital share in non-corporate, non-housing sector equals the net capital share in the corporate sector

Provide data to counter Piketty's observation that we are only returning to levels achieved in the immediate aftermath of the war today.

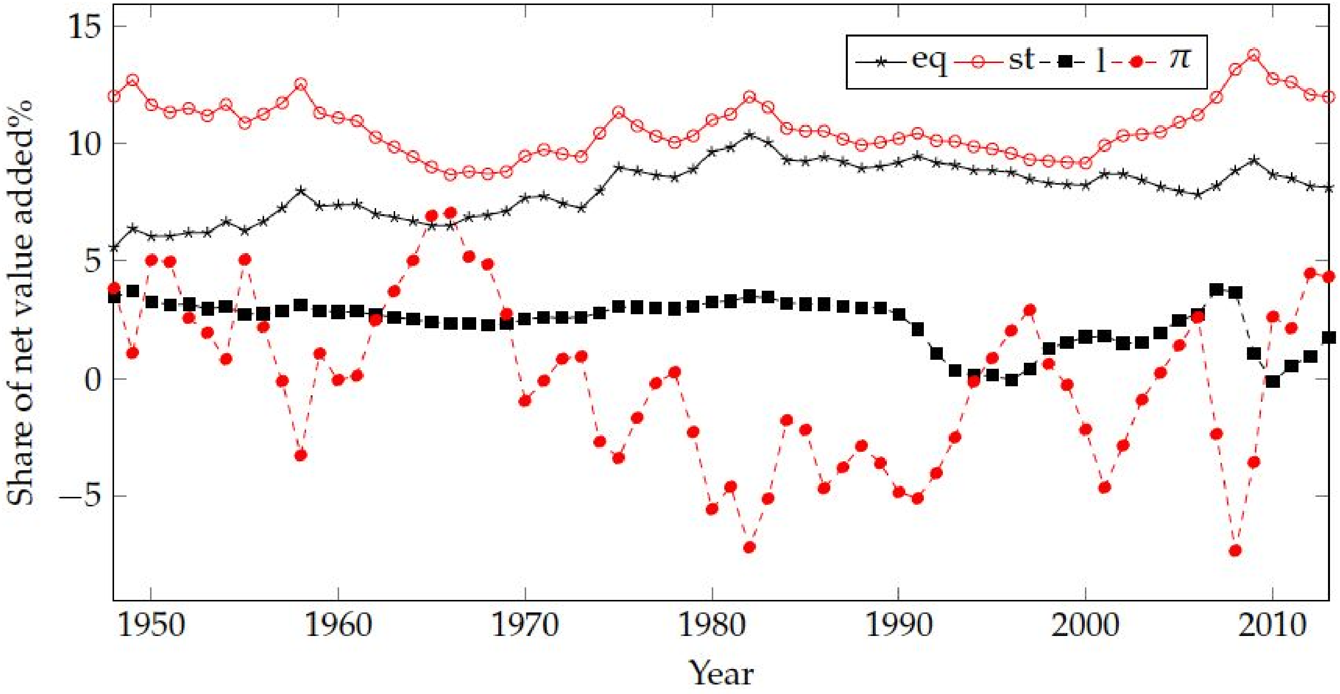
Decomposing capital share

$$\underbrace{PY - \sum_{i}^{n} \delta_i P_i K_i}_{\text{net output}} = W_N N + \pi PY + \underbrace{\sum_{i=1}^{n} (r - g_{P_i}) P_i K_i}_{\text{net capital income}}$$

A constant-return-to-scale production function

User costs of capital and the user cost Wk

Figure 6: Decomposition



Conclusion

Concern about inequality should be shifted away from the split between capital and labour, and toward other aspects of distribution

The net capital share's long-term movement has been quite small, and there is not strong reason to suspect that this pattern will change in the future

Is Piketty's Second Law of Capitalism Fundamental?

Krusell and Smith take issue with Piketty's definition of variables

Piketty defines everything in terms of net income and an exogenously given net savings rate

Meanwhile the textbook view is that income and savings should be defined in gross terms

Net vs. Gross

	Textbook (gross)	Piketty (net)
Output	Y_t	$Y_t - \delta K_t$
Savings	$i_t = sy_t$	$i_t - \delta k_t = s_t y_t$
Capital	$(1+g)k_{t+1} = k_t + s_t y_t$	$(1+g)k_{t+1} = k_t + s_t y_t$
Capital to Income Ratio	$k/y = s/ g+ \delta$	$k/y = s/g$

100% Savings?

However Piketty's definition of his variables can lead to problems

The long-run gross savings rate implied by Piketty's definitions is given by

$s = y - c / y = s\,(g+\delta)/(g+s\delta)$

However as we can see as $g \to 0$, a possibility Piketty entertains in his book the savings rate would become 1, meaning all output is used for savings

Compared with the textbook Solow growth model in the long-run steady state

$k/y = s/g$

As $g \to 0$, savings are just enough to replace depreciated capital stock

Krusell and Smith conclusion

Methodology problems with Piketty's work, would be better off using models based on intertemporal utility maximization as these predict falling net and gross savings rates as g falls

Summary

Many different critiques of Piketty:

- Mankiw gives normative reasons for why income redistribution can lead to outcomes we do not desire
- $r > g$ is a natural consequence, $r < g$ is detrimental
- a wealth tax is not the solution, a consumption tax is (if there was an issue)

Despite the existence of many of Piketty's critics, they still acknowledge Piketty's work pushing the boundaries of economic thought