

Second Machine Age or Fifth Technological Revolution?

Different interpretations lead to different

recommendations –

Reflections on Erik Brynjolfsson and Andrew McAfee’s book
The Second Machine Age (2014).

Part 8

The limits of the Brynjolfsson and McAfee policy recipes:

Proposals on fiscal stability and welfare

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In this post I continue discussing the policy recommendations in [Erik Brynjolfsson and Andrew McAfee’s](#) influential book, [The Second Machine Age](#) (2014). The previous ones focused on [human capital](#) and on [science, technology and infrastructure](#). This one will concentrate on their proposals on taxation and welfare.

Fiscal stability and welfare: taxation and the social safety net

TAXATION: Yes, tax the superstars, but shouldn't we make a radical transformation of the whole tax system?

In the section on taxation, we see again that it is not that Brynjolfsson and McAfee do not have recommendations that are good, if very specific, for adjustments to the current system. They prescribe Pigovian taxes (taxing the 'bads') on pollution, congestion, and so on; a tax on land and higher income taxes for high earners (the 'superstars'). All these suggestions are useful; the latter two have been in and out of favour as policy options since the first Industrial Revolution and are now clearly necessary to reduce the levels of inequality.

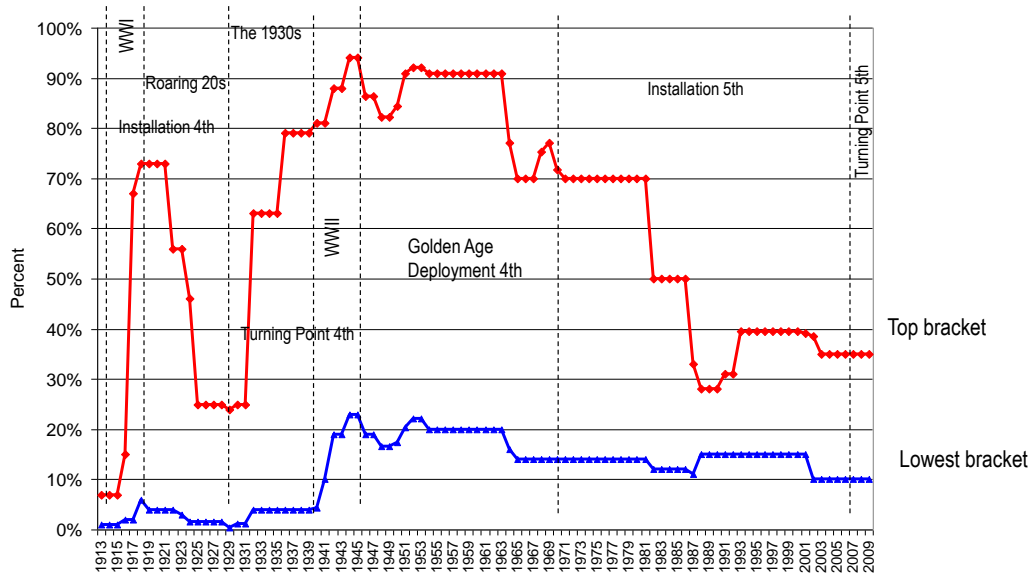
The pollution taxes are to be welcomed. As mentioned above, this is perhaps the first time they take the environment into account. Nevertheless, they limit their discussion to contaminants and to time wasted on congested roads (increasing potential pollution) – in other words, to 'negative externalities', while ignoring the elephant in the room. They do not touch the risks of climate change or of limits to natural resources. Since they declare that "we don't pretend that the policies we advocate here will be easy to adopt in the current political climate", one can surmise that they are avoiding the risk of controversy. Whatever the reason, limiting action to minor band-aid solutions will not do.

Taxing land rents is also a good thing, but they argue in favour because "such taxes are relatively efficient— they don't distort incentives or activities" (p. 225). Yet they had just supported Pigovian taxes precisely because they "distort" incentives and activities in favour of health and against harming society. The notion of distortion really depends on perspective. Taxes have long been used to promote certain industries over others; to promote the use of machines rather than labour; to reduce smoking and so on.

Somewhat different in purpose is the third 'wise' tax that Brynjolfsson and McAfee recommend: raising the marginal income tax rate on superstars. Since it was introduced in Britain in 1999, during the wars with revolutionary France, there have been different reasons for applying income tax – and different understandings of the results of its application. Most see it as a way to raise funds for the State and those opposing it are either against state intervention or hold that it reduces private investment by 'crowding it out'. However, in the US after WWII, top marginal taxes were extremely high, as much as 93% (see figure 8.1) and they did not stop investment, which was a relatively stable average of 16% of GDP until 1970. After that, taxes were cut (the top rate went down to 70% and then to 40%) and investment only averaged 17% of GDP in a bumpy bubble ride (varying between 13 and 20%) [[FRED data](#)].

Figure 8.1

Historical graph of the marginal tax rates for the highest and lowest income earners, 1913-2015



Source: Data from the [Tax Foundation](#) (graph by Wikimedia Guest 2625) My periodisation

But Brynjolfsson and MacAfee fall far short of what is needed in this matter. Taxation is probably one of the most urgent areas for institutional innovation in our present time. Intelligent taxes, combined with regulation, can guide the most socially beneficial way of deploying the new technologies, optimising growth and profitability. At times like these, it could be that it is as important to decide what to tax as how much to tax.

The current incentive system, [favouring short-term capital gains](#)¹ rather than long term investment, needs an urgent redesign. Investors have learned to avoid the risks of real production concentrating on financing finance in a casino atmosphere, where investing has become much more like betting. Digital technology has enabled high frequency operations – which strongly resemble [insider trading](#)² – and sophisticated and obscure financial instruments that make money ‘grow’ by moving it around the world, by playing around with risk hedging or by packaging various types of loans to download them on innocent investors. Changing the current capital gains tax (at 15%, when income tax is twice that, so that Warren Buffet complains that he pays [less tax than his secretary](#).³ Perhaps the solution to combat both ills – the unfair taxation and the short-termism – is to set up a decreasing tax schedule, charging 90% for any capital gains earned within one day (high frequency trading and quick arbitrage operations), with three or four steps down until gains after five years are taxed at 10% and at ten years 2%.

¹ Haldane, A. G. (2015), ‘The Costs of Short-termism’. *The Political Quarterly*, 86: 66-76

² Lewis, M. (2014) *Flash Boys: A Wall Street Revolt*. New York: W. W. Norton & Company

³ Isidore, Chris (2013) ‘Buffett says he’s still paying a lower tax rate than his secretary’, *CNN Business*, online, March 4, 2013

In the final section I will suggest that the tax system can be the instrument for turning the environmental problems into investment and innovation opportunities, promoting employment that is less vulnerable to robots and AI. In our time, taxation is probably the most powerful tool for the socio-political shaping of technological revolutions.

WELFARE: Facing low wages with a complement or providing a stable income cushion in the gig economy?

Thus far, I have responded to the policy recommendations that Brynjolfsson and McAfee feel could be administered in the very near future. There is a subsequent chapter on 'Long Term Recommendations' in which they engage in 'blue sky' thinking; attempting to be as bold as possible within the constraints that they set for themselves. These recommendations are presented as potential ways to mitigate the negative social consequences on jobs and incomes that could be expected from the predicted advances in robotics and artificial intelligence.

Under the ideologically charged title of "Please, no politburos", they declare two principles: One, not stopping the advance of technology and, two, no 'post capitalism'.

In the 1930s, when Franklyn D. Roosevelt (FDR) was attempting to set up the New Deal, he was accused of being communist and/or fascist. At the time, the anti-government ideology was as prevailing as it has been since the Thatcher/ Reagan years. We should not forget that the New Deal policies, when applied after the war, brought the most successful period in capitalist history, in terms of growth and social wellbeing, as well as business success with fair profitability. I don't think they would want to change the title of the section to "Please, no FDR" or "Please, no New Deal".

And in terms of the pattern I have identified in the history of technological revolutions, we are indeed in the equivalent of the 1930s. And we do need a full overhaul of the context for the economy, to digest the major technological shift in a manner that protects – and indeed incorporates – the majorities into its benefits. It does not mean that we need to stop the advances in technology; on the contrary, we must make sure to benefit from the bounty of wealth that can result from much greater productivity in many sectors. It does not mean we need to abandon the free market or capitalism; we just need to be as bold as FDR in shaping the context to make capitalism legitimate, by ensuring that the enrichment of the few benefits the many. What has made current capitalism illegitimate is the notion that shareholder value takes complete precedence over all other stakeholders, especially neglecting the fair share of employees and the interests of consumers. And this core flaw in the current system, is reinforced by unwarranted salary levels for top management and a taxation system that favours the rich.

Negative income tax or universal basic income?

In the final post, I will discuss the question of policy directionality, meaning a tilting of the level playing field, which includes changes in taxation that create profitable synergies for business, while incentivising job creation in new areas – mainly services for the new lifestyles.

Here, I will concentrate on their discussion about basic income and negative income tax. They basically dismiss basic income, which is an obvious proposal to consider in a world where jobs are not for life but are meant to be constantly changing, arguing that it will take away the incentive to work (which is psychologically very harmful). They do not examine experiments with basic income to find out if it really discourages work or rather elevates people's dignity and makes them want to work. Unemployment is indeed a destructive force of personal, family and community life.

Their alternative solution is Negative Income Tax ([NIT](#)). In this case, they do not dedicate several pages to examine its consequences, as they do with basic income. They do not look at the possibility that employers may take advantage of the state subsidy to [lower wages](#); neither do they refer to the bureaucratic nightmare of handling such a policy in a world of zero hours contracts and self-employment at all income levels. They don't contemplate the difficulty of providing irregular NIT payments to gig workers. Would it be once a year when taxes are declared? Would it be every month as tax credits are provided in the UK (based on a regular but low salary)? What about those who can't find a job at all because there really aren't any to be found in that locality? Will they get 100% NIT? It's not clear.

The reality, already today, is that there is a lot of 'churn' in the labour force, a phenomenon that they celebrate when talking about start-ups, but do not acknowledge as a huge threat of instability for individuals and families. This will also threaten home ownership, as people need to move to where the jobs are (achieving a skills-match as proposed by B&M) and sometimes having to live separately, husband and wife. Consultancy and other independent professions will provide very uneven income flows, although monthly payments for schools, rental or mortgage and food will continue as before. There is also a lot of part-time work, some for convenience and choice but most of it involuntary. The *gig economy* is spreading because it fits the flexibility paradigm of information technology. Zero-hours contracts are also becoming widespread and creating further uncertainty for workers. If society does not find solutions for these new conditions, life will be difficult, and unrest will be likely.

One of the solutions is precisely some form of basic income that maintains a minimum threshold living condition for those who need it and comes back to the State in the form of taxes when the receiver earns enough. The other solution could be a complementary system, to be eventually provided by the banks, having people deposit their irregular income and withdraw a regular amount monthly, automatically paying interest when going under and earning interest when saving. Many other innovations will be required for the new lifestyles in the ICT-shaped world.

Yet there is another reason for promoting basic income. It is a practical solution in a world of ‘freebies’ where an emerging culture of voluntary work (from Linux to the communities of practice in internet) is flourishing, where sharing and the collaborative economy become natural. In fact, Brynjolfsson and McAfee actually recommend that these activities are of a type “that should be stimulated”. Yet, they shirk from recommending basic income falling for the old idea that people will then become loafers and stop working.

Going Further: are ‘wild’ ideas for the future that wild?

This chapter concludes with a very short list of ‘wild ideas’ (just seven of them) proposed to them in brainstorming sessions with people from various walks of life. Many of them, I believe are not so wild, but rather elements of new paradigmatic thinking. For instance, “Pay people via non-profits and other organizations to do ‘socially beneficial’ tasks, as determined by a democratic process” seems to me to go hand in hand with a basic income; while “Nurture or celebrate special categories of work to be done by humans only. For instance, care for babies and young children, or perhaps the dying” relates to the already huge increases we are seeing in the need for care work and in the health and fitness industry. Indeed, these areas of future employment have been emphasised by Brynjolfsson and McAfee [elsewhere](#).

They also envisage, as another wild idea, a much stronger role for the state. “Ramp up hiring by the government via programs like the Depression-era Civilian Conservation Corps to clean up the environment, build infrastructure, and address other public goods. A variant is to increase the role of ‘workfare,’ i.e., direct payments tied to a work requirement”, which is Keynesian economics dressed up in only slightly new clothes. In fact, the notion of a [guaranteed work scheme](#) is being proposed by Stephanie Kelton and others as an alternative to basic income.⁴ If Brynjolfsson and McAfee’s worry about the consequences of basic income was the risk of people not working, they could have found that alternative more attractive and effective than the old-fashioned bureaucratic way of calculating negative income tax, person per person.

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In the next and final post in this series, I will propose a more systemic approach towards what could be done to shape this technological revolution in a socially beneficial way. In doing so, I will address two absent themes in B&M’s book: the environment and globalisation and I will suggest the need for the modernisation of government itself, something that has occurred with each technological revolution, but is far from taking place in our time.

⁴ Wray, L.R., Dantas, F., Fullwiler, S., Tcherneva, P.R. and Kelton, S.A. (2018) ‘Public Service Employment: A Path to Full Employment’, Report for the Levy Economics Institute of Bard College, April 2018.