> Kalecki was fully aware that the process of full employment could be used as a way to radically change the capitalist system, both by allowing what he considered a more equitable distribution of income, as well as by improving the living standards of broad masses. (p. 281)

In summary, it is worth quoting two epigrams by Kalecki, which are in the supplement to the first book discussed above. They show not only his intelligence and a sense of humour, but also his critical and sarcastic attitude to the reality he observed. Similar to the economic output of the author, they still remain uniquely valid:

> **The Hero of Our Time**
> A bit of a talent and flair
> And a portion of bluff.
> No one can see that the king is naked.
>
> **The Maxim of an Official**
> Mr. Ambrose said to his colleague:
> Regime change is the act of God,
> But the mystery of life is to survive the regime,
> And not to let the regime survive you.

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(This review is based on the Polish translation, *Przedsiębiorcze państwo. Obalić mit o relacji sektora publicznego i prywatnego*, Wydawnictwo Ekonomiczne Heterodox, Poznań, 2016)

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Public costs, private profits

Noam Chomsky (1999) states that two varieties of free market doctrine are implemented in social life. The first is the prevailing official doctrine imposed on citizens who are poorly equipped to imagine an alternative. In order to receive support from the public, international business may claim to 'protect the national economy' and defend the sector against 'foreign competition'. The second is what Chomsky calls 'really existing free market doctrine' – 'market discipline is good for you, but not for me, except for temporary advantage' (p. 34).

While the first variety functions at the ideological level and is imposed on the general public, the second is practised by big business. In everyday life, this means that the slogans of 'increasing efficiency', 'reducing labour costs', 'a more flexible labour market' and 'rationalisation of work organisation' are used to justify reduced social assistance from the state, lower wages, deprivation of social rights and subordination of working people to changing economic conditions. At the same time, business, in the name of 'creating jobs', demands from the state: tax relief, implicit or explicit subsidies, cheap land for their investments, good infrastructure financed from public funds for private purposes (access roads, new energy network connections), a labour force well educated in public schools and universities and – as is the case in the defence industry – standing orders from the state for the company's products.

The state also supports business by funding research and development to provide new manufacturing techniques and advanced technologies requiring huge investment. When discussing these issues, Edward Luttwak (1998: esp. Chapter 8) comments that state aid goes to the branches that produce the biggest gains, including computers and software, telecommunications, biotechnology, and production and storage of energy. However, state investments in the development and innovation of new technologies bring profits mainly to private corporations. The private financial sector, which is focused mainly on short-term projects, tends to rely on the state to sponsor the stages of innovation development that carry the greatest risk. Public funds transferred to the private sector for the development of new technologies tend to remain there as a gift from taxpayers.

This is what Mariana Mazzucato writes about in her book, debunking the neoliberal myths of self-sustaining private business. This is a useful publication, especially in the context of the ongoing global economic crisis, which cannot be combated by austerity programmes and state aid for private banks. The ideological attack on the welfare state has reduced the role of the state to a policing one, with reduced social obligations to citizens, and whose only task is to ensure the social and political peace that is so important to private corporations. By cutting social spending, the neoliberal state tacitly supports corporations. Mazzucato suggests a different solution: instead of reducing government programmes in the name of a more 'competitive economy', she writes in favour of an active and enterprising state, able to restore order after a crisis. The author suggests that in addition to providing loans, which can reduce the effects of economic fluctuations, the state should actively participate in solving socio-economic and ecological problems. Mazzucato shows that it is the visible hand of the state, rather than the invisible hand of the market, that has created innovations which have changed the lives of societies.

To illustrate the extent to which the state supports the creation of products commonly associated with the genius and risk of private corporations, the author describes the history of the iPad and iPhone, which have changed the way we work and communicate. Apple owes its success to a wave of state investments in new technologies, such as the Internet, GPS, and touch screen and communication technologies, which allowed for the development of the iPhone or iPad. Without this technological basis, Steve Jobs' company would not have been able to integrate these products. The fundamental question raised by Mazzucato is, 'Why are the state and the public sphere not rewarded for their direct investments in applied and basic research?' Thanks to this, Apple soared to the heights of a global business with a profit of USD26 billion in 2010 alone (Chapter 5).

Companies such as Apple receive state support through several channels. The first is through direct equity investments at an early stage of development. The second – and this seems to be the most important element – is through access to technologies that have emerged thanks to state research programmes, military projects and public procurements, or that have been developed by public research bodies. The third channel is through the creation of appropriate tax conditions and trading strategies which include support to large, private players.

Private biotechnological and pharmaceutical companies use similar methods to attain their successes. The latter usually justify the high prices of drugs with the need to cover the costs of research and development, but in fact the most innovative drugs come from laboratories financed from public funds. According to the author, 75% of new active substances have been developed by public laboratories. While state-funded laboratories invest in the riskiest stages of drug development, large private pharmaceutical companies prefer to invest in more secure versions of existing drugs (those containing different doses or proportions of substances). Nevertheless, they achieve huge profits and control the prices of drugs on the market (Chapter 3).

'Green technology' is another area where public investment has initiated the development of innovation. As the author points out, it is not entrepreneurial companies that started to develop this sector independently of the public or out of fear of climate change. Companies producing clean technologies usually make profits thanks to earlier investments by the public sector, or the use of available technologies. They also count on state support and new social habits in this area. The latter are becoming common and influence government policy not because of the sudden enlightenment of businessmen, but owing to the pressure of grass-roots civic initiatives, which have created new trends in attitudes towards the environment. Private business treats them as a source of its future profits, but joins the game only after it makes sure that the state has taken on a greater share of the uncertainty associated with the development of new energy technologies (Chapter 6).

However, the green technology sector is still in the early stages of development. Market forces cannot be expected to contribute to its 'natural' growth. As Mazzucato aptly notes, markets do not reward sustainable development, nor do they punish for pollution, waste and the plunder of natural resources. The private sector does not like risk (especially in the initial phase of the development of new technologies). It will therefore invest in the green sector only after the most expensive investments are made and there are clear and stable signals that the state is going to implement ecological policy. The private sector is not in a position to create and develop a new green area of the economy without a clear framework of state policy. Private companies are not satisfied by small incentives from the state; they want the state to continuously 'push' the green technology sector forward.

The beginnings of green technologies and their relationship with the public sector are also interesting. A good example is the history of photovoltaic panels. Opportunities for the development of solar energy in the United States were created by the National Aeronautics and Space Administration and the Department of Defense, which procured these types of product for power space satellites. These technologies were then used on Earth in road signs and a lighting system on offshore oil rigs. However, each application of these technologies in photovoltaic panels for individual consumers has required the financial support of state institutions. For example, First Solar patented its technology in cooperation with a research centre belonging to the University of Toledo and the National Renewable Energy Laboratory. Solyndra, founded by Chris Gronet and producing panels using copper indium gallium selenide technology, was able to count on the state and federal support. SunPower received support from the Electric Power Energy Institute at an early stage of its technology development at Stanford University (Chapter 7).

Are these public investments in new technologies ever given back to the public sector and what can the public obtain in return? The private sector usually says that it 'creates jobs' and contributes to the public budget through taxes. How does it work in practice? Mazzucato again uses the example of Apple to discuss this issue. Business likes to talk about the number of jobs it has created, yet it rarely speaks about the quality of these jobs. Apple seems to have created the majority of its jobs in the retail sector and other service areas (call centres and data centres) rather than in new technologies. These jobs are not attractive in terms of promotion opportunities and wages. As the author notes, Apple's remuneration policy does not differ from that of Walmart. It is characterised by large differences between the salaries of workers and managers. For example, in 2011, nine top executives in Apple received a total of USD440.8 million and, in 2012, their compensation packages amounted to USD411.5 million. At the same time, employees assembling fashionable gadgets for Apple in the Taiwanese company Foxconn based in China earned an average of USD4622 per year, which means that the nine top executives earned the equivalent of the salaries of 95,000 employees in 2011 and 89,000 employees in 2012 (Chapter 8). Furthermore, hardly anyone remembers that workers' rights are violated in companies localised in semi-periphery countries. These companies are subcontractors and assembly plants where components manufactured in core countries are assembled. Cheap labour and less strict observance of labour law and environmental standards are the main reasons why large corporations locate their assembly plants in semi-periphery countries. However, outsourcing and offshoring by companies, such as Apple, are related not only to labour but also to tax settlements; they usually pay their taxes in tax havens. For example, Apple pays its taxes in the British Virgin Islands and Luxembourg. Mazzucato provides interesting simulations: if Apple had reported half of its profits, instead of the current 30%, in the US, its tax would have been USD2.4 billion higher in 2011 alone. However, if Apple declared 70% of its profits in the US, the US state budget would collect an additional USD4.8 billion. This money, however, is pure profit for Apple (Chapter 8).

Is it profitable for the state to support private companies under these conditions? Is the public sector less efficient and less innovative, as market fundamentalists claim, than the private sector? There is no evidence of that. The 'entrepreneurial state' proposed by the author must want and be able to invest in new technologies rather than outsource this to the private sector, or be satisfied with the role of the buyer and the organiser of a market for innovative products.

As the author concludes, the most vulnerable countries are those that spend less on the areas that are expensive in the short term but bring growth and ensure the prosperity of society in the long run – this applies to research and development. The weakest part of Mazzucato's argument is her suggestion that the state should engage more in the economy, implement environmental policy and support innovation. This prescription seems to be limited to rich countries where governments take at least some account of public opinion. The model cannot work in semi-periphery countries, for example, in Eastern Europe, because these countries spend little on research and innovation. According to Eurostat data from 2013, spending on research and development in Poland was only 0.86% of total general government expenditure (0.58% in Romania, 0.65% in Bulgaria, 0.38% in Latvia) while it was 1.73% in Finland, 2.4% in Iceland, 2.02% in Germany, 3.78% in South Korea and 2.05% in USA (Eurostat, 2016). While these disparities are due to the different economic potentials of core countries and semi-periphery countries, differences in expenditure on innovation are conditioned by different political and cultural climates in these countries. In this sense, the 'natural' belief in the 'enlightened state' and its elite, who themselves want to invest in progressive and innovative solutions, is worth as much as the belief in the innovative nature of the private business sector.

A more enlightened and egalitarian state policy cannot exist without pressure from civic initiatives, social movements, academic communities and trade unions. Unfortunately, this social factor is not discussed by Mazzucato. No country becomes an 'entrepreneurial' and 'enlightened' state by itself. We might even risk saying that without adequate social pressure, 'the neo-liberal state' may quickly become a 'state of fear' in which the 'security industry' (Żuk and Żuk, 2015) (military expenditure, increasing surveillance of citizens, increasingly stringent laws and less freedom of culture) blossoms, rather than a democratic 'state of compromise' which respects civil rights, implements environmental policy and cares more about innovation in the economy than about buying weapons from armament manufacturers. In other words, it is important for an 'entrepreneurial state' to invest bold expenditure in innovation in the public sector. However, such a state can only function if there is a strong civic sphere, democratic culture and conditions conducive to the free development of new and the most controversial ideas. Perhaps these are considerations for yet another book.

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