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Research Note

Kalecki on Technology and Military Keynesianism

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Abstract: Kalecki's analysis of military Keynesianism highlights the difficulties of managing aggregate demand in one country, without coordination with trading partners. Military Keynesianism is effective as a means of reflation because, unlike civilian public works, it induces similar expenditure by political rivals. In this way it overcomes some of the trade difficulties that arise if aggregate demand expands in only one country. However, military technology is not immediately transferable to civilian production, and therefore tends to reinforce technological backwardness.

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Among writers on military Keynesianism, Kalecki stands out because his understanding of military Keynesianism goes beyond the contribution that military expenditure can make to aggregate demand, to a critical appreciation of the political and economic difficulties of the aggregate demand management that commonly passes for Keynesianism. Those political and economic difficulties are commonly identified with the political business cycle (see, for example, Cypher 2016). But Kalecki also hinted at distortions in the direction of technological innovation that military Keynesianism imposes. The paper that follows gives an overview of Kalecki's analysis of military Keynesianism, and the influence that such a policy has on technology.

1. The limitations of Keynesianism …

Kalecki's consideration of military Keynesianism goes back to his commentaries on perhaps the first and most common example of such Keynesianism, the rearmament of Germany in the 1930s. But even before Hitler's assumption of power, Kalecki had identified the flaw in the notion that fiscal stimulus, as a policy option available to all governments, offers a way out of economic depression. In his paper 'Is a "Capitalist" Overcoming of the Crisis Possible',

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published in the Polish magazine *The Socialist Review* (before it was shut down by the authorities at the end of 1932), Kalecki described fiscal stimulus as:

'… a certain form of inflation consisting of individual states, or groups of states, starting up major public-investment schemes, such as construction of canals or roads, and financing them with government loans floated on the financial market, or with special governments credits drawn on their banks of issue (i.e., their central banks – JT). This kind of operation could temporarily increase employment, though on the other hand it would retard automatic "natural" adjustment processes which might lead to overcoming the crisis. Besides this, if it were to be carried out on a large scale, it would have to be coordinated by an international agreement of the individual capitalist governments, which, given today's quarrelling imperialisms, is almost out of the question.' (Kalecki 1932a, p. 53).

The '"natural" adjustment processes' to which Kalecki referred were the elimination of excess capacity through market competition, which forces companies to shut down unused factories, and concentrate production in under-utilised factories. Such reduction in capacity makes firms more willing to invest as demand rises. As for the need for international agreements to coordinate such fiscal stimulus, Kalecki explained this in an article in the same journal shortly afterwards, where he also showed the limitations of the kind of 'credit inflation' that is the preferred policy of choice among European and North American elites today:

'… a more liberal supply of credit by the central bank, may be of minor significance only, when the business crisis is a deep as at present. Entrepreneurs will not, as a rule, invest the newly received credits because easier terms of credit will not induce any investor to build a factory that will have no chance of finding a market for its products. New credits will be used rather to pay back the old ones and the surprised creditors will bring their repaid credits back to banks thus happily closing the circle.'

Fiscal policy, according to Kalecki, does have the possibility of expanding demand. But even this has obvious limitations, most notably an exchange rate crisis and price inflation:

'… massive public works … would result in increased employment. However, even such an intervention could be effective only if it were undertaken in a closed economy, e.g., in the capitalist system as a whole, embracing the whole world, where there is one exchange (rate) only and no tariff barriers… Fiscal inflation carried out on a broader scale in one country alone … must cause disturbances in the rate of exchange. A rise in local output requires increased supplies of foreign raw materials and imports … At the same time, together with employment, domestic prices rise, which restricts exports. Consequently the balance of payments deteriorates, an outflow of gold and foreign exchange follows and the exchange rate falls… … These processes will set in earlier because, in expectation of them, foreign capital will withdraw and local capitalists will purchase foreign exchange thus accelerating devaluation. This, in turn, will distort the fiscal inflation process because a rise in prices of foreign raw materials will add to a general price rise until the symptoms of hyperinflation … appear.' (Kalecki 1932b, pp. 175-176).

The way to overcome this difficulty is for governments to coordinate their efforts at fiscal stimulus. In this way, as aggregate demand expands among trading partners, all countries import more and, as a consequence, all of them export more. But, as already indicated, Kalecki was sceptical about this possibility and reiterated, 'a necessary condition for fiscal inflation to be effective is an international agreement of the capitalist powers, which is, of course, totally utopian.' (Kalecki 1932b, p. 176).

At the height of the Second World War, international economic coordination between the world powers did come back onto the agenda at Bretton Woods in 1944. But even here Kalecki correctly recognised that, without a distribution of capital that would allow full employment in all countries *and* balanced trade, those trade imbalances would be regarded as symptoms of the 'manifest unsoundness' of the state of aggregate demand that brought about the full employment. To this irrational, but politically convenient, apprehension would be added the fear of foreign indebtedness, as trade imbalances were cleared with automatic adjustments of net foreign debt stocks (Kalecki 1946). The founding agenda of the European Union includes the coordination of the economic policies of member governments. But this coordination has not been going well in Europe in recent years, precisely because of anxieties over debts.

2. … Overcome by military Keynesianism

In Kalecki's view, military Keynesianism is not just another form of government expenditure more congenial to employers because, unlike, say, health or education services, it does not enter into competition with private sector provision, but pays private sector suppliers to 'waste' resources, in Veblen's vivid description (Veblen 1904, pp. 64-65). Military Keynesianism has the advantage over civilian Keynesianism that military expenditure and bellicose declarations force governments in neighbouring countries into emulatory rivalry. This has some of the benefits of internationally coordinated civilian Keynesianism, leveraging in imperialist quarrels to create employment. Kalecki observed the rearmament of Germany and Japan, as a form of military Keynesianism (Kalecki 1932b). However, he noted that this kind of Keynesianism does little for consumption and such 'roads to glory' lead to war.

Following the Second World War, one of the functions of the military alliances, the North Atlantic Treaty Organisation (NATO), and the Warsaw Pact, has been to co-ordinate military expenditure with, in the case of NATO, targets for military expenditure by member governments. Kalecki did not comment on this aspect of activity in the Soviet bloc. But he clearly understood the coordinating function of military Keynesianism in capitalism.

In November 1955, Kalecki gave three lectures on 'The Impact of Armaments on the Business Cycle after the Second World War' at the social science university of the ruling party in Poland[2]. The lectures became widely available posthumously with their publication in the *Collected Works of Michał Kalecki*. They are wide-ranging and include discussion of inflation, deficit financing and credit. On the basis of a four-sector model of a capitalist economy (investment, workers' consumption, capitalists' consumption, and armaments) Kalecki showed how deficit financed military expenditure adds to profits (Kalecki 1955). In answer to a student's question as to whether civilian expenditure could substitute for armaments, Kalecki answered as follows:

'This is a very good question which gives an opportunity to explain the essence of the problem. If one could devise public works equally as unproductive as armaments, they would have similar consequences. It is obvious, however, that the construction of schools, hospitals and even roads is of limited scale. However, the situation is entirely different as regards productive public works, since such constructions compete with the private sector and reduce the rate of capitalist profits, which obviously has a negative impact on private investment. Consequently, the economic effect of such public works will be weaker in the long run, and, besides this, will draw immediate political opposition from the monopolies damaged (by such competition). For instance, to this day in the USA attacks continue on the dams and power plants built during the New Deal under the public works programme. Armaments play a specific role precisely because they are unproductive…' (Kalecki 1955, p. 580-581).

Kalecki lectures were followed by a more detailed study, supervised by Kalecki and written by his research associate Adam Szeworski (Szeworski 1957). The study reinforced Kalecki's conclusions.

In his lectures, Kalecki made the assumption of a closed economy, which was convenient, since the specific example that he was looking at was that of the United States, whose foreign trade position has little impact on its domestic economy. His consideration of the open economy effects of armaments expenditure came in a later paper on 'Economic Aspects of West German Rearmament'. Here he noted the internationally-coordinated aspect of post-War German rearmament: 'Unlike Hitler's, the Adenauer regime bases its military strategy on close collaboration with the whole capitalist camp. The key to the economic role of militarization of West Germany must also be sought in its indirect impact on the economic situation of that entire camp, which in turn influences the economic situation of West Germany.' Kalecki went on to argue that German exports had benefitted from the rearmament effort of the Western alliance: '… the expansion of West German exports, which has continued for a number of years rests on … (among other factors) a high level of economic activity (that) has prevailed in the capitalist world one of whose mainstays has been the armaments programme of NATO, in particular that of the United States. As a result of this … the demand for machinery as well as chemicals, West Germany's basic export products was high and rising… (But) the export efforts of West Germany's main competitors

[2] The Institute of Social Sciences at the Central Committee of the Polish United Workers' Party, where Kalecki's friend Oskar Lange ran the programme in Political Economy.

on the world market for machinery were weakened by the absorption of a large part of their respective export capacity by armaments production…'

'In other words, its production structure and costs have facilitated the expansion of West German exports on the world market where the situation has been favourable to a considerable extent because of the armaments programme of the capitalist camp. Armaments stimulated the economic activity of the capitalist world on the one hand, and they checked to some extent the trade expansion of the main exporters of machinery, on the other hand.' (Kalecki 1962, p. 405).

In this article, Kalecki considered the possibility of disarmament and replacing military expenditure with development projects in poorer countries, a new priority in the United Nations at the time and an idea that gathered support in the 1980s during the Third World Debt Crisis. 'But even if such a conversion of armament production were fully effected, the underdeveloped countries would then receive machinery from the former arms producers in such quantities that West German exports could not but be seriously hurt.' The link with the export trade was an ambiguous one: 'Armaments create a favourable position for West German exports. But, since West Germany must in turn arm itself, its export efforts will suffer as well.'(Kalecki 1962, p. 406)

This was not necessarily to the advantage of industry elsewhere in Europe: 'The British harboured the cynical dream that the armament of West Germany would paralyse its exports of machinery, thus enabling them to take over some Germany's markets. But, as often happens, this hope proved to be short-lived. The Germans outsmarted the British. True, they improved somewhat Britain's balance of payments; they did so, however, not by slowing down the expansion of their exports and surrendering their markets, but by directing arms orders to Great Britain, obtaining important political concessions in return.'(Kalecki 1962, p. 407).

3. Technological aspects

It should be pointed out that, as far as Western Europe was concerned, its economy did not just benefit from the Cold War rearmament programme. Kalecki's friend and research associate Josef Steindl subsequently pointed out that, despite the massive investment in military equipment, set off by the Nazi rearmament and culminating in the Second World War, by the end of that war, Europe had fallen seriously behind in its industrial technology. The decade after that War was therefore marked by a huge investment in industry to catch up with the technological advances of American industry (Steindl 1989). Steindl's observation has two implications. First of all, the huge armaments boom in Europe associated with the preparation for and the conduct of the Second World War, did not improve industrial technology in the way in which is sometimes claimed by proponents and critics of armaments expenditure. Secondly, since the United States was at the forefront of the industrial technology of the time, technological catch-up would not emerge as a motive for industrial investment in that country until much later in that century, that is after the emergence of Japanese and Western European industrial superiority.

The Japanese and Western European industrial superiority is to a great extent based on their technological competitiveness. How was this possible with the massive military expenditure of the West during the Cold War? Kalecki's paper on West German rearmament gives a very simple answer: The Western powers that had won the Second World War kept their industrial capacity and raw materials imports fully occupied with armament production, leaving the West Germans (and, by implication also the Japanese) to concentrate on civilian industrial innovation and production. Forbidden to expand their armaments industries, post-War governments in West Germany and Japan used their orders for military equipment to gain access to British and American markets for German and Japanese industrial production. In this way, the race for new technology was won by the countries that bought the arms, but concentrated on civilian industrial innovation.

Conclusion

In an article that was published in the *New York Times* in 1973, Paul Samuelson wrote that military spending and wars were no longer necessary to stimulate the economy, since Keynesian economists knew how to manage it on a peacetime basis, guaranteeing full employment and rapid economic growth (Samuelson 1973). The experience of military Keynesianism in the twentieth century is a sobering reflection on what is widely regarded among radical economists as the 'golden age' of capitalism in the twentieth century. As Kalecki's writings on the subject show, this overlooks the need for economic (and financial) coordination necessary to avoid macroeconomic imbalances. Military Keynesianism solves in part the coordination problem that is the main stumbling-block for civilian Keynesianism in medium-sized and smaller economies.

Kalecki was not alone in his view. There are many similarities between his analysis and that of Paul Sweezy, in particular their common view that military Keynesianism is expedient precisely because of the limitations of more socially useful Keynesianism. Shortly after Kalecki died, Paul Sweezy published through Monthly Review Press a small collection of Kalecki's papers on military Keynesianism (Kalecki 1972).

It is worth pointing out the paradox that the United States, whose government has orchestrated military Keynesianism in the twentieth century, is also the one country that least needs to resort to this form of Keynesianism because of the status of its reserve currency and the scale of its domestic market, which makes it independent of foreign trade. This last circumstance had already been noted in Kalecki in 1932. (Kalecki 1932b). It is, however, doubtful that this was what brought Samuelson to his optimistic conclusion.

Finally, Kalecki's analysis introduces an important qualification to the view that military contracts may be the foundation for industrial innovation (see, for example, Mazzucato 2013, chapter 4). A military-industrial complex that ensures adequate military orders to maintain production at full capacity may cause the loss of technological leadership to countries that can concentrate more directly on innovations in civilian production.

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