

RECOLLECTING KALECKI'S STUDIES OF THE US ECONOMY

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Introduction

The well-known part of the story about Michal Kalecki intellectual life is that some years before the publication of **The General Theory**, he anticipated several ideas that were at the core of Keynes's book. A less well-known part is that, already at the first stage of his formulation of the principle of effective demand, Kalecki emphasized the expansionary role of government deficits on profits, and on demand and output. He proposed his theory in a series of analytical papers. He also made use of it in applied studies, dealing mainly with what was going on at the time in Nazi Germany². One of these studies is of special relevance. In it (Kalecki [(1935) [1996]]) he carried out what is, at least in the present author's opinion, the first study of the Nazi economy based on the principle of effective demand. It is probably also the first applied study ever written with this approach.

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² Some of these studies were rather of political nature, and appeared under the pseudonym Hendryk Braun, or H. Br. They are collected in Osiatynsky (1996)

Kalecki developed further his theory on the impact of Government spending on demand and output, during his stay in England. In his earliest papers written in Poland, he had shown that the budget deficit added to aggregate demand and to profits. In England he wrote a short article (Kalecki 1937 [1990]), where he considered the case of Government expenditure financed with taxes on profits. There he set forth for the first time, and several years before Haavelmo's (1945) better known piece, the notion that a balanced budget might be expansionary. However, contrary to Haavelmo, and congruent with his socialist outlook, he put the accent on the social class on whom taxes are levied. Anyway, this is an important paper, both in itself and because it gave rise to a lively exchange with Keynes, who was at the time the Editor of the *Economic Journal*, where the paper was published. This exchange is the most extensive between the two founding fathers of the principle of effective demand. Their debate is interesting also because in it one can clearly see their different view about the role of, and the different emphasis they put on expectations.

Later, during the 1950s, back in his native Poland, and when he had already published his *opus magnum*, the *Theory of Economic Dynamics* (Kalecki 1954 [1991]), Kalecki wrote a few empirical papers substantiating his theory. Two of them dealt with the economic evolution of the USA economy (Kalecki 1956 [1997]; and 1962a [1991]), and one with the Western German economy (Kalecki 1962b [1991]). Also, during that period, he directed a small group of economists at the Polish Academy of Sciences, who studied the economic situation in advanced

capitalist countries. This group published a series of applied papers and books on the subject, including the ones by Kalecki just mentioned³.

To carry out his empirical studies, Kalecki devised a novel method of analysis, which was also used by some of his collaborators. Unfortunately however, that method has not had the impact it deserves on applied research, not even among his followers. The objective of the present paper is to revisit Kalecki's applied studies. I will in the first place explain and discuss Kalecki's outlook and methodology. In the second place, I will use it to see how much it can help to understand the recent evolution of the US economy.

Kalecki's hypotheses and methodology

I will first of all summarize Kalecki's general outlook on the issue. The demand effect of government expenditure depends not only on its amount, but also on how it is financed. Greater government expenditure financed either with deficit or with higher taxes on profits, stimulates effective demand. In the first case this happens because private income is not reduced. The multiplier effect of deficit-financed government expenditure is supposed to be quite high because it raises profits and thus capitalist consumption also grows after a certain time lag. In the second case demand is also encouraged, because taxes affect income that would

³ See e.g. Kalecki and Szeworski, 1957; Dobrska and Szeworski, 1958 and 1959; Dobrska *et. al.* 1960. See also Szeworski 1965. It is a pity that, apart from Kalecki's, none of the remaining papers has ever been published in languages other than Polish.

have not been produced if government spending had not taken place. But here the multiplier effect is smaller because profits and capitalist consumption do not rise. Note, we can see that Kalecki's approach contrasts categorically with the one dominant nowadays in conventional studies on fiscal policy. The latter usually assumes that the effects of government expenditure depend on whether these are anticipated or not, or whether they are judged to be temporary or permanent⁴. Kalecki probably thought that these questions could not be answered in advance and in any case are not of particular import. As I said, he rather emphasized the social class from which the taxes financing expenditure came.

In the debate with Keynes previously mentioned, Kalecki refuted the former's objection that higher taxes on profits would negatively affect expectations and thus would discourage capitalists' spending. Kalecki replied that capitalists' spending decisions are more influenced by results than by expectations, and that in any given period capitalists' spending follows from decisions taken in previous periods. He also argued that decisions previously taken would not normally be cancelled in the current period, even if the situation changes, because of the practical difficulties and high cost this would entail.

To see more clearly his reasoning, let us assume that additional taxes were levied on profits. Capitalists would not immediately curtail expenditure. But then, if the government expands demand by the same amount than taxes rose, the later will rise dragging with it output and profits before taxes such that after tax profits

⁴ See for example Blinder (2006)

will remain constant. Thus, capitalist expenditure will not fall either in the next period, because after tax profits did not fall⁵.

I briefly formalize Kalecki's theory. Kalecki's enlarged formula for profits reads:

$$P^b = I + C_k + B + J + H - S^W \quad (1)$$

where P^b is (gross) profits **before taxes**, I is private investment, C_k is capitalist consumption, B is the budget deficit, J is the export surplus, H is total taxes on corporate profits and S^W is wage workers' savings. As I said, Kalecki assumed that in any given (short) period capitalist expenditure ($I + C_k$) is predetermined.

On the other hand, Kalecki also showed that (under some simplifying assumptions) total effective demand depends on total profits before taxes and on the relative share of wages in national income, w . Namely:

$$Y = \frac{I + C_k + B + J + H - S^W}{1 - w} \quad (2)$$

where w is the relative share of wages in national income, which depends (inversely) on the degree of monopoly; i.e. on the ratio of the price to the unit variable cost.

Let us assume that the productive capacity is not fully employed, which is Kalecki's usual assumption, and the normal situation in advanced capitalist economies. Then, if taxes on profits rise, the remaining items on the right-hand

⁵ The exchange of letters appears in Osiatynsky (1990). See also López and Mott 1999, and López and Assous, 2010

side of Equation (1) will not change. Accordingly, given the relative share of wages in national income, from Equation (2) it follows that total demand and output will rise by so much, that after tax profits will remain constant⁶. In other words, profits before taxes rise enough for profits after taxes to remain stable. Note that, if the rise of taxes on profits brought about an increase in prices and in the degree of monopoly (and consequently a fall in the relative share of wages in national income), the denominator of (2), $(1-w)$, would go up, and the short-run impact on effective demand and output of higher government expenditure would be reduced.

I shall now consider the methodology Kalecki devised for his empirical studies, for which it will be useful to clarify the purposes he had in mind. Firstly, he wanted to separate those components of income that determine changes in its volume, from those that play a purely passive role. In his theory the evolution of private investment determines the long-run trend and cycles of output. However, government spending and exports are also autonomous components of demand. Consumption is a rather passive element because, with balanced external and government sector and given the distribution of income, consumption simply follows the movement of investment.

⁶ This is only approximately correct. Since the additional government expenditure leads to an expansion of effective demand, imports tend to rise and net exports (J) are reduced. But of course, total output, as well as employment, will be raised. Indeed, net exports decline only because output rises.

Secondly, Kalecki aimed at analyzing the impact of government expenditure on effective demand, taking into account that the way of financing expenditure affects its impact. He thus distinguished between (i) deficit financed expenditure, (ii) government expenditure financed by taxing profits, and (iii) net government revenue from persons; i.e. the net balance between taxes and transfers. As I said, the first two items add to aggregate demand because they do not reduce private income, or reduce private income that would otherwise have been saved. However, the third item crowds out aggregate demand by an equal amount. Government spending on goods is equal to the sum of items (i) to (iii).

Kalecki's empirical studies of the US economy

I will refer now to two of Kalecki's empirical papers. In the first one (Kalecki, 1956 [1997]), he carried out a long-run comparison of the economic situation of the US economy, between 1937 and the mid-1950s. In the second one (Kalecki, 1962 [1991]), he studied the US business cycle in the 1956-1961 period.

In his long-run comparison Kalecki pointed out that in that period the national product had more than doubled, with an annual growth rate of 4.2% per annum. He then argued that from the supply-side this was not difficult to explain, because both total employment force and labor productivity also grew, 1.6% and 2.6% per annum respectively, even as capital equipment also expanded at a fast rate.

He then asked the following question: How was it possible that the expanded productive facilities were utilized, and the larger output find a market? For, he stated, "the discrepancy between the development of productive forces and

the market for their products constitutes one of the main contradictions inherent in the capitalist system.... [a contradiction that] in the period considered tended to grow more acute... [because]... big business's relative share of accumulation of the national product increased significantly" (Kalecki, 1956 [1997]: 280). To answer this question the author produced a table where he organized the national income accounts according to his methodology. I reproduce this table below

TABLE 1
Components of National Product, consumer services included, in the USA,
1973 Y 1955 (in \$billions, at 1947 prices)

	1973	1955
Productive Investment	12.9	30.1
Residential building	3.9	12.9
Increase inventories	5.7	3.7
Export surplus(+) import surplus(-)	-0.7	3.7
Gross accumulation	21.8	50.4
Budget deficit(+) or surplus(-)	-1.3	-4.8
Taxes on corporate profits	2.7	17.2
Gross private accumulation	23.2	62.8
Net government revenue from persons'	6.9	18.7
Personal consumption	111.9	216
National product	142	297.5

Source: Kalecki, 1956 [1997]

It may be necessary first of all to say a few words about Kalecki's terminology. He called **Gross Accumulation**⁷ the sum of the first four items: Productive Investment, Residential Building, Increase Inventories, and Export Surplus. The four items together represent the part of its product that the country is not consuming, and thus accumulates. On the other hand, **Private Accumulation**

⁷ Sometimes he used the term Social Accumulation.

includes, besides the previous items, the Budget Deficit plus Taxes on Corporate Profits. The reason is that these two items are part of the private product ceded to the Government.

Gross Accumulation is the most important autonomous component of aggregate demand. As mentioned, if Government expenditure is financed via higher Budget Deficit or via higher Taxes on Corporate Profits, aggregate demand expands. However, if it is financed via net government revenue from persons, then it simply crowds out private spending.

From this table, Kalecki inferred that the most important changes in the structure of final demand in the USA between 1937 and 1955 had been, firstly the change of sign of the trade balance, which went from a -0.5% of GDP to +1.3% of GDP, and which accordingly expanded demand. Secondly, government expenditure financed taxing corporate profits rose dramatically, thus creating additional demand. Thirdly, the relative share of private consumption fell, which lowered demand. Fourthly, he noticed the rise of what he called "Net government revenue from persons"; namely, the net balance between personal taxes and transfers. This rise crowded out personal consumption. He concluded:

"The increase in the relative share of private accumulation in the national product... did not cause any underemployment of productive resources for the following reasons: the additional private accumulation was absorbed by armaments and by the export surplus, whose increase was associated with 'foreign economic assistance' or with the construction of bases abroad which provided the wherewithal for importing American goods". (Kalecki 1956 [1997]: 284).

In his second paper Kalecki studied the shape and peculiarities of the business cycle in the USA between 1956 and 1961. From his analysis he inferred: “The course of the business cycle in the USA in 1956-61 confirms the view that the capitalist economy still shows a tendency to go into recession, but that a high level of government expenditure during crisis, pay-outs of unemployment benefits, and such measures as easier credit for housing construction soften the course of the recession and accelerate the upswing” (Kalecki 1962 [1991]: 398)

Thus, in his second study Kalecki showed that the “spontaneous” course of the business cycle had changed due to pervasive government intervention. However, expansionary fiscal policy in the US was not based on budget deficit, but on expenditure financed with taxes on profits.

Incidentally, the finding that taxes on corporate profits had gone up, both as a long-run phenomenon and during the business cycle, most probably came as a surprise to the author. As I mentioned, a long time before Kalecki had shown that government expenditure financed with taxes on private profits would be expansionary. However, at the time he minimized the practical importance of this point. He concluded that paper stating: “...capital taxation is perhaps the best way to stimulate business and reduce unemployment...It is difficult to believe, however, that capital taxation will be ever applied for this purpose on a large scale; for it seems to undermine the principle of private property” (Kalecki 1937[1990]: 325). And almost two decades later, when discussing government intervention and its effects in demand he reiterated the point. He wrote: “I shall now take up a third variant. I have to say straightaway that it is fictional. In this variant taxes fall

exclusively on capitalists. There never was and never will be such a case, and I deal with it solely for methodological reasons” (Kalecki 1955 [1991]: 354).

I shall now use Kalecki’s methodology to study the long- and short-run US fiscal position⁸. My aim is to assess how useful this methodology can be in the present conditions of advanced capitalist countries. We should take into account here that Kalecki elaborated the essentials of his theory during the 1930s and 1940s; and that he wrote the macro studies of the US we discussed section in the mid-1950s. Thus he wrote in a period when his assumption whereby “workers spend what they earn” was probably closer to reality than today. Besides that, until very recently the US economy was a relatively closed one. Last, but not least, during Kalecki’s times, the US financial development was not as sophisticated as it is nowadays. Therefore, some of his hypotheses, that then may have been approximately valid, have probably lost strength in the present circumstances.

A Kaleckian description of the US long-run economic evolution

⁸ In another paper (López and Reyes, 2011), we were able to verify the validity of Kalecki’s assumption that government expenditure financed via taxes on corporate profits expands demand and output.

<i>Components of National Income</i>	<i>1980</i>		<i>1990</i>		<i>2001</i>		<i>2007</i>		<i>2009</i>		<i>2010</i>	
1. Residential Investment	257.4	4.4	295.2	3.9	459.4	4.6	522.1	4.5	284.7	2.5	267.0	2.3
2. Non-residential Inv.	757.2	13.0	820.4	10.7	1194.1	11.9	1359.9	11.7	1086.3	9.7	1097.7	9.6
3. Change in inventories	-13.2	-0.2	19.2	0.3	-37.2	-0.4	24.2	0.2	-129.2	-1.2	52.9	0.5
Total Investment [(1+2+3)]	1001.4	17.2	1134.7	14.8	1616.2	16.2	1906.2	16.4	1241.8	11.1	1417.6	12.4
4. Foreign trade balance	-27.3	-0.5	-102.3	-1.3	-360.8	-3.6	-592.2	-5.1	-314.2	-2.8	-408.2	-3.6
5. Taxes on corporate income	177.1	3.0	185.3	2.4	188.2	1.9	349.3	3.0	199.7	1.8	306.0	2.7
6. Budget Deficit (total receipts minus total Government Additional Demand [(5+6)])	99.9	1.7	224.4	2.9	-23.9	-0.2	193.5	1.7	1039.8	9.3	1025.8	8.9
Government Additional Demand [(5+6)]	277.1	4.8	409.7	5.4	164.3	1.6	542.8	4.7	1239.4	11.1	1331.8	11.6
I. Priv. Accumulation	1251.2	21.5	1442.1	18.9	1419.7	14.2	1856.8	15.9	2167.1	19.4	2341.2	20.4
II. Net taxes on Persons	906.3	15.4	1147.9	15.2	1631.7	16.2	1678.1	14.3	1102.3	9.8	1039.5	9.0
III. Personal Cons. Exp.	3697.5	63.0	5017.9	66.1	7059.5	69.5	8169.0	69.7	7958.6	70.8	8091.0	70.5
Nat. Income *	5803.0	99.6	7579.8	99.1	10154.6	101.5	11763.5	101.0	11248.6	100.5	11620.3	101.3
Government Expenditure [(5 + 6 + II)]	1183.4	20.2	1557.6	20.6	1796.0	17.8	2220.9	19.0	2341.8	20.9	2371.3	20.6
Private Saving	1074.1	18.4	1256.8	16.4	1231.5	12.3	1507.5	12.9	1967.4	17.6	2035.2	17.7

* Figures and percentages may not add exactly due to approximations
Sources: Own elaboration with data from the Bureau of Economic Analysis (NIPA Tables).

I shall first use Table 2 (annual data), built following Kalecki's methodology⁹.

The only amendment I make to Kalecki's original table is that I include an item, which I call Government Direct Additional Demand (GDAD), which is the sum of the Budget Deficit plus Taxes on Corporate Income. The **total** additional demand created by government spending is surely larger than GDAD, because the latter has a multiplier higher than one. To make the figures comparable, in the first part I selected years more or less similar from the point of view of the stage of the business cycle. I also include years 2009 and 2010, to show how the demand-side variables behaved in the course of the current crisis.

To start with I will consider the long-run evolution of the US economy during the period prior to the present crisis. Between 1980 and 2007 GDP grew 3.2% per annum, with total employment growing 1.45% (p.a) and labor productivity 1.57% (p.a). At the same time, the real value of the capital equipment more than doubled with a growth rate of about 3% (p.a). I now ask the same question Kalecki put forward in one of his already mentioned papers: How was it possible that the expanded productive facilities were utilized, and the larger output find a market?

⁹ The details of the construction of the table and sources are in the Appendix.

The first thing we notice is the rise in the relative share of private consumption in GDP, of 6.7 percentage points between 1980 and 2007. It is important to recall is that this rise occurred in spite of the shift of factor incomes from profits to wages. The wage share fell, though moderately, between 1980 and 1995, it regained its previous level between 1995 and 2000, and fell again between 2000 and 2007¹⁰. In this latter period private consumption and the wage share moved in opposite directions.

Concurrently, the share of private savings fell more than 5 percentage points. This is a huge reduction and many analysts have observed this fall with apprehension. However, I must recall here that falling personal savings creates additional effective demand and profits (see Equations 1 and 2). In fact, it was thanks to the fall in the rate of savings that consumption could grow as fast as it did when the wage share was declining. That fall, therefore, enlarged the domestic market and by the same token probably stimulated capital accumulation.

Let us also remember that private savings is a passive, not an active element of the macroeconomy (Steindl 1990, pp. 183-215; Laski and Römisch, 2001). From the National Accounts identity we know that private savings are necessarily equal to the sum of private investment, plus the budget deficit, plus the surplus in the current account balance. Such that, paraphrasing Keynes (1937, p. 222), “the public can save ex ante, and ex post, and ex any-thing else until they are

¹⁰ Note, the concentration of income in favor of the richest strata of the population rose significantly in the period under study; see especially Piketty and Saez (2003).

blue in the face”, but savings will not rise unless the right-hand side of that identity rises. Now, for the US in the period under consideration, the budget deficit share remained **grosso modo** constant (though with ups and downs). Thus, the main factors behind the fall of the private savings share were the decline in the share of investment and, above all, the growth of the current account deficit.

The counterpart to the rising share of consumption, in a context where the wage share and the savings rate were falling, was growing indebtedness from households, including poorer households (Cynamon and Fazzari, 2008; Barba and Pivetti, 2009; and Fitoussi and Saraceno, 2010). The latter was surely aided by development that took place in the financial and monetary sector, and especially the fall of interest rates, the swelling of bank credit, and more generally the financial liberalization and deregulation. A supplementary factor probably was the strong rise in the price of assets and on wealth, which may have also stimulated a fall in personal savings.

Let us note here that these two developments are somewhat peripheral, not to say alien, to the main core of Kalecki’s theory. I will make here a small detour to consider this issue. Kalecki doubted monetary developments or policy could be a relevant way for achieving a state of full employment, or to provide an important demand stimulus, or both. For example, in his first complete exposition of his theory he criticized the view whereby capitalist consumption depends not only on their income, but also “on the level of capital values; in particular, on stock exchange prices” (Kalecki 1939 [1940]: 262). He did not carry out a theoretical discussion, but considered the issue empirically. He showed that “[between 1926

and 1929- JL] both capitalist income and consumption show small changes in the same direction. [However] share prices are violently rising throughout the period... The only possible interpretation of these data is that the influence the stock exchange on capitalist consumption in the USA in 1926-9 was not very great" (Ibid: 263). He did not come back to the issue in newer versions of his theory, and in his applied works monetary and financial developments are almost completely absent, probably because he did not consider that they play an important role.

He was also sceptical about the importance of the interest rate as such. He argued:

"The fall in the rate of interest would probably tend to stimulate consumption mainly through inflating capital values of the existing assets. This effect would be significant, most probably, only if the fall in the rate of interest were considerable"

"The reduction of the long-term rate of interest would stimulate investment by increasing its net profitability. Here again a substantial fall in the rate of interest is necessary in order to make the effect significant" (Kalecki 1946 [1990], p. 403).

After this diversion, I come back now to the study of the factors affecting the recent evolution of the US economy. An additional element that probably aided consumption spending was the change in the composition government revenues. In particular, between 1980 and 2007 a modest fall took place in the share of government spending financed with taxes on the population, which is the type of spending more likely to crowd out private spending. The decline in the share of net taxes on persons was especially important between 2001 and 2007.

As I mentioned, another important development in the period was the fall in the share of total private investment (residential plus non-residential and plus changes in inventories) in GDP. That share fell almost 4 percentage points between 1981 and 1990, and rose in 2007, but without fully recovering its previous level. I also note that non-residential investment was much less dynamic than residential investment.

The worsening trade deficit of the US economy was another regular and unrelenting phenomenon we observe in this period. Net exports, whose share in GDP was negative but small in 1980, rose to a little over 5 percentage points in 2007. Thus, that fall explains over 80 percent of the fall in private savings. Some authors see behind the growing deficit a loss of technological leadership of this country vis-à-vis its trade rivals. I do not wholly agree with this view, and I simply observe that during this period the amount of productive capital more than doubled and the share of non-residential investment in GDP did not fall much: from 13% to 11.7%. This modest fall surely cannot explain the huge rise in the deficit. The latter has more to do with the evolution of the exchange rate, which is only loosely connected with technological prowess.

The negative international US balance is a factor that tends to depress domestic demand. But on the other hand it allows implementing expansionary domestic demand measures without having to worry about their international repercussions. Besides, I recall that, under the present international financial arrangements and institutions, a growing US trade deficit is an important source of demand injections into the world economy. We may not like these financial

arrangements and institutions, because they give an unfair advantage to the world leading economy, which can finance its foreign deficit in its own currency. But this is a different question.

I already mentioned the fall of the budget deficit, which moved in ups and downs. Its share reached 2.9% in 1990¹¹, then fell until turning into a surplus of 0.2% of GDP in 2001, and in 2007 the deficit represented 1.7% of GDP. On the other hand, the share of taxes on corporate profits remained stable during the whole period. Finally, the share of net taxes on persons also moved in ups and downs, reaching its peak at 16.6% of GDP in 2000, to fall to 12% of GDP in 2007. Correspondingly, the share of what I called Government Direct Additional Demand remained **grosso modo** constant during the period, growing at about the same pace as GDP, and covering about 25 percent of total government expenditure. An important exception is the year 2001, when it covered only 9 percent of total government expenditure. Thus, in this year the additional demand created by the government was minimal, and the largest part of its spending is likely to have crowded out private demand.

The current US crisis seen through Kaleckian lenses

Let us now see how the crisis affected the different components of aggregate demand, for which I compare 2007 with 2009 and 2010 (see again Table 2). The first important thing to note is the drastic collapse of residential investment, whose share almost halved between 2007 and 2010. The shares of

¹¹ The deficit peaked in 1992, reaching 6.1% of GDP.

non-residential investment and of total investment also fell drastically, but their proportional decline was milder. The rise of total investment during the (feeble) recovery of 2010 was due almost exclusively to the change of sign of accumulation of inventories.

On the other extreme, the share of the foreign trade balance improved significantly, from minus 5.1 to minus 2.8 percent of GDP in 2009 and minus 3.6 percent in 2010. Thus, as is usual during depressions, the trade balance evolution dampened somewhat the cyclical downswing. However, the repercussion effect played also its role. Due to the large weight of the US economy in the world, and the planetarium character of the crisis, its breakdown contracted demand and output in its trading partners, with negative repercussion on its own exports.

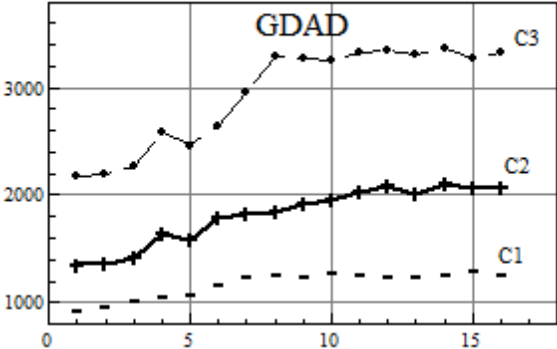
However, the most important change took place on the government side of the demand components. Total government spending rose from 2221 to 2342 and then to 2371 US billions between 2007 and 2010, and its share in GDP from 19 to 20.9 and then to 20.6 percent of GDP. But, more important than that, there was a huge increase in Government Additional Demand. The share represented by the sum of Taxes on Corporate Income plus the Budget Deficit went from 543 to 1239 and then to 1332 billions of US, more than doubling its total value between 2007 and 2010, with its share rising from 4.7 to 11.1 and then to 11.6 percent of GDP. To put it differently, while in 2007 about 75 percent of government spending was financed taxing persons, in 2010 only 43.5 percent of its finance came out of taxes on persons. This implies that not only was government spending larger but also

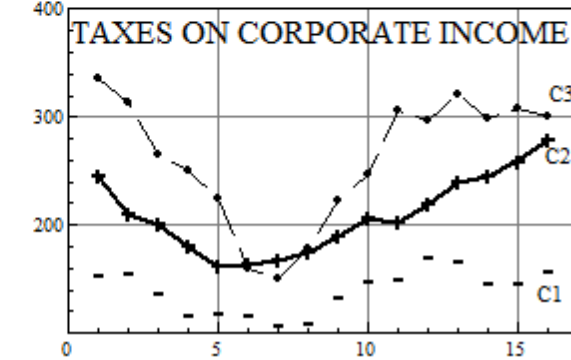
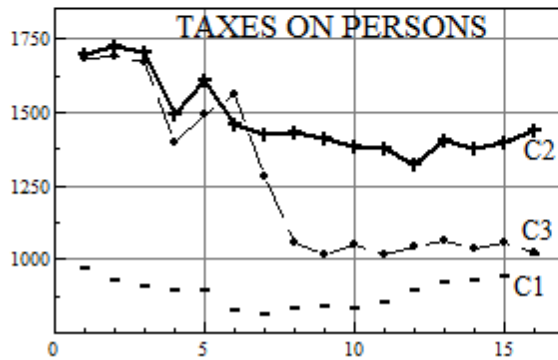
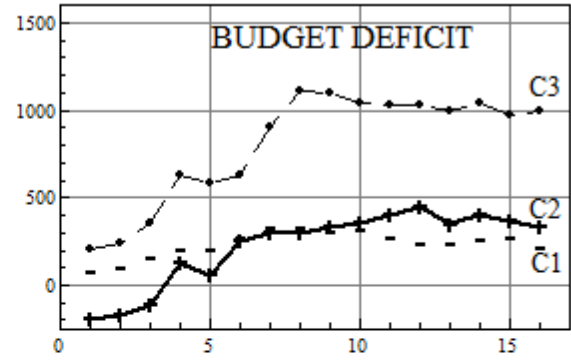
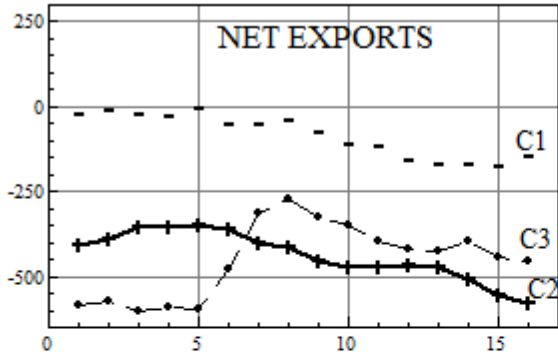
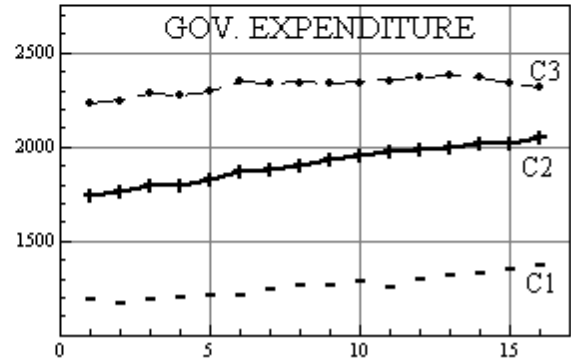
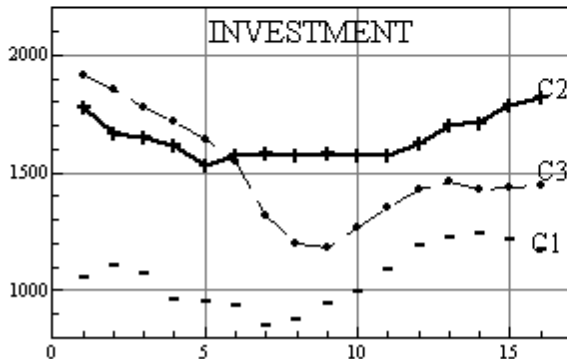
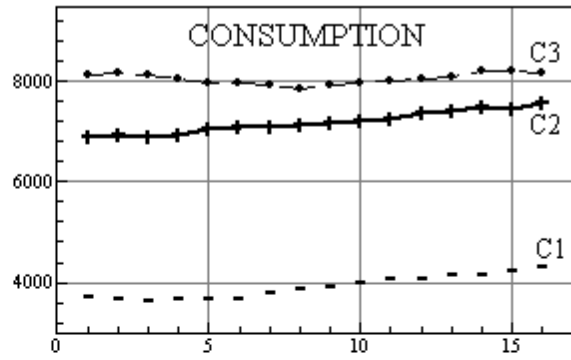
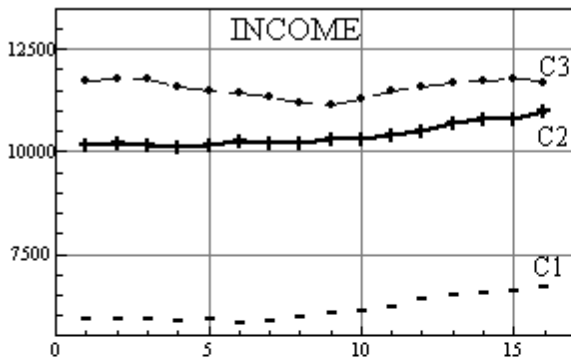
that its multiplier effect was greatly magnified, because a much smaller part of it was crowding out private spending.

This last issue surely deserves closer attention so it will be useful to put it into a broader perspective. Between the third quarter of 2008 and the second quarter of 2011, the Fed's balance sheet practically tripled, with the monetary base growing from an index of 100 to one of about 300. Concurrently, the Fed has maintained the interest rate at its historical low. But this extremely bold monetary policy did not stimulate enough private spending, which fell from 10,075 billions of (2000) dollars in 2007 to 9,201, and recovered mildly to only 10,319 in 2010.

Fiscal expansion therefore took on the leading role. As mentioned, Government Direct Additional Demand went from 543 to 1239 and then to 1332 billions of US. Besides, fiscal expansion held back a much larger fall of private demand. Thus, the total additional demand created by the additional government spending was larger than the previous figures. To be more concrete I will put some numbers to the idea. In another document (López and Reyes, 2011) we estimated that the short-run (two quarters) output-elasticity of government spending financed via taxes on profits was 0.07. To simplify I will suppose the same elasticity for the budget deficit. Now, between 2007 and 2010 government direct additional demand grew 790 billions of (2000) dollars; i.e. 145%. This means that, absent this fiscal push, GDP would have been 10.15% (145 times 0.07) lower, that is \$1,194 billions of dollars, smaller than it actually was (\$10,569 instead of \$11,620 billions). There can be not doubt that the course of the crisis would have been much more critical had the expansionary fiscal policy been absent.

To complete our journey, I think it will be useful to compare the current crisis with previous episodes of cyclical downswing. I have selected three experiences, and in each one of them I compare the evolution of the main demand-side variables. Cycle 1 starts in 1981.2, Cycle 2 starts in 200.4, and the Cycle 3 starts in 2007.3. The information is given in graph 1. Cycles are labeled C1, C2 and C3, and the horizontal axis shows the number of quarters for each cycle.





If we compare the three episodes, the first thing that stands out clearly is the depth of the current crisis. This is the consequence of the fall in real terms of both consumption and, above all, private investment. As a result, a second noteworthy feature of the current crisis is the large improvement in the trade balance, which offset somewhat the decline of private demand. A third peculiarity of the current crisis has to do with the behavior of government demand and its finance. In all the three episodes under review government real expenditure remained **grosso modo** constant in real terms. However, the decline in taxes on corporate income, and in taxes on persons, was much larger in the current episode. Accordingly, the budget deficit, and also the government additional demand, had to grow much more in this third episode. Also, the multiplier of government expenditure must also have been higher in this recent period. As previously mentioned, had it not been by the large additional demand created by the government, the recent crisis would have been much deeper.

Final Remarks

As a consequence of the depth of the current world financial crisis, public spending, even deficit financed, regained some recognition in the arsenal of acceptable economic policy instruments. This situation did not last long, and as soon as a modest economic recovery appeared in the horizon, fiscal conservatism reemerged in full strength. Anyway, the short “Indian Summer” brought back to public recognition Keynes’s figure and ideas.

However, Kalecki’s name has not come into view and his ideas remain in oblivion. This is unfortunate because fiscal policy played a key role to avoid a

deeper crisis, and Kalecki had much to say on this issue. Indeed, when Kalecki firstly put forward his version of the principle of effective demand, he gave a prominent place to government spending as an additional source of demand. He also added a twist to that notion, claiming that even financing government expenditure with taxes on profits would have an expansionary effect.

In this study I have shown, I hope, the theoretical and practical importance of Kalecki's theory of fiscal policy. In the current US crisis, monetary policy, in the shape of quantitative easing and historically low rates of interest, has been hailed by publicists and pundits as the solution to confront the decline of private spending and the business downswing. The results of have been rather disappointing. Using Kalecki's approach and methodology, I have verified that it has been public spending that has played the key role to avoid a deeper crisis than the one that actually took place.

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APPENDIX

Table A1. Model Data Sources

Variable	Variable name at source	Source	Description
Y	Gross Domestic Product (at 2000 prices)	BEA	Table 1.1.6, item A191RX1
Y nom.	Gross Domestic Product	BEA	Table 1.1.5, item A191RC1
Priv. Cons.	Personal consumption expenditures	BEA	Table 1.1.5, item A002RC1
Priv. Inv.	Gross private domestic investment	BEA	Table 1.1.5, item A006RC1
Trade Balance	Net exports of goods and services	BEA	Table 1.1.5, item A019RC1
Gov. exp.	Government consumption expenditures and gross investment	BEA	Table 1.1.5, item A822RC1
G_CPI	Price Index for Government consumption expenditures and gross investment (2000=100)	BEA	Table 3.9.4, item B822RG3
H	Taxes on corporate income	BEA	Table 3.1, item W025RC1
B	Budget deficit (total receipts minus total expenditures)	BEA	Table 3.1, item AD01RC1
S	Surplus of government revenue over government expenditure on compensations to employees and transfers	Own calculation	Variable calculated as: $S = \text{Gov. exp.} - (B + H)$