

2018, WEA On Line Conference

**The 2008 Economic Crisis Ten Years On
in Retrospect, Context and Prospect**

Discussion Forum: from October 15th to November 30th, 2018

The European Monetary Union failed because of misunderstood macroeconomics

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Abstract

The European Monetary Union and by that the Euro has failed because of not fulfilled expectations related to economic growth and prosperity for the participating countries. The glittering promises were expressed when the idea of a common European currency was launched back in 1989 and repeated frequently until the (misunderstood) macroeconomic realities hit back from 2008 and onwards. Even before 2008 it became a constant battle to counterbalance some of the negative consequences of a prematurely introduced common currency. A process, which has absorbed a large part of the time and decision power of the European council ever since the euro was made real. Instead of enforcing an integrative process, the increasing economic diversion have caused disruption inside euro-countries and tensions among the EU-member states. The macroeconomic performance has been within the euro-zone significantly below the non-euro countries with regard to unemployment, growth and public debt. On top of that, there has been ever since 2010 an ongoing and increasingly intense political debate (outside the corridors of Brussel, Berlin and Paris) about the scraping of the common currency and by that to break the downward spiral of low growth and high unemployment. This paper will conclude with a strong recommendation that monetary and fiscal policies should be coordinated and directed towards a reduction of the private sector structural excess savings and hereby, to avoid low growth and persistently high unemployment. As long as the private sector is not self-adjusting to full employment, the public sector budget should mirror the private structural surplus. Unfortunately, a policy which the fiscal compact is preventing.

Summary

The European Monetary Union and by that the Euro has failed because of not fulfilled expectations related to economic growth and prosperity for the participating countries. The glittering promises

were expressed when the idea of a common European currency was launched back in 1989 and repeated frequently until the (misunderstood) macroeconomic realities hit back from 2008 and onwards. Even before 2008 it became a constant battle to counterbalance some of the negative consequences of a prematurely introduced common currency. A process, which has absorbed a large part of the time and decision power of the European council ever since the euro was made real. Instead of enforcing an integrative process, the increasing economic diversion have caused disruption inside euro-countries and tensions among the EU-member states. The macroeconomic performance has been within the euro-zone significantly below the non-euro countries with regard to unemployment, growth and public debt. On top of that, there has been ever since 2010 an ongoing and increasingly intense political debate (outside the corridors of Brussel, Berlin and Paris) about the scrapping of the common currency and by that to break the downward spiral of low growth and high unemployment.

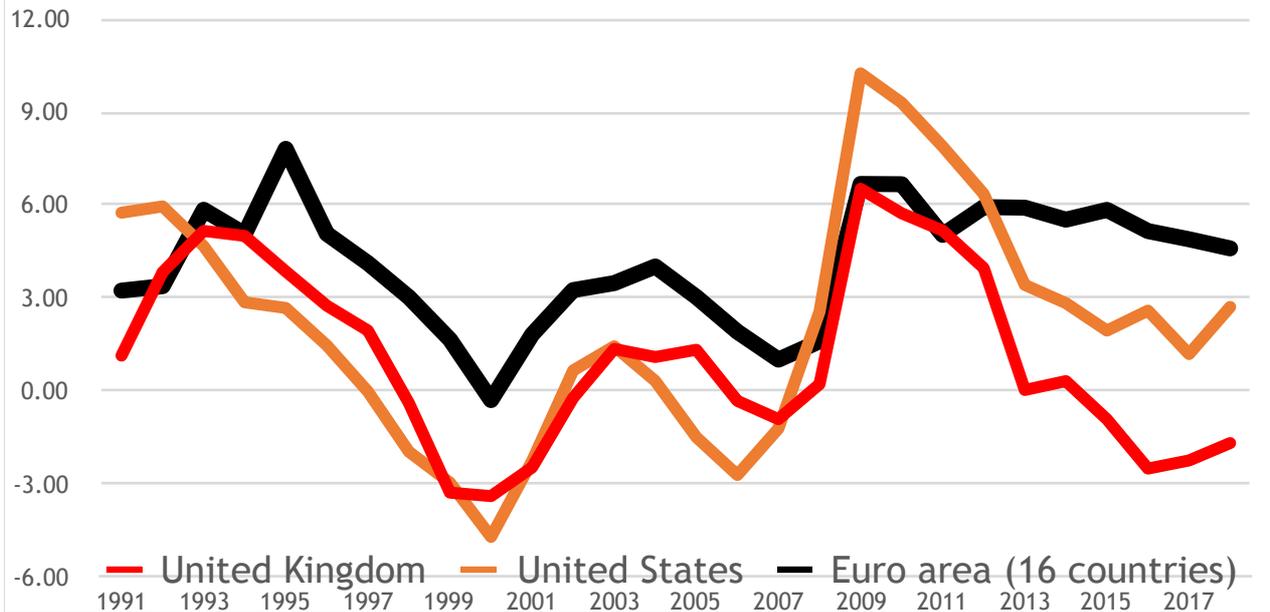
The naïve neo-functionalistic approach to European integration codified by the Treaty of Lisbon has obviously been falsified during the last 10 years. There is no quick or easy fix to make the Monetary Union work properly and to fulfil the aspiration from the early 1990s.

There are many explanations for this disappointing outcome: political ambitions (and illusions); but at the end it was misunderstood macroeconomics and strict policy requirements related to the public sector finances, which paved the way for the devastation development in Southern Europe.

The implications of a persistent private savings surplus was disregarded. Such a surplus will by definition be counter-balanced by an equivalent deficit in the public and/or foreign sectors. But, according to the rule of the fiscal compact the public sector in each country is required never to run a structural budget deficit larger than $\frac{1}{2}$ pct. of GDP. Hence, the euro-zone members are forced to run substantial balance of payments (current account) surpluses to mirror the private excess savings. Individual euro-countries have no impact on the euro exchange rate, so their only option to improve on international competitiveness is to undertake internal devaluations (wage reduction). This is not very helpful in a situation, where all major trading partners follow the same strategy of policies to reduce their domestic cost level. It comes close to a motionless march with regard to relative competitiveness within the euro-zone; but with negative consequences for domestic aggregate demand, see Symposium: *Wage- vs. profit led Growth*, ROKE, 2017, Vol.5/3. Hence, the only strategy available to euro-countries to improve on their balance of payments is austerity policy, which reduces imports. Unfortunately, also in this case, where several countries undertake austerity policies simultaneously, the derived effect is much smaller than expected. Reduced import means also reduce export from one of the other euro-countries, which is also struggling with excess private savings.

A much more constructive policy would be to reduce the excess private savings by increased private real investment. This could happen through an expansionary monetary policy. In fact, since 2014 the European Central Bank has paid quite a lot of attention to lower the (long term) rate of interest and to facilitate borrowing by firms. How successful the ECB has been, is debatable; but excess private savings has been somewhat reduced, see figure 1.

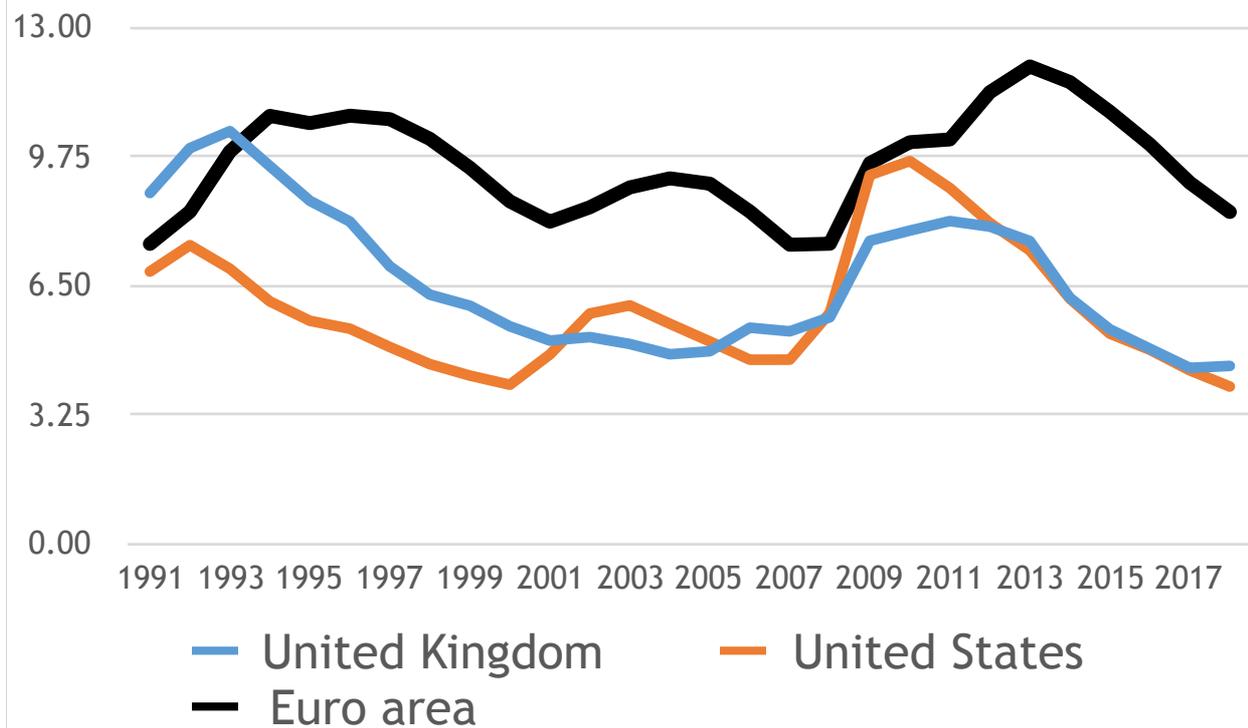
Figure 1. Private excess financial savings



This paper will conclude with a strong recommendation that monetary and fiscal policies should be coordinated and directed towards a reduction of the private sector structural excess savings and hereby, to avoid low growth and persistently high unemployment. As long as the private sector is not self-adjusting to full employment, the public sector budget should mirror the private structural surplus. Unfortunately, a policy which the fiscal compact is preventing.

Furthermore, the persistently high private savings are also mirrored in the unemployment statistics. UK and the US have undertaken a more expansive fiscal (and monetary) policy, which has reduced unemployment at an earlier stage and to a larger extent, see figure 2.

Figure 2. Unemployment



Introduction

The prosperous consequences of a European common currency were ‘analyzed’ in the Delors-report (1989). It was presented as a deductive exercise and used as a logical (and of course beneficial) superstructure to the EU internal market, which in all practical terms was set to be finalized in 1992. There was no dissenting voices within the Delors-report. All participants (the 12 central bank governors + three expert and Jaques Delors) agreed that it would be to the economic benefit for all parties (consumers, efficient firms and most important the GDP-growth in all member-states) to make the internal market work more frictionless due to reduced transaction cost, low inflation and removed exchange rate uncertainty.

The common currency was in this perspective presented as a genuine win-win proposal, which would create prosperity for everyone and hereby promote European integration in the economic and political spheres.

This economic conclusion was supported by a proper *euro-monetarist* analysis, see Jespersen (2016). Only lack of wage-/price flexibility and of cross-border labour mobility could prevent (together with misunderstood policy interventions) these prospects to materialize.

Labour market flexibility reforms, independent central bank and balance public sector budgets were the recipe to support this development of the EU (and especially the euro-zone countries) to be more and more prosperous and economic and politically united.

Twenty years later in the wake of the financial crisis and the following great recession, macroeconomists are disillusioned. The development since 2008 (and even before) revealed that the analysis was wrong. The euro-zone (as a whole) has been underperforming since the very start in 1999 measured by GDP growth and unemployment. But the disharmony was undeniable after 2010. Of course, different explanations were put forward – Brussels argued repeatedly that the main

reason were the not fulfilment of the public sector budget requirements codified in the so-called *growth and stability pact*¹.

When the financial crisis hit in 2008-10 the weakness of the Monetary Union was demonstrated in public. There was no shared rescue mechanism to support those governments, which were forced to support their reckless private banks to prevent their bankruptcy. Euro-countries were not committed by the EU-treaty to support each other, when the stability of the euro was challenged by the market. In euro-countries which had run a heavy balance of payments deficit (not necessarily parallel with a public sector deficit like Greece), there was a lack of euro-liquidity. Banks in balance of payments surplus-countries like Germany, had until 2008 willingly lent money to their Southern European colleagues. It was told, by the economists, that balance of payments deficit did not matter, when countries use the same currency. They were wrong and had disregarded that the credibility of a private banks is no stronger than the ***national*** governments ability (and political will) to support the ***national*** banking system.

Euro-governments only looking at their own national interests had to (or was forced to) ask Brussels to rescue their private banks one way or another all over the euro-zone – *to save the euro* became the mantra. But a number of the Southern European government did not have the money to rescue their own banking system, because they had given up their monetary sovereignty. These countries had to go begging around at the brink of bankruptcy. EU-funds were made available (in cooperation with the IMF and Berlin) at harsh political conditions. Hence, member states of the euro-zone were diverging measured by living standard, unemployment and inequality and *the disintegration process was initiated*.

Today, most macroeconomists had to admit that the European Monetary Union was established prematurely, institutions were not supportive and the euro-sceptics were growing in a number of countries blaming the euro and the Troika (EU-Commission, ECB and the IMF) for undermining democracy and prosperity and by that being very harmful to the original European idea of collaboration and solidarity.

The following parts of this paper will demonstrate, why the *euro-monetarist* analysis was wrong from the very beginning, how the later ‘amendments’ of the euro-zone by the addition of the *stability pact* and the *fiscal compact* only made the divergence between North and South even more pronounced. Further, it is demonstrated that the free movements of labour, financial capital and the common currency have all three removed a great deal of the EU-members (and especially the euro-countries) sovereignty, which already have made UK leave and more countries will follow.

So, clear rules of exit-strategies and generally accepted principles within the Treaty for accept of different aspirations of integration – comparable to the Danish case, are badly needed. Brexit has unfortunately, demonstrated that all parties are groping in the dark, which creates even more disharmony. One should not forget the Greek case running out of course to such an extent the GDP has fallen by 25 percent – not seen since the Great Depression in the 1930s and causing wounds, which will never be healed.

¹ Re-call that already in 1995 the head of the EU-Commission Romani Prodi called the *growth and stability pact*: ‘stupido’ by the same incident the British newspaper Financial Times called it a ‘de-growth and instability pact.

If a kind of solidarity is still present in Europe – one may doubt; but in case of the EU splitting-up in regions with genuinely shared interest, and a number of regional currencies would be a much more preferable situation to an uncontrolled and disrupted break up. One could point at a Scandinavian Union as a first step in that direction, together with for instance Benelux, Eastern European etc., see Amoroso (1999).

Small realistic steps are obviously to be recommended, and they should be supported by the people in an enlightened democratic political process.

What is meant by ‘misunderstood macroeconomics’?

To understand the concept of a ‘misunderstood macroeconomics’ one has to turn to the history of economic thought. Because if one is only looking into an ordinary textbook in macroeconomics for instance Mankiw’s *Macroeconomics*² (9th ed., 2016) the student would get the impression that there is only one macroeconomic theory – the ‘Great Moderation’, where short run divergences from long run private sector (!) general equilibrium is mainly (if not solely) caused by wage and price rigidities.

I can only agree with Keynes when he concluded the *Preface*: ‘The difficulty lies, not in the new ideas, but in escaping from the old ones’ (GT, p.viii)³

A private savings surplus has by definition to be counter-balance by an equivalent deficit in the public and/or foreign sectors. According to the rule of the fiscal compact the public sector in each country is required never to run a structural deficit larger than ½ pct. of GDP. Hence, the euro-zone members are forced to run substantial balance of payments (current account) surpluses to mirror the private excess savings. Individual euro-countries have no impact on the euro exchange rate, so their only option to improve on international competitiveness is to undertake internal devaluations (wage reduction). This is not very helpful in a situation, where all major trading partners follow the same strategy by policies to reduce their domestic cost level. It comes close to a motionless march with regard to relative competitiveness within the euro-zone; but with negative consequences for domestic aggregate demand, see Symposium: *Wage- vs. profit led Growth*, ROKE, 2017, Vol.5/3). Hence, the only strategy available to euro-countries is to improve on their balance of payments by austerity policy, which reduces imports. Unfortunately, also in this case, where several countries undertake austerity policies simultaneously, the derived effect on the balance of payments is much smaller than expected; but the negative impact on growth and employment much stronger. Reduced import means reduced export from one of the other euro-countries, which is also struggling with excess private savings.

A much more constructive policy would be to reduce the excess private savings by increased private real investment. This could happen through an expansionary monetary policy. In fact, since 2014 the European Central Bank has paid quite a lot of attention to lower the (long term)

² The textbook is running in its 9th edition (2016) with only minor changes since the first publication in 1992: only numbers not the theory/explanation is influenced by reality, e.g. the 2008 crisis and persistent unemployment in Europe

³ Although it is a preface. The content come close to being the conclusion of the entire book written as the very final sentences dated December 13, 1935.

rate of interest and to facilitate borrowing by firms. How successful the ECB has been, is debatable; but excess savings has been somewhat reduced, see figure.

The private sector is not self-adjusting

As soon as it is accepted as an empirical fact unveiled by the national statistics that full employment is a rare case this observation calls for an explanation. The inter-war period in Great Britain (and most of Europa) was an obvious case and the US became a case after the Wall Street crash in 1929.

'To escape the old ideas' meant giving up the pre-condition that the macroeconomic development is supply-side determined. Say's Law that 'supply [of labour] creates its own demand' or with Keynes words: Say's Law is equivalent to the proposition that there is no obstacle to full employment' (ibid, p.26). And the new idea is simply employment depends on production (Keynes called it 'output') and production depends on 1. Expected demand for goods and services and 2. on profitability. It is the combination of 1. and 2., which Keynes called 'the Principle of Effective Demand', see (Jespersen 2012). The entire 1936-book is one long theoretical argument related to the factors which make an impact on effective demand and how they are interrelated within a macroeconomic system, what Keynes called 'The economy as a whole'.

That lack of profitability may cause unemployment was very conventional conclusion. The 'revolutionary' new theory was the importance of 'expected demand'. Accordingly, Keynes focused on 'expectations' and on 'demand'.

- a. **Expectations**, uncertain knowledge (and lack of information) are undividable inter-linked. When one recalls that neoclassical market theory securing a Pareto-optimal outcome is relying on a number of restrictive assumptions among other full information, it becomes trivial that this theory deviates from reality. When uncertainty prevails, expectations become at least partly subjective. If you know that you do not have all information, what does a rational man do? Looking around, what are other people in the same position doing? They might possess the information you are missing, so herd-effects become rational. People do not act independently of one each other. Waves of optimism and pessimism become a part of the unpredictable future. As Keynes summaries in (Keynes, 1937) 'about the future we simply do not know' and cannot know due to uncertainty.

When neoclassical macroeconomic theory was re-launched by Lucas & Sargent in the late 1970s (Lucas & Sargent, 1978). They had to face this dilemma of uncertainty causing a fundamental obstacle to the full-employment. They cut through this Gordian Knot by assuming the representative individual to possess full and certain knowledge about the full-employment equilibrium. This outrageous unrealistic assumption they phrased *rational expectations*, which with regard to analyzing and understanding reality could be characterized as a rather irrational assumption.

- b. **Demand** is analytically less elusive. Keynes made a focus on private consumption and real investment in the *General Theory* and for good reason. In the 1930s these two demand components added up approximately to 80 percent of the GDP (Y). Public sector demand was small and foreign export highly regulated. I will concentrate on private consumption (C), private savings (S) and real investment (I) in the following paragraphs of this paper.

So, it comes close to a closed economy analysis, which subsequently can be applied to an open economy.

- c. **Finally, Keynes** asked himself, how can it be that the master of the supply and demand diagram in microeconomics, Alfred Marshall and many other neoclassical economists, only focus on the supply side when it comes to macroeconomics?

Principle of ‘Effective Demand’

In macroeconomic analysis it is important to recall that output (GDP) is equivalent to factor income, and factor income is the main source of purchasing power which is used to buy output. The causality is somewhat circular: on the one hand output is only produced if firms in aggregate expect demand to be sufficient in the nearer future on the other hand demand depends mainly (but not solely) on realized factor income (no wage, no private consumption without a welfare state, accumulated savings and/or credit facilities).

Expectations might be wrong. Well, will always be wrong to some extent. We leave this aside for a short while.

If expected demand is equal to realized demand profit maximizing firms are ‘happy’. They have no reason to change output (and employment), until expectations do change. Let us focus on this situation with fulfilled expectations:

- (1) (Output) $Y \leq C + I$ (effective demand)
- (2) $S \leq Y - C$ (factor income not spend on consumption)
- (1) + (2) $S \leq I$ (real investment determines savings)

This is the core of *The General Theory*. The initial part is spent on defining *the principle of effective demand* i.e. the theory of employment. The three major parts (or books to use Keynes own expression) contains the theory of *effective demand*: 1. The propensity to consume (or to save) out of income, 2. The inducement to invest and 3. Money-wages and prices⁴.

The point is that output is determined at a level where financial savings (non-consumption) equal real investments, which can happen at any level of employment. Therefore, focus has to be on 1. propensity to consume (save) out of (factor) income and 2. Inducement to invest (which is less dependent on realized factor income, but dependent on the marginal efficiency of capital compared to the long term rate of interest). Keynes’s theoretical innovation was to demonstrate that within the macroeconomic system there are no automatic mechanism securing that $S = I$ *at full employment*. The 3rd element is book V on Money-wages and prices, where he explains why a high degree of wage and price flexibility is no solution to unemployment (or excess employment in war-time).

The essential character of the argument is precisely the same whether or not money-wage, etc. are liable to change (ibid, p.27)

Liquidity Preference

⁴ If self-called New Keynesian economists ever read *The General Theory* and even come as far as Book V they would be taken by surprise, because the initial chapter has the titles *Changes in Money-Wages*. Here Keynes explains, why flexible wage is no solution to securing full-employment rather the opposite.

Within Keynes's macroeconomic system output (and employment) becomes a dependent variable determined by the propensity to save, the inducement to invest and the rate of interest. This is the third novelty within *The General Theory* which makes it deviate from neoclassical macroeconomics. The rate of interest is not determined by savings and real investment or the related flow of (financial) funds theory. The rate of interest is determined by financial portfolio adjustments equalizing the stock of money and the stock of other financial assets (government bonds, private debt and shares and foreign exchange (when relevant)).

Keynes was very specific emphasizing that the rate of interest was the relative price balancing demand and supply of financial stocks.

The theoretical implication of the liquidity preference theory was that the rate of interest could not be expected to adjust in such a way that real investment and private financial savings would be identical at full employment. In fact, the only diagram in *The General Theory* is a drawing of the demand and supply schedule of financial flows, where the rate of interest is exogenously determined (by the demand for money relative to (government) bonds). Within this diagram, see below, Keynes demonstrates that given the marginal efficiency of capital a change in the rate of interest will cause the real investment to change and by that output and savings.

Hence, there are two (at least) reasons why the private sector is not self-adjusting: 1. Effective demand might be deficient and 2. The rate of interest is determined by portfolio considerations, i.e. partly by speculation, cf. Chapter 12 in *The General Theory*.

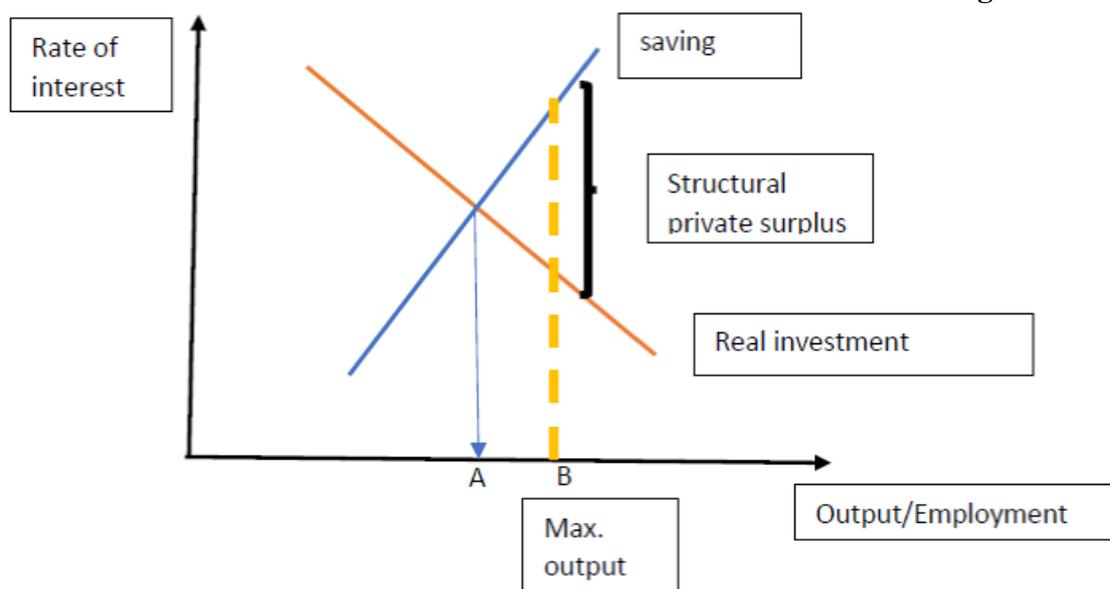
Causes of unemployment: structural private sector savings surplus

Looking at the private sector in isolation with Keynes's glasses then there is no self-adjustment mechanism within a perfect market economy where uncertainty and lack of information prevail.

If we take figure 1 as an illustration of a modern economy there are two structural obstacles to full employment:

1. **A structural private savings surplus** can be illustrated by the excess of savings compared to real investment at the level of full employment. However, if the rate of interest were determined by 'flow of funds' there would be established a rate of interest making S and I identical; but at an employment level below full employment. Within this analysis a possible solution could be to expand the real investment function either by subsidies (lower taxes) to private business or by increasing public investment, see below.

Figure 3. Private sector structural excess savings⁵



The distance from A to B is structural private sector unemployment caused by the tendency to structural private sector excess savings

The figure above illustrates that it is the intersection of private financial saving and real investments, which determine private sector production and employment in a closed economy and a balanced public sector budget. These macro-relations are independent macroeconomic behavioural representations. Real investment depends on MEC (expected rate of return of real capital) and on the rate of interest (of borrowed funds, i.e. determined by liquidity preference). Private Saving depends (mainly) on income, which is determined by output, see equations above and less on the rate of interest.⁶

By looking at figure 1 it becomes clear that private sector cannot adjust to full employment by itself. The two behavioural relations represent the aggregate decision of millions of households and (at least) thousands of firms who all act autonomously. At the macro-level there is no ‘adjustment mechanism’ which secure that effective demand should converged to a level corresponding to full employment. Private households (and firms) have locked themselves up in a situation with too high propensity to save and business with too little incentive to increase real investment, where full employment MEC is lower than the rate of interest determined by the Central Bank and the private sector’s liquidity preference.

This dead-locked employment position is illustrated in figure 1. Keynes called this dead-lock an *unemployment equilibrium*. One can argue about real investment being too low or the propensity to

⁵ This figure takes inspiration from Keynes, 1936: p. 180. It is the only figure in the *General Theory*. Keynes drew it following suggestions by Harrod; but Keynes expressed later on dissatisfaction – for good reason, because the third dimension is missing.

⁶ So, when the figure is re-drawn, the savings function should be presented much more flat

undertake private saving too high; but the outcome is undeniable: persistent unemployment due to *structural* private sector surplus.

In addition, it is important to understand that this structural private savings surplus will NOT by itself lower the rate of interest. When the economy has settled at unemployment equilibrium, private savings are equal to real investment and there is with liquidity preference unchanged a balance between supply and demand for additional funds (credit), hence no pressure in the financial markets to lower the rate of interest. According to Keynes's (new) liquidity preference theory only a change in the expected future rate of interest or expansionary monetary policy might have an impact on the private sector's financial portfolio selection and hence on the rate of interest.

Getting causality right by looking at national accounting identities⁷

⁷ This Box draws upon material from Jespersen (2016), chapter 5

**Box 1. National accounting identities,
case 1: a closed economy**

GDP-identity: Private Income \equiv total expenditures (private and public)

Y-GDP, C-private consumption, I-private real investments, G-public consumption & investment

(1) $Y \equiv C + I + G$;

(2) $Y - \text{Tax} \equiv C + I + [G - \text{Tax}]$;

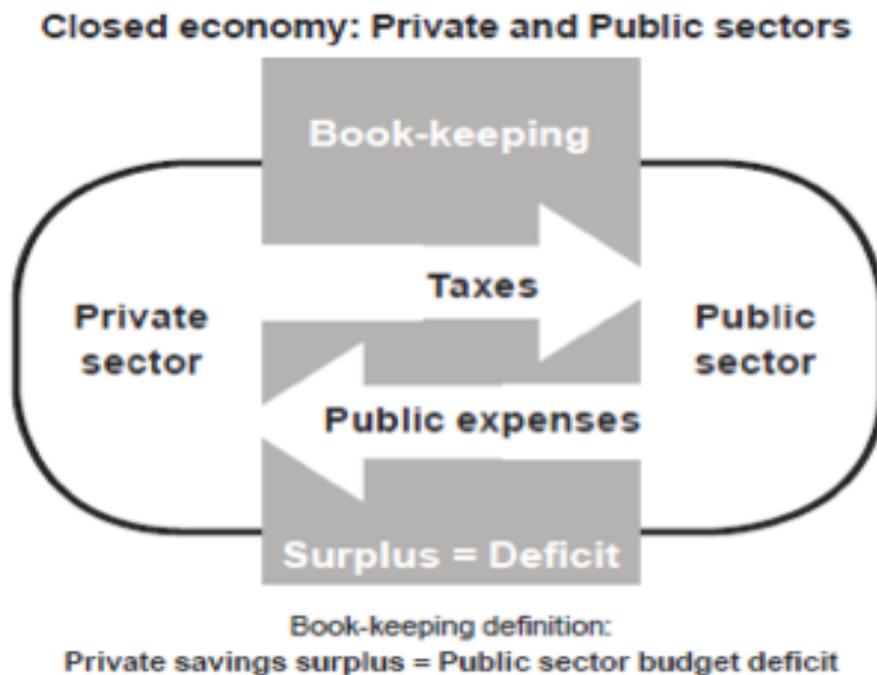
Private sector income \equiv private expenditures + public deficit

Hence,

(3) Private **actual excess** savings: $S_{px} \equiv Y - C - I - \text{Tax} \equiv [G - \text{Tax}] \rightarrow$

(4) Private actual **excess** savings \equiv public sector deficit

A Consolidated two sectors model – closed economy



case 2: an open economy (with public sector)

GDP-identity: Private Income \equiv total expenditures (private, foreign and public)

X – export of goods and services, M – imports of goods and services

(1) $Y \equiv C + I + G + [X - M];$

(2) $Y - \text{Tax} \equiv C + I + [G - \text{Tax}] + [X - M];$

Private sector income \equiv private expenditures + public deficit +

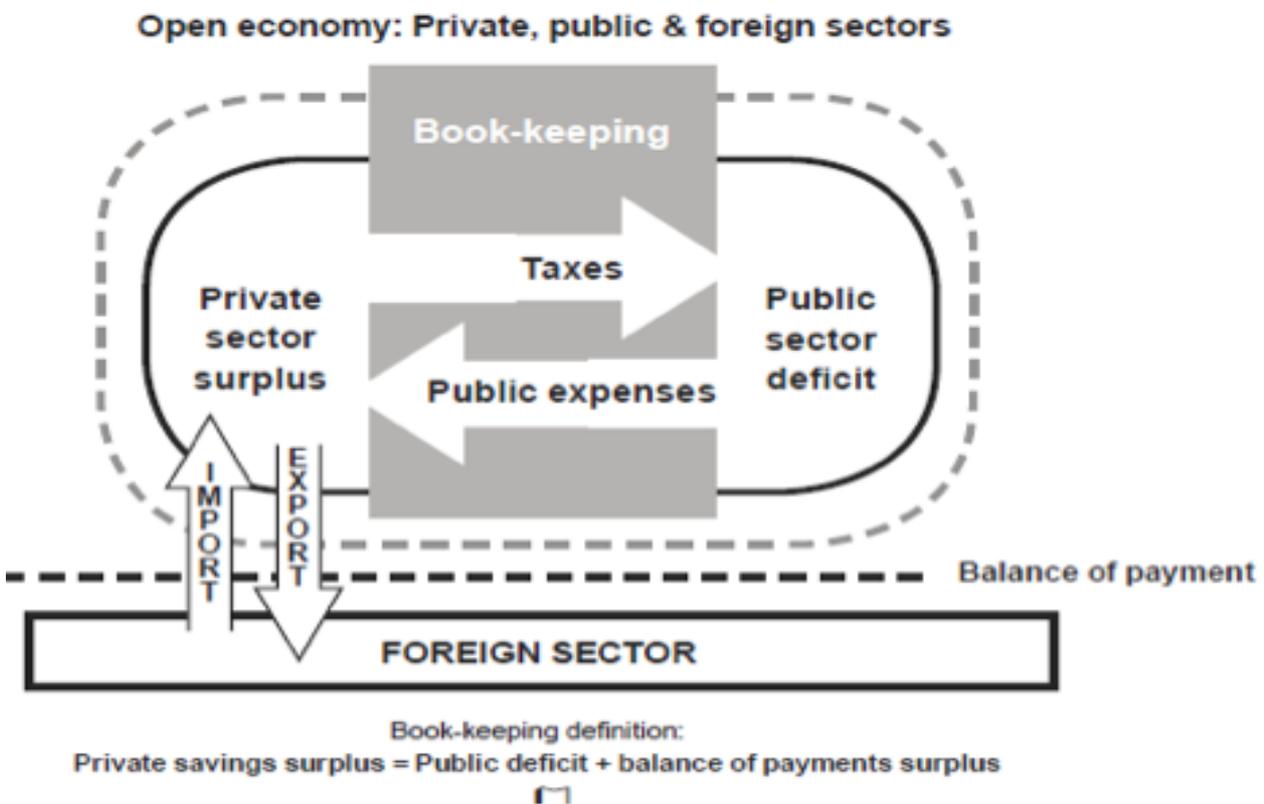
Hence,

(3) Private **actual excess** savings: $S_{px} \equiv Y - C - I - \text{Tax} \equiv [G - \text{Tax}] + [X - M]$
 \rightarrow

(4) Private actual **excess** savings \equiv public sector deficit + balance of payments (surplus)

(5) Public sector budget deficit: $[G - \text{Tax}] \equiv S_{px} - [X - M]$

A consolidated three sectors model – open economy



Hence, Public sector deficit \leftarrow Private excess savings + balance of payments deficit

The misunderstood macroeconomics: the Private Sector is not ‘self-adjusting’.

Macroeconomists agree that the private sector is the main driver of economic development. They disagree on the ‘self-adjusting’ assumption. Following Keynes’s arguments there is no such drive within the private sector due to the lack of coordination between real investment decisions and the propensity to undertake financial savings by households and business.

The starting point of the imbalance analysis has to be to figure out the level of structural employment, i.e. the employment which the private sector is able to generate on its own given the size of automatic welfare stabilizers and given the present international competitiveness (i.e. balance of payments, current account).

Next step would be to calculate how much external (public or foreign) *effective demand* is missing to create full employment, see figure 1. Within a closed economy (just to get the causality right) the public sector should run a structural (persistent) deficit equal to the private sectors structural surplus (financial excess) to close the employment gap. One could also identify this public sector structural deficit as the size of the needed *active* fiscal policy.

It is not possible to settle in advance, what size the needed active fiscal policy should take in any specific situation. It depends solely on the macroeconomic behaviour of the private sector actors. Here, it is important to separate between the permanent (structural) private sector surplus and the actual surplus which, of course, varies along the business cycle (or Trade Cycle as Keynes called chapter 22 (the only chapter on short term fluctuations) in the *General Theory*).

Looking at Euro-zone as a whole. This is the relevant case with focus on the private-public sector relationship. Until 2015 the euro-zone had broadly speaking a balanced balance of payments. Meaning that high and rather stubborn unemployment – unfortunately, very unevenly distributed – was caused by lack of effective demand inside the euro-zone. The distribution of the total effective demand between the member countries was depending on a number of factors:

1. Foremost - **relative intra-European competitiveness**. Here, the balance of payments is the channel of interrelationships. A German surplus means an equivalent deficit in other euro-zone members causing a redistribution of effective demand (and employment) from south to north.
2. The **balanced budget requirement on public sector structural budget** leads to austerity policies in countries with a structural surplus in the private sector (inclusive balance of payments surplus), see equation (4) above. As it can be seen in figure xx, all countries had a structural
3. **Monetary policy** - expansionary policy would improve on the structural imbalance in the private sectors by lower rate of interest (hence, higher real investment), and may lower the exchange rate to the benefit of an improvement of the overall euro-zone balance of Payments (increasing effective demand).

So, in such cases a persistent unemployment caused by *structural* private sector surplus the obvious question would be how to increase effective demand for labour? Output and employment could be improved, according to figure 3, if the private sector could run a savings surplus, which was match by one (or both) of the external sectors (the foreign and the public sector) would run an equivalent savings deficit.

Unemployment is caused by structural private savings in excess of private real investment. To close this gap of excess private savings, the public sector must take action. For instance, they could increase public real investment (or initiate other forms of expansionary fiscal policy). By running a public-sector deficit, excess private savings can be saturated by public bonds. Hence, public real investment has a triple effect: 1. reduces unemployment; 2. saturates private excess savings with secure financial assets (no crowding out); and 3. increases the real capital stock (infrastructure, innovation, education, durable energy supply to the benefit future generations).

Accordingly, the private structural excess savings (at full employment) could therefore equally well be described as an excess demand for external (public sector or foreign) financial asset. In a closed economy, this means that if the government creates more effective demand, output and employment, this public-sector deficit can automatically be financed by private excess savings without necessarily making the rate of interest increase.

It is equally trivial within a theoretical model to suggest that an export surplus could substitute the lack of private real investments. This is another way of making excess savings active by increased export. But all countries cannot have an export surplus (by definition). Say, all Europe suffered from an unemployment equilibrium – increased export is a no go (a zero-sum game which does not increase effective demand within Europe (if considered as a closed economic system).

Similarly, within a (semi)-closed economy like Great Britain in the inter war period or Europe in the present situation the straight forward policy recommendation would be, instead, to let the public sector run a *structural* budget deficit.

Conclusion

To establish full employment the government, i.e. the public sector, has to run a budget deficit similar to the private sector structural surplus. The ambition of full employment is, of course, very ambitious. Keynes's conclusion is more modest, that high unemployment can be mitigated primarily by increased public spending (taxes were in the inter war period quite low and mainly paid by the rich people). Anyhow, the theoretical point was, at least to Keynes, pretty straight forward: increased spending by government on public (domestic) consumption or real investment would have a positive impact on effective demand.

However, the real novelty of *the General Theory* was Keynes's demonstration that a budget deficit is a mirror picture of and therefore automatically will be matched by a private savings surplus (and/or a balance of payments surplus) of an equal amount as long as persistent unemployment prevails. Idle private savings is the cause-root of unemployment and can be the financial source, when deficit spending is undertaken to reduce unemployment. This situation is characterized by too much private financial savings which search for secure assets, i.e. public sector bonds. On the other hand, if the balance of payments turns into a deficit a part of the finance has to come from abroad, which may cause a number of challenges even when the same currency is used. Foreign liquidity (loans)

cannot be taken as granted automatically – this if anything the lesson from the financial crisis: that foreign loans may dry up quite quickly and should therefore be institutionally addressed within the treaty ruling the European monetary union.

In addition, there is an important obstacle to the smooth working of the monetary Union, that all countries cannot run a balance of payments surplus at the same time. Therefore, within a well-designed monetary union there has to be a financial re-balancing mechanism as an integrated part of the institutional super-structure. Inside the euro-zone any balance of payments surplus should be paid into a structural fund, which is responsible of re-circulated these balance of payments surplus(es) back to the deficit countries. So, euro-members could focus on how to rebalance the private sector and make it more competitive.

In this perspective of a realistic macroeconomic theory (and model) it becomes obvious, why a strategy of reducing a public sector deficit, in case of substantial unemployment, by recommending austerity policies will be counter-productive, if full employment and prosperity is the aim of the policy.

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