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# **Essentials of Constructive Heterodoxy: Say's Law**

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# Essentials of Constructive Heterodoxy: Say's Law

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## Abstract

The core problem of economics is that the representative economist never managed to keep political and theoretical economics properly apart. The mixture is toxic indeed. As Joan Robinson said about what parades as economics: Scrap the lot and start again. Yet, the question then arises where to start. To solve the Starting Problem – first formulated by J. S. Mill – is the all-dominant initial step of a paradigm shift. The most urgent task of a constructive Heterodoxy is to rethink pivotal concepts like market, Say's Law, profit, etcetera. The reconstruction of the theoretical superstructure from scratch is an absolute methodological necessity.

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## **1 No science of behavior**

... real progress involves radically revising or even abandoning that starting point. (Keen, 2011, p. 35)

First of all one has to distinguish between theoretical and political economics. The goal of political economics is to push an agenda, the goal of theoretical economics is to explain how the actual economy works. In political economics anything goes, in theoretical economics scientific standards are observed.

The core problem of economics is that the representative economist never got out of the morass of political economics. This is why economics is a failed science. Economists cannot explain how the economy works and are in the state of manifest self-delusion with regard as to what can be and has been achieved (2013a). As Joan Robinson said about what parades as economics: Scrap the lot and start again.

The question is, where to start.

Orthodox economics is founded on behavioral assumptions. For several reasons this has been the wrong starting point. What is decisive: no specific behavioral assumption can serve as a starting point for economic analysis because no way leads from the understanding of human behavior to the understanding of the behavior of the economic system. It makes no difference whether one employs homo oeconomicus or homo socialis. Contrary to widespread practice, second-guessing the agents is not economic analysis, it is psychological or sociological diletantism. Ultimately, it leads to nowhere as the current state of Orthodoxy testifies.

Section 2 gives the formal description of the most elementary economic configuration, that is, the pure consumption economy. From these minimalistic premises follows in Section 3 the market clearing price as result of the Structural Law of Supply and Demand. In Section 4 the complete conditions that underlie Say's Law are explicated and discussed. Section 5 concludes.

## **2 Initial abstraction**

The power of using abstractions is the essence of intellect, and with every increase in abstraction the intellectual triumphs of science are enhanced. (Russel, 1961, p. 627)

As a first approximation, one can agree on the general characteristic that the economy is a complex system. However, with the term system one usually associates a structure with components that are non-human. In order to stress the fact that humans are an essential component of the economy we could perhaps better say that the economy is a complex hybrid human/system entity.

Because it is impossible to directly observe the actual economy in its totality, the first task is to create a simplified mental representation. As a matter of fact, what is needed for good methodological reasons is the simplest possible description of the monetary economy. This description cannot be other than highly abstract and all depends on whether the abstraction succeeds. Abstraction, almost needless to emphasize, must eventually arrive with the highest precision at concrete facts, that is, at the touch points of theory and the real thing. Abstraction is very different from the accustomed green cheese assumptionism that never finds a counterpart in the real world.

The starting point of an analysis can never be criticized for over-simplification, only for botched over-simplification. One methodological mistake often made is *petitio principii*. This fallacy consists in including the conclusion that one is attempting to prove in the premises. This happened with standard economics.

It is utopian, as a matter of economics, because in effect it simply assumes from the outset a perfect solution to the very problem that an economic system is supposed to solve. (Nelson, 2006, p. 62)

*Petitio principii* is entirely sufficient for the refutation of most of orthodox economics.

The correct formal starting point is given with the most elementary economic configuration. The pure consumption economy is defined by:

$$Y_W = WL \tag{1}$$

wage income  $Y_W$  is equal to wage rate  $W$  times working hours  $L$ ,

$$O = RL \tag{2}$$

output  $O$  is equal to productivity  $R$  times working hours  $L$ ,

$$C = PX \tag{3}$$

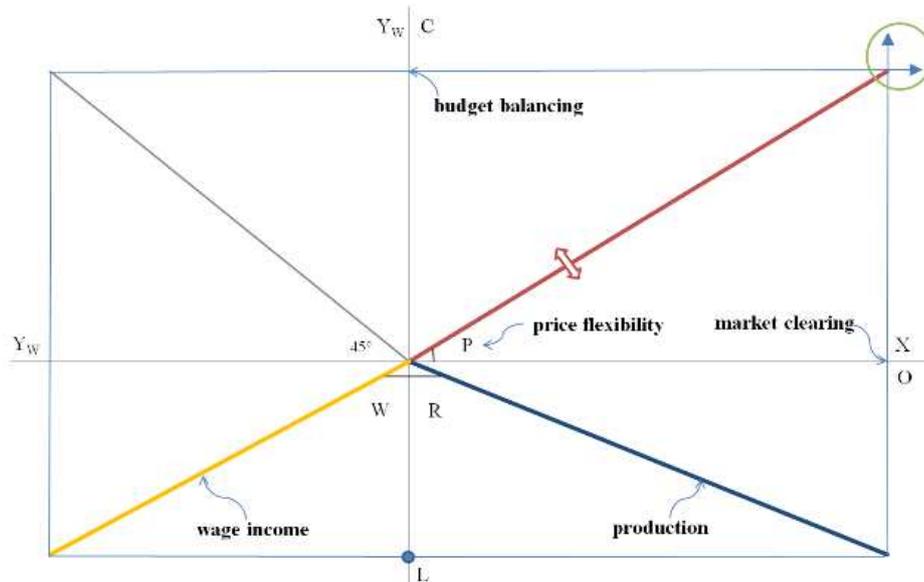
consumption expenditure  $C$  is equal to price  $P$  times quantity bought/sold  $X$ .

The first three equations relate to income, production, and expenditure in a period of arbitrary length. The period length is conveniently assumed to be the calendar year. Simplicity demands that we have for the beginning one world economy, one firm, and one product. To spell this out is to point the way to the required differentiations and extensions.

To complain that a lot is missing in the premises is far beside the point. Foundational propositions cannot be simple or trivial enough.

A theory is the more impressive the greater the simplicity of its premises, the more different kinds of things it relates, and the more extended is its area of applicability. (Einstein, quoted in Brown, 2011, p. 244)

For the graphical representation of the pure consumption economy see Figure 1.



**Figure 1:** Pure consumption economy with market clearing and budget balancing

At any given level of employment  $L$ , the wage income that is generated in the consolidated business sector follows by multiplication with the wage rate. On the real side, output follows by multiplication with the productivity. Finally, the price follows as the dependent variable under the conditions of budget balancing, i.e.,  $C = Y_W$  and market clearing, i.e.,  $X = O$ . Note that the ray in the southeastern quadrant is *not* a linear production function; the ray tracks *any* underlying production function. Note also that it is methodologically inadmissible to take the assumption of decreasing returns into the premises. Note finally that  $W$  is the *average* wage rate if the individual wage rates are different among the employees, which is normally the case.

If the wage rate  $W$  is lowered, the market clearing price  $P$  falls. If the number of working hours  $L$  is increased the price remains constant, provided productivity  $R$  does not change. If productivity decreases the price rises. If productivity increases the price falls. If wage rate and productivity vary in lockstep the price stays put. All this can be directly read off from the four-quadrant graphic.

In any case, labor gets the whole product and profit for the business sector as a whole is zero. All changes in the system are directly reflected by the market clearing price.

We know, of course, that the firm sets a price which is different from the unknown market clearing price. This case has to be dealt with separately (2014, Sec. 4).

### 3 Market clearing price and real wage

From the first three equations and the two conditions follows the price as dependent variable:

$$P = \frac{W}{R}. \quad (4)$$

This is the most elementary version of the Law of Supply and Demand for the pure consumption economy with one firm. In brief, the price equation states that the market clearing price is always equal to unit wage costs  $\frac{W}{R}$ . Employment is not a determinant of the price. The price formula is testable in principle and fully replaces supply-function–demand-function–equilibrium.

Conditional price flexibility is, clearly, an algebraic concept. Nothing is said about the behavior of the firm. The formal system is fully determined without any behavioral assumption.

From (4) follows

$$\frac{W}{P} = R \quad (5)$$

that is, the real wage is equal to the productivity.

The first point to notice is that the real wage is *not* determined by supply-demand-equilibrium in the labor market. If anything, only the *nominal* wage rate is. The wage rate  $W$  may go up or down by an arbitrary percentage rate, this has, due to conditional price flexibility, no effect whatever on the real wage.

The crucial systemic fact to point out against the orthodox approach is: when the product price is determined in the elementary economy by ‘supply and demand’ in the product market then the real wage cannot be determined by ‘supply and demand’ in the labor market. Because of this, the general assertion that all markets are cleared by the price mechanism is false.

The real wage is determined by the systemic and the production conditions. What is not determined at the moment is the labor input  $L$ . Hence, it may well be the case that the actual labor input is below the full employment level. Employment will be dealt with in Section 4.

Employment, wage rate or productivity are irrelevant for the profit of the business sector as a whole. In the pure consumption economy with budget balancing monetary profit cannot be other than zero.

The emergence of profit has to be dealt with separately (2013b, Sec. 4). Suffice it to say here that profit is defined as:

$$Q_m \equiv C - Y_W \quad (6)$$

Under the condition of budget balancing monetary profit is zero in all periods.

#### 4 Complete conditions of Say's regime

What is perhaps most curious about "Say's Law" is the continuing disagreement on its substance, and to whom it should be credited. (Baumol, 1999, p. 195)

The first two conditions are market clearing, i.e.,  $X = O$ , and budget balancing, i.e.,  $C = Y_W$ . This results in conditional price flexibility with the market clearing price in each period as dependent variable.

Conditional price flexibility in the product market disables the wage-employment mechanism in the labor market. This in turn leads ultimately to perfect employment indifference.

Because profit is zero on all employment levels the firm has no economic motive to move away from the actual employment. This means in particular that the firm does not move 'spontaneously' from unemployment to full employment.

It should be noted in passing that employment indifference has a superficial similarity with Keynes's unemployment equilibrium. For all practical purposes it is the same thing except for the fact that Keynes's conception is indeed awkward. Indifference means that there are no 'forces' that move the economy in some direction.

Sticky wages play no role at all. The wage rate may vary arbitrarily or not at all, this has no effect on the real wage which is always equal to the productivity. This is guaranteed by conditional price flexibility.

As a result we have: whatever productivity or employment changes occur in Say's regime the output will always be fully absorbed. The slogan 'supply creates its own demand' holds for the product market.

However, it does not hold for the labor market because of indifference. Nevertheless, the representative economist's idea of Say's Law always embraced full employment.

This was what the classical economists really meant by Say's Law of Markets, namely, that a free enterprise capitalist economy has an inherent tendency to return to full employment, which is indeed its normal state of economic activity. (Blaug, 1997, p. 232)

This means for our reconstruction that an additional condition is needed and has to be explicitly introduced. It is the following: the business sector increases employment at the going wage rate as long as there is supply from the household sector at this rate. This is what Say's Law implies with regard to the labor market. Because of indifference the usual supply-demand-equilibrium mechanism is simply inapplicable. Unemployment is the natural state of the pure consumption economy with market clearing and budget balancing, and wage rate reductions of any magnitude are of no effect at all.

If the condition of wage-neutral employment expansion/contraction is met both the product and the labor market are cleared and the 'supply creates its own demand' slogan holds in the full sense. Whatever labor supply is there, it will be absorbed, and whatever the resulting output turns out to be will be absorbed, too. Note that there is *no* wage reduction required to achieve this overall market clearing.

Strictly speaking, at this point the discussion about Say's Law is over. While it is true that the markets are cleared at all times under the given conditions it is pretty obvious that the business sector does not behave as required. Since Keynes also believed that Say's Law implies full employment he turned to the demand side in order to explain unemployment. Of course, insufficient demand can become an *additional* problem. But, as a matter of fact, unemployment needs no explanation. Because of indifference it is the natural state. It has always been an unproven assertion that full employment is the natural state.

Because profit is zero at all employment levels it would not help much to introduce the behavioral assumption of profit maximization. The curious thing is that the whole discussion about Say's Law does not take much notice of what happens to profit. This, indeed, is the biggest mistake from the methodological standpoint and – ironically – it unites all parties, including the most outspoken critic Keynes.

Whatever business or labor thinks about wage rate changes or whether somebody suffers from money illusion or not is immaterial. All wage rate changes are perfectly neutral with regard to the real wage.

If there is a tendency for rising productivity in the economy, e.g. because of an intensifying division of labor, the wage rate should rise, otherwise deflation occurs.

So far we have dealt with one firm. Additional conditions are required when the business sector is split up in many firms. There is no need to go into details here but it is clear that with a differentiated business sector the zero profit condition demands that the market clearing price is equal to unit wage costs in all firms.

On closer inspection Say's Law implies three conditions: market clearing, budget balancing, and wage-neutral employment expansion/contraction. With these

conditions we get what we want: a fully employed economy in which the flexible product price reacts to all nominal and real changes in the system. This economy is a benchmark. It is pretty obvious that the three conditions are never realized and above all that there is no spontaneous mechanism which makes Say's Law come true.

In the real economy, Say's Law does not hold, not even approximately. More precisely: the firm sets a price which is not the market clearing price, the household sector's budget is not balanced, that is, there is always either saving or dissaving, and finally, because of indifference, there are no 'forces' that push or pull the economy towards full employment. Say's Law is a vacuous proposition.

## 5 Extensions and Conclusion

The extensions of the most elementary market representation are obvious:

- The condition of market clearing has to be lifted, this brings inventory changes into the picture.
- The condition of budget balancing has to be lifted, this brings saving/dissaving as well as loss/profit and changes of the quantity of money/debt into the picture.
- The initial market has to be differentiated, this brings the interaction of markets and the structure of relative prices into the picture.
- Within the firms the wage rates have to be differentiated.

These further approximations to the actual economy have to be consistently carried out within the given formal framework. The main results of the systemic analysis of the exact content of Say's Law are:

- While it is true in a very general sense that 'supply and demand' determine the product price there is no such thing as supply-function–demand-function–equilibrium. Orthodoxy got the formal representation of the markets and their interaction wrong.
- The Structural Law of Supply and Demand for the pure consumption economy with one firm states that the product price is equal to unit wage costs under the condition of market clearing and budget balancing. The structural price formula is testable in principle.
- The crucial systemic fact is: when the price is determined by 'supply and demand' in the product market then the real wage cannot be determined by 'supply and demand' in the labor market.

- In order to establish full employment in Say's regime the additional assumption of wage-neutral employment expansion/contraction has to be explicitly introduced. Full employment is not 'spontaneously' established. There are no occult forces at work.
- Say's Law defines a benchmark and is not a description of how the real economy behaves.
- The pure consumption economy with market clearing, budget balancing, and wage-neutral employment expansion/contraction is reproducible for an indefinite time with zero profit in each period. The conditional market clearing price reflects all random changes in the elementary consumption economy.
- Say's regime is feasible in principle but it is certain that the three defining conditions are never met. If nothing else, Say's Law is a striking example of utterly confused thinking and arguing in the history of economic thought.

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