200 YEARS OF

RICARDO

Contents

Should We Remember Ricardo? Surplus Approach Two Hundred Years After 'On the Principles of Political Economy and Taxation'

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Introduction

In the preface to his Production of Commodities by Means of Commodities (1963) Piero Sraffa famously tells his readers that 'anyone accustomed to think in terms of equilibrium of demand and supply may be inclined, on reading these pages, to suppose that the argument rests on a tacit assumption of constant returns in all industries'. He goes on to say that if the reader finds this helpful, there is no harm in adopting this view as a working hypothesis, however no such assumption is made in his work. Instead his assumptions were a constant output and constant production coefficients in each industry, with his investigation concerned exclusively with those properties that do not depend on changes in either the scale of production or the proportions between its' factors.

This, Sraffa (1963) argued, was the standpoint of the old classical economists from Adam Smith to Ricardo, which had been submerged and forgotten since the advent of what he calls the 'marginal' method, the latter being far from marginal when it comes to its prevalence in economic theory from the latter half of the 19th century onwards. Production of Commodities by Means of Commodities (henceforth PCMC) is widely seen as Sraffa's interpretation and formal mathematical exposition of Ricardo's theory of distribution and relative prices. It should therefore come as no surprise that the author begins his first chapter with a simple economic system where no surplus is created followed by the second chapter titled 'Production with a surplus', where the economy in question is now seen as having the technological capacity to produce a surplus product. We can be almost certain that despite his neutral tone, Sraffa must have understood progression from a 'rudimentary' society to an economic system being able to produce a surplus is less a question of technology and more a question of social organization. Yet this is how the classical economists following Adam Smith

(1776), when comparing the early and rude state of society with no accumulation of stock and appropriation of land to early capitalism, had seemed to delineate the world.

Even from Smith's description, however, we can see that the institutional shift to private property represents perhaps the most important distinction between the two systems and that issues of productivity and technology are secondary in the whole affair. In fact, we could dare and go so far as to say that the utility of many technological advances is in its ability to augment the creation of the net product and the ability to secure it, which in capitalism means the ability to successfully monetize it. Lucky for us the subtler overarching nature and interesting, yet ultimately illusive issues concerning the ancient wellspring of the surplus product are hardly of any importance for this brief inquiry. It will be enough to propose that capitalism is a system capable of producing a surplus and that this is in fact its main purpose, with all the other characteristics being secondary to this basic *primum movens*.

Following the classical tradition, we could say that movements of the surplus represent a gravitational pull for the whole economic system. In analyzing movements in prices of financial instruments Professor Shaikh (2010) makes a comparison between simple equilibrium as a state-of-rest and the classical notion of equilibration-as-turbulent-regulation. In this conceptual framework we can view the surplus product as the regulating force determining both supply and demand, while simultaneously being at least partially determined by both. A similar representation of such endogenous movements in the system revolving around the profit rate can be found in Goodwin (1967).

The following examples will illustrate how we can still use original Ricardian notions (coupled with Keynesian elements found in Pasinetti (1993) to explain some of the main characteristics of modern industrial societies, such as the persistence of unemployment. Importantly, this is done without any additional assumptions about the nature of the human spirit, leaving untouched the motivation, hopes, fears and desires of the individual. Not only is this framework more robust and less dependent on assumptions about the behavior of the individual, but in an era of intrusive data collection it is less invasive, representing a more gentlemanlike type of social inquiry that does not require either voluntary or non-voluntary breaches of privacy to test its hypotheses. Our only assumption is that in capitalism production is carried out with the aim of securing a profit (Sušnik, 2016, p.1) and our inquiry is concerned with the implications of this simple fact.

Profitability, demand and employment in a simple one commodity economic system

We can begin our inquiry by establishing the basic relationship between profits and wages since it is this dynamic which represents the central contradiction in modern economic systems. To put it simply the issue is that while companies will wish to sell as much commodities as possible they would also wish to produce with minimum costs, thereby actually depressing aggregate purchasing power. It is also the aim of capital to increase profitability, which is to say net income, whereas workers are interested in increasing the gross income of society. Since it is the capitalists who ultimately decide the level of employment (especially in a pure capitalist economy, with no state), their investment decisions regulate the level of final demand as well. Seeing as how these decisions depend on expected future profitability (gauged by past performance) it is ultimately profitability which determines the level of employment as well as the level of aggregate demand.

Let us take an economy with a given labor force and a given productivity of labor, with the wage rate likewise set exogenously by some institutional arrangement or other. Then we have the following relationships where L denotes the labor force, π is labor productivity and w are real wages:

$$L = \bar{L} \tag{1}$$

$$\pi = \bar{\pi} \tag{2}$$

$$w = \bar{w} \tag{3}$$

Profitability is determined by all three magnitudes. Real profits per unit of output are the difference between productivity of labor (equation 2) and the reward of labor (equation 3), while the mass of profits, P, is simply this difference multiplied by the labor:

$$P = \pi L - wL = (\pi - w)L \tag{4}$$

While not important in this first example, it should be noted that with full employment and a given productivity of labor, we also have the total output, Y, which in this case is constant. We could call the following relation a 'Smithian production function' of sorts:

$$Y = \pi L \tag{5}$$

Taking productivity, size of the labor force and (what follows naturally) output as given, we are free to examine the effects of a change in the wage rate on capital profitability. While neither profits nor wages can ever reach their extreme values (commanding the whole output) in practice, we do not exclude them at this point in the investigation. For a specter of real wages ranging from 0 to $\bar{\pi}$ (the whole product) we get the following inverse relationship:
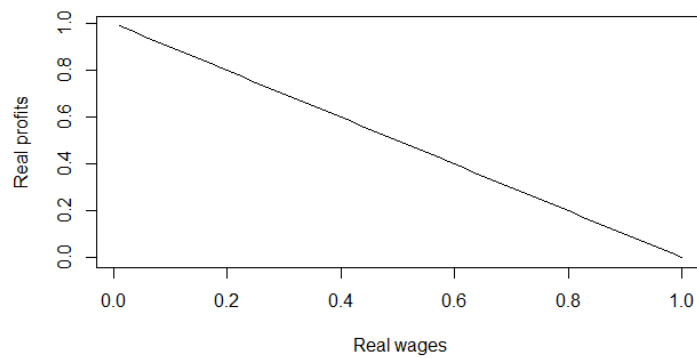
Figure 1: Relationship between real profits and real wages

Additionally, following Graziani (2009, p. 65), we can define the profit rate, r, as the difference between output and production costs, divided by the capital expenditure (in our case equal to production costs which consist only of the wage bill):

$$r = (\pi - w)L/wL \tag{6}$$

Using the same range of real wage bargaining positions (and under the same assumptions of constant output) the following relationship between the wage rate and the profit rate emerges:
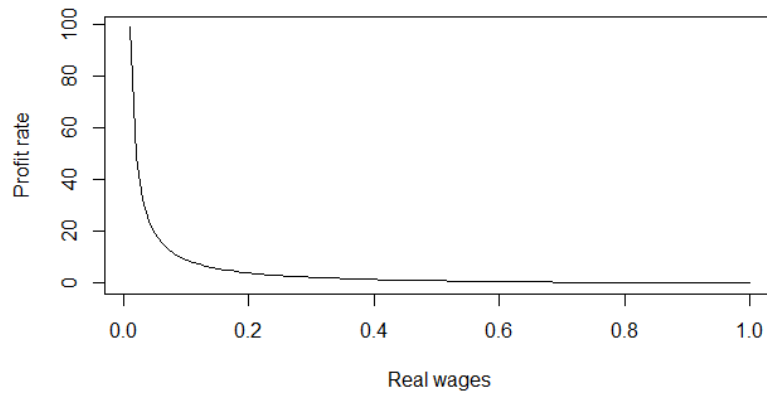
Figure 2: Profit rate in relation to real wages

With a given productivity it is obvious that any increase in real wages will decrease the profit rate. Now this does not mean that capital accumulation will come to a halt immediately, because while the aggregate profit rate acts as a gravitational pull we should not forget that the mass of capital is a sum of competing capitals. And when the individual capital outlays become great enough to absorb enough labor then we might see an increase in the wage rate. In other words capitalism is a spontaneous system and while capitalists as a class have similar goals, they do not invest as a class, which was pointed out by Kalecki (1971).

We can make a simple extension of the existing model to see the effects of changing employment on the wage rate. The wage setting relation is no longer institutionally determined and exogenous to the system, instead we connect it to the level of employment:

$$w = \sqrt[2]{L} \tag{7}$$

Keeping the other assumptions intact we can now see how different levels of employment impact the distribution of income. It should be mentioned that this exercise in comparative statics does not imply that changes in the level of employment are the causal drivers of the system. The logic for accumulation of capital over any longer period will have to be somehow connected with profitability of capital, but as mentioned previously, this does not mean that aggregate investment decisions cannot lead to periods of low profitability.

Once again if we take productivity as given and cycle through all the possible levels of employment ranging from 0 to $\bar{L}$ (in our case simply equal to 1), this allows us to examine relationships between employment and the distribution of income. Strictly speaking by doing

this we are straying from the assumption of fixed output but doing so does represent a certain closure of the classical system (as interpreted, for example in the PCMC), because it fixes real wages and by doing so also determines real profits.

The results while unsurprising are still informative. For example, a clear inverse relationship between the profit rate and the level of employment emerges. Obviously, given the wage setting relation, exactly the opposite is true for real wages.
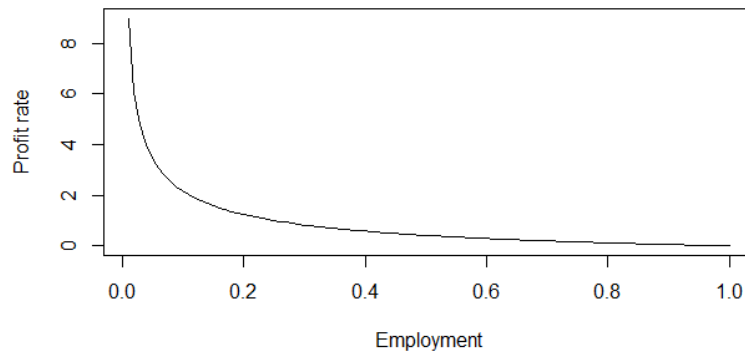
Figure 3: Profit rate in relation to employment with endogenously determined wages

Essentially the same inverse relationship holds between the wage rate and the profit rate, which is obviously just a reflection of the wage bargaining relation:
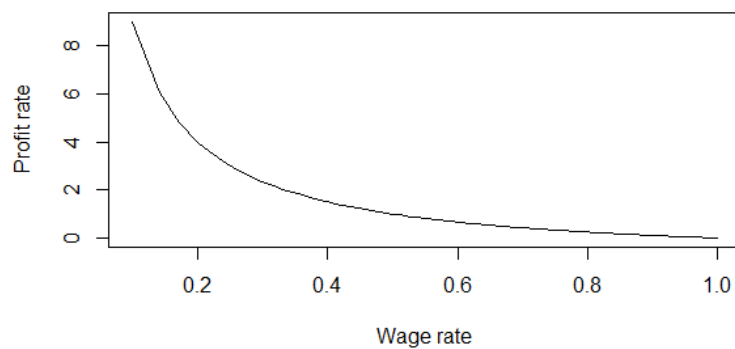
Figure 4: Profit rate and the wage rate

On the other hand, real profits will keep on increasing up to a certain point after which any additional increase in employment will decrease aggregate profitability:

Figure 5: Mass of profits in relation to different levels of employment

Since increases in employment lead to increases in the wage rate it should come as no surprise that the relationship between the wage rate and aggregate profits is like the relationship between employment and profits:

Figure 6: Mass of profits in relation to the endogenously determined wage rate

Again, while we have not imparted causality on the examples above, they are nevertheless telling. Abstracting from changes in productivity, there is a clear antagonistic relationship between the profitability of capital and the real wage rate. Whether or not these should become explosive or not is a whole different matter. It does seem unlikely, however, that a harmonious ahistoric relationship would spontaneously emerge in a society where income distribution on some basic level resembles the examples given above. More likely great institutional efforts would have to be expanded to make sure that such an economic system reproduces itself from one period to the next. And indeed, that seems to be the case for modern industrial societies the world over.

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A simple dynamic economic system

Having defined the basic relationships between wage, profits and employment we can use these to create a simple dynamic economic system. Once again, we leave productivity untouched and exogenously given as in (2).

Employment in each period of production, L_t now becomes a function of profitability, meaning that it is in principle determined by the investor class.

$$L_t = f\left(mean\left(\sum_i^a r_{t-1}\right), \varepsilon_t, \overline{L_{max}}, \bar{L}_{desired}\right)$$

(8)

The exact functional relationship between the profit rate and employment can be seen in the appendix. However, if the average profit rate in the recent past is lower than the average rate in the preceding period, then employment decreases. Otherwise it is assumed that capitalists will marginally increase their capital outlays, but never above exogenously given $\overline{L_{max}}$. While the addition of the latter parameter is somewhat *ad hoc*, its aim is to capture the fact that capitalism is a system with constant unemployment. Additionally, $\bar{L}_{desired}$ represents the maximum level of employment that the capitalists would be willing to employ, if they could invest in tandem with one another. Finally, ε_t, represents random normally distributed stochastic elements in the level of employment that occur within any given period of production. The profit rate, r_t, and the wage rate, w_t, are set in the same fashion as before, with wages being a function of employment and with profitability representing the residual between productivity and real wages:

$$r_t = (\pi - w_t)L_t/w_t L_t$$

(9)

$$w_t = \sqrt[2]{L_t}$$

(10)

These are the results for one thousand production periods. The whole body of labor in the economic system is normalized to one, so that there is no difference between labor employed and the level of employment. The blue line are profits, the green line represents employment and the red line the real wage rate.
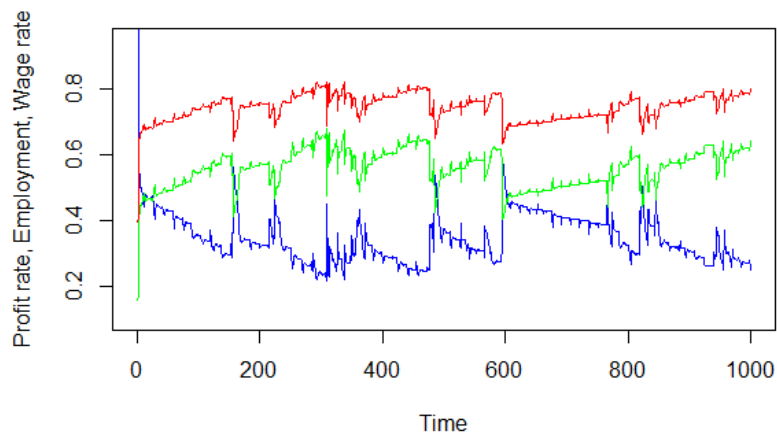
Figure 7: A dynamic representation of a simple classical economic system

The reader can see that when profitability keeps falling for consecutive periods, this eventually leads to a fall in employment and *pari passu* to a fall in the wage rate. However, increased profitability raises expectations and with renewed animal spirits capital expenditures begin to increase leading once more to consecutive periods of falling profitability. At this point we are already dangerously close to Keynesian waters where expectations drive investments, yet these expectations are still firmly grounded by ghosts of past profitability, which remains the central gravitational force around which the investment and employment nexus gravitates.

Keynes, Ricardo and Machinery

»These were my opinions, and they continue unaltered, as far as regards the landlord and the capitalist; but I am convinced, that the substitution of machinery for human labor, is often very injurious to the interests of the class of laborers.« Ricardo (1821), On Machinery

In this final section I would like to examine the relationship between the capacity of a modern society to produce commodities and its capacity to consume them. As Pasinetti (1994), among others, pointed out, this is by no means something that can be taken for granted. For this final part we will relax our assumption of fixed productivity and the focus will reverse to issues of demand and exogenous profit expectations. In the previous section profitability was endogenously determined, here we will regress to a state of given expected probabilities. If the reader feels that there is a distinctly Keynesian feel to our approach, they would not be

mistaken, but this is only because, as mentioned by Morishima (1989, p.171), Ricardo himself unconsciously abandons Say's law in his analysis of the effects of labor-saving technologies on income distribution. By doing so he implicitly acknowledges the critique later leveled by other authors (Marx, Keynes) at the notion that supply creates its own demand.

Let us start with a very neutral example, reminiscent of Pasinetti's (1993) work on the same subject. We have an economic system with different possible levels of productivity. Alternatively, although I am not sure that Joan Robinson would look kindly upon this interpretation, we could imagine that we have a dynamic system where productivity falls in each succeeding period. However, since we do not have a temporal element, we must imagine that each rate of productivity is assigned to its own economic system, since it would be schizophrenic for one society to possess all these different states at the same time. Yet while we have various levels of labor productivity, aggregate demand is the same for all of them. What are the consequences of this, represented by the following relations, where Y is output, π is labor productivity, L_s represents exogenously given labor supply and L_d is labor demand?

$$Y = \bar{Y} \tag{11}$$
$$\pi = \pi_i^n \tag{12}$$
$$L_s = \bar{L} \tag{13}$$
$$L_d = Y/\pi \tag{14}$$
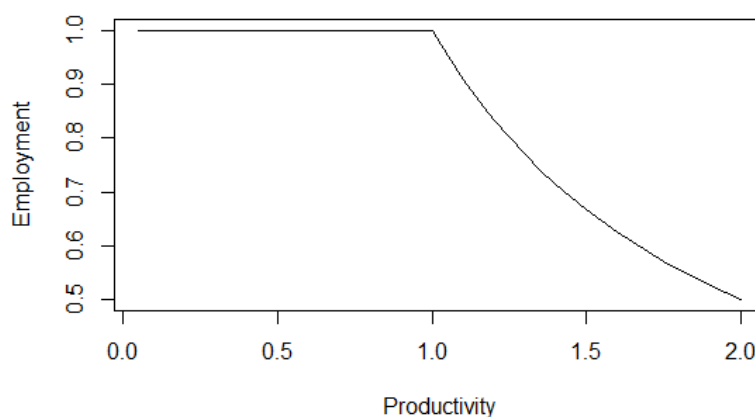
Figure 8: Changes in productivity in relation to the level of employment (with given output)

While demand outstrips supply (due to productivity lagging behind the wants of a society), we have full employment and had we constructed a price system as well, it seems only too likely that the economy in question would be facing inflation. On the other hand, once productivity

is large enough to cater to all the demands (and more!), we see that the level of employment starts to drop off. This is a simple consequence of the fact that in a system of productivity growth, demand must follow. If demand lags behind the growth in productivity, then by dint of fewer hands being able to supply the desired amount of goods in each succeeding period, some laborers will have to be let go. Labor saving technologies therefore do not immediately imply, as already mentioned by Ricardo, that the whole society would be automatically better off.

Let us now move once again away from the issue of productivity growth and focus solely on demand. Let us furthermore return to the division of income between capitalists and workers, thus moving away from the idealized homogenous society existing in the previous example. It does not follow from the previous example that just because labor suffers from increasing productivity (given output), that the same is true for capitalists. In fact, if we imagine that the same wage and profit relations hold as described in section two, this is certainly not the case:
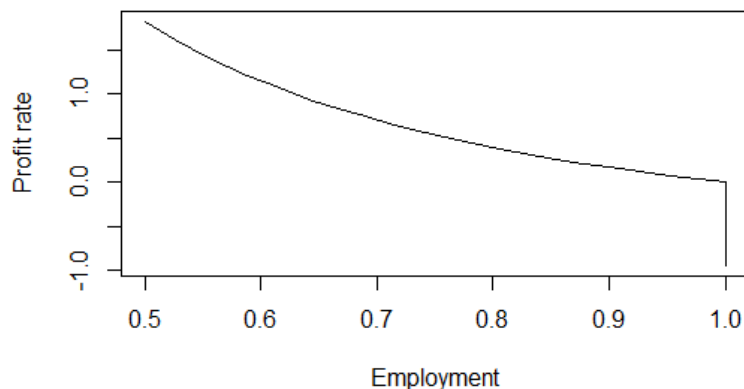
Figure 9: Profit rate and the level of employment at different levels of labor productivity

We see that capital would be receiving negative returns under a full employment regime, whereas with growing productivity and falling employment, the profit rate keeps increasing with growing productivity. As far as capital is concerned, therefore, the lower the demand for labor, while productivity keeps increasing, the better. Once again, a very simple example illustrates an important facet of social reality, such as why is capital interested in austerity policies.

Let us now move from the classical world of endogenous profit rates into the Keynesian universe of expectations and exogenously given autonomous demand:

$$r^e = \bar{r}^e \tag{15}$$

$$Y = \alpha_0 + \sqrt[2]{r^e} \tag{16}$$

$$L_d = Y/\pi \tag{17}$$

Expected profit rates, r^e, are given exogenously by (15). National income defined by (16) consists of an autonomous element below which it cannot fall, and it is positively related to expected profits, which are assumed to drive investments which increase expenditures directly and by increasing the purchasing power of the workers. Demand for labor, L_d, is a function of aggregate demand and exogenously given level of labor productivity. How does this system behave?
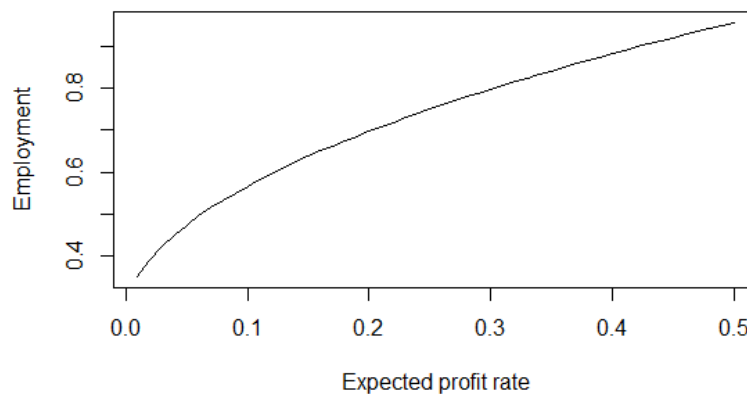
Figure 10: Level of employment across different expected rates of profit

It is obvious that the expected profit rate drives the system. The higher it is, the higher will be the level of employment (which cannot fall below the minimum level defined by the ratio between α_0 and the exogenous productivity of labor). Again, on the surface it is investments which determine the level of employment, but investments are ultimately ruled by profit expectations. Essentially the same positive connection exists between expected profits and national income:
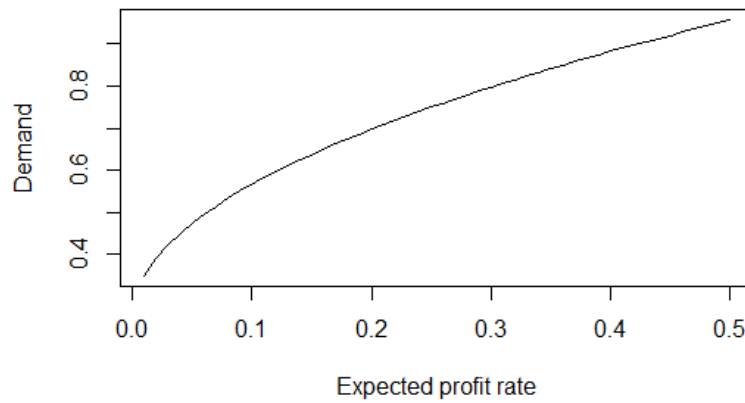
Figure 11: Demand at different expected rates of profit

We can expand this basic system by making the level of productivity partially endogenous to the system. This can be seen as a Smithian element, where an increase in demand leads to further division of labor, or we can view it as a consequence of Verdoorn's Law, where increases in aggregate demand were seen to lead to an increase in labor productivity $(\frac{\partial \pi}{\partial Y} > 0)$.

$$\pi = \pi(Y) \tag{18}$$

This allows us to see the difference between an economic system where the level of productivity is fixed and an economic system where the level of productivity is connected to the level of economic activity. The blue line on the graph represents the evolution of the first and the red line represents the evolution of the second example:
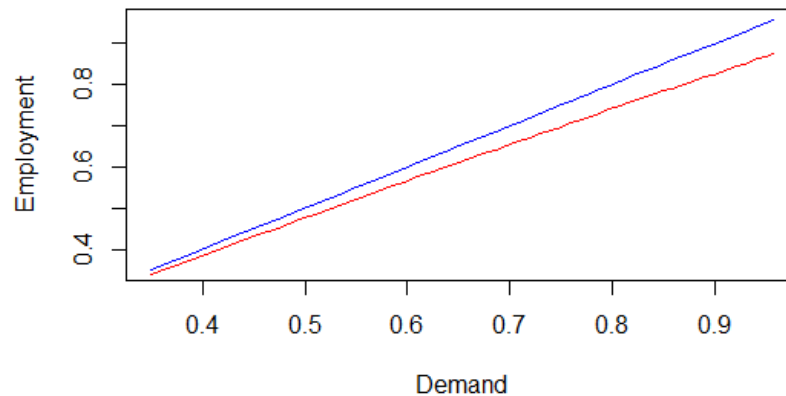
Figure 12: Employment across different levels of demand under different productivity regimes

Once again, we can show, that increased productivity (due to various reasons, but usually connected to technological advances) has a negative impact on employment, given the level of demand. It is therefore still true, that technological advances are by no means sure to increase the wellbeing of the society. As was shown in previous examples, however, they will increase the net income that accrues to capitalists. Here we catch a glimpse of why technology is so idolized today and why it is seen as an *Allzweckmittel* to cure all ills, because its implementation clearly favors the dominant social group in the struggle for income distribution.

Concluding notes

As was shown in the previous examples, Ricardo's notions concerning the economic system can be applied to a wide range of problems that remain relevant today. The beauty of classical political economy is the simplicity of its assumptions and their non-invasive nature, not requiring an intimate glimpse into one's soul to reach robust conclusions about macrodynamics of an economic system. The latter might very well be independent of the actions of individuals, since it is very unlikely that these actions would map themselves linearly onto the canvas of social reality. Additionally, if we connect Ricardo with Marx, Keynes and Kalecki, we can create an interesting a powerful analytical apparatus which can be expanded at will to better understand the nature of modern societies.

Two centuries have passed since Ricardo had finished his monumental work, describing the workings of early industrial societies and I would argue that his method is as important today as it was in the 19th century. The surplus approach provides logical rigor and methodological freedom limited only by our ingenuity. Perhaps most importantly, the surplus approach is not a deterministic closed system - social outcomes depend on history and human agency. In this sense its methodological freedom and indeterminacy represent not only assets for researchers but offer theoretical glimpses and possibilities that could make the world a better place.

Literature

Graziani, A. (2009). *The Monetary Theory of Production*. Cambridge, UK: Cambridge University Press. Originally published in 2003.

Kalecki, M. (1971). *Selected essays on the dynamics of the capitalist economy, 1933-1970*. Cambridge, UK: Cambridge University Press.

Morishima, M. (1989). *Ricardo's Economics. A general equilibrium theory of distribution and growth*. Cambridge, UK: Cambridge University Press.

Pasinetti, L.L. (1993). *Structural economic dynamics*. Cambridge, UK: Cambridge University Press.

R. M. Goodwin (1967) "A Growth Cycle", in C.H. Feinstein, editor, *Socialism, Capitalism and Economic Growth*. Cambridge: Cambridge University Press.

Ricardo, D. (1821). On the Principles of Political Economy and Taxation. Chapter 31: On Machinery. Retrieved May 5, 2018 from http://www.econlib.org/library/Ricardo/ricP7.html#Ch.31,%20On%20Machinery.

Shaikh, A. (2010). Reflexivity, path dependence, and disequilibrium dynamics. *Journal of Post Keynesian Economics*, *33*(1).

Smith, A. (1776). Book I: On the Causes of Improvement in the Productive Powers. On Labor, and on the Order According to Which its' Produce is Naturally Distributed Among the Different Ranks of the People. Retrieved May 5, 2018 from https://www.marxists.org/reference/archive/smith-adam/works/wealth-of-nations/book01/ch06.htm.

Sraffa, P. (1963). *Production of Commodities by Means of Commodities. Prelude to a Critique of Economic Theory*. Bombay: Vora & Co. Originally published in 1960.

Sušnik, U. (2016). *Economic Growth and Income Distribution in Modern Monetary Economies: The Importance of Expectations and the Role of Institutions*. Doctoral dissertation, Faculty of Economics, University of Ljubljana.

On Price Normalization and Choice of Techniques in Ricardo's Theory

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Abstract

Ricardo's corn model was the first model that made the unambiguous rank, comparison and choice of techniques, with respect to their profitability, possible. The problem of choosing techniques will be mathematically formulized and a solution based on the corn model will be provided. For those, who are familiar with the problem of price determination, it is well known that it is impossible to determine prices, for a given nominal wage, without determining profit rate first. From the price determination system, a relation between nominal wage and profit rate can be obtained, known as the w-r relation. To obtain the w-r relation, and fully determine prices, the price of a single commodity, or of a basket of commodities should be exogenously determined. The w-r relation as it will be shown in this paper is sensitive in the above arbitrary price determination. This vicious cycle was known to Ricardo. He concluded that these difficulties were just mathematical and technical natured and therefore ostensible. This vicious cycle broke, as it will be shown later in this paper, by determining profit rate before and independently of prices.

Key words: Classical, Sraffian, Ricardian, Political Economy

JEL classifications: B12, B24, B51, E11, P16

The w-r relation and its dependence on price normalization

We refer to the production system $[A, \ell, X]$, which produces the gross product $X, X > 0$ by using the productive technique $[A, \ell]$, where $A, A \geq 0$ is the nxn matrix of the technical coefficients and $\ell, \ell \geq 0$ the $1xn$ row vector of labor inputs per unit of commodity produced. We further assume that matrix $A, A \geq 0$ is decomposable and has the following canonical form:

$$A = \begin{bmatrix} A_{11} & A_{12} \\ 0 & A_{22} \end{bmatrix}$$

The canonical form of matrix A, shows that the production system using technique $[A, \ell]$ produces both basic and non-basic commodities. Let the system produce m basic commodities and $n - m$ non-basic commodities[1]. As a result, A_{11} is a square indecomposable mxm matrix and A_{22} is a square indecomposable $(n - m)x(n - m)$ matrix. We further assume, that since $rank(A) = n, rank(A_{11}) = m$ and $rank(A_{22}) = n - m$ hold, then A_{11} and A_{22} are nonsingular. Let also matrix A_{12} be indecomposable[2].

The previous assumption, that technique $[A, \ell]$ is productive, implies that:

$$\lambda_m^A < 1$$

where λ_m^A is the maximum eigenvalue of matrix A, corresponding to the maximum eigenvector of of matrix A. It also holds for $\lambda_m^{A_{11}}$ and $\lambda_m^{A_{22}}$ (the maximum eigenvalues of matrices, A_{11} and A_{22}) respectively:

$$\lambda_m^A = \min(\lambda_m^{A_{11}}, \lambda_m^{A_{22}})$$

Thus, it holds:

$$\lambda_m^{A_{11}}, \lambda_m^{A_{22}} < 1$$

We further assume that:

$$\lambda_m^{A_{11}} \neq \lambda_m^{A_{22}}$$

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[1] It is obvious that $1 \leq m \leq n$

[2] In other words, the given production system is decomposed into two subsystems: subsystem I which produces only basic commodities and subsystem II which produces basic and non-basic commodities.

The following definitions are implied:

a) r is the given production system's and its subsystems' uniform profit rate.

b) R represents the maximum profit rate of the given production system, which corresponds to a zero-nominal wage, w.

c) $\bar{R}$ is the value of R, which assures positive or at least semi-positive prices for all commodities that $[A, \ell, X]$ produces. It is obvious that $\bar{R}$ is the smallest positive value of R.

Let wages be paid post factum. The following relationship describes commodity prices, p:

$$p[I - A(1 + r)] = w\ell \qquad (1)$$

Replacing w with zero in (1) it follows:

$$p[I - A(1 + R)] = 0 \qquad (2)$$

From (2) it follows that:

$$R = \frac{1 - \lambda_m^A}{\lambda_m^A}$$

We furthermore denote:

- $R_I (R_{II})$ the maximum profit rate of subsystem I (II).

- $\bar{R}_I (\bar{R}_{II})$ the value of $R_I (R_{II})$, which ensures positive prices $p_I (p_{II})$ for all commodities that subsystem I (II) produces as net product.

We obtain for the prices of the two subsystems:

$$p_I[I - A_{11}(1 + R)] = 0 \qquad (a)$$

And

$$p_{II}[I - A_{22}(1 + R)] = p_I A_{12}(1 + R) \qquad (b)$$

From (a) and (b) we can deduce that:

$$R_I = \frac{1 - \lambda_m^{A_{11}}}{\lambda_m^{A_{11}}}$$

$$\bar{R}_I = \frac{1 - \lambda_m^{A_{11}}}{\lambda_m^{A_{11}}}$$

$$R_{II} = \frac{1 - \lambda_m^{A_{22}}}{\lambda_m^{A_{22}}}$$

$$\bar{R}_{II} = \frac{1 - \lambda_m^{A_{22}}}{\lambda_m^{A_{22}}}$$

What has been said about the given production system $[A, \ell, X]$, also holds for any other production system $[A, \ell, V]$, which uses production technique $[A, \ell]$ (Stamatis, 1998).

From equation (2) it follows that, to have a solution different than the trivial one ($p = 0$) it must hold: $rank[I - A(1 + R)] < n$. When $rank(A) = n$ (see Stamatis, 1991 p.67) it also holds:

$$rank[I - A(1 + R)] = n - 1 \tag{3}$$

When (3) holds, then the inverse of $[I - A(1 + r)]$ also exists for $r, 0 \leq r \leq \bar{R}$ and consequently $w, 0 \leq w \leq w_{max}$. From (1) we obtain:

$$p = w\ell[I - A(1 + r)]^{-1} \tag{4}$$

Equation (4) fully determines the price vector p and up to a scalar for an exogenously given r, or for an exogenously given w. It is concluded that prices cannot be fully determined for an exogenously given r, or w. To fully determine prices and obtain the w-r relation, it is mandatory to normalize prices first. The arbitrary determination of the price of a commodity or of a basket of commodities is called price normalization (Stamatis, 1991). The price normalization is accomplished by equating the price of a commodity or the price of a basket of commodities to a constant positive quantity of a homogeneous extensive thing. This equation is called normalization equation, the commodity mentioned above (basket of commodities) normalization commodity/ies and the positive quantity of a homogeneous extensive thing is called fictitious money. Let the normalization commodity be $y, y \geq 0$. Let also the price of this commodity be equal to b units of fictitious money, or otherwise b units of that homogeneous extensive thing. Then the normalization equation is:

$$py = b \tag{5}$$

When we multiply equation (4) with (5) we can obtain the w-r relation, which is:

$$w = \frac{b}{\ell[I - A(1 + r)]^{-1}y} \tag{6}$$

For $r, 0 \leq r \leq \bar{R}$ and $w, 0 \leq w \leq w_{max}$. It also holds for $w = 0$:

$$R = \frac{p[I - A]y}{pAy} \tag{7}$$

We can derive from production system $[A, \ell, X]$, its' part $[A^*, \ell^*, X^*]$, which is called the normalization subsystem, by eliminating from vectors x, y, ℓ (and thus we obtain x^*, y^*, ℓ^*), those components, related with the goods that only produce the given (and not the normal subsystem) system of production. Accordingly, we can derive from nxn matrix A, the kxk matrix A^*, by eliminating rows and columns related to the above commodities. Correspondingly we can also derive p^* from p.

Let R^* be the maximum profit rate of the normalization subsystem and $\bar{R}^*$ the respective profit rate, which guarantees positive process.

Based on the above, we can derive two distinguished types of normalization:

If the normalization commodity consists only of basic commodities, it follows that: $A^* = A_{11}$. Then it holds

$$R^* = R_I$$

And moreover

$$\bar{R}^* = \bar{R}_I$$

As R^* we define the maximum profit rate of the normalization subsystem and as $\bar{R}^*$ the profit rate which guarantees positive process.

On the other hand, if the normalization commodity consists of both basic and non-basic commodities, it follows that: $A^* = A$. Then it holds (Stamatis G. 1998 p.12):

$$\bar{R}^*[= \min(\bar{R}_I, \bar{R}_{II})] = \bar{R}[= \min(\bar{R}_I, \bar{R}_{II})]$$

Therefore, it is possible to have:

$$\bar{R}^*(= \bar{R}_I) \neq \bar{R}[= \min(\bar{R}_I, \bar{R}_{II})]$$

for a normalization commodity consisting only of basic commodities and

$$\bar{R}^*[= \min(\bar{R}_I, \bar{R}_{II})] = \bar{R}[= \min(\bar{R}_I, \bar{R}_{II})]$$

for a normalization commodity consisting of both basic and non-basic commodities.

Based on the above, we can substitute relations (1), (2), (3), (4) , (5) , (6) , (7) with (1a), (2a), (3a) , (4a) , (5a) , (6a) , (7a) respectively:

$$p^*[I - A^*(1+r)] = w\ell^* \tag{1a}$$

$$p^*[I - A^*(1+R^*)] = 0 \tag{2a}$$

$$rank[I - A^*(1+R^*)] = k - 1 \tag{3a}$$

$$p^* = w\ell^*[I - A^*(1+r)]^{-1} \tag{4a}$$

$$p^*y^* = b \tag{5a}$$

$$w = \frac{b}{\ell^*[I - A^*(1+r)]^{-1}y^*} \tag{6a}$$

$$R = \frac{p^*[I - A^*]y^*}{p^*A^*y^*} \tag{7a}$$

We have seen that the maximum profit rate of the normalization subsystem may be different from the maximum profit rate of the given subsystem. This implies that the position of the w-r curve may change with price normalization.

When normalization commodity changes, the normalization subsystem, that produces the normalization commodity, as its net product, also changes. With the normalization subsystem changing the obtained w-r relation also changes. The w-r relation does not belong to the technique $[A, I]$ but to the normalization subsystem $[A^*, I^*, X^*]$ instead. It is possible in other words to have as many w-r relations as the correspondent normalization subsystems.

Consequently, when normalization commodity changes, the normalization subsystem and the correspondent w-r relation[3] also change. The place (the maximum profit rate, the labor productivity in price terms), the slope[4] and the shape (the second derivative of the w-r relation) of the w-r curve also change. Based on that, the phenomena of switching and reswitching may appear or disappear. Moreover, the choice, the order and the ranking of production techniques are generally impossible, since there are no production techniques to choose, order or rank but normalization subsystems instead. The only possible case for an unambiguous choice, order and ranking of techniques s is when the w-r relation is linear. The w-r relationship is linear, when prices were first normalized with Sraffa's (1960), Miayo's (1977) or Vassilakis' (1983) standard commodity. Another example of a unambiguous choice is when the surplus product and the material inputs have the same composition. This is possible in Charassofian systems and of course in corn economies *a la Ricardo* (Manoudakis, 2010). Actually Ricardo was the first, who solved the above problem using the corn model.

The corn system

The Ricardian corn system consists of n production sectors[5]. The first sector produces corn (c), using only corn as a material input. The $n-1$ other sectors (i) produce other commodities by using corn and the remaining other $n-1$ commodities. The system uses a linear production function and each production process produces a single commodity. The profit rate $r, r > 0$, is uniform and the real wages are represented by the vector $d, d = (d_c \quad 0)$. The form of real wages vector implies that real wage consists only of corn[6]. Therefore, the given production technique is a closed *a la Leontief* model. Obviously, it is

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[3] The w-r relation can be re-written as:
$$w = \frac{p[I-A]}{\ell q} - r\frac{pAq}{\ell q} = \pi_\varepsilon - rK_q$$
where $\pi_\varepsilon \equiv (p[I-A])/\ell q$ is the productivity of labor in the normalization subsystem and $K_q \equiv pAq/\ell q$ is the capital intensity, and the slope of the w-r curve, of the normalization subsystem.

[4] The slope of the w-r curve is equal to $\frac{dw}{dr} = \frac{d\pi_\varepsilon}{dr} - \frac{dK_q}{dr}r - K_q$. It holds for $\frac{d\pi_\varepsilon}{dr} = 0$. In the special case that the w-r is linear then it holds $\frac{dw}{dr} = -K_q$, otherwise it holds $\frac{dw}{dr} = -\frac{dK_q}{dr}r - K_q$.

[5] In the Ricardian framework there are three solid social classes: i) landowners own the land, which they rent, ii) capitalists who possess the capital, by which they buy labor power and organize the production and iii) workers who sell their labor force to the capitalists. In our model we have assumed that land can be extended indefinitely, and therefore, we have included it in the material input matrix. We further assume that all land pieces are equally productive. Consequently, all landowners receive the same rent. The above assumptions do not affect the results our analysis, but simplify it instead, since in Ricardo all the income variables are expressed in corn terms. In Pasinetti (1980) the analysis is more complex since the production of corn is referred to decreasing returns to scale and the luxurious product (gold) is subjected to constant returns to scale.

[6] It also holds that $0 \leq d \leq \frac{Y^R}{\ell^R X^R}$, where Y^R, represents the net product of the Ricardian system and

assumed that production technique is productive[7] and the production system is viable. The Ricardian production system can be described by the triplet $[A^R, \ell^R, X^R]$, where $\ell^R, \ell^R > 0$ the labor inputs entering directly in the production process of a unit of commodity, and $X^R, X^R \geq 0$, the gross product of the Ricardian system.

Let matrix $A^R, A^R \geq 0$ be the Ricardian material input matrix, with the following canonical form:

$$A^R = \begin{bmatrix} A^R_{cc} & A^R_{ci} \\ 0 & A^R_{ii} \end{bmatrix}$$

where A^R_{cc} is the quantity of corn entering in the production process of a unit of corn[8] and A^R_{ii} is the quantity of the other $n - 1$ commodities (i) entering directly in the production process of a unit these commodities[9] (i). The $d\ell^R$ matrix of real wages per unit of produced commodity is equal to: $d\ell^R = \begin{bmatrix} d_c\ell^R_C & d_c\ell^R_i \\ 0 & 0 \end{bmatrix}$. It is obvious that since real wages consist only of corn, material inputs and the real wages have the same composition. Accordingly we can

define matrix $\bar{A}^R = A^R + d\ell^R = \begin{bmatrix} A^R_{cc} + d_c\ell^R_C & A^R_{ci} + d_c\ell^R_i \\ 0 & A^R_{ii} \end{bmatrix} = \begin{bmatrix} \bar{A}^R_{cc} & \bar{A}^R_{ci} \\ 0 & A^R_{ii} \end{bmatrix}$, which

represents the input matrix of means of production and wage commodities per unit of produced commodity[10]. In the Ricardian corn model not only, real wages but profit rate as well can be expressed in corn terms. It follows, thus, that real wages (which are included in the material inputs) and profits have the same composition. In terms of modern economics, the Ricardian corn model is decomposed into two subsystems: the reproductive one, which produces corn, and the non-reproductive one, which produces all other $n - 1$ non-reproductive commodities. Profit rate is therefore determined as the ratio of the net product of the corn system and the sum of material (in corn) and labor inputs. Competition among production process, leads to the dominance of profit rate in the production process of corn over the production processes of all other $n - 1$ commodities and thus to be uniform. The abovementioned common composition of profits and real wages entails a price-independent

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[7] Therefore it holds: $0 < \lambda^{A^R}_m < 1$

[8] For the production process of corn holds $a^R_c = (a^R_{c1} \quad 0, \dots \quad 0)^T$

[9] Obviously A^R_{ii} is a square $n - 1 x n - 1$ matrix

[10] It is obvious that corn is a reproductive commodity and the other commodities are non-reproductive commodities. Thus Ricardo's corn system can be represented in a canonical form with a decomposable non-singular matrix.

profit rate determination. The corn economy therefore, has the properties of a one-good economy.

Let the gross product, of the reproductive subsystem be equal to a unit of corn. Therefore, the net product is equal to Y_{cc}^R:

$$Y_c^R = 1 - \bar{a}_{cc}^R \tag{8}$$

As it has already been assumed $\bar{a}_{cc}^R$, consists also of labor inputs. In that case net product is also the surplus product of this economy. Equation (9) represents the price system of the corn economy

$$p_c^R = p_c^R \bar{a}_{cc}^R (1 + r^R) \tag{9}$$

From (9) is implied:

$$r^R = (1 - a_{cc}^R)/a_{cc}^R \tag{10}$$

From equation (9) it is obvious that profit rate is independent from price normalization, while from equation (10) is implied that profit rate is the ratio of two magnitudes, sharing the same composition, namely the surplus product and the material inputs. Given equations (9) and (10), prices of the non-reproductive products can also be determined[11]. We have seen, how ingeniously had Ricardo solved the profit determination problem, independently of prices and how he had made the unambiguous choice of techniques possible.

Concluding remarks

We have seen how price normalization changes the w-r relation in decomposable production systems. The reason is quite simple: we cannot fully determine the prices without first normalizing the prices. Price normalization can change the dimensions of the production system, converting the production technique used by the given system, into a normalization subsystem. The existence of multiple subsystems can change the maximum profit rate of the normalization subsystem. Therefore, there is no need for the profit rate of the given production technique, and the profit rate of the normalization subsystem to coincide. Price normalization also changes the slope of the w-r curve (in other words the capital intensity of

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[11] It holds for the price of the non-reproductive system: $p_i^R = p_c^R \bar{a}_{ci}^R (1 + r^R) + p_i^R \bar{a}_{ii}^R (1 + r^R)$

the normalization subsystem in price terms). The latter also changes the shape of the w-r curve. It is well known that w-r curve serves as the basis, for applying the profit maximization criterion. This criterion has been for decades a popular tool for economists to choose among techniques although, as has been shown above, they do not actually choose between techniques, but among the normalization subsystems. The fact that prices depend on the rate of profit and the rate of profit depends on the normalization of prices makes it impossible to choose techniques in the general case.

Ricardo approximately 150 years before the so-called Cambridge Controversy, has found a way to overcome the above difficulties, although even then he was not aware of it. Having identified the vicious circle of prices, profit rate and wage determination, he had ingeniously introduced the framework of "common composition". He knew, in determining prices, an income distribution variable (he choose real wages) should first be determined exogenously. Real wages and moreover labor itself consisted as one commodity (re)produced in the Ricardian production system. Considered that, real wage is determined based technological attributes only, independently of price normalization and profit rate. As a result, the material inputs, the net product (at the same time the surplus product) and the real wages had the same composition. Given all the above assumptions and conclusions, he managed to determine profit rate independently of price normalization.

In the corn model price normalization was not mandatory for determining the profit rate. Profit rate could easily be determined for each positive vector of prices. The above determination made it possible to choose unambiguously among techniques, since in corn models all the normalization subsystems coincide with the given production technique. So 150 years before Sraffa, Ricardo introduced a well-defined method of determining the profit rate.

Literature

Abraham-Frois, G. and Berrebi, E. (1979). Theory of Value, Prices, and Accumulation. Cambridge: Cambridge University Press.

Bidard, Ch. (1991). Prix, reproduction, rareté. Paris: Dunod.

Manoudakis K. (2008). Choice of Techniques and phenomena of switching and reswitching in linear models of production, proceedings 1st Ph.D Conference in economics, in memory of Vasilis Patsatzis. Athens :Gutenberg

Manoudakis K. (2010). Choice and ranking Of Techniques, Phd Dissertation. Athens: Panteion University of Social and Political Sciences (in Greek)

Manoudakis K. (2011). Choosing techniques or typical subsystems instead?. Journal of European Economy, pp.261-274

Miyao T. (1977). A generalization of Sraffa's standard commodity and its complete characterization. *International Economic Review*, 12 σελ. 151-162

Pasinetti, L.L., ed., (1980), Essays on the theory of joint production.   London: Macmillan.

Ricardo, David (1817), On the Principles of Political Economy and Taxation (1 ed.), London: John Murray

Ricardo, D. (1951-1973).The Works and Correspondence of David Ricardo', 11 volumes edited by P. Sraffa with the collaboration of M.H. Dobb. Cambridge: Cambridge University Press

Sraffa, P., (1960). Production of Commodities by Means of Commodities. Cambridge : Cambridge University Press,.

Stamatis, G. .(1983). Sraffa und sein Verhältnis zu Ricardo und Marx, Göttingen.

Stamatis, G. (1988). Über das Normwwaresubsystem und die w-r-Relation. Ein Beitrag Zur Theorie Linearer Produktionssysteme, Athens: Verlang Kritiki

Stamatis G./Pachristos V. .(1994). The Ricardian determination of the general profit rate, before and independently of prices or the Sraffain standard system as a "misunderstand" of the Ricardian corn system (in Greek), in G. Stamatis. 1994. Theory of Linear Production Systems., Athens: Kritiki, pp.62-91

Stamatis G. (1998) On the Position and the Slope of the w-r-Curve. *POLITICAL ECONOMY* ,2 pp.5-26 .

Stamatis G. Autumn (2001). Why the Comparison and Ordering of Techniques is Impossible, *POLITICAL ECONOMY*, No9, pp.5-44

Vassilakis, S. (1983). Nichtbasisproducte,Standardproduct und allgmeine Profitrate. Hefte für Politische Ökonomie, Nr. 5. Göttingen pp.441-447

Ricardo, Marx, Keynes: Distinct Economic Visions?

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Abstract

The objective of this article is to test the relevance of the theory of David Ricardo (1772-1823) from the perspective of the history of economic thought, mainly in terms of individual viewpoints. Some of Ricardo's contributions were either rejected or enlarged by two of his most outstanding successors in economics: Karl Marx (1818-1883) and John Maynard Keynes (1883-1946). These two economists are chosen due to the relevance of Ricardo´s insights for their respective cores. Marx's theories are based on the Ricardian political economy, but the German philosopher, being the creator of an alternative view of economics contributed instead to a radical interpretation of the class struggle which permeated his view of unequal income distribution. Keynes's macroeconomic theories are based on a rejection of the Ricardian economics, favoring instead the insights of Ricardo's contemporary, Thomas Malthus. The shift of focus is obvious since Keynes, unlike Ricardo and Marx, was concerned on income determination rather than income distribution. We can ask ourselves whether some of the main Ricardian contentions were rejected in and of themselves or because the passage of time changes everything. In the brave new world of the late 19th century the world had become more interconnected with global financial and productive flows. Ricardian theory could not have anticipated some of the issues that would face advanced capitalist societies.

Key words: Classical, Marxian, Economic Methodology, Keynesian, Unemployment, Political Economy

JEL classifications: B12, B24, B41, B51, P16

Introduction: Classical Economics

Ricardo represents one of the pillars of Classical political economy since he produced insights on the essence and the functioning of the system, setting a realistic base to describe the anatomy of a society by distinguishing its members into different groups such as workers, capitalists and landowners. As it is widely known, Ricardo created his theories in the footsteps of Adam Smith (1723-1790), who emphasized the advantages of a free-market system, based on the notions of Laissez-faire (scarce intervention of the government on the economy), individual liberty, efficiency, market specialization and the profit motive. Smith's vision would complement that of Utilitarianism, founded by Jeremy Bentham (1748-1832), for whom benefits must be larger than costs in any decision-taking. Smith is the creator of microeconomics in 1776 with his book *The Wealth of Nations*, synthesizing all previous theories but providing a new vision. Ricardo's main contribution apart from new insights, often not in line with Smith's theoretical conclusions, was his systematic approach that helped shape the core of Classical Political Economy.

The Classical SRP

The Classical *SRP* is a result of (or a parallel event to) the French Enlightenment (1789), rationalism (born in the epoch of Descartes, 1596-1650) and the Industrial Revolution (1760-1830). The Classical core assumes the existence of a closed atomistic (entities had no complex interrelations amongst them) and heuristic system, grounded on microeconomic concepts, especially the arbitrage among prices, including the belief in wage flexibility for alleviating unemployment, where disequilibria are a temporary anomaly.

Methodological individualism underlies the micro-theory of demand-supply. In other words, individual choice is conducted in the framework of timeless and ubiquitous markets assuming that rationality is universal. The Classical message is conservative ignoring social facts.

In Classical economics celestial harmony denies the existence of heterogeneous human actions. Thus, the Classical *SRP* reflects the certainty prevailing in physics, ignoring that human beings are mobile in terms of time and space. The consequence is that the Classical *SRP* is equated with self-regulating atomistic (Newtonian) markets, wherein perfect rationality leads to free competition. There, time is only a logical category. The consequence is that money is an illusion.

We should mention at least two other outstanding Classical economists, Robert Malthus (1766-1834) and Jean-Baptiste Say (1767-1832). They believed in a perfect double-sided system, in the context of a barter economy where money is a veil only useful for conducting transactions but not as an asset of value, although at least Malthus, to his credit, had had some suspicions about this harmony.

Later Classical economists (whose core is akin to the Classical) are John Stuart Mill (1806-1873) with interest on stationary states, and Leon Walras (1834-1910) the creator of General Equilibrium. We can also mention William S. Jevons (1835-1882) with an emphasis on mathematical methods, and Alfred Marshall (1842-1924) who gave a further impulse to microeconomics within the Ricardian core, which is dealt with in the next section.

David Ricardo and systematization

Ricardo systematized political economy 50 years after Smith. His ideas were formed during the Napoleonic Wars, when profits and the government size were the principal problems. Ricardo's ideas are the value theory of labor; the societal division among rent, wages and profits, and class struggle; comparative advantage; and a formal theory of trade. Ricardo´s topics are distribution; money; and the Ricardian equivalence. The problems Ricardo tackled are those of value, distribution and the issue of technology in production. The treatment of these themes is now outlined.

Ricardo's Theory of Labor Value (LTV)

Ricardo questioned the then-sacred role of the landowners as the creators of wealth hinting to the existence of workers' exploitation. His 'Iron Wages Law' states that wages fluctuate around subsistence levels rather than being competitive as in Smith. He contended that even in modern societies it is labor which gives value to commodities. Then, Ricardo created a theory of value and distribution, wherein value refers to the treatment of the determinants of the prices of production.

Ricardo started out from the determination of the relative (exchange) values paying heed to the quantity of labor embedded in them, but he did not examine the form of labor that creates exchange value. Hence, he did not grasp out the connection between labor and money. This might have been since Ricardo was only concerned about the magnitude of value. Perhaps for

this reason, his method is deficient in proving the congruity of the economic categories with one another.

Ricardo believed in the law of marginal returns but considered rents as an unearned surplus since they do not replenish anything as land is given and not a producible commodity. Given the youth of political economy at that time and the richness of his other insights Ricardo produced complex conclusions.

Ricardo integrated the theories of value and distribution since the rewards to both laborers (wages) and capitalists (profits) defined the distribution of wealth, although value arises from labor and is hence independent from distribution. Rent is thus a residue.

However, there is something special about this theory in terms of implications. If capital is accumulated, the ratio K/L (capital/labor) varies across industries as well as profits. Thus, the labor theory of value (LTV) only works if capital intensity is homogeneous across industries, but Ricardo did not find an average commodity for setting value.

Income Distribution in Ricardo

Ricardo's theory of distribution decomposed product or total profits into wages, profits and rents, wherein the relation between wages and profits would be balanced by the interplay of arbitrage. Ricardo's model is: Prices = w + π, where P (prices) determines rent.

Labor (L) is thus the determinant of P but as K/L across industries is heterogenous, there is a dis-proportionality between P and L time (value). Ricardo's theory of profits is based on his corn models, where:

(1) Profit rate = π/X

X = wages, Net product = total profit (π)

Now the interesting part is that for Ricardo the profit rate may fall in the short run, but technology keeps it from falling in the long run. For both Smith and Ricardo, the average rate of profit would diminish, in Smith due to competition, but for Ricardo only if wages were increased due to an increase of agricultural products prices. Of course, on the other hand technological advances in agriculture could stifle agricultural prices.

Ricardo considered corn to be the standard of value for being both an input and an output. Both direct and indirect labor were used in the creation of products. The problem was that the empirical evidence on the falling rate of profit (a concept celebrated by Marx as triggering factor of crises) did not support the theory.

Still Ricardo's *LTV* is not rigidly true. He attempted to demonstrate that profits and wages were independent with the implication that the profit rate may rise at an increasing rate. Surpluses must compensate each other, wherein surpluses are considered as deviations of natural prices from labor values. Taxation affects both capital accumulation and profit rates, unless, of course, the subject of taxation are workers' wages in which case those funds may go towards additional capital formation.

Ricardo viewed rent as a portion of national income that accrues to owners of scarce resources and as such only benefits individuals and not the whole economic system. As real wages increase, real profits fall, as the revenues from the sale of manufactured goods are split into profits and wages. This is because profits depend on wages, wages on the price of necessaries, and the price of necessaries chiefly on the price of food. The only restriction for profitability in investment lies in diminishing returns to scale in agriculture, which requires rents increases.

Thus, harmony is fictional. There are contradictions between the apparent and the actual movements of the system. Ricardo exposes the contradictions between the classes as shown by intrinsic relations, discovering the root of the historical struggle for development.

Ricardo ascertains that Smith attributes the fall of profits to capital accumulation, and to the resulting competition, but the fall is due to an increase in rents. For Ricardo a fall in profits is not necessarily a consequence of a change in capital accumulation. Labor is the unique input for him (like for Marx) and rent grows as population increases (given the land stock and productivity in agricultural production).

Economic events have different effects on different classes. The dismal science was born out of Malthusian predictions regarding the disparity between the increase in population and food supplies. Food prices were too high in the times of Ricardo, but the capitalists wanted cheap grain which was not convenient for the landowners.

Nevertheless, if rent is excessive, profits fall short and so does capital accumulation. Rent is a special kind of return that increases the costs of production. Increases in population augment the cost of producing grain and wages must rise.

Capitalists may be squeezed by rent and are prone to disappear or industrialization may be inhibited by the high levels of rent. For Ricardo, rents increase due to the different qualities of land. Ricardo's theories of *LTV* and distribution are the basis of his subsequent theories of capital accumulation, technical progress (on the machinery question linked to technological unemployment), development, taxation and debt.

Trade

Ricardo views trade as a function of the relative costs of production and the structures of prices (P). The purpose of trade is not to accumulate gold or silver but facilitating industry specialization which brings about more trade. Trade is mutually beneficial with comparative advantage at its nucleus.

However, Ricardo forgot that local accumulation fostered the Industrial Revolution in England. Free trade does not benefit every country since it takes time to absorb new technologies. Further, comparative advantage only applies where capital is immobile, and production is neither continuous nor absolute. Finally, not all goods are tradable.

On the other hand, protectionism would rise rents (in agricultural terrains), profits going away from industry. He advocated free trade as it would reduce the price of grains reducing wages, increasing profits and enhancing growth via industrial specialization.

Ricardo discusses the possibility of technological unemployment, wherein trade is the solution. Goods are mobile unlike capital. In this way trade produces wealth since it reduces costs. *LTV* does not hold across countries because of immobility. For him, money and credit are related to prices and it is this nucleus that forms exchange rates, determining gold flows. For Ricardo the economy is static, but he believed in convergence in terms of countries' development levels through the channel of trade.

Additional insights

In Ricardo, aggregate demand cannot be deficient since he believes in Say's Law (supply creates its own demand, in Keynes's words), and it does not affect the ability of the system to reach full employment. In a self-consumption economy there exists no scarce information and there are no general gluts in the commodities markets (only temporary and partial). In

Ricardo´s view the solution for deficiencies in aggregate demand are reductions in wages or the interest rate.

Malthus, like Ricardo was also as non-monetary economist. However, he noticed that if we leave money out of the picture, Ricardo's argument seems unanswerable and aggregate investment justifies itself by creating a demand for its product. The only reason for the fall of profits is a rise in wages (a distributional problem). Ricardo thus objects to the projection of a micro-conception onto the macro level.

This is however an illusion. The Malthus-Ricardo debate was conducted on the terrain of a barter economy, since deep issues on the interest rate and money were not present. Additionally, the Ricardian analysis concerned itself with the long-period equilibrium, a situation which is never realized.

Ricardo was an early believer in the Quantity Theory of Money (´QTM´). This is related to the neutrality of domestic prices and money, and to free trade. He also wrote on the stability of the currency and on the national debt. He contended that increases in the money supply entailed increases in the price level further validating Say's Law.

His method was purely deductive, something which cannot be said for Keynes and Ricardo. His *Principles of Political Economy and Taxation* (1817) were full of abstract principles, prototypes and laws of behavior (physicalism). The interactions among classes could almost be said to follow the laws of physics.

Assessment

Unsurprisingly Ricardo never criticized the assumptions of political economy, being himself one of its founders, but we must nevertheless be aware that his system relies on a perfect order. He believed that saving was automatically identical to expenditure, considering capital accumulation as essential in the long-run process, driven by profit seeking supported by competition and individualism with modest public interventions.

For Ricardo, Smith and Malthus, the working class is essentially passive (like in Keynes). Ricardo has little explicit social philosophy. However, he was an innovative systematizer of economics. Ricardo was a Benthamist, Benthamism preaches utilitarianism as the leitmotiv of human existence which is mere calculation of pleasure for the individualistic man in an atomic social system.

Ricardo was also concerned on the payment of the national debt through a tax on property, this is the Ricardian Equivalence Theorem. Taxes will be paid for not leaving holes for next generations, although this would mean that fiscal policy would be unable to increase employment.

"On machinery" is a special chapter in Ricardo's main book (1917) dealing with the laws regulating the distribution of income among social classes. According to socialist thought, Ricardo's theories had radical implications. Let's turn to Marx's stance on these issues.

Marx's stance on society's functioning

Marx's ideas may be useful to change the world in view of the existence of rapid social change. He had new ideas in terms of his conceptions of the State, of globalization and of the individual. Historical materialism is at the core of Marxism. This takes us back to Ricardo since Marx's central assumption is that social changes must be explained in terms of class struggles, wherein the (historical) economic basis of society determines the nature of social classes and struggles.

Marx borrowed concepts from three main sources. His first source is Ricardo, the second one is Classic German Idealistic Philosophy mainly from Hegel, a strand which had a huge impact on science. Marx relied on the emphasis of Hegel (1770-1831) on history, the State and alienation as well as on the work of Ludwig Feuerbach (1804-1872). Then Marx turned them upside down, modifying the path of Western philosophy. Finally, Marx improved the concept of utopian socialism, viewing Socialism as a social-historical product.

Marx's version of *LTV*

Marx rejected the "classic" concepts of *Laissez Faire*, the Invisible Hand, the atomistic (as opposed to the organicist) view of the economy and the existence of a self-regulating system, in both universal and eternal terms. Marx critiqued the core of Classical British political economy mainly through the revision of the analysis of labor value of Ricardo.

Marx took from Ricardo the concept of social classes but assumed that the capitalists were the winners, rather than the landowners. However, Marx uses the labor theory of value for doing theories of surplus value. In his view, the Classics had conveniently forgotten certain

inconvenient truths, such as the accumulation of surplus labor time produced by one group in the hands of another.

According to Marx the theories of vulgar economists hid commodity fetishism under a theoretical shroud and foster the illusions created by competition. He related value to an abstract measure of the value of the output of society: Money. Both Ricardo and Marx had a theory for class struggle, but whereas Ricardo ascertained that money went to the rich people's pockets Marx thought that capitalistic exploitation would lead the workers to stand up. Surplus and crises are the determinants of the unavoidable fall of capitalism. In some sense it could be said that Ricardo had already understood the seeds of the destruction.

Surplus

For Marx, the equation: $\pi = c + v + s$ (C = fixed capital, v = variable capital or labor, s = surplus) explains the nature, evolution and origin of profits (wherein a redistribution of surplus values would occur). The key difference is that for Marx wages can only rise if exploitation as sustained by surplus extraction is increased.

For Marx, the equation is: $\pi = s/v/(c+v)+1$, where c/v (the organic composition of capital) rises as more machinery must be used due to rising competition among capitalists and the rate of profit diminishes, which is prevented by an increase in surplus value caused by exploitation of L through reducing wages or due to capital cheapening.

Therefore, Marx changes the object of study, the method, the subject of study and introduces the historical element when analyzing the origin of surplus value as the cause of distributional inequalities. Ricardo only quantified labor (which he saw as an abstract category), but did not examine its intrinsic properties and dynamics, thereby neglecting their general social and specific historical character.

Thus, for Marx the bourgeois mode of production is a concrete form of social relations framed under specific historical stages of development where the basic unit is not the individual like in Ricardo but society. For Marx, the capitalists are active in intensifying the exploitation rate. For Ricardo the average rate of profit could only fall if wages rose, but for Marx it exhibited a diminishing tendency due to structural reasons. Recall that for the Classical and the Neoclassical Economists wages are determined in the labor market.

For Marx, the means of production are highly relevant, and the class struggle produces inherent instability. For him, the capitalist economies are not self-correcting. He would also deny the possibility that the ratio K/L could be equalized among industries, indeed this would reduce profit rates and the capitalists would have to be based on surpluses or new markets. Still Marx finds the ideal commodity in money, commodities being his original object of study.

Money for Marx

Marx would produce new insights in the ontological theme by contending that man is part of an organic social system whose aims go beyond the profit motive as the representation of pleasure. Commodities are transformed into money.

Marx recognized and better understood the role of money unlike Ricardo who had analyzed a barter economy. The cause is that due to homogeneities in production levels and the issue of time in production the only invariable measure of value, for better or for worse, was money. The rate of profit was non-natural for Marx. For him it falls due to increasing wages, diminishing returns in capital versus labor or intensified competition of capitals. The Smithian view of infinite expansion and a perfectly harmonised system is thus prevented by the landlords for Ricardo and by the capitalists for Marx, who were rapidly becoming financers. And this is where Keynes, a monetary economist if ever there was one, enters the picture.

The middle-way attitude of Keynes

Keynes (1883-1946) had been able to craft macroeconomics with both uncertainty and money at its very. He was a philosopher of economics who rejected the simplified Classical (Smithian) notions of Laissez Faire, the invisible hand, the atomistic individual and view of the economy, representing a natural Cartesian order[12], physicalism, a self-regulating system and the "old" perception of full employment ('FE') as a microeconomic phenomenon related to wage levels.

In the Neo-classical core entrepreneurs and investors were homogeneous, symmetrical, atomistic and rational, and hence equilibrium exists, neglecting the role of money in shaping economies. Economics was based on rationalism, atomism and the notion of *homo economicus*, which are taken from the natural sciences. But Keynes rejects this approach.

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[12] However, Keynes was an admirer of Newton's atomistic work on physics.

What made Keynes different from the Classics

In Keynes similar as in Ricardo the system tends to be disordered but in terms of short-period equilibrium rather than on distribution or social classes. Keynes's concern was involuntary unemployment. Aggregate demand (AD) determines national income (*Y*) via investment but there is no guarantee that this process leads to full employment. And since we live in a complex and uncertain world and he viewed money as a crucial store of value linking not just the real and the monetary sectors, but essentially as a social construct that makes it possible to organize intertemporal production.

In this context, Keynes's key concepts were the ineffectiveness of price flexibility for curing unemployment; the irrelevance of wages as an equilibrating factor (Chapter 18 of *GT*); uncertainty (Skidelsky, 2009), the instability of investment (I) due to asymmetric expectations; and the disparity between savings and investment (Heilbroner, 1951). Keynes is thus a monetary economist contending that the Classical and the Neoclassical economists were living behind the times when they neglected unemployment as triggered by the disturbing impact of money on aggregate demand.

For Keynes, Ricardo's theories of value and distribution are at the Classical Core laying emphasis upon on proportions of the national product (income or *GDP*) rather than on its size, as he stated: "The Ricardian tradition had dominated theory and policy for over a century" (Keynes, 1936, VIII, p. 32). Keynes concerned himself with the issue of income determination (size and movements).

Keynes also generated rich insights in terms of political economy, especially in Chapter 24 of *GT* (1936), presenting what could be called mild reforms of the system. There he condemned the rentiers but advocated public intervention to foster adequate effective demand. Keynes found fault with Ricardo on the issue of the classical theory of interest, which affirmed to Keynes that Ricardo was trapped by the illusion of Say's Law, thereby being unable to see the possibility of general gluts taking place.

Keynes was not interested in profits (he was before 1936), distribution, regions or sectors. However, he was interested in accumulation since it may bring about gluts.

For Keynes the profitability in investment represents the combined effect of the levels of the schedule of the marginal efficiency of capital and that of the monetary interest rate. Production

is potentially limited by demand whenever the interest rate is too high to generate a level of investment corresponding to full-employment saving.

Money and crises

Keynes's critique of Say's Law hinges on interest and money (which are absent in a barter economy), with money not only being useful for transactional purposes but representing a store of value as well. Keynes stated that Malthus was dealing with a monetary system, unlike Ricardo whose theoretical apparatus would not let him address the issue of a general glut.

Keynes like Marx considered that money possessed another essential property: It is an asset of value as it is the only commodity that reproduces itself in a non-arithmetic form. Money determines interest rates, which define investment levels, which in turn determine aggregate demand and employment in the event of gluts. This systematization is distinct to that of both Ricardo and Marx. Keynes is concerned on the effects of investment instability. On the other hand, Keynes never wrote about the ratio K/L across industries.

No crises exist for Ricardo but a secular trend leading to the stationary state, whereas in Keynes one can find underemployment and stagnation. For Keynes, wages depend on aggregate demand. For him, the organicist economy is not self-regulating, like in Marx.

Keynes was an inductivist (Ricardo was a deductivist) and a believer in organicism where every variable is related to any other in multidirectional forms in an aggregate system. The basic unit in Keynes is the nation's economy. Finally, Keynes (like Marx) rejected utilitarianism. Keynes sustained that human beings are not crass machines, contending that man goes beyond the simple calculus of benefits and costs advocating ethical values and the use of probability theory regarding decision taking.

Conclusions on the rejections of Marx and Keynes to the Ricardian *SRP*

Rejections must be interpreted in the context of falsifications or improvements in *SPRs*, wherein improvements are not only due to the simple fact that later thinkers possess more knowledge and operate in wider systems.

This article is focused upon the analysis of Ricardian economics under the perspective of the Karl Marx and John Maynard Keynes. Ricardo passed from the theory of distribution to the theory of growth, the latter being based on saving, profit accumulation and trade, but growth

would have a limit leading to a stationary state (to a definitive failure of the system according to Marx, to unemployment in accordance to Keynes).

Ricardo's and Smith's long-period method regards prices as natural rather than affected by short-term market events. Ricardo had also reduced interest as a part of profits and land rent to an excess of average profits. For Marx those categories fell then into the realm of surplus, and for Keynes interest was a monetary rather than an industrial phenomenon. At Ricardo's time the financial system was not relevant even though he himself was a successful financier.

Ricardo lacks historicism as his categories in political economy, specifically on bourgeois production, are both universal and ubiquitous. Marx explains the development of social productive forces in historical terms. Keynes describes their evolution throughout history but is focused on macroeconomic events, especially booms and busts.

Ricardo starts with value, Marx with commodities and Keynes with unemployment. Ricardo's core validates the workings of the bourgeois economy and reflects the tenets of German Classical Philosophy. Marx's theory is proletarian-oriented rather than bourgeois-tilted, but Ricardo had already foreseen revolutionary motives.

Keynes wrote about the controversy on Say's Law, the methodology of economics, and the negative effect of Ricardo's triumph. For Schumpeter, Ricardo incurred in the Ricardian Vice of considering that his epoch was definitive. Further logic does not necessarily produce a good economic theory. Only Keynes and Marx would break the Classical logical core -including the systematization of Ricardo- in terms of both method (organicist in both Keynes and Marx, inductive for Keynes but dialectical for Marx) and economic predictions (outburst for Marx, solvable decomposition in Keynes).

Ricardo's early interests were in natural sciences (geology) which contrasts with philosophy for Marx and Keynes (especially in terms of ethics, epistemology and political and social philosophy). Hence it can be argued from this analysis that both Marx and Keynes broke the Ricardian core, improving and deepening economic analysis by creating progressive *SRPs* grounded on innovative philosophical visions mainly in terms of epistemology and political philosophy and to a lesser extent of ethical stances.

Literature

Andrews, D. R. (2000). "Keynes, Ricardo and the Classical theory of interest", *The European Journal of the History of Economic Thought*, 2(29), pp. 228-44.

Anonymous (2018). "Comparison of Marx's versus Ricardo labor theory", PREZI. http://prezi.com/u7-ppikv94ct/teorias-economicas-de-david-ricardo/ (accessed January 27, 2018).

Cottrell, A. (2018). "Keynes, Ricardo, Malthus and Say's Law". ECN. http://ricardo.ecn.wfu/-cottrell/ecn265/says_law.pdf (accessed January 16, 2018).

De Vivo, G. (1987). "Ricardo, David, 1772-1823". In *The New Palgrave: A Dictionary of Economics*, eds. John Eatwell, Murray Milgate and Peter Newman, Vol. 4. London: MacMillan, pp. 183-198.

Economic Theories (2018). History of Economic Thought, Comparison of Marx's versus Ricardo labor theory", Zelda. http: www.economictheories.org

Kurz, H. (2018). "David Ricardo". *Encyclopedia.com*,
http: www.encyclopedia.com/people/social-science-and-law/economics-biographies/david-ricardo (accessed January 19, 2018).

Feiss, E. (1998). "Marx on Ricardo: An explanation of some important misunderstandings", *The European Journal of the History of Economic Thought* 5(2), pp. 276-91

Find a Grave (2018), http: www.findagrave.com/memorial/12746052, (accessed January 19, 2018).

Heilbroner, R. (1999). *The Worldly Philosophers*. Chapter 4 The Gloomy Presentiments of David Ricardo and Parson Malthus, New York: Simon & Schuster.

History of Economic Thought Website (2018), "Keynes on Malthus and Ricardo", http: www.economic.theories.org/2008707/Keynes-on-malthus-and-ricardo-theories.html?m=1 (accessed January 19, 2018).

Hollander, S. (1979). *The Economics of David Ricardo*. Toronto: University of Toronto Press

Hutchinson, T. (1952). "Some questions about Marx", *Economica* Vol. XIX, p. 592

Keynes, J. M. [1936] (1964). *The General Theory of Employment, Interest and Money*, London: Palgrave

Marx, K. [1867] (2018). *The Capital. A Critique of Political Economy*, Marxists Internet Archive, http://www.marxists.org/archive/marx/works/download/pdf/Capital-Volume-I.pdf (accessed January 19, 2018).

Milgate, M., and S. Stinson (1991). *Ricardian Politics*. Princeton, New Jersey: Princeton University Press.

Moggridge, D. (1992). *Maynard Keynes. An Economist's Biography*, London: Routledge.

Ricardo, D. [1817] (2001). *On the Principles of Political Economy and Taxation*. New York: Batoche.

Robinson, J. (1978). "Keynes and Ricardo". *Journal of Post Keynesian Economics* 1(1), pp. 12-18.

Schumpeter, J. A. (1954), *History of Economic Analysis*, New York: Oxford University Press.

Skidelsky, R. (2009). *Keynes. The Return of the Master*, London: Allen Lane.

Sowell, T. (2006). *On Classical Economics*, New Haven, CT: Yale University Press.

The History of Economics Website (2018), *David Ricardo 1772-1823,* http://www.hetwebsite.net/het/profiles/ricardo.htm (accessed January 19, 2018).

Tucker, G. L. S. (1961). "Ricardo and Marx". *Economica New Series* 28(111), August, pp. 252-289.

Vienneau, R. (2018), *David Ricardo*, http://robertvienneau.blogspot.mx/2013/UT/mao-un-ricardo.htm?m=1 (accessed January 19, 2018).

Absolutne stroškovne razlike in trdovratna trgovinska neravnovesja: Harrodijanski proces usklajevanja[1a]

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Uvod

Klasični ekonomisti so razumeli, da mednarodna trgovina poteka med profitno usmerjenimi izvoznimi in uvoznimi podjetji, ne pa med »narodi«. Na primer, v razlagi zunanjega trgovanja Smith poudarja, da je »privatni dobiček edini, ki motivira lastnika kapitala[13], da dobiček investira v agrikulturo, industrijo ali drugo vejo veleprodaje ali maloprodaje« (Smith, 1973, p. 474)[14]. Klasiki so prav tako poudarjali, da v vsaki industriji konkurenca ščiti nizko-cenovna podjetja, ki imajo možnost nižanja cene in uničiti dražjo konkurenco. Smith razširi ta princip v analizi mednarodnega trgovanja, v kateri zaključi, da bo kapital v rokah naroda z nižjimi produkcijskimi stroški, bolj uspešen v mednarodnem prostoru (1973, p. 35). Z drugimi besedami, *absolutno stroškovno prednost[15]* lahko uporabimo v analizi konkurence znotraj enega naroda in v analizi konkurence med narodi.

[1a] This is a translation of a seminal text, Absolute Cost Differences and Persistent Trade Imbalances: The Harrodian Adjustment Process by Anwar Shaikh (2014). It can be found in the 2nd Chapter, Orihuela, Jose Carlos, and Jose Tavara. Pensamiento económico y cambio social: homenaje a Javier Iguíñiz. Fondo Editorial de la Pontificia Universidad Católica del Perú (2014).

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[1] *Komentar avtorja prevoda:* Shaikh tukaj uporablja izraz »*capitals*« torej *kapitali*, s čimer agregira tendenco kapitala v določeni državi. Avtor prevoda se bo raje držal izraza *kapitalist* oziroma *lastnik kapitala*, saj je mnenja, da ima personifikacija kapitala lahko napačno sporočilnost, saj sporoča kapaciteto kapitala, torej stvari in ne osebe, k dejanju, odločitvi.

[14] Vse reference so dostopne v pregledu literature v originalnem delu.

[15] Absolutni strošek je lahko oceniti s primerjavo vseh metod produkcije ekonomske dobrine v določenem valutnem območju, to pa je v bistvu način, kako analizirati konkurenčnost znotraj države (Shaikh, 1980a, opomba 3, p. 232).

Podobno kot Smith je tudi Ricardo želel razumeti vzorce mednarodnega trgovanja s profitno motiviranimi dejanji lastnikov kapitala v različnih državah. Pravzaprav Ricardo svojo zgodbo zgradi iz Smithovega izhodišča, na primerjavi dveh držav, Anglije in Portugalske. Predpostavlja, da so portugalski kapitalisti stroškovno bolj učinkoviti kot angleški, zaradi česar je Portugalska najprej deležna trgovinskega presežka, Anglija pa trgovinskega primanjkljaja. Ricardo v Hume-ovem duhu trdi, da pozitivna neto bilanca Portugalske pomeni neto priliv denarja v državo: ker izvozna podjetja prodajajo v tujini več, kot izvozna podjetja tam kupujejo, denar priteka v Portugalsko. Obratno, ker so v Angliji proizvajalci manj stroškovno učinkoviti, bo Anglija deležna primanjkljaja in posledično neto odliva denarja. Neto priliv denarja v Portugalsko, ki nastane zaradi stroškovne učinkovitosti proizvajalcev, bo povzročil *rast ponudbe denarja*. V Angliji, kjer so podjetja manj učinkovita, bo ponudba denarja padla.

Ricardo je bil velik zagovornik kvantitativne teorije denarja. Bil je namreč prepričan, da bodo zaradi rasti ponudbe denarja zraste tudi portugalske cene in plače, padec ponudbe denarja v Angliji pa bo vodil v znižanje angleških cen in plač. To pomeni, da bo začetna stroškovna prednost Portugalske postopoma izginila, Anglija pa postala vedno bolj konkurenčna. Ker so ti učinki posledica nesorazmerij v trgovanju, se bo proces nadaljeval dokler trgovina ne bo uravnotežena. Z drugimi besedami, prosto trgovanje bo avtomatično naredilo obe državi *enako konkurenčni v mednarodnem okolju neodvisno od njunih začetnih razlik v stroškovni učinkovitosti* (Shaikh, 1980a, p. 204).[16]

Ricardov primarni argument je bil zastavljen v okviru fiksnih menjalnih tečajev, saj predpostavlja zlati standard, v katerem je valuta vsake države fiksna glede na zlato in zato fiksna relativna ena na drugo. Logika njegove trditve velja tudi za fleksibilne menjalne tečaje (Emmanuel, 1972, pp. 240-243). Začetni trgovinski presežek Portugalske pomeni neto akumulacijo angleških funtov v portugalskih rokah, saj portugalski izvozniki prodajajo več v Angliji kot tam kupujejo portugalski uvozniki. V fleksibilnem valutnem sistemu bo presežek vplival na ceno angleškega funta v primerjavi s portugalskim eskudom – povzročil bo apreciacijo eskuda. To pomeni, da bodo portugalske dobrine za angleške kupce dražje, kar bo načelo začetno cenovno prednost portugalskih proizvajalcev. Končni rezultat bo enak rezultatu menjave znotraj fiksnega menjalnega tečaja: razmerje med izvoznimi in uvoznimi cenami v skupni valuti bo raslo v državi s trgovinskim presežkom in padalo v državi s

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[16] Neoklasična teorija doda novo predpostavko pri obravnavi spontane polne zaposlenosti, s katero izniči morebitne probleme zaradi prilagoditve: delavci odpuščeni iz poraženih sektorjev bodo preprosto našli službe v zmagovalnih sektorjih. Ni težko videti, zakaj je predpostavka relativne stroškovne prednosti in polne zaposlenosti tako privlačna za ortodoksijo.

primanjkljajem, vse dokler trgovinska bilanca ne bo uravnotežena v obeh državah. Preživeli portugalski izvozniki bodo tisti z največjo cenovno prednostjo v mednarodni trgovini, preživeli angleški izvozniki pa tisti z najmanjšo cenovno prednostjo. Avtomatizirana operacija na prostem trgu, motivirana s profitnim motivom posameznikov, bo obrnila začetno cenovno prednost portugalskih proizvajalcev in cenovno pomanjkljivost angleških proizvajalcev v primerjalne cenovne prednosti za določeno skupino proizvajalcev v vsaki državi.

Ko se bo rikardijanski proces umiril, se bo zdelo *kot da se je* Portugalska specializirala v proizvodnji tistih dobrin, kjer je imela »primerjalno stroškovno prednost«, te dobrine pa menja za dobrine enake denarne vrednosti (trgovina je namreč v ravnotežju), za dobrine, pri katerih je imela Anglija primerjalno stroškovno prednost (Ricardo, 1951, pp. 134-136; Shaikh, 1980a, p. 216). Vendar pa je pri tem ključno, da so dejanski agenti, zaradi katerih pride do tega ravnotežja, profitno naravnana podjetja v Angliji in na Portugalskem, ki se odzivajo na profitne spodbude.

Marxova in Harrodova kritika primerjalne stroškovne teorije

Ricardo plačilno bilanco implicitno zreducira na *trgovinsko* bilanco. Plačilna bilanca je seštevek neto prilivov v državo: izvoz minus uvoz (trgovinska bilanca) *plus* neto neposredne tuje investicije *plus* kratkoročni kapitalski prilivi kot na primer neto posojila tujcev domačim agentom. Ricardo ne upošteva dolgoročnih in kratkoročnih kapitalskih prilivov. Neto mednarodni denarni tokovi igrajo ključno vlogo v njegovi zgodbi, ampak samo kot sredstvo kroženja. To je čudno, ker sta izvoz in uvoz finančnega kapitala (mednarodno zadolževanje in posojanje) neločljivo povezana s tokom sredstev, ki nastanejo zaradi izvoza in uvoza blaga. Ali če povemo drugače; pritok sredstev v trgovinski presežek države se bo izkazal kot povišanje likvidnosti na kratkoročnih finančnih trgih, medtem ko se bo odtok sredstev v državi s trgovinskim primanjkljajem prikazal kot zaostrovanje razmer na finančnih trgih. Marx, ki je bil zelo kritičen do kvantitativne teorije, se osredotoči prav na to točko (Shaikh, 1980b, p. 34):

»*Ideja, da spremembe v obstoječi količini zlata v določeni državi dvignejo ali znižajo cene dobrin v tej državi tako, da povišajo ali znižajo količino sredstev v kroženju, je pravzaprav stara prevara. Če je zlato izvoženo, potem se, kot pravi kvantitativna teorija denarja, cene dobrin povišajo v državi, ki zlato uvaža in znižajo v državo, ki zlato izvaža.*

V dejanskosti pa znižanje v zalogah zlata zniža obrestno mero; in če ne bi nihanja v obrestnih merah vplivale na določanje stroškov in cen ter ponudbe in povpraševanja, potem bi ostale cene dobrin nespremenjene navkljub spremembam v stanju zlata (Marx, 1967, p. 551).«

Skoraj stoletje kasneje pride do enakega zaključka Harrod (Harrod 1957, poglavje IV, sekcija 5 in poglavja VII-VIII). V njegovi analizi bi denarni tok, sprožen s presežkom v plačilni bilanci, znižal likvidnost države, ne pa tudi dvignil ravni cen. To naj bi znižalo obrestne mere v državi[17] in stimuliralo odliv kapitala brez nujnih posledic za trgovinsko bilanco. Glede na stopnjo do katere so investicije odvisne od spremembe obrestne mere, bodo spodbudile raven produkcije in povečale uvoz preko keynesianskega kanala. To sicer lahko zniža presežek trgovinske bilance, ne more pa ga tudi izničiti (1957, str. 130, 131-133, 135, 139). V kolikor centralne banke z deficitom na plačilni bilanci zadržijo tuje rezerve tako, da dvignejo obrestno mero in sprožijo priliv kapitala, ki pokrije primanjkljaj, potem bi *naredile enako, kot bi naredil tudi trg* (str. 85-86). Zadnje, kratkoročni prilivi kapitala, ki jih sproži plačilno neravnovesje, bodo zmanjševali razliko v obrestnih merah, ki pravzaprav vodi do obravnavanega neravnovesja, zaradi tega pa bodo konvergirale mednarodne obrestne mere (str. 116).

Če povzamemo argument Harroda; prosta trgovina ne bo negirala temveč bo *izražala* konkurenčne stroškovne prednosti in pomanjkljivosti. Države, v katerih imajo proizvajalci absolutno stroškovno prednost bodo imele v povprečju trgovinski presežek, ki jih bodo njihovi finančni trgi reciklirali v obliki mednarodnih posojil, medtem ko bodo države v katerih proizvajalci nimajo absolutne stroškovne prednosti končale s trgovinskim primanjkljajem in mednarodnim dolgom (Harrod, 1957, str. 85-85). *Tokovi kapitala sicer pokrivajo nesorazmerja trgovinske bilance, vendar pa ne moremo trditi, da so trgovinska nesorazmerja samo-regulirajoča.*

Alternativna teorija prilagajanja trgovinskih neravnovesij

Naj bo *e* = nominalen menjalni tečaj, *bop* = plačilna bilanca relativna na BDP, *bot* = trgovinska balanca relativna na BDP, *idiff* = obrestna razlika (domača obrestna mera *minus* tuja obrestna mera) in *kf* = neto priliv kapitala. Pika nad spremenljivko določa stopnjo časovne spremembe.

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[17] Pritok zlata naredi državo bolj likvidno. "Če banke zagotovijo dotok, bodo postale progresivno likvidnejše, če pa dotoka ne zagotovijo, se poveča likvidnost javnosti." Četudi banke ostanejo indiferentne do povečanja lastne likvidnosti, se "zlato skoncentrira v centralni banki"

Potem so lahko zgornji argumenti povzeti v obliki naslednjih predlogov s pripadajočimi enačbami splošne forme.

Plačilna bilanca je vsota trgovinske bilance in neto priliva tujega kapitala; prav tako je razlika v trgovinski bilanci in neto odlivih kapitala. Menjalni tečaj apreciira, ko je plačilna bilanca pozitivna, saj bo neto akumulacija tujega kapitala v rokah domačih proizvajalcev depreciirala tujo valuto, torej apreciirala domačo. Apreciacija domače valute bo spodbudila uvoz in zmanjšala izvoz, zaradi česar se bo trgovinska bilanca znižala. Takrat bo presežek v plačilni bilanci povečal domačo likvidnost in znižal razlike med domačo in tujo obrestno mero. To bo spodbudilo kratkoročni odliv kapitala.

(1.1) $bop \equiv bot - kf$ (balance of payments $\equiv$ trade balance $-$ net capital outflows)

(1.2) $\dot{e} = f(bop), f(0) = 0, f' > 0$ (exchange rate responds positively to a balance of payment surplus)

(1.3) $bot = h(e), h' < 0$ (balance of trade responds negatively to currency appreciation)

(1.4) $i\dot{diff} = j(bop), j(0) = 0, j' < 0$ (interest rates fall due to enhanced liquidity from a bop surplus)

(1.5) $\dot{kf} = k(idiff), k(0) = 0, k' < 0$ (capital outflow when the domestic interest rate is below the foreign)

Slika 1 - Definicije, vir Orihuela *et. al.*, str. 56

Osupljivo je, da je enostavna linearna oblika prejšnjega splošnega modela globalno stabilna in prinaša ravnovesje plačilne bilance v obeh državah pri ravnotežnem menjalnem razmerju in skupni obrestni meri. Kljub temu trgovinska nesorazmerja vztrajajo, s tem pa ustrezni mednarodni tokovi kapitala – to trdi Harrod in to običajno vidimo tudi v praksi. Naj bodo *a, b_0, b_1, c, d* pozitivni parametri linearne ekvivalence splošne funkcijske forme enačbe (1.1) – (1.5):

(1.6) $bop \equiv bot - kf$

(1.7) $\dot{e} = a \cdot bop$

(1.8) $bot = b_0 - b_1 \cdot e$

(1.9) $i\dot{diff} = -c \cdot bop$

(1.10) $\dot{kf} = -d \cdot idiff$

Slika 2 – Identitete, vir Orihuela *et. al.*, str. 57

Če odštejemo (1.8) od (1.6), vzamemo derivat in zamenjamo enačbo (1.10) za *kf* dobimo (1.11) spodaj. Ko to združimo z enačbo (1.9), dobimo sistem dveh diferencialnih enačb, ki je globalno stabilen pri *bop* = 0 in *idiff* = 0.

$$(1.11)\ \dot{bop} = \dot{bot} - \dot{kf} = -b_1\,\dot{e} + d \cdot idiff = -b_1 a \cdot bop + d \cdot idiff$$
$$(1.9)\ \ \dot{idiff} = -c \cdot bop$$

Slika 3 - Matematična izpeljava, vir Orihuela *et. al.*, str. 56

Iz enačbe (1.9) vidimo, da ima sistem ima unikatno ravnotežje pri *bop* = 0 in zato *idiff* = 0 z enačbe (1.11). Stabilnost lahko vzpostavimo z Jakobijevo matriko $J = \begin{pmatrix} -b_1 a & d \\ -c & 0 \end{pmatrix}$, ki je globalno stabilen, ker $Tr(J) = -b_1,\, a$ $\Delta \equiv (Tr(J))^2 - 4Det(J)$ < 0 in $Det(J) = cd > 0$. Pot prilagajanja je ali monotona ali ciklična, odvisno od vrednosti diskriminante Cikličnost prilagajanja se zgodi tam, kjer je diskriminanta manjša od nič (Hirsch in Smale, 1974, str. 96). V ravnotežju velja:

i.   Plačilno razmerje je v ravnotežju (*bop* = 0)

ii.   Mednarodne obrestne mere so izenačene (*idiff* = 0)

iii.   Neto prilivi kapitala sprožijo trgovinska nesorazmerja (*kf* = *bf* z enačbe (1.6))

iv.   Nominalni menjalni tečaj je v ravnotežju (*e = 0* z enačbe (1.7))

v.   Neto odliv tujega kapitala je v ravnotežju (*kf = 0* z enačbe (1.10))

vi.   Trgovinska bilanca je v ravnotežju (iz ravnotežja *e* izhaja ravnotežje *bot* z enačbe (1.8))

Začetna točka Ricarda je trgovinski presežek Portugalske (in primanjkljaj Anglije) in odsotnost mednarodnega toka kapitala. Vendar pa je v tem sistemu končni rezultat bližje temu, ki si ga je zamislil Harrod kot temu, ki si ga je zamislil Ricardo: mednarodna trgovina dokončno ostane v neravnovesju, plačila pa so v ravnotežju zato, ker tokovi kapitala pokrivajo trgovinske nesorazmerja. Potrebno je omeniti, da vzorec ne sovpada samo z idejami Marxa in Harroda, temveč tudi z empiričnimi dokazi (Shaikh in Antonopoulos, 2012, str. 203-204).

Letters of Ricardo to Malthus (1810-1823)

David Ricardo

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More than 12 years of correspondence between the two economists between 1810 and 1823 is undoubtedly relevant in understanding the development of political economy. Despite the fast break of the industrial revolution, it is important to understand that farming still represented quite an enormous part of the economy at that time, while other industries (metal, textile, mining) just started to develop successfully. Fast growth of the population and a low standard of living for the workers were some of the reasons for the theoretical exploration in economics. Thomas Malthus (1766-1834), David Ricardo (1772-1823) together with Adam Smith (1723-1790) and John Stuart Mill (1806-1773) all played a crucial part in strengthening the political economy as a scientific discipline. It is clearly seen from their writings that both Malthus and Ricardo had, unlike Smith, a very pessimistic outlook on the future of capitalism. Core concepts of their theory were wages, rents and profits. Smith's Distribution Theory focuses on explaining which social classes get different types of income. He stated that wages belong to workers, rents to the landlords and the profits to the capitalists.

In 1810 Ricardo published a pamphlet titled "The High Price of Bullion, a Proof of the Depreciation of Bank Notes" in which he wrote about monetary questions that led to the first meeting between Malthus and Ricardo which took place in 1811. Ricardo defended the so-called "gold standard" which is nowadays among economists generally known as a disastrous economic experiment.

More interesting were the debates between Ricardo and Malthus about the corn law, which limited import of foreign corn and on the other hand stimulated export with subsidies. The main objective of the law was to maintain high corn prices. Ricardo said that the international market could be a solution that would limit possible upcoming economic problems which may appear because of The law of diminishing returns. In the 22nd letter he wrote: »I have

no doubt that, if the free importation of corn is allowed into this country, inasmuch as it will direct foreign capital to foreign land, it will tend to lower foreign profits, and if all the earth were cultivated with equal skill up to the same standard, the rate of profits would be everywhere the same, though the superior industry and ingenuity of particular countries might secure to them a greater abundance of other commodities...« When Ricardo was developing theoretical definitions about wages, rents and profits he sometimes leaned on definitions of Malthus. Malthus's hypothesis on the impact of rising population played a very important role in Ricardo's work. The biggest problem that he saw was the trend in downsizing the profit rate. Due to the population growth, the food demand increases, which means that farmers must use less fertile land and because of that, both production costs and the food price increase. Because of the market principals the food on the market has the same price even if it is produced on the land of best quality where costs did not change. In the short term this increases profits, but the competition amongst capitalists causes the enlargement of the rent.

In conclusion the improvement of the standard of living contributes to an increased population, a bigger population causes bigger needs for food and less land that is of good quality is being used. Therefore, the costs go up and so does the price. Competition raises the price of food produced on a higher quality land and all the additional income is collected by the landlords, because the competition amongst capitalists pushes the rents up. The rent represents the differences between the production cost on the land that is less fertile and the production cost on the highly fertile land. The problem that then appears is that higher food prices demand higher wages which lower the profit rate. The main thesis of the 29th letter to Malthus is that the progression of wealth tends to lower profits and increase rent.

In October 1814 Ricardo wrote (20th letter in the book): »Accumulation of capital has a tendency to lower profits. Why? Because every accumulation is attended with increased difficulty in obtaining food, unless it is accompanied with improvements in agriculture.« Ricardo understood that the increase in productivity increases profits, but he didn't believe that the increase in productivity will be fast enough. He announced a pessimistic scenario where he stated that the more the prices will grow - because of the growing costs – the higher will rents and wages be, and in turn profits will decrease.

Ricardo saw the only reason for increasing rents in the law of diminishing returns, while Malthus on the other hand believed there could be other reasons for the rent to grow. He stated that in the future, profits will fall to zero rate which will stop the capital from accumulating and cause the end of economic growth. Ricardo saw the solution in international

trade which allows import of cheap raw materials and export of cheap products and capital. The solution disables the rapid growth of the rent and at the same time ensures normal profit rate. Import restrictions benefit only landlords through the rise of rent, but it hurts other people and economic development. Free trade in corn increases the amount of profits more than a policy of restriction increases the amount of rents (67th letter). Even Smith claimed in his book that profit rate does not depend on the wealth, but on the rate of the growth of wealth.

Ricardo even took a step further when he claimed that the growth of wealth automatically leads to a decreasing rate of profits. This is clear if we understand that production depends on three production factors: land, capital and work. Land is a fixed production factor and the law of diminishing returns says that every additional quantity of capital and work on the same land brings less output growth. Because of this the new quantities of capital and work move on the less fertile land, which again increases costs and decreases profit everywhere (because of the increases in rent). Growth of nominal prices would be the sign of prosperity and not the cause of it. In letters he wrote that prices of corn will not be followed by the growth of corn products, but by the lowering profit rate. In the letters is clearly shown that Ricardo and Malthus did not estimate the power of technological growth, which is normal if we understand that fast technological progress only appeared after Ricardo's time. As the economist Robert J. Gordon wrote, the fast productivity growth started just before the end of 19th century (Gordon, 2016).

Interesting are also Malthus' and Ricardo's views on the aggregate demand displayed in the 73rd and 74th letters: »I quite agree with you in thinking that Say's letters to you are not very well done. He does not even defend his own doctrine with peculiar ability, and on some other of the intricate questions, on which he touches, he appears to me to be very unsatisfactory.« Despite Ricardo's critic, he comes from Say's law which says that each offer generates its own demand. On the other hand, Malthus was the first economist who started to develop the so-called theoretical problem of effective demand. His arguments were early and got validated only in the first half of 20th century with John Maynard Keynes. Malthus position was that a potential aggregate demand and an effective aggregate demand exists. He agreed that Say's law applies for workers whose income is so small that everything they earn is being used for survival, but there is a different story with capitalists who have a bigger income.

Malthus believed that capitalists sometimes delay consumption because of the general conditions in the economy, profits rate expectations, the degree of uncertainty etc. He went

against a thesis, still dominant today, which states that savings are always equal to investments. He called the situation in which saving is bigger than productive consumption the crisis of realization. Malthus even took a step further because he believed that a higher rate of capital accumulation will automatically increase the problem of insufficient consumption. That's the main reason for the profits rate falling and the solution for this situation are so-called unproductive consumers (those who don't participate in the production process). We cannot ignore that he defended high rents, because the rent is intended fully and entirely for the consumption. Through Malthus's views, high rents help remedy imbalances between demand and supply, but to high capital accumulation deepens imbalances. This view goes absolutely against Ricardo's view on rent, because he claimed rent can never help in the creation of wealth, what does apply for profit. This thinking was very important, because more than a hundred years latter John Maynard Keynes developed the exact theories about aggregate demand.

When we take hands on some of the work from 200 years ago, it is important to understand social circumstances of that time. Only then we can truly comprehend Ricardo's writings. We need to understand that they did not have an enormous amount of statistical data which is nowadays used by economists. Their views were based on probably statistically unrepresentative observations. Malthus got his pessimistic views from the writings of the agronomist Arthur Young, where he recognized a threat for England. Some people saw the fear of revolution in Malthus's work which took place in France before the essay was published. Ricardo had the same fears; his biggest fear was relative rarity in which the land would because of growth of the other goods become relatively rare. He predicted enormous growth of rent and he saw a solution in international market and rent taxes. Even today some of Ricardo's views are an important part of the classical economy. Rule of the decreasing returns and margin rates play a crucial part in today's economy, although practices showed that his theories were based too much on farming economy. Rents did stay up for some time, but progress did push agriculture on the side and eventually the rent prices went down. The principle of relative rarity is still important nowadays especially on the land with the richest areas (Silicon Valley).

Technical progress which took place after Ricardo's death was not expected nor from Ricardo nor from Malthus. These readings reveal the evolution of our economy. They also reveal the way economists were thinking about a capitalistic economy when there was no statistical data on which they could rely on. It is left to the reader alone to figure out which theses are correct

and where the mistakes were made. If reader will read the letters which Ricardo wrote until his death, he or she will find out that their relationship was respectful, which we cannot be said for today's economists with opposing views.

The writings ended in 1823 with David Ricardo's death. Malthus did attend the funeral and said: "I never loved anybody out of my own family so much. Our interchange of opinions was so unreserved, and the object after which we were both enquiring was so entirely the truth and nothing else, that I cannot but think we sooner or later must have agreed."

And with that came the end of an intellectual correspondence between two friends. Today, 200 years later, the letters help us understand the very first insights of the political economy.

Literature

Dorfman   R.   (1989).   Thomas   Robert   Malthus   and   David   Ricardo.
https://www.aeaweb.org/articles?id=10.1257/jep.3.3.153

Gordon J. R. (2016). The Rise and Fall of American Growth

Piketty T. (2014). Capital in the Twenty-First Century (5-7).

Body, Language and Meaning in Conflict Situations[18]

Orit S. Waisman

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Why should an economics journal, specializing in economic heterodoxy and methodology publish a book review, which focuses on conflictual contents? Why should the journal deal with perspectives of an author who specializes in dance – movement therapy -, is herself an artist and a linguist, basing the book on the semiotic analysis of gesture–word mismatches and word system?

Because *Body, Language and Meaning in Conflict Situations* by Orit Sônia Waisman reflects an innovative holistic approach to text analysis, integrating verbal and non-verbal signs, concentrating on mismatches as markers of significance. Moreover, the analysis is applied to the videotaped sessions of the discussion group, involved in different ways in the Israeli-Arab and Israeli-Jewish conflict. Surely not a typical analytical approach that is used in economics. The book offers a unique insight into possibilities for extracting information from nonverbal dimensions. The author defines and conceptualizes her own approaches for the analysis of non-verbal content but can be greatly inspiring and offering a guidance towards a new direction of research of conflict. Waisman is a dance movement therapist and a linguist. She is the head of the Dance Movement Therapy Department at David Yellin College in Jerusalem since 2006. She is also the head of the Dance Movement Therapy Section at ICET, the Israeli union of arts therapists, and has extensive experience as a dance movement therapist and supervisor with various populations. She is a Jungian candidate at the Israel Institute of Jungian Psychology in her fourth year.

Interdisciplinarization becomes inevitable in science, especially with those that deal with paradigmatic shifts. Interdisciplinarization is also slowly taking us towards a better

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[18] Waisman, O. S. (2010). *Body, language and meaning in conflict situations: A semiotic analysis of gesture-word mismatches in Israeli-Jewish and Arab discourse* (Vol. 62). John Benjamins Publishing.

understanding and processing of conflicts, but according to Gruber (1998), the investigation of verbal disputes faces a major methodological problem. In most situations conflicts occur "spontaneously" and they are viewed as a rather "private" activity in our Western culture. This has led researchers of conflict communication to investigate mainly courtroom interaction, therapeutic settings, child - disputes or disputing behavior in non–Western cultures. Moreover, in Western cultures, emotions are perceived to be in the individual. In other cultures, feelings provide a social, rather than an individual statement that comments on oneself in relation to others. White (1990) wrote that emotions also index social relations.

In relation to conflict resolution, economics contributed econometric methods for data analysis as well as game theoretical models for social interaction modelling, but also approaches to armament market research and negotiation. In relation to language in the field of economics McCloskey established a strong basis for the "Rhetoric of Economics" as a heterodox methodology in the study of economies. Chomsky also approached economics and conflict related topics from his multifaceted knowledge and thinking processes. It is thus important to start noticing the changes in how the intertwining of fields is underway. Authors that go deeper behind the data and the information readily available and measurable, are the ones directing our attention to thinking in terms of paradigms, to philosophical framing, historical placement, cognitive bias, anthropological, cultural and ethnic specificities. Waisman is a proponent of such a manner of handing over the knowledge that she had gathered, and an excellent example of how to transparently point at an observation and interpretation, commenting on the ideological, cultural, personal, political, academic conditioning. She often stresses that her background and identity could be the source of biasedness and suggests thorough self–reflection and comparing one's own views to opposing/alternative views. In chapter 6, Waisman comments that "her approach, as a Jewish, Ashkenazi, woman researcher, forms one of the perspectives through which the data may be analysed. Certainly, the phenomenological, interdisciplinary, qualitative nature of the research implies that researchers of other ethnic background would provide different perspectives on the data. Presenting the data to another researcher would challenge the author's own Western meaning–forming".

In the literature, this view is applied by postmodernist feminist writers like D. Harraway, who argument that no research, no scientific method can serve as absolute objective knowledge, as every scientist is an inevitably biased individual, researching in a limited location and time period. Thus, universal equations and truths are only found in versions of objectivity, that are in the service of hierarchical and positivist orderings of what can count as knowledge.

Waisman is very aware of the biases and the personal historical background that is inalienable from each individual researcher's work, regardless of the scientific method used. This is especially important, when dealing with ethnic, cultural and political issues, which condition the ideological and ingrained cognitive processes of the individuals/groups studied.

Waisman expresses that the book is the product of a search that has several sources. One of the sources is the author's personal history, intertwined with the history of her people, the Jewish people. As a descendent of Jewish immigrants who fled persecution in Eastern Europe at the beginning of the twentieth century, Brazil was the eventual site where her parents were born. Zionism was there to ease the pain caused by memories of expulsions and pogroms, and, indeed, she yearned to come to Israel. Their eventual immigration to Israel afforded vast possibilities for her. But questions of identity paved the path of her professional life. When she perspective as she faced a challenge to deal with affect expressions in depth. She chose to proceed to higher studies in linguistics, enriched by dance and drama therapy studies. The desire to turn to the creative world, skills of theatrical acting combined the knowledge of body movement with character/role searching, and the fascination with human expression altered and combined the incompatible - to return to lost countries, took a prominent place in her soul. As she deepened her creative and psychological interest in human expressions and communication strategies, this craving became more and more acute. She knew that the body could not be kept out of this discourse, but nor could language. When she started to work and to teach as a dance movement therapist, questions of body movement and interrelations with words became less and less vague. Questions concerning the connections between language and body movement led the study throughout its stages.

In the introduction to her book Waisman presents the data she used. It was comprised of a series of videotaped sessions between Israeli-Arab and Israeli-Jewish students from the Department of Behavioural Sciences, at Ben Gurion University of the Negev during the 1998 – 1999 academic year. The research question that initiated the research process within the author was: What are the verbal and non – verbal signs of conflict? As she began the study, the author repeatedly watched and re-watched the sessions and searched for the sign of conflict in language and in the body. She was trying to recognize a pattern / a system / meanings / triggers/ word groups / relation between language and the body. She searched for combinations and semiotic elements in the language, movement, gesture, mimics and in how they relate, and observed how to extract a mechanism, a sort of a key, with which she

would later be able to explain the latent, ingrained, subconscious, emotional or simply cultural piths and cul-de-sacs of the Israeli–Jewish and Israeli–Arab conflict.

In chapter 2, she gives a presentation of the theoretical groundwork, which sets the framework again for the reader to see what the analytical thought is based on. She further on includes the review of work on non-verbal communication, including a short historical perspective and emphasis on current studies of non-verbal expression in human interactions. Additionally, there is a section devoted to pointing gestures and their role in language development and in communication; gestures prove to play a big role in the author's research.

She exposes the challenging nature of the non-verbal sphere of communication, cognition, problems with formalization of non-verbal content, analysis, and information in general. The body is one of the major conveyors of non–verbal information in a society, which validates the body for functions separate from those pertaining to the "mind". Some modern perspectives are interested in the body as the site of meaning, challenging and moving beyond the Cartesian dichotomy between body and mind. The author makes a reference to the roots of Cartesian approach: "The Cartesian approach to the body can be likened to the devalued position often ascribed to the female. In "The Birth of Tragedy", Friedrich Nietzsche (2000) refers to the constant struggle between the mythological Greek gods, Apollo and Dionysus; while the former stands for light and truth, the latter stands for the powers of wine and intuition. In Western tradition, the female is invariably associated with the less valued Dionysus. Likewise, in the Cartesian approach, the body is considered of less value than the mind. Even Chomsky with his concept of the "ideal speaker", unaffected by grammatically irrelevant conditions, such as distractions and memory limitations – reflects the reasoning of the Cartesian division. According to it; the flesh, which is bounded by space and time, is considered less ideal than the unlimited nature of thought and mind. However, an increasing number of studies challenge Cartesian divisions and suggest that the body is in a process of becoming accepted as a mirror of the soul; as well as that of society, simultaneously reflecting hidden systems of power, systems of dominance and of levels of consciousness (to name but a few: Berman, 1986; Bordo, 1986, 1993; Butler, 1997; Chodorow, 1991; Foucault, 1972; Grosz, 1994; Yanay & Rapoport, 1997).

We are also given the background on the authors that conceptualized and researched the "mismatch" form, and stresses that with the mismatch we are dealing with pieces of information that need not conflict and they rarely do, but they convey different information, However as it is established later, they do appear more at the occasions of intensified conflict.

Continuing, she introduces us into the sign-oriented semiotic theory and word - systems semiotic approach. She found three-word systems in the conflict discussion group; let us introduce the Aphek & Tobin's definition, that she uses to determine them (2010): "The word systems semiotic approach is a tool of text analysis according to which the text can be comprised of written or spoken discourses. Word systems may be viewed as an extension of Martin Buber's (1964) concept of "leading words" (Leiwörter), a device that connects different texts or parts of the same texts, creating a kind of "compactness" in the text."

Research into the language of conflict seems to be surprisingly scarce. In a general wider field of economics, language is considered and takes the central role in analysis and theory conceptualization in the fields: Rhetoric of Economics" (consolidated by D. McCloskey) and in Cognitive Economics (R. McCain,), Behavioural Economics (D. Kahneman, A. Tversky, V. Smith) and some aspects of negotiation (H. Raiffa).

In chapter 3, Waisman presents the major methodological attitudes needed to successfully facilitate any conflict-related resolution processes: it is to allow for difficult feelings and to learn how to deal with them, rather than to aspire for a calm atmosphere. As her studies began, she preliminarily analyzed the data without a research question to see what be significant) and so discovered the three-word systems that she presents in the chapters 4.5., and 6. discoveries she could make. She also analyzed the non - random distribution of verbal and non – verbal signs surrounding mismatches (recurring signs distributed across large parts of texts can be significant) and so discovered the three-word systems that she presents in the chapters 4, 5, and 6.

The author is aware of and also presents the fact that the dialogue in the discussion group is carried out in Hebrew, as the Israeli participant do not have sufficient knowledge of Arab language. "This poses a problem of unequal power between the groups, as the encounters reconstruct the outside reality of neglecting the Arab culture and language as in many areas of life in Israel."

In chapter 4 she presents the beten (Hebrew for belly) word system and gives extensive explanations and interpretations of the content of the dialogue. Waisman writes that it seems likely that the language of the beten is equated here with the painful story, whereas the political disputes are the other language She extracts the most interesting dialogues and core situations and leaves out the less eventful ones. This is in an lively way efficient for the reader, and her interpretations serve as a literary narrations (her roots in theatre probably determine the

pronounced and in-depth description and understanding of the roles and relative social position of the discussants). It is quite interesting to read that she goes really into detail of the dialogue and all the verbal and non - verbal modalities that pertain it. With Eshkol–Wachman movement notation she created the mismatch form, however this particular creation process is not described in detail, in the book, which would be very useful for the practitioners in the field.

In chapter 5, she presents the medina (state) – adama (land) word systems; medina is non - verbally connected with the chest, the body part that metaphorically represents nationalistic feelings; adama represents the Arabs' solution to the conflict. The adama is the Arabs way to deal with the frequently proposed "instant" Jewish solution of providing them with a medina. On the other hand, the author cites Bourdieu that; "The state is consequently the foundation of a logical conformism, and a moral conformism.

Likewise, in chapter 6, she discusses the Shoa – Nakba (the Holocaust and catastrophe – of 1948) word system: "The emotionally charged issue of the Shoa – Nakhba evokes different feelings for each group and creates different communication strategies. The author extracts from her work that (!): The data reveals that this delicate and explosive equivalence lies at the heart of the conflict. Waisman writes:In a way, the essence and the emotions raised by the Nakhba are intertwined in the signs of the Shoa, so that for the Arab participants, the Shoa word system serves as a vehicle to transmit the Nakhba. Consequently, it became clear that she was in fact dealing with a single Shoa – Nakhba word system.

Through the chapters 4, 5 and 6 she is very precise about explaining the background of each speaker, the intonation, and focuses in detail on interactions and the pertaining emotion. There is a marked emphasis on the emotions given throughout the book that is inherently analytical and deals with the multidimensional Arab - Jewish conflict, which entangles two main groups in economic, territorial, political and cultural dimensions. However, the nature of this conflict is also highly emotional and still brewing in the social fabric and affects individuals and their issues around identities. The notion of the neutrality of language is linked to the view of human reason as "conscious, literal, logical, universal, unemotional, disembodied, and serv[ing] self-interest, writes Gross." Yet, the strict binary separation between, and juxtaposition of, rationality and emotion has been challenged by insights from modern cognitive and brain research. Rather than seeing emotions as undermining reason, we have come to regard them as playing an essential role in how we, in fact, reason. Language

gets its power because it works on both levels; and because "it is defined relative to frames, prototypes, metaphors, narratives, images, and emotions."

As mentioned above, McCloskey, who is the beginner and the main generator of in-depth probing and awareness of the role of language in economics, claims that economics uses rhetorical means and linguistic tools to convey its research results and to persuade, discuss, interpret, present. Moreover, she spoke about the literary soul of economics: economic language is full of metaphors like "human capital, the law of demand, random walks, the elasticity of demand for gasoline, utility curve". In her book McCloskey referred to the philosopher Black who claimed that "a memorable metaphor has the power to bring two separate domains into cognitive and emotional relation by using language directly appropriate for one as a lens for seeing the other" (1962, p. 236).

Waisman's work is one of the first attempts to incorporate non – verbal information in the analysis of the language of conflict. There have been authors either focusing on the non - verbal communication or focusing on the language of conflict like Cohen, who wrote "Language and Conflict Resoultion": The Limits of English in 2001. He presented his study that was grounded in the view that communal life is possible only because members of a community possess a set of shared meanings, enabling them to make coherent sense of the world. He was aware of the non - verbal aspect of forming meaning, but he was only scratching the surface of the vast pool of research possibilities.

It is pivotal to look at how these ideas could be the wave on which economics can transition out of its deeply ingrained Cartesian thought. In "The Handbook of Economics and Ethics" they explain: Julie (1993) has argued persuasively that "the emphasis on choice in economics is related to the Cartesian dichotomy between embodiment and rationality. In this view, the abstract, detached, masculine view represents scientific thinking, and is radically removed from the concrete, connected, feminine reality of material life. Nelson argues that making the detached cogito the object of study in economics means that nature, the body, children and the need for human connectedness remain cut off from masculine concern. Moreover, the emphasis on scarcity suggests that nature is hostile and stingy. This implies a conception of man dominating a passive, but nevertheless threatening, nature." In recent years there has also been a big breakthrough in the knowledge about the "mirror neurons", which are revolutionizing our neuroscience, behavioural sciences, sports fields, the arts and its social role and overcoming the separation of the body and mind in a dualistic fashion. Pannese (2010) proposes that "mirror neurons' cross-modal responsiveness, whereby seeing an action being

performed by somebody else triggers similar neural response to that of performing that action oneself, can be interpreted as an instantiation of inter - substance causality.

Such findings essentially alter the understanding of consumer choice, business strategy formation, motivational tools development, interaction understanding, etc. and potentially shed new light on theoretical developments in economics. Waisman claims that "social systems are represented both verbally and non – verbally, and these are consequently the ways in which symbolic power is executed." Analytics in the field of economics (studying what could be considered types of social systems) have yet to fully include the non – verbal sphere: the gestures study, semiotics, eye gaze, facial expressions, proxemics, body postures, kinesis, notation, space occupation, sound, work place happiness, and has yet to redefine some of the meanings of its theoretical concepts.

Literature

Cohen, R. Language and Conflict Resolution: The Limits of English. International Studies Review, Vol. 3, No. 1 (Spring, 2001), pp. 25-51. Blackwell Publishing.

Gross O. & Aolain F.N. "The Rhetoric of War: Words, Conflict, and Categorization Post-9/11," Cornell Journal of Law and Public Policy: Vol. 24: Iss. 2, Article 1. (2014)

McCloskey, D. The Rhetoric of Economics. Journal of Economic Literature, Vol. 21, No. 2 (Jun., 1983), pp. 481-517. American Economic Association.

Nelson J.A. Poisoning the Well, or How Economic Theory Damages Moral Imagination (2016). In The Oxford Handbook of Professional Economic Ethics. Editors G. DeMartino & D. McCloskey.

Pannese A. Bodies Divide, Minds Unite: Mirror Neurons and Leibniz's Philosophy of Mind. Biological Theory. September 2010, Volume 5, Issue 3, pp 264–270

Waisman, S.O. Body, Language, and Meaning in Conflict Situations. A semiotic analysis of gesture – word mismatches in Israeli –Jewish and Arab discourse (2010). John Benjamins Publishing Company. Amsterdam, the Netherlands.