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On Some “New” Interpretations of Ricardo’s Principle of Comparative Advantages

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Abstract

Different theories of international trade have originated from Chapter VII “On Foreign Trade” of Ricardo’s *Principles* and particularly from the interpretation of his numerical example of the gains from trade. In this paper a relatively new interpretation of such example and the resulting implications will be assessed in the light of Sraffa’s writings (1930, 1951) and of the so-called *Neo-Ricardian* approach applied to the theory of foreign trade. In particular, it will be reconsidered: i) the analogy between the choice of international specialization and the choice of techniques; ii) the conditions under which absolute cost advantages may prevail over comparative advantages and affect the pattern of international trade and the delocalization of the national industries.

Keywords: David Ricardo; Comparative advantage; Gains from trade

JEL classification: B12; B17; F10

1. Introduction¹

According to a relatively “new” interpretation, Ricardo’s example of the gains from trade is not confined to the case of constant returns. This acknowledgement has led to a generalization of the text-book Ricardian model of international trade. However, more far-reaching theoretical developments seem to originate from the recognition of the fact that the scope of Ricardo’s principle is, on the one hand, wider than what its neoclassical application suggests, because it does not require the assumption of full employment equilibrium. On the other hand, it is narrower than what is often maintained, because the explanatory role of the comparative advantages is superseded by that of absolute advantages

¹ This paper was presented at a Conference in honour of Richard Arena, held at Campus St. Jean d’Angely, Nice 19–20 May 2022. The author wishes to thank A. Birolo, S. Fratini, H.D. Kurz and I. Steedman for their useful comments and suggestions. The final draft has benefited from the comment by an anonymous referee. The usual disclaimer applies for any remaining errors, imperfections and omissions.

in the presence of international mobility of capital. The appropriateness of the attribute “new” depends on the perspective. In Ricardo, the wider scope of his principle is implicit, whereas its restrictive qualification is mentioned only in passing. This paper argues that early and recent *Neo-Ricardian* contributions to the theory of international trade have extensively addressed such interpretations, which still appear newer from a neoclassical perspective.²

Different theories of international trade have originated from Chapter VII “On Foreign Trade” of Ricardo’s *Principles* and particularly from the interpretation of his numerical example of the gains from trade. The scientific priority of the new interpretation of his four *magical* (according to Samuelson’s expression) numbers, according to which the example is consistent also with variable returns in the production processes, seems not yet clearly acknowledged. I just mention the hints found in Sraffa (1930, 1951) and the contributions of Yukizawa (1974, reported by Tabuchi 2017), Parrinello (1988), Ruffin (2002). Furthermore, such interpretative revival includes recent contributors who claim to offer new Ricardian models of foreign trade.³ The interpretation of Ricardo’s example will be related to the *Neo-Ricardian* approach applied to the theory of foreign trade by Parrinello (1970, 1973, 1988), Metcalfe and Steedman (1973, 1979), Mainwaring (1979). In particular, this paper reconsiders: i) the analogy between the choice of international specialization and the choice of techniques; ii) the conditions under which the absolute costs prevail over the comparative advantages in affecting the pattern of international trade. Such possibility has been admitted in passing by Ricardo and developed in different theoretical contexts by Shaik (1980), Brewer (1985), Parrinello (2006, 2010, 2015), Montani (2008), Bellino and Fratini (2022).

2. Interpretation of Ricardo’s example

Historians and theorists of comparative costs and international trade have been repeatedly engaged in the interpretation of the example which Ricardo presents in order to prove the reciprocal gains from trade for two trading countries, even in the case of absolute advantages (or disadvantages) on the side of one of them. Most of the Chapter “On Foreign Trade” of the *Principles* deals with the case of a single country which can trade with foreign countries. In the present notes the argument will be also confined to the case of a single economy which can exchange with the rest of the world at given terms of trade: this is the typical case of a small open economy. It is useful to start from the interpretation

² The following passage is an example of the relative “novelty” of the interpretations recalled in this paper: “The history of economic thought contains many examples of insights gained by earlier economists that were subsequently lost. Sraffa’s insight of 1930 (unrelated to his subsequent larger reinterpretation of Ricardos’ work) was ignored for over 70 years until Roy Ruffin noticed it and brought it to public attention. Perhaps the new view of Ricardo’s four numbers as the amounts of labor embodied in trade flows should be referred to as the Sraffa-Ruffin interpretation” (Maneschi, 2004, footnote, p. 441).

³ Cfr. Shiozawa, Y., Oka, T. and Tabuchi, T. (eds) (2017); Senga S., Fujimoto, M., Tabuchi, T. (eds) (2017).

of Ricardo's example found in Sraffa (1930) and from his table, before focusing on one of the two countries only.

**Table 1: Number of men whose labour is required for one year
in order to produce a given quantity of cloth and wine**

	Cloth	Wine
In Portugal	90	80
In England	100	120

The example describes the conditions under which, given *any* (not specified numerically) quantities of two commodities, the two countries can gain from the reciprocal exchange of those quantities, where the gains are defined by amounts of saved labour.

Let us quote Sraffa (1930, p. 541):

It would therefore be advantageous for England to export cloth in exchange for wine imported from Portugal; and for Portugal to export wine in exchange for cloth from England. Under these circumstances "England would give the produce of the labour of 100 men, for the produce of the labour of 80" [...]

England gives the cloth produced by 100 Englishmen in exchange for the wine produced by 80 Portuguese; and since this quantity could only have been produced by 120 Englishmen, she gains the labour of 20 Englishmen. Portugal gives the wine produced by 80 Portuguese for the cloth produced by 100 Englishmen; the production of this cloth would have required the labour of 90 Portuguese, and therefore Portugal gains the labour of 10 Portuguese.

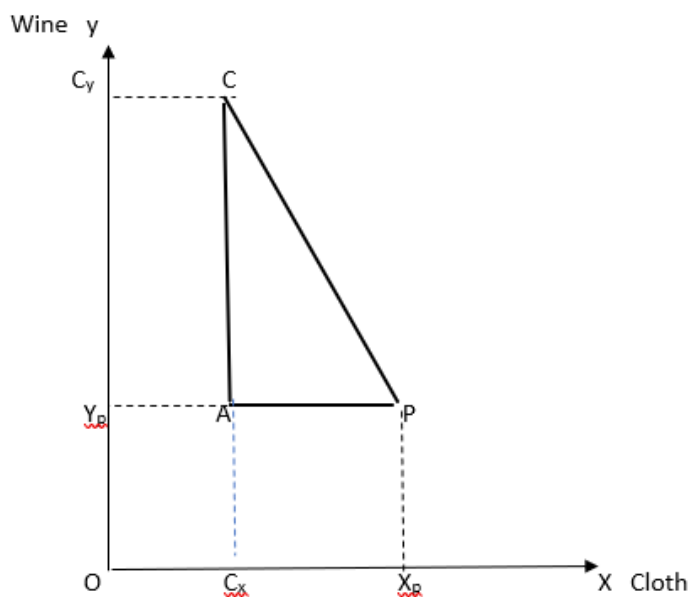
The example as such is neither a normative nor a positive theory of the existence of foreign trade. It shows "only" the conditions under which a self-contained exchange of two commodities is advantageous for both countries, subject to the definition of labour-saving advantage. It states a general and fundamental principle, without the need of specifying under which conditions the potential advantageous trade, described in Table 1, can be brought about by a central planner or as an unintended result of the competition among profit-seeking individuals. In fact, it does not make any assumption about the available techniques, the conditions imposed by the limited amounts of labour and natural resources, the demand for commodities and the existence of other commodities beside wine and cloth. Historians and trade theorists seem to offer new interpretations of the example, by taking a step forward and specifying further assumptions which embed that general principle into a model of international trade, in particular the textbook Ricardian model of foreign trade with fixed labour coefficients. This strategy can be fruitful, but it does not provide different interpretations of Ricardo's example. We may claim, dismissing the small niche left to the explanations of foreign trade inspired by Adam Smith's idea of *vent for surplus*, that all models of international trade are Ricardian, because they are consistent with his principle of comparative advantages, still some of them are more Ricardian than others, since they stand as a development of the classical approach at the level of the theory of value and distribution, instead of taking a marginalist turn. We shall compare two models of international trade, which are founded on the same interpretation

of Ricardo's example, not confined to the case of constant returns, but they exhibit quite different degrees of Ricardianism in the aforementioned sense.

3. From the example to the trade triangle

Let us focus on England in Ricardo's example. Figure 1 represents the quantities of wine Y and cloth X that can be associated with the amounts of labour, 120 and 100.

Figure 1: The trade triangle



In figure 1, ACP is the so-called trade triangle, where P is the production point and C is the consumption point under free trade, whereas C is the consumption-and-production point under autarky. C in four dimensions is associated with four coordinates: the consumptions of cloth and wine C_x , C_y and the respective labour requirements L_{cx} , L_{cy} . Similarly point P corresponds to the quantities of cloth and wine produced in England under free trade, X_p , Y_p , by means of labours L_{px} , L_{py} . AP represents exports of cloth $X_p - C_x$, and AC imports of wine $C_y - Y_p$. The total labour requirement is equal to $L_{cx} + L_{cy}$ without trade and $L_{px} + L_{py}$ with trade. Ricardo's example is parsimonious of numerical data because it sets only $L_{px} - L_{cx} = 100$, $L_{cy} - L_{py} = 120$. By definition, the gains from trade are the difference between the total labour requirements with and without trade, that is the difference between the labour amounts attributed to the traded quantities: $100 - 120 = -20$ units of labour. A similar interpretation of Ricardo's numbers can be extended to Portugal, the second country described in the example.

The "new" interpretation of Ricardo's example earns two achievements: it admits variable returns to labour with incomplete specialization and, more importantly, it is consistent with unemployment. It has led to generalize the textbook Ricardian model of international trade, based on the assumptions of a given supply of labour and full

employment equilibrium.⁴ Under such neoclassical assumptions, P is a point on the production possibility frontier of the economy and C is the consumption point above the frontier. Outside a full employment equilibrium, P is a feasible production point which satisfies a given consumption C by means of trade, relatively to a *not binding* production frontier. It is not binding because either the frontier adjusts to the demand for labour or the required production point is placed below a given frontier. The former state of the economy can be interpreted as the result of an endogenous supply of labour, according to the classical theory of population; the latter can be instead derived from a theory of unemployment based on the principle of effective demand. From here onwards we shall focus on a model of a demand-led economy, which does not impose a full employment equilibrium and looks closer to Ricardo's theory of value and distribution. In particular, the model relies on the assumption of given quantities in demand and adopts the definition of labour saving, instead of consumption augmenting, gains from trade.

4. A narrative behind the simple *Neo-Ricardian* model with decreasing returns

Decreasing returns in the wine industry can be attributed to the limited endowment of some natural factor like wine-growing lands. Let us assume a *continuum* of heterogeneous plots of land characterized by decreasing fertility measured by the productivity of labour, so that it is possible to construct a *descriptive* relation between the output of wine and the most efficient application of increasing amounts of labour on less and less fertile land. Such a relation is increasing at a decreasing rate and the corresponding average and marginal costs of wine are increasing with the implemented labour. Let us take constant returns in the cloth industry and fixed terms of trade. We may imagine a sequence of four expansion stages of the demand for wine and cloth, represented by a moving point C of the trade triangle in North-East direction.

I. Initially the consumption is satisfied by a complete specialization in the wine industry, because the domestic production of cloth is unprofitable at the international relative price. The best lands are superabundant and the rents are equal to zero.

II. As the demand keeps expanding, less and less fertile plots of land are cultivated. The inframarginal pieces of land receive positive rents, whereas the rent is zero at the margin of cultivation. The cost of wine on the marginal land is higher than its average cost. The gap between the domestic relative cost and the international relative price becomes narrower, but the complete specialization in wine remains.

III. The stage is reached where the autarky relative cost is equal to the international terms of trade. The demand for cloth and wine (point C) can be equally satisfied by any mix of domestic and foreign production represented by a trade triangle, where the slope of the hypotenuse CP denotes the given exchange ratio. In particular, the trade triangle can be reduced to point C, i.e. no trade.

⁴ Cfr. Maneschi (2004).

IV. The marginal cost of wine, relative to that of cloth, in autarky becomes higher than its given international relative price. The exports of wine are stopped, but its production continues to partially meet the domestic consumption as it remains profitable *up to* the marginal land cultivation. Instead, the production of cloth becomes profitable for domestic use and exports against imports of wine. This is a stage of incomplete specialization, characterized by an inversion of the exchanged commodities, in comparison to the stages I and II. The next section will formalize a model of the economy at this stage IV.

5. The equations of the model

Let us denote

- the *nominal* values: w the wage rate, P_x, P_y the prices of commodities X, Y;
- the quantities: produced X, Y ; consumed C_x, C_y and exchanged Z_x, Z_y
- the terms of trade: π .

By hypothesis, X (cloth) is produced at a constant labour input per unit of output, defined by the labour coefficient l_x . Instead, the production of Y (wine) undergoes diminishing returns, described by a differentiable and convex labour function $L(Y)$. Let us denote $l_y \equiv L(Y)/Y$, an increasing average cost function; $l'_y \equiv dL(Y)/dY$ an increasing marginal cost function with $l'_y > l_y$, where labour is the standard of value, as set by the equation (7) below. Let the following equations be satisfied under free competition⁵

$$wl_x = P_x \quad (1)$$

$$wl'_y = P_y \quad (2)$$

$$X + Z_x = C_x \quad (3)$$

$$Y + Z_y = C_y \quad (4)$$

$$P_x Z_x + P_y Z_y = 0 \quad (5)$$

$$\frac{P_x}{P_y} = \pi \quad (6)$$

combined with the equation which sets labour as numéraire

$$w = 1 \quad (7)$$

6. Interpretation of the model

The model, beside the given production conditions defined by l_x and l_y , is characterized by two assumptions: the terms of trade π are fixed from the outside and the consumptions levels C_x, C_y are given. Hence, the equations (1) – (7) form a determinate system.

⁵ For simplicity the model is formalized by strict equations, instead of weak inequalities. This dismisses the possibility of corner solutions, where a commodity is not produced at all (complete specialization).

The variables Z_x, Z_y , can take positive or negative values: positive means imports, negative exports. Notice that the income-expenditure equation

$$w(l_x X + l'_y Y) = P_x C_x + P_y C_y \quad (8)$$

is implicit in equations (1) - (7), but it is not a Walras's Law which includes the value of the excess demand for labour, relative to its given supply. Furthermore, the left side of (8) can be written $w[l_x X + l_y Y + (l'_y - l_y) Y]$ to denote the distribution of total income between wages $w(l_x X + l_y Y)$ and *rents* $w(l'_y - l_y) Y$ paid on a *continuum* of infra-marginal plots of land, which are placed in a decreasing order of fertility.

The model (1) – (7) can be compared with the autarky model, obtained from the former by setting $Z_x = 0, Z_y = 0$ and dropping the equations (5), (6). The gains from trade are measured by the difference between the corresponding total labour requirements $L = l_x X + l_y Y$. The condition for the existence of gains from trade is the inequality $\left(\frac{l_x}{l'_y}\right)_{Y=C_y} \neq \pi$, that is a deviation of the autarky cost ratio from the given terms of trade.

The pattern of trade is determined by the sign of such inequality. The economy will export X and import Y if $\left(\frac{l_x}{l'_y}\right)_{Y=C_y} < \pi$; in this case $Z_x < 0$ and $Z_y > 0$ in the solution to system (1)

- (7). The greater or less sign in the inequality $\left(\frac{l_x}{l'_y}\right)_{Y=C_y} \neq \pi$ is not predetermined like in the case in which also the production of wine Y should be subjected to constant returns, because it depends on the scale of consumption. Such inequality turns out to be the equality $\left(\frac{l_x}{l'_y}\right) = \pi$ through the adjustment of l'_y combined with the incomplete specialization of the economy.⁶

A *ceteris paribus* assumption applies to the comparison between autarky and foreign trade, because a common scale is set by a given consumption bundle. The production pattern of the open economy depends on the value of total consumption $P_x C_x + P_y C_y$, relative to the chosen numéraire, but it does not depend on the ratio C_x/C_y . Observe that determining the composition of total consumption in a state of unemployment requires that the laborers be assumed homogeneous in terms of tastes, beside the assumption of uniform productive efficiency. In fact, the selection of equally paid and efficient workers from the total labour force is indifferent from the point of view of the producers, even if they have different propensities to consume.

⁶ The assumption of diminishing returns is not necessary for the adjustment from no trade to free trade. In fact, such change can be explained even under ubiquitous constant returns, formalized by linear processes and allowing for a complete specialization. In this case the horizontal leg AP of the triangle APC in Figure 1 would belong to the X axis.

7. The choice of specialization and the choice of techniques: analogy and differences

Trade theorists have stressed the analogy between the choice of international specialization and the choice of techniques. However, the use of the term “choice” is not fully appropriate in this context and the similarity is limited. In fact, the notion of choice is commonly referred to an agent, whereas a single individual cannot “choose” a system of production for the economy as a whole, because the latter emerges only at the systemic level, as an unintended result of free competition. Furthermore, an exchange admits that inputs and outputs are simultaneous and reversible; by contrast, such properties are usually excluded in a theory of *time-phased* production processes.

Granted the previous qualification, let's analyse the analogy in detail. The equation $P_x Z_x + P_y Z_y = 0$ in the model is a condition of balanced trade, but it can be also interpreted as a zero-extra profit condition attributed to a special technique or method of production, which involves the opposite signs of the amounts Z_x, Z_y : minus and plus denote input and output respectively. For simplicity, let us assume constant returns also in the Y (wine) industry and the existence of two methods of production available in such industry: a manual method defined by the fixed labour coefficient l_y and a completely automatized method, which requires only X (cloth) as input. Let the fixed coefficient x_y denote the amount of input X per unit of output Y and call the pairs (l_x, l_y) and (l_x, x_y) the *manual* and the *automatic* economy, respectively. Let us consider the following price conditions imposed by free competition:

$$wl_x = P_x$$

$$wl_y \geq P_y$$

$$P_x x_y \geq P_y$$

Suppose that $l_y > l_x x_y$. The greater profitability of the automatic economy sifts through two tests. 1st: the costs are greater than revenues (losses) for a producer of Y who chooses the manual method and sells its product at the price prevailing in the automatic economy. 2nd: the costs are less than revenues (profits) for a producer who chooses the *integrated* manual-automatic method to produce Y and sells at the price prevailing in the manual economy. The automatic economy is more profitable than the manual one at the individual level: a producer has an incentive to choose the automatic method within the price configuration of the manual economy and, vice-versa, to remain in the automatic economy if this is the initial state.⁷ This argument does not explain the dynamics from the manual to the automatic economy, as the result of cumulative individual choices and price

⁷ By a similar test of profitability, if $l_y < l_x x_y$, the manual economy would be the best choice.

changes, but only the fact that an automatic economy is more profitable at the individual level in terms of both alternative valorizations.⁸

Let us now extend the analysis by two additional assumptions: i) also the cloth industry, beside the manual method, can choose an automatic method described by a fixed coefficient y_x , which denotes the amount of Y required per unit of output X; ii) the coefficients y_x , x_y satisfy the inverse relationship $y_x = 1/x_y$. As a consequence, if the automatic method in the wine industry does not pass the test because $l_y < l_x x_y$, then the automatic method in the cloth industry *must* succeed, because $l_x > l_y y_x$ and vice-versa. Therefore, one of the two automatic economies should be selected, since the pure manual economy is always dominated by an automatic one (except in the special case $l_y = l_x x_y$). The analogy is achieved, if the coefficient x_y is re-interpreted as the terms of trade $x_y \equiv \pi$ in the open economy (equation 6 of the model) and y_x is its inverse value. The choice of an automatic, instead of the manual economy, corresponds to the choice of free trade instead of autarky. Notice that the equation $\frac{P_x}{P_y} = \frac{l_x}{l_y}$, which reflects the labour theory of value in autarky, is replaced under free trade by the equation $\frac{P_x}{P_y} = \frac{l_x}{\lambda_y}$, where $\lambda_y \equiv l_x x_y$ is a *consolidated* labour coefficient. A spurious labour theory of value can be said to hold in the open economy, because now λ_y is not a purely technical - or socially necessary- labour coefficient anymore. “Spurious” in this context means that the determination of value has been moved from the sphere of production to that of production-and-exchange of commodities.

We can make a further step and extend the analogy to the initial model, characterized by decreasing returns in the wine industry and incomplete specialization. In this case we should take the marginal labour coefficient l'_y instead of the average coefficient l_y , in order to assess the most profitable system of production, by comparing profits and losses in the wine industry at the margin.

The previous analogy explains the choice of international specialization as a special cost minimizing choice of techniques. It is a roundabout explanation, in comparison with the impressive simplicity of Ricardo’s numerical example, yet it is an explanation at the individual level, instead of being confined to the gains for the country as a whole. At the same time, it is more abstract than the argument by which Ricardo explains how specialization, according to the principle of comparative *real* costs, emerges in a *monetary* economy. As mentioned in Faccarello (2015) and extensively analyzed in Kurz (2017), Ricardo deals in such a context with arbitrages performed in money values by profit seeking *merchants*. Instead, the model (1) – (7) abstracts from the existence of money exchanges⁹

⁸ The application of the double test of profitability rules out the possibility of a *loop* between the manual and the automatic economy, such that each economy is more profitable if it is evaluated at the prices of the other. This result is almost trivial in the simple case envisaged in the text. It becomes more complex in the case of n commodities, related by input-output interdependence, because it requires the solution and comparison of two systems of simultaneous price equations in order to assess the relative profitability of the economies which differ by one method of production.

⁹ The nominal prices of the model (1) – (7) are *pure numbers per unit of commodity or labour* and are not equal by definition to money values.

and the roles of trader and producer in the analogy discussed above are merged within the same agent.

8. Capital and the scope of the principle of comparative advantages

Overcoming the assumption of labour and land as the only inputs in the production process, by the introduction of capital, which includes means of production and wage goods and receives a positive profit rate, is an important progress in the theory of value and distribution. However, such an extension has a special relevance for the theory of international trade. Let us summarize this feature in the light of some early *Neo-Ricardian* contributions and their recent development, assuming for simplicity that all commodities are produced under constant returns and the same commodities are used as circulating capital. Some well-known properties of a long period equilibrium with a uniform rate of profit can be extended, *mutatis mutandis*, from the case of a closed economy to that of an open economy which faces a given international relative price (terms of trade).¹⁰ One of the two distributive variables — the rate of profit or a real wage rate — can be fixed within its admissible range. Such a closure of the model is feasible because the theory rules out the movements of monetary/financial capital between the economy and the foreign countries, therefore the level of the external interest rate does not affect the domestic rate of profit. Free competition will lead to the choice of a pattern of specialization combined with the highest real wage, given the rate of profit; or with the highest rate of profit if the real wage rate is given. Notice that the comparison between the domestic cost ratio and the terms of trade cannot be made in advance, only on the basis of the existing production conditions, because the relative costs depend also on the value assigned to the exogenous distributive variable.

No fundamentally new property has emerged so far for the theory of capital applied to an open economy, compared to the results already obtained for an economy without foreign trade.¹¹ However, a specific property of the theory of international trade, based on the principle of comparative advantages, should be stressed, if it is applied to a production economy with capital. Such a theory admits the free trade of physical capital goods (say, machines), but it excludes movements of monetary and financial capital (say, convertible or inconvertible money, bonds, stocks, direct investments etc.) between the trading economies. Notice that the mobility of capital does not necessarily presuppose a monetary economy, because credits and debits transactions can in principle be carried out also among barter economies, by means of financial assets denominated in a single or composite physical commodity. Removing the exclusion of international capital movements has important consequences for the theory of foreign trade based on the principle of

¹⁰ Cfr. Parrinello (1970, 1973, 1988), Metcalfe and Steedman (1973, 1979), Mainwaring (1979).

¹¹ The possibility of a re-switching of the same pattern of specialization, as the interest rate is assumed to change exogenously, can be proved by the same logic behind the re-switching of techniques (Parrinello 1970).

comparative advantages, as mentioned in passing by Ricardo himself¹² and analyzed from a *Neo-Ricardian* perspective by Brewer (1985), Parrinello (2006, 2010, 2015), Bellino and Fratini (2022).¹³ We just notice here that the small open economy would have to face not only given terms of trade of commodities, but also an interest rate fixed from the outside, to which the domestic uniform rate of profit should level out. Hence the model is deprived of the degree of freedom which allows either the domestic rate of profit or the real wage rate to be fixed independently. It is possible that the rate of profit, which is consistent with the international competitiveness of the economy, be incompatible with a socially admissible wage rate at home. The interpretation of such possibility does not consist in asserting that the model of the open economy has become overdetermined, but in conceding that a possible equilibrium configuration is one in which the levels of all capitalistic activities of the economy — in particular the production activities — are equal to zero. This logical possibility, attributed to a model of an open economy, may seem to be devoid of interest or even meaningless, but it must be considered because it represents a tendential state to which an economy engaged in global markets is exposed: that is a state of general delocalization of its industries. We wonder whether the labour force in a model of such economy should be assumed mobile or immobile in respect to the foreign countries. We may respond that labour follows capital, if it can do so.¹⁴ In the case of an undersold economy, the individuals may emigrate or survive by public subsidies or the remittances of the emigrants.

We have reached a conclusion: the applicability of the theory of comparative advantages is more limited than what is suggested by most textbooks and policy debates. In fact, in the presence of international capital movements, the absolute costs may prevail on the comparative costs. “Absolute advantages” mean “*real costs*” advantage.¹⁵ In Table 1 of Ricardo’s example the real cost of a commodity is measured by men per unit of time (a year). It is not so obvious whether the workers in England and those in Portugal should be assumed homogeneous in terms of efficiency. This assumption is not necessary for the validation of the principle of comparative advantages, where only ratios between domestic quantities of labour are compared. Instead, it must be taken into account if we want to assess the *absolute* advantages of the two countries in the case of free migration of capital and labour.

¹² “If the profits of capital employed in Yorkshire, should exceed those of capital employed in London, capital would speedily move from London to Yorkshire, and an equality of profits would be effected, but if in consequence of the diminished rate of production in the land of England, from the increase of capital and population, wages should rise, and profits fall, it would not follow that capital and population would necessarily move from England to Holland, or Spain, or Russia, where profits might be higher” (Ricardo [1817] 1951, p. 134).

¹³ Shaik (1980) and Montani (2008, appendix III), in different theoretical contexts, have also dealt with the case of the international specialization which does not comply with the principle of comparative advantages in the presence of capital movements.

¹⁴ Cfr. Parrinello (1988). The same claim has been resumed by Gehrke (2015).

¹⁵ A certain confusion derives from the fact that the term “absolute advantage” is often used to denote *monetary cost* advantage.

Ricardo has formulated the pure theory of international trade from a national point of view, instead of a regional or supranational perspective. Marshall's authority has also passed down the persuasion that a national economy cannot be "undersold" because of its too high costs of production.¹⁶ This claim dismisses the fact that an economy can be called "national" in terms of institutions even if capital moves across its borders and, in this case, it can be undersold. Ricardo has emphasized only the higher *gains* that would obtain in the absence of restrictions on the movements of capital and labour among national economies. He makes the following remarks on the basis of the absolute advantage attributed to Portugal in his example: "It would be undoubtedly advantageous to the capitalists of England, and to the consumers in both countries, that under such circumstances, the wine and the cloth should both be made in Portugal, and therefore that the capital and labour of England employed in making cloth, should be removed to Portugal for that purpose" (Ricardo [1817] 1951, p. 136).

9. The temptation to derive policy recommendations from general principles. Did Ricardo succumb to such temptation?

Ricardo in his *Principles* mentions: i) the analogy between the effects of the opening to foreign trade and those derived from a technical innovation;¹⁷ ii) the damage that the labouring class might suffer from the technical progress embodied in new machinery;¹⁸ iii) the non-applicability of the principle of comparative advantages in the presence of inter-regional or international capital mobility, as implied by the passage quoted above. Instead, in Ricardo we do not find an explicit recognition of the possible damage — at least in the short run — due to the expansion of foreign trade, despite the admission of i) and ii), nor the acknowledgement of possible harmful effects due to the delocalization of the domestic industries with regard to iii). On the contrary, Ricardo points out the economic advantages that derive from the liberalization of international capital movements,

¹⁶ We read in Marshall: "...it might be argued that short hours of work might ruin the foreign trade of the country. Such a doctrine might derive support from the language of some of our public men, even in recent times. But it is a fallacy. It contradicts a proposition which no one who had thought on the subject would dream of deliberately denying; one which is as well established and as rigorously proved as any in Euclid. This proposition is, that low wages, if common to all occupations, cannot enable one country to undersell another. A high rate of wages, or short hours of work, if common to all industries, cannot cause a country to be undersold: though, if they were confined to some industries, they might of course cause these particular industries to be undersold" (Marshall [1873] 1925, p. 112).

¹⁷ "... The rate of profits can never be increased but by a fall in wages, and that there can be no permanent fall of wages but in consequence of a fall of the necessities on which wages are expended. If, therefore, by the extension of foreign trade, or by improvements in machinery, the food and necessities of the labourer can be brought to market at a reduced price, profits will rise" (Ricardo [1817] 1951, p. 132).

¹⁸ "All I wish to prove, is, that the discovery and use of machinery may be attended with a diminution of gross produce; and whatever that is the case, it will be injurious to the labouring class, as some of their number will be thrown out of employment, and population will become redundant, compared with the funds which are to employ it" (Ricardo [1817] 1951, p. 390).

although for other reasons he was pleased that many (presumably English) capitalists were reluctant to export their capital abroad.¹⁹

With regard to the commercial policies, the choice to be evaluated is commonly not the sharp one between a closed versus an open economy, but that among different degrees of openness, through a range of public interventions, like customs, quotas, quality standards implying protectionist effects, controls of emigration, up to a wide assortment of sanctions. Great economists have been tempted to offer a normative advice to the policy makers on the basis of some general economic principle, without waiting for its elaboration at a lower level of abstraction, which is needed for the analysis of the kind of policy choices mentioned above. I would leave to the historians of economic thought²⁰ the task of assessing whether the father of the theory of comparative advantages has succumbed to such a temptation by taking a stand about the abolition of the Corn Laws of his time.

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¹⁹ “Experience, however, shews, that the fancied or real insecurity of capital, when not under the immediate control of its owner, together with the natural disinclination which every man has to quit the country of his birth and connections, and intrust himself with all his habits fixed, to a strange government and new laws, check the emigration of capital. These feelings, which I should be sorry to see weakened, induce most men of property to be satisfied with a low rate of profits in their own country, rather than seek a more advantageous employment for their wealth in foreign nations” (Ricardo [1817] 1951, pp. 136–137).

²⁰ Cfr. Hollander (1976) on Ricardo and Schumpeter.

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