ALGORITHM OF THE CURRENCY EXCHANGE IN MANOILESCU GENERALISED SCHEME

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[Abstract]
In a monetary competitive economy, the economic entities from the most countries are depending, in the international economic relations, on the existence of a foreign currency accepted in this operation and consequently the exchange rate between the currency from the specific state and this currency. The increase of the products' exchange through the currency price allows us to study, from an analytical point of view, the most popular of the cases from the international trade: the export or import of merchandise which is not conditioned by the reverse operation of another product. The study will need to take into consideration some changes regarding the requirement of a simple exchange, with two products, which are necessary for the comprehension of this trade process. Firstly, in any analysis which regards an unilateral export operation of products, import or export not reciprocal connected, the partner's internal prices aren't observed as a rule such as in a simple exchange are. Now, the analysis necessarily needs to include the currency's use matter, which is possible to be appreciated or depreciated in the "depositing" stage. Our main observation direction isn't to at least collaterally follow this phenomenon, which is considered important regarding the imperceptible change of the currency's instrument role.
[Abstract from author][1]

The gaining profit intention through the currency's evaluation – unexistent tendency in normal conditions for the producers-merchant – can be separately observed as a pure speculative purpose. The currency deposit for this purpose is different from the sustaining of its main function. With the currency's acceptance as an instrument, its deposit is yet necessary for the maintenance of reserve which would assure actually its initial function's accomplishment, that of facilitate the products' exchange. The sustainable development concept, and in a strong way the sustainability concept, sustain the necessity of this changing position observation, because of increasing pressure which currency exerts over the limited material (natural and human made) resources, we are obliged to a more detailed observation of the currency's possible effects over the products' exchange and consumption.[2]

In the initial exchanges the used currency in the price's measurement was a mean and the product-merchandise was the main object. The achievement of a monetary surplus under a profit shape at the end of the sale-buying action – which was assuring the possibility of the economic cycle's resumption at a wide stage through investments or an increased consumption – was considered a chain stimulating effect.[3]In present

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[2] Although our concern regarding this phenomenon's existence is indirect we cannot pass over the fact that in the identified relation between the comparative advantage and the durable development's objective, through the appearance of a new „permanent" resource (the currency) – because of tendency of emphasized increase of this – can occur some national, regional and international unbalances, determined by the spatial movements and so, in time, between some important volumes of products from the real resources and currency one in the absence of some real correspondent efforts.

[3] In some ancient civilizations, in the products' trade, the exchange's surplus didn't exist. The fact that in the Inca civilization the exchanges were made without an existent profit-surplus didn't hinder it to reach to a

import/export operations the "valve"-currency's use, except this function, makes necessary – for the participant economic entities and, in addition, for the states – the periodical calculation of the relative balance of the international economic exchanges and also for the financial ones. The currency becomes a "replacing merchandise", with which help, and distinctively for which the external exchanges' balance will be permanently calculate.

In the case of a merchandise's import/export the exchange ratio between the two currencies assures the partial comparative advantage's calculation through its relation with the one between the internal and international price. It occurs a relative independence of a merchandise's exchange compared to the exchange of other merchandises. The unfolding conditions of a simple exchange are characterized through the lack of the diversifying possibility of choosing the necessary merchandises for import/export because of the possible unsequency of the request and the offer of the two participants and, also of the divisibility's reduced possibility in the case of the merchandises' volumes so a changed volumes' equality would exist. The problem can become more complex in the case of more changed merchandises' existence (multiple exchanges). The currency's presence increases the exchanges' flexibility but also the risks of whom are exposed the currency's "owner-storehouse" whom includes also the previous merchandise's owners because of the permanent fluctuations of the exchange rates. In fact, it's about the transitory constant stocking – in order to buy other products necessary for the production process or only the exchanges' unfolding the exchange's influence in the currency's fluctuation musn't be neglected.

In the identification of the comparative advantage's presence in economy, the exchanging ratio' modifications between the currencies are alike with a brownian movement. *In our opinion, the permanent fluctuations' existence of the exchanging rates between the currencies has limited (burdened), especially in the last decades, the possibility of some increase relations' identification of the comparative advantage totally relationed from each parts' ones.*

The monetary trade (the stock exchange) is nowadays relative independent from the merchandise trade. A successively exchange between multiple currencies can put us in the (increment)'s winner/looser position – of the profit in the monetary economy – from this kind of operations. On the one hand, the transitivity's lack between the exchange rates of the different currencies and on the other hand, the permanent oscillation of the exchange rates around a fluctuating reference course established by the national banks, is sometimes a quiet impulse for the passing from the production activities and the ones related to trade to operations on the stock exchange.

The relative advantage's formula, established in barter exchange, can be used also for the exchange between the value stock exchange' currencies, because the relation assures the comparative advantage's measurement from any kind of merchandise and the currency, as we showed, has become in our monetary competitive economy a "dummy merchandise". The acceptance of the fluctuation courses had opened this way. Without a sufficient concern, in our opinion, especially from point of view of sustainable development, passed to the currency's acceptance as an "instrument-merchandise", with a relatively stable independence, although the currency is nothing but a convention.[4]

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relatively high flowering level. Its disappearance, on the other hand, it's possible to be connected, in a certain direction, also to the absence, in those times, of this driving element, which would be based on the existence of the competition spirit of the human being which is checkable in the exchange activities through the profit. [Georgescu-Roegen, 1971, ch. 1].

[4] The acceptance of such extension, of the currency-merchandise, because of the high repeating level of these exchanges, make it permanently influence the „other reality", goods-merchandises, to which the economists researchers' attention turn now according to the new concept of the sustainable development. The necessity's existence regarding the natural resources' consumption reducing – in the case when this

The exchange report between the national currency and the international one – simultaneously accepted by the importing/exporting economic entities – becomes in this real exchange's new conditions a trade term which will be compared with the report between the internal price and the internationally negotiated one. The new currency algorithm in fact is a derivation of the basic algorithm one barter exchange. For detailing these relations between these ratio the barter exchange's scheme will be resumed. Through an elementary transformation the initial formula [Dogaru, 2005], the relative advantage of the E entity, can be rewritten in (1).

$$A_{vrE} = \frac{p_{e2}}{P_2} : \frac{p_{e1}}{P_1}$$

(1)

The report between the Pr2 product's internal price from the E country from the initial formula, p_{e2}, and its international price becomes the exchange rate between the national currency and the international one. According to the new formula there can be determined the relative advantage of some economic exporting entity (2).

$$A_{vrE} = Rsc_1 : \frac{p_{e1}}{P_1}$$

(2)

where:

R_{sc1} - the exchange rate (national currency/convertible currency) from the exporting country;

Note: The keeping of the prices' symbols of the two products from the initial algorithm regards the necessity of the economic unitary significance's identification;

In the simple act, with an exported merchandise, in exchange for a convertible currency, now clearly appears that the export international price's diminish would reduce the relative advantage. This case is understood better by an enterprising individual because of the influences over his cash' volumes. Similarly, in analogy, the import price's increase would reduce his relative advantage and, continuously, the absolute one which is influenced by the amount volume of exchange.

The comparative advantage's existence in the export actions is certified by the exchange rate bigger than the ratio between the internal price and the international one. In this formula's basis it has been observed the connection between the comparative advantage's calculum through barter and that of the advantage in the exchange through currency case. In this case the real economy is mixed with the nominal one. The currency's use in the repeated exchanges, in the identified relative comparative advantage's basis regarding the export of some merchandise, indirectly sustains the instrument-currency's transformation in "dummy merchandise".

A similar calculation will be made also by I economic entity, P_{r1} product's importer, exported by E. Through the prices' rearrangement from the initial formula [Dogaru, 2005] it will be identified the exchange rate from the relative advantage's formula of I entity.

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phenomenon is considered and accepted as necessary as standards of national and international level – will determines, if the present tendency of increased growth of the currency's volume will remain, a repositioning of the currency's place/role. The trend t create a local currency [Korten, 1995] is the first step. In the measure in which the existence of the currency's volume won't be controllable and controlled is possible that the merchandises' volume to be spatially and temporally manipulated in dual directions (ergodic, not random in the Georgescu-Roegen's sense), without the respectfulness of the equity's principle, in the goods exchange between man and nature.

$$A_{vrE} = \frac{p_{i1}}{P_1} : \frac{p_{i2}}{P_2} \qquad (3)$$

The ratio between the internal price of the P_{r2} product from the I country and its international price is now the exchange rate between the national currency and the international one. According to the new formula it can be established the relative advantage of I importing country, A_{vrI}, in the case of Pr1 product's import. In these conditions, the relative advantage for the importing economic entity will be identified from the dual situation of the same product's export by the E entity, according to the (4) formula:

$$A_{vrI} = \frac{p_{i1}}{P_1} : Rsc_2 \qquad (4)$$

where:

R_{sc2} – the exchange rate (national currency/convertible currency) from the importing country.

The exchange rates of the two entities, *E* and *I*, are calculated as a report between their national currencies and an international one in which are measured the P_1 and P_2 international prices. The presence of a two international currencies in the merchandises' exchange of the *E* and *I* entities can occur another case which must be explained. Through the existence of two different national currencies had independent rates toward some international currency, the measurement of the total advantage, including now the two currencies, amplifies.[5] The comparative advantage would be calculated totalizing the one from the two products' exchange with the one from the currencies' exchange. This final case is necessary to be separately detailed. The existence of a comparative advantage, connected by the possible gains in the basis of the relation between the currencies, in which the international prices are expressed, and those in which the exchange rates are exposed, isn't analyzed here but it is based on the Manoilescu initial generalized scheme (stage I).

After passing from 1971 to a free fluctuation of the currencies a new measurement problem has appeared. Between the two currencies' exchange rates from the two countries, having the same international currency as a reference point, the transitivity condition isn't respected not even in a weak way. In consequence, the product between these two exchange rates is not equal, in most cases, with the correspondent exchange rate between the two national currencies, R_{sc3}.

$$R_{sc1} \neq R_{sc1} * R_{sc2} \qquad (5)$$

R_{sc3} - the exchange rate between the two national currencies of the two countries in which the exchange's economic participant entities are resident (the initial scheme).

In these new terms the comparative advantage's study of the relative comparative advantages, related according to Manoilescu theoretical generalized scheme regarding the exchange of two products, are equal with an almost total advantage, A^*_{vrt}, different from that obtained in a simple exchange.

$$A_{vrE} * A_{vrI} = A_{vrt} \neq A^*_{vrt} \qquad (6)$$

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[5] The presence of two different international currencies will multiplies the calculus, but the initial scheme of simple barter can be use as start point.

These remarks, including those connected to the idea that the relatively total comparative advantage is an economic entity's relative advantage, reduce the global analyses' possibilities. The simple indexes, calculated through these relative prices, didn't pass the transitivity test. The multiplication of these two relative advantages of the economic entities E and I, more fluctuant now because of the currency's permanent oscillations and also unequal because of the transitivity's lack between the currencies' exchange courses, would overlap the gains from trade or will generate a gap in the check of this relations. In the lack of an adjustment coefficient above suggested, the permanent check of the relatively total comparative advantage's volume wouldn't be possible anymore in relation with the two relatively partial advantages. This reference point is necessary to be keep, including from the perspective of the sustainable development' requirements achievement, to ensure a relative resources saving.

In the import case of the P_{r2} merchandise, by the E economic entity, initial formula [Dogaru, 2005] has the above form:

$$A_{vrE} = \frac{p_{e2}}{P_2} : Rsc_1 \qquad\qquad (7)$$

where:

R_{sc1} – the exchange rate (national currency/convertible currency) from the E importing country.

In this case it is followed that the ratio between the internal price of the imported product and the correspondent international one to be bigger than the Rsc1 exchange rate. This way, having as reference point the national currency, through its exchange rate on the values national/international stock exchange, is necessarily for an E entity's comparative advantage to be achieved.

In the Pr2 product's export by I entity, initial formula [Dogaru, 2005] has the following structure:

$$A_{vrI} = Rsc_2 : \frac{p_{i2}}{P_2} \qquad\qquad (8)$$

where:

R_{sc2} - the exchange rate (national currency/convertible currency) from I exporting country.

In a similar way, if the relative comparative advantage, calculated in an index form, is bigger than one, the I entity will achieve comparative advantage (as profit). In consequence, in all the exchange cases where the currency is used, the second merchandise's role from the exchange operation is taken by international price of the national currency and its price on the international market.[6]

The goods exchange, using exchange rate, breaks up in two steps the comparative advantage's comprehension from the exchange of two products: the E entity's export of the Pr 1 merchandise toward currency, the exchange rate being reference point. The

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[6] This new reference point is accepted through the comparative advantage's calculation of each exporting/importing economic entity. The idea that the oscillations of the exchange rates could bring national value (as profit) – reported to what is achieved in both countries in the international exchanges – is partially true. As it has been demonstrated by Manoilescu, but only through the products/sectors hierarchy after the production's efficiency (including the imported products), taken through a separate step of the generalized scheme [Dogaru, 2006], can be more exactly established through what kind of exchange operations the national value can be brought of one or even both economic entities/countries.

currency's use assures, as it has been shown, the separation solution in time of the two operations – the independence problem of the buying-selling of the two goods – without the value equivalent of the necessary quantities from each of the two merchandises.

The equality's condition between the value volumes of the two merchandises, necessary in a correlation in the barter exchange, which gave the possibility of the theoretical scheme's construction regarding the comparative advantage, is now suspended. A new problem appears, the exchange rates' transitivity of the two currencies, do not assure relatively total advantages' evolution in the exchange between two or even several groups of merchandises. Over three decades ago a new unit relative price had been used, the parity of the buying intensity, which has opened the road for putting aside this drawback. The existence of internal relative prices' aggregation, in the basis of the buying intensity's parity concept, supports for us the possibility to approach more and more the reports between the efforts in producing goods – measured through prices – and the exchange ratio between the national currencies.[7]

The purchasing power parity achieves, in a weak way, the transitivity test. The advantage is obvious because between the two exchange rates of two countries which have the same international currency as a reference point and, as we noticed, generally there isn't any transitivity. In the absence of the respect regarding the transitivity's requirement, necessary for calculating the relatively total advantages starting from the relative advantage of each entity, the two relative advantages will have to be adequately corrected. The relatively total advantage's formula in a two goods exchange, without using the currency, is rewritten, through the adjustment of the relatively total advantage, as a result of the two partial advantages' multiplying, A_{vrt}, with an adjustment coefficient which would correct the circular form's absence between the exchange rates of the two countries, K_s. The coefficient is the result obtained by adequately reporting the two exchange rates and assures the inequality's adjustment from the (9) formula.

$$A_{vrt} = A_{vrt}^* * K_s \qquad\qquad (9)$$

where:

A_{vrt}^* – the relatively total advantage from a merchandise's exchange through the export and, separately, the import of two economic entities, E and I, using the two national currencies and an international one.

K_s – adjustment coefficient of the exchange rate of the two national currencies and a international one.

Mainly starting from this drawback of the exchange rate's usefulness, a team of four economists has solved, at the beginning of the 8th decade for the last century, this comparison method which uses the relative prices and eliminates the dependency of the currency's fluctuation [KKHS, 1975]. In these terms, the new instrument of the real economy's study appeared: the purchasing power parity (PPP). Later, a similar instrument has been suggested, the unit value ratios (UVR), used by the Growth and Development Centre of the University of Groningen, which uses the production prices instead of the detailed ones.[8] A general comparison regarding the prices' evolution through the purchasing power parity, initiated in the comparative advantage's study, the price's parity or the unit value ratios appears this way as possible.

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[7] The price's parity is called at intermediate levels of aggregation, except for the initial relative price [Heston, 1997]. In order to respect the historical truth – that this difference between the purchasing power parity and the price parity – has been made in the first studies of the International Comparison Programme [initially called Project; KKHS, 1975].

[8] Information about this instrument on the web site: www.gddc.net

In the economic blocks/areas' inside, in which the national economies will fit perfectly – as the European Union, for example – this operation must be permanent for the guarantee of identifying some directions of the European product exchange which would sustain a constant positive economic evolution of the whole block. In consequence, the economic significance's decoding from the prices' aggregation in the PPC o UVR will reveal situations in which the economic entities' interests in doing exchange operations will be identified. Mostly with these analyses of the general tendencies' observation the analytical economicity's condition – the reduce of the effort and of the increase regarding the decision's safety – is accomplished, and from where, possible in the exchange actions.[9] Also, in the European Union the concordance absence between the exchange rates of the national currencies and the buying intensity's parity is a structural indicator which follows the approaching tendency between the two sizes.

In the multiple exchanges, in the existent correlation's absence from a simple exchange between the ratios of the internal and international prices, because of the transitivity's lack between the exchange rates of the currencies in which the two categories of prices are expressed, can appear significant differences between the partial advantages' sum and the total comparative advantage. Regarded from some oscillations of a national currency's point of view, is necessary that the obtained advantages from a certain period of time – because of the permanent fluctuations of the exchange rates of these currencies – in the merchandises' exports of the residential economic entities to compensate with the obtained losses from the merchandises' import by the economic entities from the same country. The internal and international prices' influence hasn't been taken into consideration here.

The oscillation exchange rates' phenomenon is simultaneously and similar, but more obvious, with the one of the ratio between the internal and international prices. The internal prices aren't permanently changing, simultaneously with the change regarding the production factors' efforts. Some studies over the empirical economy have shown that in most economic areas the prices are periodically changing by the add of a profit's (return margin) at the average costs. On the other hand, it has been noticed that only in some areas the price is established on marginal principles.[10] Contrarily, the exchange rates modifies almost instantly, the phenomenon being simulated by the auction of the stock exchange. The parallel comprehension of the two phenomena, of the prices and exchange rates' oscillation becomes more difficult, on the one hand, because of the correlation's absence between the exchange rates' modification by means of international currencies in which the import/export actions are made, and on the other hand, because of the national and international prices.[11]

The permanent oscillations' inconveniences of the exchange rates are obvious in the observation of the comparative advantages from the product exchanges because they sometimes significantly eliminate the possibility of observing the evolution effects of the ratios between the internal and international prices. In case of comparing the countries' economic development levels, according to the global existent information from the National Accounts System (ONU's database) this inconvenient is partially eliminated in the present moment by PPC and UVR's instruments. The two sizes are aggregate relative prices are usually based on the relations of the same good at of the similar goods of two different countries.

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[9] O more detailed analyses will be made in [Dogaru, 2003].

[10] Godley normal price hypothesis, in *Average Pricing* [PAL, I, 1987].

[11] In the exchange's analyses at the aggregate level, the transitivity's lack of the exchange rates will require the rise of new needs for making different exchange situations comparable. In the European Union this objective becomes more important because of the New Member States integration needs.

An annual comparison of the reports' evolution between the internal prices of two products in groups of countries with different economic development levels helps us to remark the relatively total advantage's tendency according to which exchange strategies can be made in the total comparative advantage's basis. It is considered that the countries with lower incomes follow a convergence development way to the level of the group of countries with raised incomes. The observation, in time, of the ratios of these different economic areas allows the follow of the potentially total advantages' increase and decrease from these exchanges. The dynamic change of these ratios usually show us a change of the relatively total advantage' size. [Dogaru, 2003, ch. 3]. The evolution, in time, of this advantage, captured by the report between the prices of two products or, at an aggregate level, through the indexes of the exported and imported merchandises, sustains the possibility of comparative advantage measurement for the international product exchange.

The combination of the simultaneous observation through the purchasing power parity and through the international trade – on the same structure of the merchandises used here as a prices' aggregation instrument – can show us how much the comparative advantage's base – measured through profit – is able in a country to bring national value through the external trade operations.[12]

In most cases, when the exchange between the economic entities doesn't take place in the compensation system with another merchandise, the relatively total advantage's formula is valid and assures the possibility of measuring the comparative advantage's tendency, including in a steady-state economic system and/or being in development course (by a changeable size).[13]

Premises

The passing to the observation in the analytical base of this situation – of the simple exchange through the currency – from the empirical economy, doesn't essentially change the analysis regarding the negotiating conditions of the international price according to the

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[12] The comparison of the merchandises from multiple countries supposes the respect of the identity's condition: the same merchandises and the same structure of the merchandises in time. The requirement is difficult to be followed, but the tendency's caption, using statistic procedures which would sustain partially the identity condition's respect supports the identification of the evolution of the comparative advantage's phenomenon in a country reported to other countries.

[13] Not taking in consideration the issues created by the transitivity's lack between the exchange rates of the national currencies reported to any international currency, settled as a reference point, and also some exceptions (the currency's devaluation in some deadline contracts) the entire world's trade can be seen as a simple exchange. The calculum through the deducted formulas of the relative advantage and then of the absolute value, considering the compensation's necessity through the payments' balance, sustains the measurement through indexes, in the basis of the generalizing of the relatively simple exchange's formula, at an aggregate level, to identify the relative advantage/disadvantage positions of each country. Of course, that this generalizing supposes the usage of statistic procedures as the hedonic price's hypothesis and the dummy product method, used in the prices' calculum for the goods found in the national economy's production. The both procedures used for over three decades through applying the Geary-Khamis's method in finding out some aggregate relative prices, as the purchasing power parity from the International Comparison Programme [KKHS, 1975]. Calculations and similar judgments regarding the exchange can be made also in a national economy, as it has been showed at the extension of the comparative advantage's principle in the internal exchanges.

comparative advantage. Also in this case, the identification of a stable reference point in our future judgments is necessary. The fact that in these terms a sale-buying contract is composed from two parts comparing to the simple exchange will not stop us to still observe the products' exchange in two initially divided sequences which we are going to unify. If we will succeed in solving this requirement, the analytical economicity's principle regarding the global observation of the reality, which is necessary in the comprehension of the products' exchange as a whole, will be respected.

References

1. Academia de Studii Economice. 2000. Political Economy, Internet http://www.ase.ro/bib/html/economie .
2. Dogaru Vasile. 2003. *The Population Income and the Prices of Agri-Food Products*. *Comparative analyse of countries trend between 1950-2002*, Bucharest: Expert Publishing House.
3. Dogaru, Vasile. 2000. *The International Trade's Theoretical Scheme. Manoilescu Generalized Formula*, "The Romanian Statistic Magazine", July 2000, pp. 48-65.
4. Dogaru, Vasile. 2005. *Comparative Advantage in Manoilescu Generalized Scheme*, "Romanian Journal of Economic Forecasting", no. 3/2005, pp. 91-113.
5. Dogaru, Vasile. 2006. *Manoilescu's generalized scheme regarding the international goods exchange – a general presentation*, Probleme economice (Economic Issues), no. 226-227, The Institute National for Economic Research, Romanian Academy, 2006, pp. 80.
6. Georgescu-Roegen Nicholas. 1971 *The Entropy Law and the Economic Process*, Editura Politica, Bucharest, 1979.
7. Heston, Alan, Summers, Robert. 1997. Some Uses of PPPs in the Penn World Table, *Eurostat's Conference on The Value of Real Exchange Rate,* Brussels, 20-21 oct 1997.
8. Kravis Irving B, Kenessey, Zoltan, Heston, Alan, Summers, Robert (KKHS). 1975. *A System of International Comparisons of Gross Product and Purchasing Power,* The John Hopkins University Press, Baltimore.
9. Korten, David C, *The Corporations Rule the World*.1995 Editura Samizdat, Bucharest, 1995.
10. Manoilescu, Mihail, *The National Productive Forces and the External Trade[14]*. 1937. Editura Stiintifica si Enciclopedica, Bucharest, 1986.
11. *Palgrave, The New. A Dictionary of Economics, Vol I-IV* (PAL), Eatwell, J. and others (eds.), 1988, The Macmillan Press Limited, London, 1998.
12. Porter, Michael. 1990. *The Competitive Advantage of Nations*, The Free Press, New York, 1990.
13. Ricardo, David, *Selected Works*. 1817. Editura Academiei RPR, Bucharest, 1959.
14. Triplett, Jack E, *Handbook on Hedonic Indexes and Quality Adjustments in Price Indexes: Special Application to Information Technology Products*. 2004. Statistical Analysis of Science, Technology and Industry, Organization for Economic Co-operation an Development, Paris, 2004, DSTI/DOC (2004)9.

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[14] The Romanian edition is the translation of the German edition *(Die nationalen Producktivkräfte und der Aussenhandel. Theorie des internationalen Warenaustausches),* 400pp, Junker und Dünnhaupt, Verlag, Berlin, 1937*)*. According to translator in Romanian edition have replaced the paragraphs §72 and §73. The quotation of the paragraphs is made after Romanian edition. Others previous editions: *The Theory of Protectionism, London: King, 1931; Theorie du protectionisme et de l'echange international, Paris: Giard, 1929*