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Discrepancies between real costs and prices

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Abstract

We support labour contents as an absolute and reliable measurement unit and as an accounting procedure that expresses the real costs and profits of the economic system.

As far as the labour capacity of expressing real social costs and profits is concerned, we highlight the inaccuracy in the basic economic data derived from the deviation of the rate of profit in terms of prices with regard to that which is calculated for labour values and we also demonstrate that the price system far from being independent of these values, is supported by them. Thus, there is no redundancy between price and value systems.

These results are obtained in a simple model under the following assumptions: simple – not joint - production is considered where only circulating capital exists. Every good or service considered, is a basic commodity; there is only one quality labour.

The connection between value and price

We start with an original labour value system, with no prices – and where the unit of measurement employed is equal for every commodity in the system, the labour contents:

$$(C_c + V_c) * (1 + r_c) = q_c$$

$$(C_s + V_s) * (1 + r_s) = q_s$$

example :

$$(1,043 + 1,324) * (1,040) = 2,463$$

$$(1,003 + 1,763) * (1,044) = 2,890$$

C_c and C_s represents the circulating capital and V_c and V_s , the variable capital employed, representing for the sake of simplicity two different commodities, produced in two different industries, measured in labour contents instead of physical quantities. Each industry has its own rate of profit: r_c . and r_s ; q_c and q_s represent the output in each industry.

To allow a common profit rate for both industries, we have attributed different prices to each industry's commodity:

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$$(P_c * C_c + P_s * V_c) * (1 + r) = P_c * q_c$$

$$(P_c * C_s + P_s * V_s) * (1 + r) = P_s * q_s$$

or :

$$(C_c + \frac{P_s}{P_c} * V_c) * (1 + r) = q_c$$

$$(\frac{P_c}{P_s} * C_s + V_s) * (1 + r) = q_s$$

Example :

$$(1,043 + 1,318) * (1,043) = 2,463$$

$$(1,007 + 1,763) * (1,043) = 2,890$$

P_c and P_s represent the production prices that allow the common rate of profit, r .

We can see that the price system has had the effect of modifying the price of the quantities interchanged between the two industries. Provided that the rate of profit in the original labour system is greater in the second industry, q_s , its relative price has to be lower than the other so as to allow an increase in the costs in this industry and a decrease of the costs of the first industry, q_c making it possible for both industries to share the same rate of profit.

The Marxian calculation of the rate of profit – the weighted average rate of profit – is different as can be seen here:

$$(C_c + V_c) * (1 + r_{average}) = q'_c > q_c$$

$$(C_s + V_s) * (1 + r_{average}) = q'_s < q_s$$

$$(q'_c + q'_s = q_c + q_s)$$

This average or the real rate of profit differs from the common rate of profit calculated above, except when the quantities produced are those of the Sraffian Standard system where there is proportionality of the inputs needed and the outputs produced (at this point both industries have, necessarily, to share the same rate, Vid. A. Sinha & M-S. Dupertuis). The Marxian average rate, although more precise than the corresponding common rate in prices, does not allow a correct calculation of production prices².

²See: Melendez, Vicenc. **Connecting labour values and relative prices**, <http://ideas.repec.org/f/pme292.html#papers> for a connection between values and prices (expressed in terms of wage) where a rate of profit for the relative prices system, that equates total cumulated plus value with total cumulated profits, can be calculated in advance, based only on labour quantities. It corresponds to a rate of profit in value terms.

Distortion of the value of circulating and variable capital and plus value in the same quantity

We can now compare the original input and output data in labour values and the corresponding data expressed in production prices, after a redistribution of plus value has been initiated through the common rate of profit.

Original labour value input and output data

Industry	Circulating capital	Variable capital	C+V	Plus value	Total product
q _c	1,043	1,324	2,367	0,096	2,463
q _s	1,003	1,763	2,766	0,124	2,89
Total sectors	2,046	3,087	5,133	0,22	5,353

Production prices input and output data – obtained equating total labour value output and total price output -

Industry	Circulating capital	Variable capital	C+V	Profit	Total product
q _c	1,043	1,318	2,361	0,102	2,463
q _s	1,007	1,763	2,77	0,12	2,89
Total sectors	2,05	3,081	5,131	0,222	5,353

Differences between both data groups

Industry	Circulating capital	Variable capital	C+V	Plus value/profit	Total product
q _c	0	-0,006	-0,006	0,006	0
q _s	0,004	0	0,004	-0,004	0
Total sectors	0,004	-0,006	-0,002	0,002	0

It can be seen that the profits in terms of labour values calculated by subtracting Total product and the resulting sum of inputs (C+V), $0,220=(5,353 - 5,133)$, differ slightly from the profit obtained in the production price system: 0,22.

In other words, valuing commodities and services according to the production prices produces a variation with respect to the exact value contents of every commodity in order to allow a common rate of profit but distorts the preservation of the real costs and profits as expressed by the labour accounting magnitudes. In this case, the problem with this transformation is that the price system's profit is higher than the real one expressed by the plus value, and that the sum of circulating and variable capital is lower in the same quantity, creating a dysfunction with what is happening in reality as expressed by values.

It is significant to observe that if we had modified the proportions of interchanges between industries in the example used we would have obtained the same result as with the calculated production prices and a uniform profit rate.

No-redundancy of value and prices systems

Despite it being true that prices and values share the physical conditions of production, as Steedman indicates, when confronting labour values and prices, the former expresses better than prices the real rate of profit which is not dependent on the set of prices necessary for the equalization of the rate between sectors.

The contradiction between profits and global output that does not adjust in terms of prices with its corresponding value expressions, can only be solved in a standard system, otherwise the system falls into inconsistencies between its core values and its price expression.

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