Demand and market value

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Introduction

In his interpretation of chapter 10 of volume III of Capital Itoh (1980) has pointed out two weaknesses in Marx´s theory of market value. The first refers to the existence of two alternative theories explaining market values. The second refers to Marx´s presentation of competition within an industry previous to competition between industries, that is, the determination of market values previous to the determination of prices of production.

According to Itoh, the two theories explaining market values are: the *weighted average* of individual values and the determination of market value by *supply and demand*. According to him the weighted average approach can roughly be applied to manufacturing production whereas the supply and demand approach is usually applied to agriculture and mining where market values are determined by the worst condition of production.

Itoh´s main objective is to develop a unified theory of market value determination. He purports to have accomplished this by means of defining the representative condition of production as those conditions through which supply adjusts to fluctuating demand. In manufacturing, the representative condition is usually given by the most efficient methods of production while in agriculture and mining the representative condition is given by the least productive conditions of production.

This paper argues that this interpretation is faulty on two grounds. *First*, because it eliminates an important feature of the theory of equalization of profit rates, namely, the differentiation of profit rates due to the extra profits that accrue to the most efficient producers when they sell at market values. In fact, if market values are immediately determined by the representative condition, then, the later will not yield extra profits and it is likely to obtain a lower than average rate of profit. Second, because Itoh is forced to conflate market value and price of production in one single process of competition. If market value is determined by the individual value through which supply expands, then,

competition between industries and within an industry become one single process of competition determining simultaneously market values and prices of production, the so-called market prices of production. This is the reason why Itoh criticizes Marx procedure of taking the determination of market value as the point of departure for the process of competition among industries.

This paper argues that Itoh´s unification creates more problems than it resolves and therefore his proposition should be abandoned. In its place we should keep Marx´s own approach.

Market value

In his theory of market value Marx initially presents three hypothetical cases regarding the determination of market value. *Case I* refers to the determination of market value by capitals of average productivity. *Case II* refers to the determination of market value by lowest productivity capitals. *Case III* refers to the determination of market value by highest productivity capitals. If the three cases presented by Marx are simulated it becomes clear that there will be always a divergence between average values and the individual values of the predominant conditions, that is, average and predominant conditions are not the same thing. This divergence will be the smaller the greater is the weight of the predominant condition in the total product of the sector.

The three possibilities presented by Marx all assume a fixed level of supply. In our examples the supply is always 1008. Moreover he assumed, as it was just referred to, that the social demand was always equal to this supply in all three cases presented on pages 183-184 of chapter 10 of volume III of *Capital*. The reason for doing this is that he is not yet interested in deviations between market value and market prices. As long as social demand coincides with supply at market values, market prices will be equal to market values.

In what follows consider L as total labor consumed, Q as quantity of use values produced and V_i as individual values.

Table 1. Case I: average productivity capitals produce the bulk of commodities

	L	Q	V_i
1. Lowest productivity capitals	216	12	18
2.Average productivity capitals	576	48	12
3. Highest productivity capitals	216	24	9
Average			13
Totals and weighted average	**1008**	**84**	**12**

Table 2. Case II: lowest productivity capitals produce the bulk of commodities

	L	Q	V_i
1. Lowest productivity capitals	648	36	18
2.Average productivity capitals	144	12	12
3. Highest productivity capitals	216	24	9
Average			13
Totals and weighted average	**1008**	**72**	**14**

Table 3. Case III: highest productivity capitals produce the bulk of commodities

	L	Q	V_i
1. Lowest productivity capitals	216	12	18
2.Average productivity capitals	144	12	12
3. Highest productivity capitals	648	72	9
Average			13
Totals and weighted average	**1008**	**96**	**10,5**

As it is clear from the tables above, *dominant* and *average values* do not coincide. However, we can say that as the dominant producers expand their share of the market, average values will progressively approach their own individual values.

It is important here to emphasize that the dominant method determines market value in the sense that it exerts a decisive influence on its magnitude. The individual value of the dominant method and the market value calculated as a weighted average are necessarily different. The latter will approach the former depending on the relative weight of the dominant method in total production. Interestingly enough, Itoh takes the word "determine" to meaning "being equal to". On page 183 Marx uses the word determine as well as the word "regulates". On page 184 it becomes clear that the word "determine" is used to mean exerting a decisive influence. Referring to *case II*, Marx says: "how close the market-value approaches, or finally coincides with, [the individual value of the least productive capitals] depends entirely on the volume occupied by commodities produced at the unfavourable extreme…" (Marx 1967:184). The same reasoning is applied to the analysis of *case III*, immediately below, on the same page.

It is only after this that Marx considers the possibility of market prices to diverge from market values. If for any reason demand is greater than supply, then, market prices will stand above market values. Supply expands to the level of demand. If all conditions of production expand *in tandem* then the market value does not change. In reality, not all types of producers will have the same chances to expand supply. Those better placed in the market will be able to expand faster. In this case the market value suffers a change as well. In any case this change is not due to demand but rather to the fact that supply expanded unevenly among all types of producers in activity. Up to this point market value is defined entirely in terms of supply conditions, be it as a weighted average or as the most common condition of production. In face of this analysis how should we interpret pages 179, 184 and 185, where Marx seems to be putting forth a supply and demand version of market value determination?

Demand, supply and market value

Given the market value the level of demand is determined by what Marx called social need. This level of demand in turn determines the level of supply. That is why we have at the same time demand and supply explaining fluctuations of market prices around the market value and the market value regulating supply to demand.

Let us suppose at first that demand is greater than supply at the current market value. The market price will stand above the market value and the extra gain to be pocketed by the capitalists spurs them to expand supply to the level of demand. The difference between market price and market value disappears. This is the scenario in which divergences between supply and demand explain the gravitation of market prices around market values. We could represent the process in which demand is greater than supply in the following manner:

$$v_m \rightarrow D > S \rightarrow p_m > v_m \rightarrow (S \uparrow \cong D) \rightarrow p_m \downarrow \cong v_m$$

What if the divergence between demand and supply is somewhat stable? We have to suppose that supply cannot be expanded to match the level of demand at the current market value. Why not just say that the market price will stay above market value? The reason is that market price is an oscillatory variable. If it stays way above market value indefinitely, then, it plays the role of the market value. But why is that supply cannot be expanded? One possible answer is the case of non-renewable natural resources. Our diagram would look like this:

$$v_m \rightarrow D > \overline{S} \rightarrow D \rightarrow v_m \uparrow$$

Let us now examine the contrary case, that is, the case when demand is smaller than supply. In this case, the market price would stay more or less permanently below the market value. Demand does not expand in face of lower prices. If prices are low enough to make the less efficient producers leave the scene, then, the market price would be validated as market value, properly speaking, as only the most efficient producers would stay in the game. This case however implies a modification in the technical conditions of production.

As we can see it seems that Marx is dealing here with exceptional situations; qualifications due to the effect of lasting divergences between supply and demand. Let us see how this seemingly anomaly is dealt with by other Marxist writers.

For Rubin the market value of a commodity is not determined by the quantity of labor allocated in its sphere. On the contrary, he argues that the quantity of labor allocated in each particular sphere of production depends on the previous determination of market value (251). The latter is determined by the level of development of productive forces in the particular sphere of production. Given the market value we have associated to it a level of demand to which supply adapts.[1]

Rubin asks whether or not lasting changes in demand could alter market values. His answer is unambiguous: lasting changes in demand cannot alter market values as long as the technical conditions of production do not change (246). Changes in demand can, however, provoke changes in supply. Rubin provides a numerical example in which the increased demand makes the market price to rise above market value. Extra profits then make supply expand from 240.000 to 280.000 arshins of cloth which are then "sold at the previous market value of 2r.75k".

Giussani (1996) proposes a different solution. For him *social value* is the weighted average whereas the market value results from the effect of demand. Suppose the social value is one and the quantity produced is 70. If demand is weak, then, it can absorb the totality of the products supplied, say, at a price of 0.5, the individual value of the most efficient producers. If social demand is large, the totality of supply of 70 may be sold at the market value of, say, 2, the individual value of the least efficient producers. In this way demand determines which individual value will function as market value. The concept of market prices is spirited away for market values do all there is to be done: they encompass both the effect of permanent shifts in demand as well as oscillations of market prices around social values due to continuous divergences between supply and demand. Giussani´s interpretation contrasts with Marx´s view that "average or market value" (p.186)

[1]This, by the way, does not differ from Marx´s own procedure for he presupposes demand = supply when deriving market values. Once supply is assumed to have adapted to demand, the market value can be determined by the total amount of labor expended in the particular sphere divided by the number of articles produced in that sphere.

are the same concept and that market price results from short-run deviations between supply and demand.

For Kristjianson (1998) divergences between supply and demand are conceivable only within the framework of inter-industrial competition for it is only in that context that we can conceive the process of redistribution of social labor among the various industries. Only inter-industry competition allows for the possibility of misallocation of labor. This misallocation creates divergences between supply and demand, which for him are a further determination of market value. In this sense he follows Itoh in that inter-industry is necessary for the determination of market value.

In order to illustrate Kristjianson´s viewpoint we propose a numerical example. Suppose a two sectors economy:

Industry I			**Industry II**		
L	Q	m_v	L	Q	m_v
100	50	2	100	100	1

where L stands for the total amount of labor expended in the production, Q the quantity of use values produced, and m_v the market value.

The total value produced in the economy is equal to 200. The total demand is assumed to be 200 as well.

Suppose now that too much was produced in industry I, and too little in industry II. As a result, he says, the market value in industry I will be less than 2, say 1.5. Since demand is weaker than supply by an amount of 25%, then, demand should be stronger than supply in industry II by an amount of 25%, which raise the price to 1.25. The total amount of value is still 200, despite the changes in market values in both industries. He concludes, therefore, that allowing demand to play a role in determining market value does not imply that demand creates value.

Let us suppose now that at the market price of 2, determined by the current level of productivity $(L/Q)_{\mathrm{I}}$, industry I yields the average rate of profit. In this case, provided that technology does not change, industry I will have to shrink to a level of supply such that

demand can absorb all of its production at the price of 2. Suppose that the relationship between demand and market value is the following:

m_v		*demand*
1.5	→	50
2.0	→	35
2.5	→	20

Some capitalists will leave the industry until just 35 units are produced for at the price of 2 the sector yields the average rate of profit. The market value would have returned to 2. The market value would have risen again to the level determined by the technical conditions of production. Would it not be easier, then, to say that the market price had fallen below market value to rise again to the level of market value? The same reasoning can be applied to industry II.

Our own view would follow in the footsteps of Rubin: lasting changes in demand can not alter the market value as long as productivity of labor has not changed. And this leads us to the next issue. However, productivity of labor can change due to shifts in demand whenever the response of supply changes the relative weight of the different producers in the total production of the sector. Consider the following example:

	L	Q	v_i
Capital 1	45	15	3
Capital 2	55	35	1.5
Total	100	50	2

Suppose now that cost-price of producers type 1 is above 1.5. These producers will not even be able to recover their capital consumed and will, therefore, be forced to leave the market. The market value in this case sinks to 1.5 as only producers of type 2 stay alive.

Itoh (1980), on the other hand, has proposed to unify both conceptions, that is, the technical average one and the demand/supply version. He intends to have achieved this by means of the simple idea that market values are determined by the representative conditions of production, those through which supply adjusts to the varying demand. As to the technical average definition of market value the representative condition is given by the "dominant and most common" (88) method of production. In the case of supply and demand determination of market values the representative condition is given by the worst conditions of production.

We will argue that this definition of market value is not free of problems and ambiguities. *Prima facie*, it conflicts with the analysis of extra surplus value and ultimately creates a problem for the understanding of competition among industries.

Itoh´s proposition

Makoto Itoh follows Kuzo Uno´s proposition regarding the theory of market value. For Uno the representative condition of production is the one that "determines market value" (Itoh, 1980, p.90). On page 87 Itoh cites Uno to the effect that "the determination of the market value of a commodity depends upon the condition of production under which the supply of the commodity is adjusted to the fluctuating demand".

By establishing that market value is determined by the methods through which supply adjusts to demand Itoh purports to have unified the explanation for the determination of market value both in *industrial production* where supply usually expands through the best techniques and *agriculture and mining* where usually supply expands through the worst techniques.

Although it seems clear from a reading of chapter 10 that for Marx prices of production are determined by values and that, therefore, the determination of values within an industry constitutes the basis for the determination of prices of production, Itoh prefers to conceive the determination of market values and prices of production as a single process. According to him competition both within and between industries constitutes a single process determining market prices of production (90). This single process is given by what

he calls the representative condition. For Itoh the representative condition determines market value within the sector and at the same time functions as the point of reference for the process of equalization of profit rates across industries. In his view, these two mechanisms unfold together and therefore cannot be treated separately (90).

But if the representative condition determines market value then it cannot serve as the reference point for the process of equalization for the simple reason that its profit rate will generally be lower than average if calculated at its own individual values, as it will be shown bellow.

Problems and contradictions of Itoh´s theory

Value and market value

Socially necessary labor time is defined by Marx as the quantity of labor required to produce a commodity under the predominant conditions of production. Throughout most of the volume I of *Capital* the question related to the divergences between this predominant standard and individual conditions of production are used only as a way of clarifying the concept itself. For the most part, the analysis deals with the metamorphosis from commodity to money and from money to commodity, being divergences between social standard and individual values treated only as a subsidiary mater.

Chapter 10 of volume III of *Capital* introduces the concept of *market value* as the result of many producers each producing at a different level of productivity. Market value, in this new context, is the socially necessary labor that asserts itself trough competition among all the producers of a single branch of production. Once established, market value implies deviations in the magnitude of value between the individual values of the various producers and the market value proper. Market value, therefore, is a concept that stands in opposition to the individual values since the later represent deviations from the former. In so far as the formation of market value is the basis for the generation of extra surplus value for those producing at lower individual values, it constitutes a point of departure for the analysis of competition among industries and as a consequence for the formation of prices of production.

Extra surplus value and profit rate differentials

According to Itoh, market value is determined by the individual value of those capitals through which supply expands. He calls this a variant interpretation of the technical average, saying that in this variant of the theory market value is "regulated by the technically dominant or most common condition of production".

But as long as market value is determined by the methods of production through which supply expands, then, these methods would not yield extra surplus value for the market value would coincide with their individual value.

Now let us add to this that the most efficient methods are, in general, methods that use a higher organic composition of capital. If this is so, sale at their own individual value implies that their profit rate must stand below average. As a consequence, from the point of view of the process of equalization of profit rates these would not possibly be the methods through which supply expands even though they are the most efficient. We are therefore confronted with a paradox which is a result of considering market value as the individual value of the methods through which supply adjusts to the expanding demand.

It is curious, however, in face of what has just been said, that Itoh should mention extra surplus value (p.89). As we know extra surplus value arise from transfers of value from producers with individual value higher than market value to producers with individual value below market value. Extra surplus value then presupposes that the individual value of the commodities through which supply expands does not immediately rule the market value, or else there would be no extra surplus value at all. We are then left with the idea that after all what Itoh is saying is that the representative methods regulate market value in the sense that these are the individual value that will assert themselves as market values once the market share of this kind of producer increases. This view, however, implies that market value is not simply given by the methods through which supply expands.

It is true that the expansion of supply reveals the regulating tendency beneath market prices, that is, the regulating force of the most efficient methods. But this regulating force does not manifest itself all at once but only gradually as the most efficient methods lower prices below market values in order to dispose of their greater production. Let us see how Marx refers to this process:

> "If one produces more cheaply and can sell more goods, thus possessing himself of a greater place in the market by by selling below the current market price, or market value, he will do so, and will thereby begin a movement which gradually compels the others to introduce the cheaper mode of production, and one which reduces the socially necessary labor to a new, and lower, level" (Marx, 1967, p.194).

The same reasoning is presented a few pages before exactly in context of the determination of market value by means of the most predominant condition. Marx says:

> "Should demand be weaker than supply, the favourable situated part, whatever its size, makes room for itself forcibly by paring its price down to its individual value" (idem, p.84).

It must be clear from this citation that the market value cannot be lowered before the socially necessary labor to produce the commodity is lowered. Since this is an on going process which occurs by means of the expansion of production it must show itself as a process of changing market shares among the different conditions of production.

Even when all producers are compelled to reduce their prices this does not mean that the new market price is the individual value of the best producers. It can only be so when supply expands at a rate so much above the rate of expansion in demand that the best producers are obliged to reduce their selling price to the level of their individual value. This however presupposes quite a process of expansion of supply.[2] But then again, the market value would be very close to a weighted average for the industry. Until then the market price will be above their individual value. The extra surplus value thus obtained is what guarantees a higher rate of profit for capitals using these methods. This dynamic process is

[2] This seems to be the kind of phenomena Marx is analyzing on page 179: "if the mass of the produced commodities exceeds the quantity disposed of at average market-values, the commodities produced under the most favourable condition regulate the market value" (Marx, 1967, III, p.179).

lost once we identify market value with the individual value of the methods through which supply expands.

Demand, supply and conservation of value

From page 186 to page 194 of chapter 10, Marx develops a critique of the determination of market value by the interaction between supply and demand. This should represent in itself strong evidence that value must precede price and that, therefore, the determination of market value should pertain exclusively to supply conditions.

It is worth to repeat that the aggregate supply in terms of value must be equal to the total amount of labor consumed in society as a whole. It follows from this that the total value in any given branch of production should be determined in a likewise manner as the total amount of labor consumed in the said branch. This is not an axiomatic proposition. It is actually based on the fact that when the volume of demand at the market value is equal to the volume supplied, then we just have transfers of value from worst producers to best producers. The total amount of labor consumed is distributed according to the divergence between individual values and the unique market value while the total amount of value produced remains equal to the total amount of labor consumed.

Marx always calculates market values on the assumption that the volume of social demand at that market value is equal to the volume supplied by all producers. In this case the division L/Q does not incur in any error for the total amount of labor in the industry is equal to the social need at the current market value. If, however, we were to allow for a discrepancy between supply and demand, then, L/Q would not be a proper measure of market value for the reason that the sector would not have adjusted the total amount of labor to the social need. In this case the market value can only be determined by the dominant condition of production.[3] Given this market value, were demand to be greater than supply, market price would exceed market value and the sector would need more labor in order to supply the amount of social need. If this expansion is accomplished while keeping market shares constant, then the market value would stay constant and supply would have adjusted to demand. It is for this reason that Rubin (1979) emphasizes so much

[3] But that in turn depends on how supply will expand. In this case we actually cannot determine market value. Yet, we presuppose it for we know the level of demand at market value.

that we cannot, in practice, derive market values by dividing the total amount of labor in a given branch of production by the total number of articles produced in that branch.

By rejecting the weighted average notion of market values Itoh is left with the value of the best extreme, in the case of industrial production. If we then multiply this lower than average value by the total quantity produced we obtain a smaller value than the total amount of labor consumed inside that branch. But if we cannot have transfers of value then the most efficient producers cannot have higher rates of profit either.

Market value, equalization of profit rates and falling profit rate

We are therefore confronted with a defective theory, one that cannot simultaneously allow for *extra surplus value* and to the *notion of market value as being determined by the methods of production through which supply expands*.

If we are to preserve the idea that the most productive methods have higher rates of profit because of their extra profits we have to allow for a difference between their individual value and the market value. If, moreover, we are to retain the idea that these extra profits disappear as soon as the method becomes numerically predominant we have to retain the notion that market values are slowly eroded to the level of the individual values of the dominant methods.

It should also be emphasized that higher productivity is associated, in Marx, with higher organic composition. It follows then, from the dynamics so described, that as the extra profits are eliminated, the rate of profit of the dominant producers sinks to a level below average. Alternatively, if we consider that this process is taking place simultaneously in most industries, this should result in a drop in the average rate of profit. From this point of view the process of equalization of profit rates is part and parcel of the process of falling profit rates, both within branches of production and in aggregate.

How much this analysis is tied up with the analysis of the tendency of the rate of profit to fall can be seen by this observation made by Marx at the end of chapter 13:

> "A capitalist working with improved but not as yet generally adopted methods of production sells below the

> market price, but above his individual price of production; his rate of profit rises until competition levels it out" (Marx, 1967, p.231).

It is therefore very clear that for Marx individual value or individual price of production does not coincide at once with market value or market price. It is also implied by this statement that the process of equalization is not for the branch of production as a whole but for those capitals with manage to obtain higher than average rates of profit via extra surplus value.

Market value and price of production: a numerical illustration

Let us consider for a moment a branch of production of average organic composition of capital. Let this branch of production be composed of three capitals, the middle one being the one with average organic composition.

Table 5. Differential profit rates within an industry at market value=12

Capitals	*Cf*	*Cc*	*v*	*d*	*m*	*L*	*Q*	*Sales*	*Profits*	*l`*
1	66	50	82	2	82	216	12	144	10	5,0%
2	106	50	44	6	44	144	12	144	44	**22,0%**
3	252	100	50	16	50	216	24	288	122	30,3%

Since this industry has an average organic composition of capital its market value coincides with the price of production of the capital with average organic composition. For capitals type 1 and 2 the market value represents prices respectively below and above prices of production.

In the above example it is likely that supply should expand through the "dominant and most common" technique given by the type 3 of producer. If we were to follow Itoh´s proposition we would have to suppose that market value would be determined by the individual value of capitals of type 3. Let us see then how would our profit rates look like under such an assumption. To achieve this we have to recalculate profit rates on the basis of a sale price equal to 9, the individual value of the dominant and most common condition.

Table 6. Differential profit rates within an industry at market value=9

Capitals	*Cf*	*Cc*	*v*	*d*	*m*	*L*	*Q*	*Sales*	*Profits*	*l`*(%)
1	66	50	82	2	82	216	12	108	-26	-2,16
2	106	50	44	6	44	144	12	108	8	4,0
3	252	100	50	16	50	216	24	216	50	12,43

If the market value is immediately determined by the condition through which supply expands then supply is not going to expand through this condition for the simple reason that the profit rate of the dominant method at its own individual value is generally below the average profit rate. In table 6 we can see that the profit rate of capitals of type 3 is only 12% *circa*, well below the 22% average rate of profit for the whole economy.

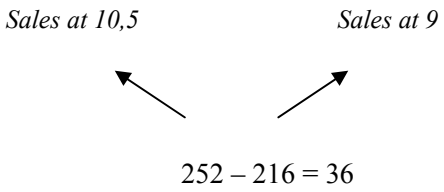
Market values and prices of production

The next issue relates to the sequence presented by Marx running from market values to prices of production. Contrarily to this view Itoh argues that there is a single process of competition determining simultaneously market value and prices of production. He takes the term "market prices of production" to mean precisely that determination of

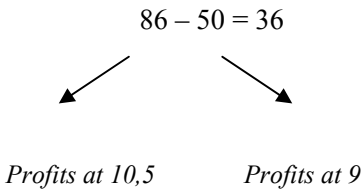
prices within a sector and equalization of profit rates across sectors are part of a single process. Let us examine his view a little closer.

According to Itoh, the pinpointing of the representative condition within an industry is necessary for the process of competition among industries. Moreover, he argues, competition inside an industry would be weakened without the presence of capital flows among industries (90). The "theory of market value should be discussed latter" than the theory of prices of production for the later one is more basic. With market value coming first, extra surplus value can only come from within the industry. With a theory of competition that integrates intra and inter-sectoral competition, he says, extra surplus value can also come from outside the industry, that is, from other sectors of the economy. Is this possible? Moreover, we should ask to which concept this sort of *extra surplus value coming from outside the industry* is related.

Let us suppose that our interpretation of Itoh´s theory is right and that table 6 is a good representation of its essential points. It follows from that table that the market price will have to rise to 10,5 in order to yield an average rate of profit of 22% for capitals of type 3, the representative capitals of that sector. Where is the extra surplus value in that case? It can only arise from the difference between produced surplus value and appropriated surplus value, that is,



or



Unfortunately the difference to the amount of 36 does not all correspond to extra surplus value. Extra surplus value is related to market value as socially necessary labor time, the result of different individual values. Transfers of value due to differences in organic composition are related to the socially determined rate of profit. The former refers to the world of commodities. The later refers to social capital.

The difference of 36 is not all due to extra surplus value. It must be partitioned between extra surplus value and the organic composition effect of profit rates equalization. How much of it is due to extra surplus value and how much is due to organic composition effect? To be sure, 36 is the result of 1,5 times 24 units sold. At the price of 10,5 capitals of type 1 are out of the market for their total cost is greater than their total proceeds. Transfer of value can only occur between capitals 2 and 3. Of the total extra gain of 36 above surplus value produced, 18 come from producers of type 2. Only these 18 correspond to extra surplus value. What about the additional 18? The other 18 can only originate from transfers of value coming from other industries. These 18 are generated by such a ratio of supply to demand so that prices rise from 9 to 10,5.

Conclusion: Values and prices of production

Marx explains changes in prices by changes in values. Why should that be different regarding prices of production? Changes in prices of production are explained by changes in market values. Let us present this argument more fully.

Changes in prices of production cannot be explained by changes in prices of production. Changes in prices of production are determined by changes in values. But how? We have to examine the possible causes for changes in prices of production.

First, let us define price of production, as Marx does, as the sum of cost-price k plus the average profit on cost-price as:

$$p_p = k + p'k,$$

or

$$p_p = (1 + p')k$$

where p_p stands for price of production, p' is the average rate of profit, and k is the cost-price.

This equation is only right on the assumption that all capital advanced has been transformed into product. Then, it can be read as the price of production of the entire mass of products produced or more simply as the unit price of the commodity.

It is plain from the above equation that prices of production can only change if either k or p' change. If we further assume that the rate of profit changes only very slowly then the price of production can be said to change in the short-run only as a result of changes in k, the cost-price. It is precisely the change in cost-price the aim of competition within an industry. Competition within an industry is the continuous strive to introduce methods of production that lower the cost-price, k, of commodities. Marx called this the *fundamental law of capitalist competition*. Individual capitals do not have control over the general rate of profit. They can however change their individual profit rates by lowering k. It is through the lowering of k that individual capital can obtain a rate of profit higher than the average.

The reduction in k is what explains the emergence of profit rate differentials. Capitals that are able to reduce k obtain a higher than average profit rate. They are the capitals that serve as point of reference for the process of equalization of profit rates across industries. This equalization process cannot but be the process of a general reduction in k, that is, reduction of the socially necessary labor required (c+v) for the production of a given commodity. In so far as the process of equalization of profit rates implies the emergence of a new market value it must represent the starting point for the formation of new prices of production.

On the basis of a single market value variations in cost prices give rise to various rates of profit. The formation of different rates of profit within the various sectors of the economy is the premise of competition among those sectors. In this sense the formation of market values must precede the equalization of profit rates. This is not a void conceptual proposition. It is rather a practical necessity.

For capitals that introduce a superior method of production the market value is taken as given. At the given market value this new method of production can obtain a higher than average rate of profit. If profit rates equalize through this type of capital, then, the price of production that will be brought about by the expansion of production is a process that follows the previous formation of market values. As the percentage participation of those capitals in the market increase market values fall.

What represents price of production for these methods is for the other producers in the market merely the market value. This means that all the other capitals will not obtain prices of production: for some the new market value will stand below their own individual price of production. As long as the new market value does not stand below *k* even capitals with lower productivity will be able to stay alive.

We see then that the equalization of profit rates is at the same time a process of increasing productivity in the industry. The value of the commodity falls by means of gradual reductions in *k*. The diminution in *k* results from the increasing production share of superior techniques and the consequent price reductions as a means to increase their market share. In this sense Itoh is right: the formation of prices of production for the representative capitals is at the same time the formation of a new market value. In this sense those two process are part of a single process of competition.

However, it is necessary to keep them separate. They are altogether different entities: what is price of production for some capitals is just the market value for others. The formation of prices of production for the regulating capital represents for all other capitals not prices of production but the formation of a new market value. This new market value is the starting point for a new round of competition as soon as a new technique is introduced.

Moreover, equalization of profit rates changes value as it changes the *k* portion of value. Formation of prices of production is at the same time the process of reduction in prices of production. But prices of production fall because values, as capture by *k*, fall. That is the reason why it seems inappropriate to say that prices of production are a more fundamental concept than market value.

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RESTOS

Rubin

For Rubin market value is approximately equal to the individual value of the dominant conditions of production. The dominant condition of production is the one that brings to the market the great bulk of commodities compared with the quantities brought by the other technical conditions (229).

This definition is similar to the technical average definition. The greatest is the weight of a particular condition of production in the supply of a particular commodity the closest the market value will approach the individual values of the dominant condition of production.

Interestingly enough the predominance of a particular technique is related to the appearance and eradication of extra surplus value. Imagine at first a new technique. It cannot determine market value by the very reason that the purpose of its introduction was to take advantage of a market value that is higher than its individual value. Its more or less general application eradicates the extra profits and brings about a lower market value. This process of reduction of market values may be approximated by a weighted average calculation. Why is then that Rubin avoids the calculation of market values as a weighted average?

His argument is as follows.

The quantity of labor allotted to each sector of production is determined by market values in each sector for it is the market value that which determines the volume of demand. The market value multiplied by the total number of units demanded is what determines social need. Supply adjusts itself to the magnitude of this social need by distributing capital and therefore labor accordingly.

Mmmmm

Introduction

In his famous and brilliant book on *Value and Crisis*, Itoh (1980) argued that there were two theories about market value, standing side by side in chapter X of the third volume of Capital. He named the first theory the technical average theory, usually associated with the calculation of market values as a weighted average. Then there is a second theory which Itoh refers to as a demand and supply theory of market price.

After reviewing the attempts at unifying those theories Itoh concludes that no one was able to present a coherent solution. He proceeds then to develop an approach that according to him would encompass both ways of determining the market value.

The objective of this article is to show that Itoh´s solution is contradictory and inadequate in view of other important aspects of Marx´s propositions. An attempt is made to propose an alternative interpretation.

Good for footnote

Rubin argued extensively against what he called the "economic" view of market value. According to him market value cannot be derived from an average because in that case we would be assuming that the quantity of labor allocated in that particular industry has already been adjusted to the volume of demand determined by market value. He argues that market value should be regarded as the dominant condition of production. The determination of the market value leads to the determination of the amount of social demand, the later being defined as the level of social need or social requirement at that specific market value. The problem raised by Rubin is bypassed by Marx in that he is initially abstracting from differences between demand and supply.

Citação Itoh

> "through the fluctuations of the market price the commodity economy reveals anarchically under what conditions of production the necessary amount of commodities for the social demand is supplied, showing the level of market value as the center of gravitation of market price…We see here how the commodity economy actually makes the social value apparent via the motion of market competition while various individual values exist corresponding to the different conditions of production" (Itoh, 1980, p.87).