

Market price to market value – a theoretical bus trip

Vladimir D. Micheletti
Universidade Federal de Alagoas
vlamiche@ofm.com.br
Northeast of Brazil

Summary

Even the present moment, we have been just pricing value. Although to link the future we must go around and reverse this process by starting to value price. To reverse this process, the unique commodity which can realize it is the one that never realizes itself as commodity; it does not carry materialized labor force because it is the proper process of production that really carry persons – the transportation sector (public transport).

This peculiarity enable us to combine all the entrepreneurs of local asset (small, meddle, and big – uneven developed) into the *associated producers* or *Regulator Agency* (RA) that must collect information about each transportation unit (buses, minibuses, double-deckers, articulated single-deckers, ‘independents’, etc.) and passenger’s route / trip (starting-ending points), and sum up them all, to divide the total cost included the perceptual part of each entrepreneur’s profit to find out the price or tariff of each kilometer routed. This way each passenger can pay – by cyber cash - for the kilometers really tripped.

This transportation sector rearrangement resolves if not all at least two main problems: one hand makes visible the so called invisible hand or market’s forces. The passenger’s choice or preference shall determinate since the unit of transport to whole RA, even the disuse of particular unit of transport. The data collected by RA generates an exact (so not estimated) sector’s GDP, Gross Domestic Product that enables to monitor its planning, management and operation, also the development across transport, environment, etc. The most important socioeconomic fact is the complete autonomy of this newest agency which can (and must) promote the real and easiest combined (synthesized) and uneven (diversity) development, withering the State (Third Person). The other hand brings forward the *market-value* as the perfect tariffication because it realizes the “implicit price” (une longue tradition de calcul de prix implicites dans des modèles d’équilibre général) that walrasians economists have been looking for and always supposing the Third Person as completely absent. Therefore, the industry of transportation need subsidy from the Third Person almost as much as the agriculture does.

The rekindle of the *market-value* must also turn itself a socioeconomic index better, really effective, than “burgerindex” of the world oldest magazine – The Economist – because it is not based on an unique commodity but on a whole sector and strictly linked to the production process where the plus-value is extracted. The same way money has been representing itself as a bridge between two parts of transaction, market-value can (and must) reverse and extend the process of valuing price from industry of transportation to others industries (communication, bureaucracy, for example).

To resume, market-value reverses the way market’s forces have priced value because now we can observe empirically the way things can get valued and appropriate these things by a price attached (neither up nor down) to their value – it is value determining its own apparent form, this is the way we can start valuing price.

A brief foreword

As Freeman and Carchedi wrote at the introduction of their book – ***Marx and Non-equilibrium Economics***¹ – the present paper not only reflects an intensive process of critical reappraisal of neoclassical economics and its relation to Marx’s theoretical work but also attempts to establish a real, right, and productive route to all of us, so this way we can link the future together.

Keynes had noted that we all have been accustomed to teach that prices are governed by the conditions of supply and demand, and, in particular, by the changes in marginal cost and the elasticity of short-period supply have played a prominent part, “*but when [we] pass in volume II [Marx’s Capital, of course], or more often in a separate treatise, to the theory of Money and Prices we hear no more of the homely [Theory of Value] but intelligible concepts and move into the world where prices are governed by quantity of money, by its income-velocity, by the velocity of circulation relatively to the volume of transactions, by hoarding, by forced saving, by inflation and deflation et hoc genus omne; and little or no attempt is made to relate these vaguer phrases to our former notions of the elasticities of supply and demand... whilst in the more sophisticated we are lost in a haze where nothing is clear and everything is possible. We have all of us become used to finding ourselves sometimes on the one side of the moon and sometimes on the other, without knowing what route or journey connects them, related, apparently, after the fashion of our waking and our dreaming lives*”. It is not necessary to say that we must escape from this double life (value and price) to bring the theory of price as whole back to close contact with the theory of value.²

That is because we already found the commodity that not only Keynes but also Piero Sraffa looked for. The first asserted that “*for there may be no method available to labour as whole whereby it can bring the wage-goods equivalent of the general level of money-wages into conformity with the marginal disutility of the current volume of employment. There may exist no expedient by which labour as a whole can reduce its real wage to a given figure by making revised money bargains with the entrepreneurs. This will be our contention. We shall endeavour to show that primarily it is certain other forces which determine the general level of real wages. The attempt to elucidate this problem will be one of our main themes. We shall argue that there has been a fundamental misunderstanding of how in this respect economy in which we live actually works*”³; the second, Sraffa’s *Production of Commodities by Means of Commodities* is a search for the *Standard Commodity*, but as Alan Freeman says – “*Sraffa rightly criticizes neo-classical capital theory because it cannot establish any independent measure of the ‘quantity of capital’, whence its derivation of global quantities such as the marginal productivity of capital is next to meaningless. But Sraffa’s construction by no means escapes the problem. It is hard enough to use the standard commodity, as Sraffa acknowledges, to compare physical quantities of fixed capital in different systems, that is, systems employing different technologies. But if the technology of a single capitalist economy undergoes constant change, the standard commodity itself undergoes constant change even within that system, and no invariable measure of the neo-Ricardians’ beloved ‘physical quantities’ exists*”⁴, we should conclude that it is not only ‘hard enough to use the standard commodity’ but also impossible.

¹ FREEMAN, Alan and CARCHEDI, Guglielmo. ***Marx and Non-equilibrium Economics***. London, Edward Elgar Publishing Limited, 1st edition, 1996.

² KEYNES, John Maynard. ***The General Theory of Employment, Interest, and Money***. New York, 1st edition, A Harvest / HBJ Book, 1964, p. 292-293.

³ KEYNES, John Maynard. Op cit., p. 13.

⁴ FREEMAN, Alan. *The logic of the Transformation Problem*, p. 241. In: MANDEL, Ernest and FREEMAN, Alan. ***Ricardo, Marx, Sraffa: the Langston Memorial Volume***. London: 1st edition, Langston Foundation, 1984.

We said we have found this commodity but we should have said also that the ‘body’ of this specific commodity must be created by us because it is not a material product; it has no ‘body’. Marx puts it this way: “there are certain independent branches of industry in which the product of the productive process is not a new material product, **is not a commodity**. Among these only the communications industry, whether engaged in transportation proper, of goods and passengers, or in the mere transmission of communications, letters, telegrams, etc., is economically important”⁵, moreover “the formula for the transport industry therefore be $M - C_{M.ofproduction}^{Labour} \dots P - M'$ since it is the process of production itself that is paid for and consumed, not a product separate and distinct from it. Considering that every individual capital is therefore, on the one hand, in its two circulation-halves $M - C$ and $C' - M$, since it is the process of production itself that is paid for and consumed, not a product separate and distinct from it...”⁶. Marx quotes opportunely that this kind of capital, which appeared before industrial capital amid conditions of social production that have receded into the past or now succumbing, are not only subordinated to it and the mechanism of their functions altered in conformity with it, but move solely with it as their basis, hence live and die, stand and fall with this basis. That is why “money-capital and commodity-capital, so far as they function as vehicles of particular branches of business, side by side with industrial capital, are nothing but modes of existence of the different functional forms now assumed, now discarded by industrial capital in the sphere of circulation – modes which, due to social division of labour, have attained independent existence and been developed one-sidedly”⁷. In another word, it promotes the uneven or unequal, but not combined development, and this fact makes all the differences.

The objectives of this paper are: 1) to bring the theory of price as whole back to close contact with the theory of value; 2) to outline the transport industry as the prime sector to realize the preceding; 3) to present the Market-value as the direct opposite to the Market-price, and carrying all the possibilities to reverse the actual process of development putting definitively the uneven and combined development, the “Permanent Revolution”.

To finalize, we must alert all the first reader that the purpose of this paper is not to present a “new solution” nor a “new approach” to the so called “transformation problem” because we see no problem at all with the Theory of Value written by Karl Marx, and right after complemented by Georg Simmel with his books – *Philosophie des Geldes; Soziologie: Untersuchungen über die Formen der Vergesellschaftung*, and others.

The role of public transport

We will take the definition of ‘public transport’ from Peter White’s book - *Public Transport: its planning, management and operation* – which recognize that it “include[s] all modes available to the public, irrespective of ownership. In addition to the scheduled services of bus, coach, domestic air and rail operators, I include taxis, private hire buses and coaches, and the tour/excursion market served by the coach industry. Provision of school services by hired-in buses and coaches (which may in some cases be restricted to pupils of a specific school or education authority) is also included”⁸, but the rearrangement of the transportation sector required here makes us to work just with buses, minibuses, double-deckers, articulated single-deckers, ‘independents’ and/or ‘illegal’, etc. – it doesn’t matter if the whole or parts of it is private or public ownership - supposed to serve a city and/or metropolis; i.e., local, point of origin, to fit the problem rather than the other way around.

The overall responsibility for transport policy is placed under local public authorities, let us say State or Third Person, and this Third Person need the so called “market gearing” to rule the

⁵ MARX, Karl. *Capital*. Volume II, Moscow: Progress Publishers, 1986, p. 53.

⁶ MARX, Karl. Op. cit, pp. 57.

⁷ MARX, Karl. Op. Cit, p. 57.

⁸ WHITE, Peter. *Public Transport: its planning, management and operation*. London: Routledge Taylor & Francis Group, 2009, p. 17.

public transport. It unnecessary to discuss the efficiency of both gearing because it is well known the existing problems this sector brings to the collective. For example, White says that:

A quasi-independent role is played by the Commission for Integrated Transport (CfIT), which provides inputs to government policy and responses to its implementation. Its role in the 1998 Transport White Paper was defined as 'to provide independent advice to Government on the implementation of integrated transport policy, to monitor developments across transport, environment, health and others sectors and review progress toward meeting our objectives'.

Two other government departments also have substantial influence on transport policy. The Department for Business, Enterprise and Regulatory Reform, DfBERR (formerly the Department for Trade and Industry, DTI) is involved in certain aspects of industrial strategy and the operation of competition policy, exercised through the Competition Commission, and the Office of Fair Trading (OFT). This aspect has gained increasing importance in the transport sector since deregulation of local bus services.

The Treasury is responsible for overall allocation of expenditures between departments, fiscal policy such as fuel duty, and taxation of 'company car' benefits. The role of financial control has become particularly strong in the transport sector in recent years and tends to determine other aspects of poly... Although the majority of expenditure on transport is that incurred by private individuals in running of cars and fares paid to public transport operators, public finance plays a major role.⁹

If the agriculture sector needs the Third Person's subsidies to survive, the public transport sector comes right after and doesn't matter if it for regulating or deregulating the sector that in the rest of the world is well known as troublemaker.

The rearrangement that this sector requires to become "associated producers"¹⁰ implies to bring the theory of price as whole back to close contact with the theory of value because "*le coût marginal social d'un déplacement est simplement la valeur que le marché donne aux ressources mises en œuvre par ce déplacement. Mais dans une économie effédée par des distorsions, le prix du marché n'est en général pas égal au coût social, en sorte que le coût marginal social d'un déplacement n'est en général pas correctement évalué par la valeur que le marché donne aux ressources mises en œuvre par ce déplacement... Les problèmes d'optimum second sont définis en ajoutant des contraintes supplémentaires aux problème de maximisation ; les solutions correspondentes donnent les prix implicites correspondantes pour les diverses fournitures de transport ou de produits ordinaires*"¹¹, apart from, these economists should have observed an error – let us say "bad habit", "deceptive in form, is illusory in character", "Täuschung" – completely visible, so not implicit, i.e., the fact that the bus' users pay a tariff (a fixed price) for different routes / trips, that means, two users usually pay the same tariff for diffent distance actually travelled. Therefore, Marx not only had observed it, but also theorized it as "plus-value": "*the formula $M - C \dots P \dots C' - M'$, with its result $M' = M + m$ is deceptive in form, is illusory in character, owing to the existence of the advanced and self-expanded value in its equivalent form, money. The emphasis is not on the self-expansion of value but on the money-form of this process, on the fact that more value in money-form is finally drawn out of the circulation than was originally advanced to it*"¹², The next step we will see how to correct this bad habit.

⁹ WHITE, Peter. Op cit. p. 2-6.

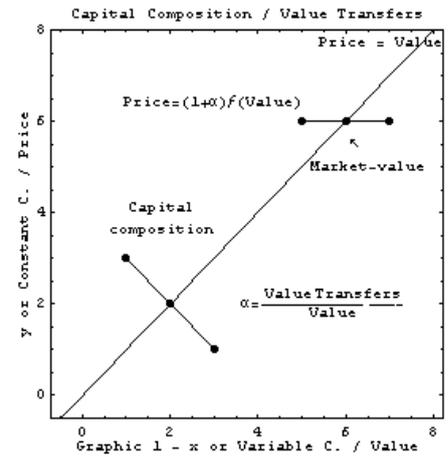
¹⁰ MARX, Karl. Op cit., volume III, "Freedom in this field can only consist in socialized man, the associated producers, rationally regulating their interchange with Nature, bringing it under their control, instead of being ruled by it as the blind forces of Nature; and achieving this with the least expenditure of energy and under conditions most favorable to, and worthy of, their human nature... Beyond it begins that development of human energy which is an end in itself, the true realm of freedom,..." , p. 820.

¹¹ PALMA, André et QUINET, Emile. **La Tarification des Transports: enjeux et défis**. Paris : Ed. Economica, 2005, pp. 19-27.

¹² MARX, Karl. Op cit., p. 62.

The Regulator Agency or “Associated Producers”

Combining all the entrepreneurs (public or private) of local asset (small, middle, and big – uneven developed) into the “Associated Producers” or Regulator Agency (RA) we will get something like table 1. The *value-composition* or capital composition of these capitals may well be illustrated in a graph (graphic 1) that also presents the prices, values, and transferences / absorptions of value.



This RA must collect information about each transportation unit (buses, minibuses, double-deckers, articulated single-deckers, ‘independents’, etc., private or public) and passenger’s route / trip (distance travelled; starting-ending points) and sum up them all, to divide the total cost included the perceptual part of each entrepreneur’s profit (Presumed Profit, Pp) to find out the price or tariff of each kilometer routed. This RA must be completely independent of the Third Person to be a real and efficient Regulator Agency – so not “quasi-independent” as White says – to carry on the response to wither the State or Third Person, and this way consolidating the Social Control, its direct opposite.

In order to include capitals into the Linear Programming problem as restrictions ($Cc_i + Vc_i + Pp_i \leq b_i$), where Pp =Presumed profit (let us suppose it being 10% of Cc or investment of capital) and b should be correspond to the sum of all three variables. The objective function must be the sum of each variable ($Cc_1 + Cc_2 + \dots = Cc_{Total}$;

Table 1- Transformation of values into price of production

Capitals	Cc	Vc	Sv	Value	P.rate%	Profit	Price	Part. on
				Cc+Vc+Sv			Cc+Vc+P	Transfers dem.(%)
I	3	1	1	5,0	50	2,0	6,000	1,000 33,3%
II	2	2	2	6,0	50	2,0	6,000	0,000 33,3%
III	1	3	3	7,0	50	2,0	6,000	-1,000 33,3%
Total	6	6	6	18		6	18	0 1
Cc - Constant capital				Production	Competition		Apropriation/consump.	
Vc - Variable capital				Offer			Demand	
Sv - surplus value (100%)				[in]			[out]	
Average rate of profit: $Svt/(Cct+Vct)$								

$Z_{Max} = Cc_{Total} + Vc_{Total} + Pp_{Total}$.

The solution of this problem makes primal (production maximization) match the dual (cost minimization). Conventional economic theorists would call it “Pareto’s optimum” and/or “fixed-point”; we just call it “value”, “market-value”.

Maximized the objective function we obtain the optimum value ($Z_{Max} = 12,6$; $Cc=1,1$; $Vc=1$; $Pp=0$; $Z_{Min} = 12,6$; $Cc=1,1$; $Vc=1$; $Pp=0$; $Z_{Max} = Z_{Min}$) dividing it by the total kilometers routed / tripped by all passengers, we obtain the price of the kilometer tripped. This must be multiplied by the quantity of kilometers tripped by the passenger and paid through magnetic card – cybercash; electronic ticket machine - at the moment this passenger get off the bus. Thus RA can broadcast data about the number of waiting passengers at the bus stop and also advertisings, notices, etc.

$$Z_{max} = 6Cc + 6Vc + 0,6Pp$$

Subject to

$$3Cc + 1Vc + 0,3Pp \leq 4,3$$

$$2Cc + 2Vc + 0,2Pp \leq 4,2$$

$$1Cc + 3Vc + 0,1Pp \leq 4,1$$

Where, Cc, Vc, Pp and b_i are non-negative.

Simplex table

	X_1	X_2	X_3	S_1	S_2	S_3	b_i
S_1	3	1	0,3	1	0	0	4,3
S_2	2	2	0,2	0	1	0	4,2
S_3	1	3	0,1	0	0	1	4,1
C_B	-6	-6	-0,6	0	0	0	Z
C_N				0	0	0	Z

$C^N \cdot C^B \cdot B^{-1} \cdot N$ $C^B \cdot B^{-1} \cdot b = Z$

Market value and the Unity

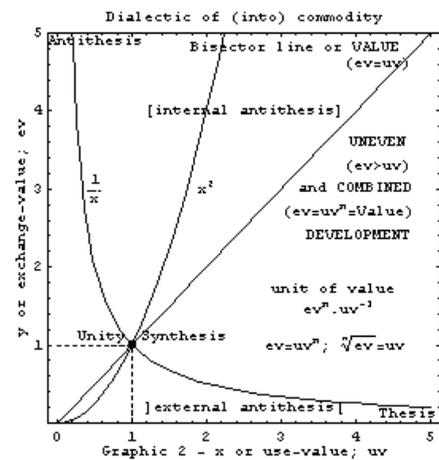
Why shall we call it “market-value”?

On one hand, the data collected by RA generates an exact (so not estimated) sector’s GDP, Gross Domestic Product that enables us to monitor its planning, management and operation, also the development across transport, environment, etc. Market-value means to unify value and price, it means the **unity**. The “market-value” turns itself into a socioeconomic indicator better than Burger

Index or any other indicator because it is not based on a commodity but on whole industrial sector. This newest RA may promote the real and easiest *combined* (synthesis - combining of separate elements into a complete whole) *and uneven or unequal* (diversity) *development* withering the State or Third Person. Furthermore, this RA brings back the so forgotten “agent of the general circulation of commodities... Thus forming the link in the general chain of metamorphoses taking place in the world of commodities”¹³

The other hand makes visible the so called Adam Smith’s ‘invisible hand’, that means, users shall determinate since the unit of transport to whole RA, even the disuse of particular unit of transport (car ownership); these empirically based data open the doors to all conventional economists to realize or to form into a body the so called “implicit price” (*un longue tradition de calcul de prix implicates dans des modèles d’équilibre general*). Otherwise, “value may be an abstraction but it is not a secret. The concept of a woman, a man, or food is an abstraction but every day real men and women eat real food or really die for lack of it, This apparent [to all but economists] without knowing their names”¹⁴, here all we have to do is not miss this theoretical and historical bus because “market-value” certainly reverses the way market’s blind forces have priced value till the present moment.

To finalize, taking this theoretical and historical bus we can answer affirmatively the supposed question – “Why Marxist economics should be taught but probably won’t be!”¹⁵ – because now the “intrinsic and instrumental aims of education” make a **unity**, the unity that Marx once claimed when explaining the “Defects of the Total or Expanded form of value”, that is, “the defects of the expanded relative value-form are reflected in the corresponding equivalent form. Since the bodily form of each single commodity is one particular equivalent form amongst numberless others, we have, on the whole, nothing but fragmentary equivalent forms, each excluding the others. In the same way, also, the special, concrete, useful kind of labour embodied in each particular equivalent, is presented only as a particular kind of labour, and therefore not as an exhaustive representative of human labour generally. **The latter, indeed, gains adequate manifestation in the totality of its manifold, particular, concrete forms. But, in the case, its expression in an infinite series is ever incomplete and deficient in unity**”¹⁶.



The metaphor used by Keynes – “the professional investment [De te fabula narrator!] may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly correspond to average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the others competitors, all of whom are looking at the problem from the same point of view. It is not the case of choosing those which, to the best of one’s judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest.” – may well represent the unity we have talked about (see graphic 2) . He said: “we have reached the third degree [y=f(x³)] where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practise the forth, fifth and higher degree [y=f(xⁿ)]”¹⁷; may be Keynes thought he had moved

¹³ MARX, Karl. *Capital*. Volume II, Moscow: Progress Publishers, 1986, pp. 557-58.

¹⁴ FREEMAN, Alan and CARCHEDI, Guglielmo. *Marx and Non-equilibrium Economics*. London, Edward Elgar Publishing Limited, 1st edition, 1996, p. xvi.

¹⁵ CLARKE, Peter and MEARMAN, Andrew. *Why Marxist economics should be taught but probably won’t be*. In: *Capital & Class*, n° 79, Spring 2003, pp. 55-80.

¹⁶ MARX, Karl. *Capital*. Volume I, Moscow: Progress Publishers, 1986, pp. 69-70.

¹⁷ KEYNES, Op cit., p. 156.

forward Marx by using the “third degree”, therefore the second degree, $y=f(x^2)$, is enough to understand and to use Marx’s method – the dialectic.