Value, Price of Production and Market Price

Freeman, Alan

The University of Greenwich

April 2000

VALUE, PRICE OF PRODUCTION AND MARKET PRICE

Alan Freeman

The University of Greenwich

afreeman@iwgvt.org

1999

ABSTRACT

This entry, submitted to the *Encyclopedia of Political Economy* but not included in it, contrasts the temporal and simultaneist approaches to the formation of price and its relation to value.

Unpublished Manuscript originally submitted to O'Hara, Phillip A (1999) *The Encyclopaedia of Political Economy,* pp318-320. London and New York: Routledge. ISBN 0-415-15426-X

Keywords: price, value, transformation, Marx, TSSI

VALUE, PRICE OF PRODUCTION AND MARKET PRICE

The Ricardian school could not reconcile the idea of value as a 'natural' or regulatory price with its determination by labor-time. The NEOCLASSICAL escape-route, which sought to define value in terms of use-value, spawned further contradictions forcibly resolved in GENERAL EQUILIBRIUM.

A radically different idea appears in Marx's sharp distinction between value and exchange value. Value does not directly determine exchange ratios but is the substance of which these exchanges consist – the 'thing which' money buys. This suggests that when the products of labor acquire prices, the value previously created by this labor is redistributed so that each money price represents a definite magnitude of labor-time – the TRANSFORMATION or form of appearance of this labor-time. Since even a small discrepancy implies that labor is not the sole source of value, it is essential to ascertain if this value concept yields quantitatively exact results. *Capital* I, Ch 5 seeks to establish that price-value deviations cannot create new value so that a specific commodity – LABOR-POWER – which is 'both within the sphere of circulation and without it' must be the source of value.

Many phenomena cause market prices (actual sale prices) to deviate from values including rent, monopoly, interest, and changes in nominal price. However controversy has centered on prices of production – Marx's term for an ideal price expressing the tendency for profit rates to equalise under conditions of complete mobility. *Capital* III, chapter 9, sets out to show this special case constitutes no exception to the zero-sum character of circulation established in Volume I; this is the import of the famous equalities of total price with total value, and of total profit with total surplus value. These signify that profit rate equalisation, the rock which shipwrecked the Ricardians, can neither create new value nor transfer existing value between classes.

The counter-attack spearheaded by Böhm-Bawerk led in 1897 to Komorzinsky's allegation that Marx failed to transform the 'value of constant capital'. Drawing on Dmitriev and Tugan-Baranowsky, von Bortkiewicz's 1906-7 response – especially following Sweezy's 1942 endorsement – became the standard for Marxists and non-Marxists alike.

Bortkiewicz did not deny the criticism but added the damning claim that internal inconsistency in Marx's procedure rendered the mistake ineradicable, justifying the substitution of his own quite distinct procedure for Marx's. Subsequent authors systematically omitted the distinction so that the construction is universally attributed to Marx, its flaws providing the justification for mainstream exclusion of Marx. A growing body of work suggests that Marx's own treatment suffers neither from the omissions nor the contradictions attributed to it, focussing renewed attention on Marx's own concept of value and price.

For Bortkiewicz the decisive issue is not just an alleged failure to transform input prices but the very idea that these could differ from output prices. In consequence he constrains them to be equal, excluding all change during production. He substitutes 'mutual' determination, taken from Walras and Marshall, for Marx's 'successivist prejudice'

> Marx…held firmly to the view that the elements concerned must be regarded as a kind of causal chain, in which each link is determined, in its composition and its magnitude, only by the preceding links...Modern economics is beginning to free itself gradually from the

> successivist prejudice, the chief merit being due to the mathematical school led by Leon Walras. (Bortkiewicz 1906:23-24)

He thus redefines prices – as in General Equilibrium – as exchange ratios in a hypothetical stationary economy yielding profits proportional to annual production costs.

His second redefinition supplied what became, in one form or another, the received definition of value for most of his century: a set of exchange-ratios in a second hypothetical economy yielding profits proportional to labor-time. Values and prices were thus defined to be the solutions to two sets of simultaneous equations – giving rise to the appelation 'dualist' or 'two-system' – representing two hypothetical economies, neither one trading nor producing as the actual economy trades or produces, but each with a use-value structure loosely derived from it. Transformation then consists of specifying an algebraic relation between these two ideal systems. There is widespread agreement that, so specified, this cannot be done without great damage to the integrity of Marx's work.

However this is not the only possible interpretation. The 'New Interpretation' argues that variable capital, a money sum expended by the capitalists, represents a magnitude of value distinct from the value of wage-goods. 'Single-system' interpretations extend this to constant capital whose value is distinct from the value of the means of production. Following Marx, value may be defined as the immediate sum of the value indirectly represented by the price of inputs and directly by the living labor acting on them:

> The difference between cost-price and value, insofar as it enters the price of the new commodity independently of its own production process, is incorporated into the value of the new commodity as an antecedent element. (Theories of Surplus Value III:167)[1]

This possibility is inherent even in the simultaneous framework (see LABOR THEORY OF VALUE). Though it confirms Marx's contested assertions, most Marxism ignores it and has spawned an inventive literature in support of the dual definition. Sweezy (see ECONOMIC SURPLUS) presents values as the prices of a prior historical stage of 'Simple Commodity Production', a phrase not used by Marx. He views Marx's method of abstraction as the definition of complete systems constituting successive approximations to really-existing capitalism. The SURPLUS APPROACH likewise treats values as the prices of a hypothetical stationary economy using existing technology but making no profits.

These interpretations met the difficulty that, since the connection between their value and price systems is synthetic, it appears metaphysical. Initially, the fact that price so defined is determined by 'physical conditions' fuelled SRAFFA'S critique of marginalism, since 'margins' cannot further determine what is already fully specified. Though many Marxists welcomed this critical advance, Samuelson and later Steedman's insistence that the same objection applies to 'values' – so defined – turned the question around.

However Sraffa's conclusions are devastating precisely because they can be drawn from marginalism's own – simultaneous – algebra. A comparable critique of Marx's concept must establish that it too depends on this algebra. But on the basis of Marx's CIRCUIT OF SOCIAL CAPITAL – a succession of purchase, production and sale

[1] Marx here uses 'cost-price' for what is later termed 'price of production'.

under varying conditions – distinct categories of value, price of production and market price can be defined in any given period without recourse to stationarity.

This 'temporal single-system' interpretation also serves to illustrate the most radical development which arises from Marx's point that price of production is not an actual exchange rate:

> Between these spheres that approximate more or less to the social average, there is again a tendency to equalization, which seeks the 'ideal' mean position, i.e. a position which does not exist in reality. (CIII p273)

Since all purchases are in fact at market prices, the substantive problem is perhaps neither to predict one price from another, nor explain anything from an ideal economy. Rather we may ask how, in an actual economy, commodities can transmit a definite quantum of labor-time to the product even though their values are effaced in the exchange with money.

Suppose that at the start of production £1 represents 1 hour and that two capitalists C1 and C2 have spent £30 and £40 on means of production and £5 each on wages, their workers adding 15 hours of living labor to their products. If these sell for £40 and £60 respectively their *value* is given in hours as

C1: $30_C + 15_{V+S} = 45_{V+C+S}$

C2: $40_C + 15_{V+S} = 55_{C+V+S}$

We may express the *market price* (sale price) of these products, totalling £100, in hours if we are able to determine what Ramos terms the *Monetary Expression of Labour*, being the value represented in exchange by a unit of money. For example if we further suppose C1 and C2 constitute the whole of production, then products embodying 100 hours have sold for £100 so that £1 as before represents 1 hour. Market prices are then 40 and 60 hours. In exchange, therefore, C1 sells 45 hours for money representing 40 hours, transferring 5 hours to C2 who sells 55 hours for 60 hours.

The *price of production* is an ideal price expressing what would happen if goods sold at an equal profit rate. Surplus value for C1 in hours is 15_{V+S} less the 5 hours represented by the £5 wage, namely 10 hours, as is C2's surplus value; hence the total is 20 hours. Profit must necessarily be the same in total: it is respectively 5 and 15, reflecting the transfer of 5 hours from C1 to C2. 20 divided by the advanced capital of $70_C + 10_V = 80_{C+V}$ gives the *general rate of profit* of 25%. The 'price rate of profit' is thus equal to the 'value rate of profit', responding to a further objection of Bortkiewicz's. Price of production of C1's output is then $35_{C+V} \times 1.25 = 43.75$ and that of C2 is $45_{C+V} \times 1.25 = 46.25$, either in £ or hours.

This meets both 'equalities' and differs from Bortkiewicz in that the value transmitted to the product by constant capital is given by the actual money paid, not by an ideal input price dogmatically equated to output price.

References

All other cited authors referenced in Freeman, A. and Carchedi, G (1995). *Marx and Non-Equilibrium Economics*. London and Vermont: Edward Elgar.

---

[2] Marx here uses 'cost-price' for what is later termed 'price of production'.

[3] Technically, if the norm of the transition is less than 1.

Böhm-Bawerk, E. von (1984), 'Karl Marx and the Close of his System' in Sweezy (1984).

Bortkiewicz, L. von (1952), 'Value and Price in the Marxian System'(part I), in *International Economic Papers,* 1952(2), 5-60.

________ (1984), 'On the Correction of Marx's Fundamental Theoretical Construction in the Third Volume of *Capital*', in Sweezy (1984)

Dmitriev, V.K. (1974), *Economic Essays on Value, Competition and Utility* (ed. D. M. Nuti) Cambridge: Cambridge University Press.

Komorzynsky, J. V. (1897), 'Der dritte Band von Carl Marx "Das Capital": eine Kritische Abhandlung über die Arbeitswerttheorie und die Socialistische Lehre vom Capitalsertrage', *Zeitschrift für Volkswirtschaft, Socialpolitik und Verwaltung*, 6:2.

Morishima,M. and Catephores, G. (1978), *Value, Exploitation and Growth*. London: McGraw Hill.

Pasinetti, L. (1977), *Lectures in the Theory of Production*. New York: Columbia.

Samuelson, P. A. (1970), 'The Transformation from Marxian Values to Competitive "Prices": A Process of Rejection and Replacement', *Proceedings of the National Academy of Sciences,* Vol 67, pp423-425.

Seton, Francis (1957), The 'Transformation Problem', *Review of Economic Studies*, 24, pp149-160.

Shaikh, Anwar (1973), 'The So-called Transformation Problem: Marx vindicated', mimeograph, New School for Social Research, New York.

Shibata, K. (1933), 'The Meaning of the Theory of Value in Theoretical Economics', *Kyoto University Economic Review*, 8(2), 49-68.

Sraffa, Piero (1960), *Production of Commodities By Means Of Commodities: Prelude to a Critique of Economic Theory*. Cambridge and New York: Cambridge University Press.

Steedman, Ian (1977), *Marx after Sraffa*. London: New Left Books.

Sweezy, P.M. (1970), *The Theory of Capitalist Development; Principles of Marxian Political Economy*, New York, Modern Reader Paperbacks (l970) and London (1942).

________ (ed.), (1984), *Karl Marx and the Close of his System*, Philadelphia: Orion Editions

Tugan Baranowsky, M. (1905), *Theoretische Grundlagen des Marxismus*, Duncker & Humbolt, Leipzig.

Wolff, R., Roberts, B. and Callari, A. (l982), 'Marx's (not Ricardo's) "Transformation Problem": A Radical Reconceptualization', *History of Political Economy*, Vol 14 No. 4., pp 564-582.