UNIVERSITY OF INSUBRIA

UNIVERSITY OF LEEDS

17th ESHET Annual Conference
May 16th-18th 2013, Kingston University, London

Capital's *Pons Asinorum*

The Rate of Turnover in Karl Marx's Analysis of Capitalist Valorisation

Hervé BARON and Marco VERONESE PASSARELLA




Contents: structure of paper/presentation

Contents: review of literature (main references)

- **Desai M. (1979)**, *Marxian Economics*, Basil Blackwell Publisher.
- **Dos Santos P. L. (2011)**, 'Production and consumption credit in a continuous-time model of the circuit of capital', *SOAS discussion paper*.
- **Duménil G. (1975)**, 'L'expression du taux de profit dans "Le Capital"', *Revue Économique*.
- **Fichtenbaum R. (1988)**, '"Business cycles", turnover and the rate of profit: an empirical test of Marxian crisis theory', *Eastern Economics Journal*.
- **Foley D. (1986)**, *Understanding Capital: Marx's Economic Theory,* Harvard University Press.
- **Lapavitsas C. (2000)**, 'On Marx's analysis of money hoarding in the turnover of capital', *Review of Political Economy*.
- **Morishima M. (1973)**, *Marx's Economics: A Dual Theory of Value and Growth*, Cambridge University Press.
- **Webber M. J. and Rigby D. L. (1986)**, 'The rate of profit in Canadian manufacturing, 1950-1981', *Review of Radical Political Economics*.

Engels vs. Marx? Different formulations of 'S'

- The 'mass of surplus-value', Marx in Ch. 9 of Vol. 1:

(1) $S_i = s_i V_i = s_i L_i v_i \qquad (i = 1,2,3,\ldots,k)$

where: s_i = rate of surplus-value, V_i = variable capital, L_i = quantity of labour units, v_i = unit value of labour-power (all referred to *i*-th industry)

- «[T]he time required for the turnover has the effect that the whole capital cannot be simultaneously employed in production. […] The shorter the turnover time, the smaller is this idle portion of capital compared with the whole; the greater therefore is the surplus-value appropriated, other condition being equal» (*Capital*, Vol. 3, Ch. 4).
But «**[t]here was no more to Chapter 4 than the title**» (Engels, *Preface*)!

- Engels in Ch. 4 of Vol. 3 and Marx in Vol. 2:

(2) $S'_i = n_i S_i = n_i s_i L_i v_i$

where n_i = rate of turnover of capital of *i*-the industry

Rate of turnover and the rate of profit

- Standard equation (Marx in Vol. 3):

(4) $$r = \frac{s}{\frac{C}{V} + 1} = \frac{s}{q + 1}$$

(where: C = constant capital)

- Engels in Ch. 4, Vol. 3 (under a simple reproduction regime, 'short run'):

(5) $$r_i' = \frac{s_i'}{q_i + 1} = n_i \cdot \frac{s_i}{q_i + 1}$$

- Competition among capitals in the 'long run':

(5*bis*) $$r' = \hat{n} \cdot \frac{s}{q + 1}$$

with: $\hat{n} = \frac{\sum_{i=1}^{k} n_i V_i}{\sum_{i=1}^{k} V_i}$, $s = \frac{\sum_{i=1}^{k} S_i}{\sum_{i=1}^{k} V_i}$, and $q = \frac{\sum_{i=1}^{k} C_i}{\sum_{i=1}^{k} V_i}$

Time of turnover and its components

- Time of production, t^P: working time, L, and break time, t^B.
- Time of circulation, t^C: financing time, t^F, and realization time, t^S (namely, D – M and M′ – D′).
- As a result, the total time of turnover, t^R, is:

(6) $$t_i^R = t_i^P + t_i^C \qquad \text{where: } t_i^P > 0, t_i^C \geq 0$$
$$= \left(L_i + t_i^B\right) + \left(t_i^S + t_i^F\right)$$

The 'temporal composition' of capital

- The rate of turnover of capital is:

(7) $$n_i = \frac{1}{t_i^R} = \frac{1}{t_i^P(1+\tau_i)}$$

where: $\tau_i = \frac{t_i^C}{t_i^P}$ and $t_i^P > 0,\ t_i^C \geq 0$

- The annual rate of profit is:

(8*bis*) $$r_i' = \frac{\hat{s}_i}{\theta_i(1+\tau_i)(1+q_i)}$$

$$\left[\theta_i = \frac{t_i^P}{t_0^P} \text{ and } \hat{s}_i = \frac{s_i}{t_0^P}\right]$$

we call $\theta_i(1 + \tau_i)$ the **'temporal composition' of capital**

The 'temporal composition' of capital (continue)

1. The higher (lower) the temporal composition of capital of the i-th industry compared to that of other sectors, the lower (higher) the extracted annual mass of surplus-value compared to that of other sectors.

2. The annual rate of surplus-value extracted by both the i-th industry and the whole economy increases (decreases) as the temporal composition of capital decreases (increases).

3. The general annual rate of profit of the whole economy increases (decreases) as the average temporal composition of capital decreases (increases).

4. Therefore, insofar as the temporal composition is accounted for, the impact on the annual general rate of profit of those sectors which affect the rate of turnover of capital, and which are usually regarded as 'unproductive' (such as banking and finance) become ambiguous…

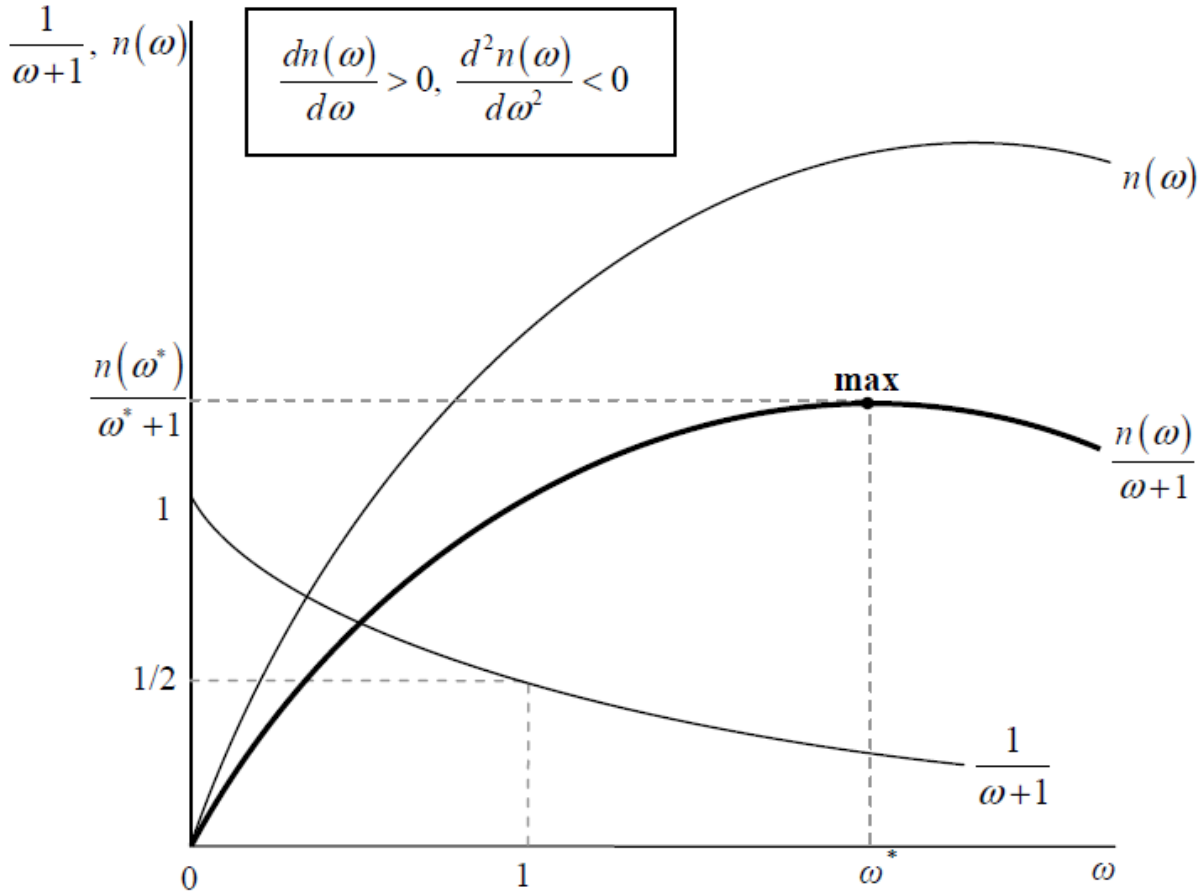
Remarks

- The aim of this article was twofold: first, to bridge a gap in the literature dealing with the economic though of Marx; second, to provide a re-definition of several Marxian concepts on the basis of the role played by the rate of turnover of capital.

- We achieved the following results:
  1. The work of Friedrich Engels on the original manuscripts of the Vol. 2 of Capital must be regarded as more than a simple editing (see MEGA^2).
  2. The Marxian rate of profit should be modified to include not only the turnover of capital (Engels), but also the long-run equalization (and capital re-investment).
  3. The rate of turnover and hence profits are affected by the conditions of the banking-financial sector, through its effect on the investment activity.
  4. The final effect of an increase in the share of labour units employed in the banking-financial sector on the rate of profit is ambiguous.
  5. This is a further (temporary) 'countertendency' to the Marxian law of the tendential fall of the rate of profit. Financialization of the last three decades is the *pons asinorum* that 'capitalists' have gone through to sustain the profitability of capital.

'Optimal' share of unproductive labour units?

$$\frac{dn(\omega)}{d\omega} > 0, \quad \frac{d^2 n(\omega)}{d\omega^2} < 0$$



$$r' = \frac{n}{\omega + 1} \cdot s$$

where: $\omega = \frac{V_u}{V_p} = \frac{L_u}{L_p}$

Rate of profit under enlarged reproduction

- The annual mass of surplus-value is:

(A.4) $$S'' = \underset{t_1}{s \cdot V_p} + \underbrace{s \cdot \left[V_p \cdot (1+\beta \cdot s) \right]}_{t_2} + \underbrace{s \cdot \left[V_p \cdot (1+\beta \cdot s)(1+\beta \cdot s) \right]}_{t_3} + \ldots =$$

$$= sV_p \sum_{t=1}^{n} (1+\beta s)^{t-1}$$

where β is the constant rate of 'saving' (re-investment)

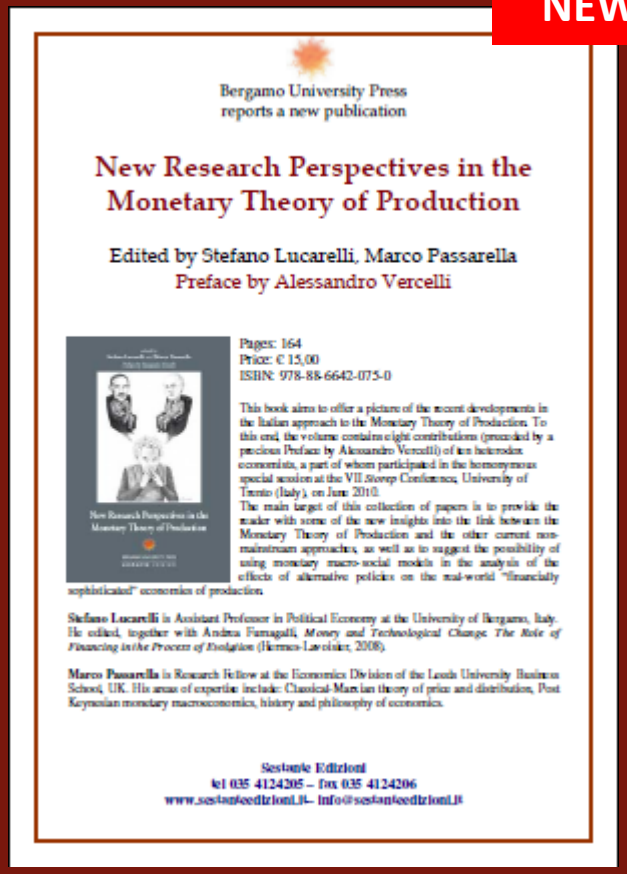
- The annual general rate of profit is:

(A.6) $$r'' = \frac{sV_p}{C_p + C_u + V_p + V_u} \cdot \sum_{t=1}^{n} (1+\beta s)^{t-1}$$

Thank you

Heterodox Economics

NEW



Bergamo University Press
reports a new publication

New Research Perspectives in the Monetary Theory of Production

Edited by Stefano Lucarelli, Marco Passarella
Preface by Alessandro Vercelli

Pages: 164
Price: € 15,00
ISBN: 978-88-6642-075-0

This book aims to offer a picture of the recent developments in the Italian approach to the Monetary Theory of Production. To this end, the volume contains eight contributions (preceded by a precious Preface by Alessandro Vercelli) of ten heterodox economists, a part of whom participated in the homonymous special session at the VII *Storep* Conference, University of Trento (Italy), on June 2010.
The main target of this collection of papers is to provide the reader with some of the new insights into the link between the Monetary Theory of Production and the other current non-mainstream approaches, as well as to suggest the possibility of using monetary macro-social models in the analysis of the effects of alternative policies on the real-world "financially sophisticated" economies of production.

Stefano Lucarelli is Assistant Professor in Political Economy at the University of Bergamo, Italy. He edited, together with Andrea Fumagalli, *Money and Technological Change. The Role of Financing in the Process of Evolution* (Hermes-Lavoisier, 2008).

Marco Passarella is Research Fellow at the Economics Division of the Leeds University Business School, UK. His areas of expertise include: Classical-Marxian theory of price and distribution, Post Keynesian monetary macroeconomics, history and philosophy of economics.

Sestante Edizioni
tel 035 4124205 – fax 035 4124206
www.sestanteedizioni.it - info@sestanteedizioni.it

Visit for info:

www.marcopassarella.it/en