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**TRINITY COLLEGE DEPARTMENT OF ECONOMICS
WORKING PAPER 13-19**

Credit, the Turnover of Capital, and the Law of the Falling Rate of Profit: A Critical Note.

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December 2013

Abstract

This brief paper argues that the total turnover period of capital, comprising both its time of production and circulation, has been almost totally ignored in the Marxian literature as an important counteracting factor to the law of the declining rate of profit. It is not mentioned at all by Marx in his famous Chp. XIV, Vol. III of *Capital* where he discusses other important counteracting forces, nor by Engels [in this particular context] who edited both Vols. II and III. Moreover, this note contends that had Marx lived to re-write Vols. II and III, he would have explicitly connected the expanding role of credit [associated with the development of capitalism] to a significant reduction in the turnover period of capital, thereby boosting the rate of surplus-value, and countering, in an highly erratic and contradictory manner, the fall in the rate of profit.

J.E.L. Codes: B10; B14; B24

Keywords:

I. Introduction.

In a recent article in this Journal, Ramirez (2012) argued that Marx viewed the law of the declining rate of profit to be just a “tendency” which would prevail in the long run, but one that would be subject to a number of counteracting forces which in the short to medium run would “cross and annul the effect of the general law” (see *Capital* III, Chp. XIV, pp. 232-40; for further details, see Sowell, 1967). Among those factors listed by Marx are increases in the intensity (“speedup”) of exploitation (which raises the rate of surplus value, $s'=s/v$), depression of wages below the value of labor-power (v), the growth of the relative surplus-population which encourages the expansion of labour-intensive industries (again raising s'), and the growth of foreign trade [and the export of capital] (*Ibid.*, Chp. XIV).¹ Marx discussed this ‘law’ in the context of cyclical crises, and although some Marxist scholars contend that Marx viewed the fall in the rate of profit as the sole or primary explanation for the onset of economic crises (e.g., see Kliman, 2011; Dobb, 1973; and Mandel, 1971 [orig., 1968]), other scholars strongly disagree and argue that Marx had several competing explanations for business (industrial) cycles, including explanations based on disproportions between the various branches of production arising from the anarchy of capitalist production as well as those /associated with under-consumptionist tendencies (see Brewer, 1990; Howard and King, 1985; Ramirez, 2007; Sherman and Evans, 1984; and Sweezy, 1970 [1942]) .

However, there is one highly important counteracting factor that is not mentioned at all by Marx in Chapter XIV, Vol. II, nor, surprisingly, by Engels who edited both Volumes II and III of *Capital*; neither is it mentioned or emphasized by most prominent Marxian scholars with the possible exception of Mandel (1971); it is, however, implicit in Marx’s analysis of the recurring

¹ See Hunt (2002) for parallels between J.S. Mill’s discussion of foreign trade and that of Marx, which paved the way for the works on European imperialism by Hobson, Lenin, and Luxemburg.

circuit of social capital in Chp. XVI, Vol. II of *Capital*, and Engels's presentation of it in Chp. IV of Vol. III [except for the title, it was written completely by Engels], viz., the effect of the turnover of capital on the law of the declining rate of profit. If Marx had lived to re-write Chp. XIV of Vol. III, he would have explicitly included the effect of the turnover period on the rate of profit and connected it to the growing use of credit (in the form of bills of exchange and bank notes) associated with the development of capitalism, which he foresaw so presciently. The shortening of the turnover period is a direct result of the ever-rising social productivity of labor which expresses itself both in a marked reduction in both the time of production and circulation, thus boosting both the rate of surplus-value and profit.

This short article is organized as follows: Section II below highlights Marx's circuit of money capital and Engels's discussion of the turnover period in Chp. IV of Vol. III of *Capital*. Section III discusses the highly important but contradictory role of credit in reducing the turnover period of capital via a marked reduction in the circulation time of commodities. Section IV is the conclusion and summarizes the main points.

II. The Turnover Period of Capital.

In the Marxian reproduction scheme, the turnover period of total money-capital comprises both the time of production of surplus-value and the time of circulation of commodities, including labour-power (L) and means of production (MP). In Marx's notation, the circuit of money capital is: $M—C (L \ \& \ MP) \dots P \dots C'—M'$, where M and C denotes money and commodities, respectively, and the dots indicate that the process of circulation is interrupted by the production of surplus-value; "and C' and M' designates C and M increased by surplus-value" (see *Capital*, Vol. II, p. 23). The whole point of capitalist production is to continuously reproduce and expand the circuit of capital-value in the form of money to such a degree that "...The

process of production appears merely as an unavoidable intermediate link, as a necessary evil for the sake of money-making” (Vol. II, p.56). In this connection, Engels observes in Chp. IV, Vol. III of *Capital* that the turnover period of capital has been significantly reduced via improvements in the “methods of producing steel iron and steel, such as the processes of Bessemer, Siemens,...etc., [which have] cut to a minimum at relatively small costs the formerly arduous processes. The making of alizarin, a red dye-stuff extracted from existing coal-tar, requires but a few weeks, and this by means of already existing coal-tar dye-producing installations, to yield the same results which formerly required years” (p. 71). Similarly, the rising productivity of labour has reduced the time during which commodities are in transit via dramatic improvements in means of communication and transportation. He notes that, “The last fifty years have brought about a revolution in this field, comparable only with the industrial revolution...On land the macadamized road has been displaced by the railway, on sea the slow and irregular sailing vessel by the rapid and dependable steamboat...and the entire globe is girdled by telegraph wires. The Suez Canal has fully opened East Asia... to steamer traffic. The time of circulation of a shipment of commodities to East Asia , at least twelve months in 1847, has now been reduced to almost as many weeks” (Ibid).

More precisely, if we have two capitals (A and B) with the same value composition (c/v), equal rates of surplus-value, and equal working-days, then “the rate of profit of the two capitals are related inversely as their period of turnover” (Ibid., p. 72). A numerical example, borrowed from Engels’ exposition in Chp. IV, Vol.III will elucidate this important idea. Suppose that capital A is composed of a value of $80c + 20v = 100C$, and rotates twice per year with a rate of surplus value of 100 percent. At the end on year, the total value produced is : $160c + 40v + 40$, and the profit rate over the advanced capital, $100C$ --not the turned-over capital of 200 --is 40 percent.

Capital B, on the other hand, has the same rate of surplus value and value composition as capital A, viz., $160c + 40v = 200$ C, but is turned over only once per year, and yields a profit rate over the advanced capital of only 20 percent, half as much as capital A. The analysis can also be easily modified to include fixed capital so that only a portion of the existing fixed (e.g., machinery, warehouses) constant capital (as opposed to circulating constant capital), say 10 percent, is transferred to the commodities produced in any given number of turnovers of capital (see Vol. II, pp. 293-4).²

Engels, through his meticulous editing of the unfinished and almost illegible scattered manuscripts left behind by Marx, is also more precise and consistent than Marx was in Vol. III—Marx actually wrote Vol. III before Vol. II-- in laying out algebraically an alternative formulation to Marx's formula below,

$$p' = s'v/(c + v) \quad (1)$$

where p' is the rate of profit, s' the rate of surplus value (s/v), and v in the numerator is the variable capital advanced in each turnover (a flow variable), while the v in the denominator is variable capital *initially* advanced (a stock variable). In this formulation, the two v 's are only equal if the turnover time is precisely one year and Marx in Vol. III was not always altogether

² Of course, it is possible for a significant "increase in the total outlay [of fixed] capital from the installation of expensive machinery" to raise the value of the advanced capital and thus lead to a fall in the profit rate which is calculated on the total capital [see Chp. 4, Vol. III, p p 70-71]. However, this is not a necessary outcome because, with the advance of capitalism, there is also a considerable increase in the social productivity of labour in both the consumer and capitals goods' industries. This latter development could conceivably cheapen the value of the advanced capital despite the massive increase in its material (physical) elements. In an important respect, this counter-argument can also be levied against Marx's contention that "the compensation of the reduced number of labourers [from 24 to 2 in his famous example] by intensifying the degree of exploitation has certain insurmountable limits It may... check the fall in the rate of profit, but cannot prevent it altogether" (Vol. III, p. 247). Why? Because the capital advanced to employ two workers may be the same or smaller than that required for 24 workers. The capital-value of $(c + v)$ in the denominator of the rate of profit formula, p' , could remain the same if the fall in v is just offset by the rise in c , or, actually decrease if both $(c + v)$ fall due to a substantial cheapening of the material elements of constant capital. The latter is aided and abetted by the expanding role of foreign trade in the evolution of capitalist development which, according to Marx, further cheapens the material elements of c and v "...[and] tends to raise the rate of profit by increasing the rate of surplus-value and lowering the value of constant capital" (see Vol. III, p. 237).

clear or consistent about this. Engels' more precise formulation, given in Chp. IV, p. 74, is as follows,

$$p' = s'nv/C \quad (2)$$

where n refers to the number of turnovers and C is the total stock of capital initially advanced, including fixed capital. The product $s'nv$ represents the surplus-value produced during a given time period (year), and, *ceteris paribus*, the greater the number of turnovers, the greater the amount of surplus-value generated per year and thus the higher the profit rate.

III. Credit and the Turnover Period.

With the development of capitalism [and the rising social productivity of labour], Marx never tired of pointing out throughout the three volumes of *Capital* (and also in *Theories of Surplus Value* and the *Communist Manifesto*), that the compelling forces of “money-making” and competition would drastically reduce both the time of production and circulation, thus endogenously generating a powerful offset to the fall in the rate of profit. Moreover, he explicitly pointed out that the expanded use of credit in the form of bills of exchange [the “derivatives” of his time!]³ would reduce significantly the time during which commodities are in transit, thus expediting their sale (realization of surplus-value) and increasing the rate of surplus-value (and profit) [see Chp. XVI of Vol. II; and Chps. XXVII and XXX of Vol. III]. In this connection, O'Hara (2002) correctly observes that, although Marx viewed the sphere of money and credit as relatively autonomous from the sphere of production (where surplus-value is actually produced), he nevertheless believed that the development of the credit system had a decisive effect on

³ With the development of commercial and banking credit money begins to serve more and more as a means of payment in the sense that commodities are not sold for actual money, but for a written promise to pay at some agreed upon future date (essentially a derivative financial instrument). Marx, and his contemporaries, refer to these “promises” as bills of exchange, and they were commonly used by capitalists to settle debts, purchase goods, or presented to banks for actual money, albeit at a discount—essentially a bank loan. See Marx's discussion in Chp. XXX of Vol. III of *Capital* (pp. 479-481).

economic activity and the production of surplus-value (see also Nelson, 1999; and Mandel, 1971). In Marx's words, "...credit accelerates the velocity of the metamorphoses of commodities and thereby the velocity of money circulation"(p. 436). Later, in Chp. XXX of Vol.III, he connects explicitly the expanded use of credit with the development of the productive power of social labour and production on an expanded scale. He observes presciently that, "Production on a large scale and for distant markets throws the total product into the hands of commerce; but it is impossible that the capital of nation should double itself in such a manner that commerce should itself be able to buy up the entire product with its own capital and sell it again. Credit is...indispensable here; credit, whose volume grows with the growing...value of production and whose time duration grows with the increasing distance of markets...The development of the production process extends the credit, and credit leads to an extension of industrial and commercial operations" (p. 481).

It is readily apparent from the textual evidence presented in Vol.III (and in Vol. II of *Capital*) that Marx viewed the credit system as playing a critical role in both shortening the turnover time and expanding the circuit of capital beyond national borders; he also believed, correctly, that it would occur in a highly contradictory and chaotic manner; that is, the excessive use of bank and commercial credit enables capitalist production to expand (momentarily) beyond its natural limits (as determined by the financial needs of productive accumulation) before the inevitable and often unexpected crisis occurs; that is, "financialization" of the economy via excessive credit intermediation nurtures and sustains the illusion of a smooth and continuous reproduction process of capital up to the eve of the crisis; in Marx's words, "the whole [credit] process becomes so complicated, partly by simply manipulating bills of exchange, partly by commodity transactions for the sole purpose of manufacturing bills of exchange [speculative excess], that the

semblance of a very solvent business with a smooth flow of returns can easily persist even long after returns actually come in only at the expense partly of swindled money-lenders and partly swindled producers. Thus business always appears almost excessively sound right on the eve of a crisis” (p. 484).

For Marx, excessive credit creation, fueled by moral hazard and the financial innovations of his time, played a critical and growing role in the reproduction of social capital on an extended basis, but given the decentralized and anarchic nature of capitalist production, it did so in a highly erratic and contradictory manner which only postponed the inevitable day of reckoning.⁴ This inherent tendency of a bank-based system of credit intermediation to create periodic cycles of excessive credit creation that are decoupled from the real accumulation of capital is a hallmark of mature capitalism. In light of Marx’s incisive and prescient analysis in Chp. XXX of Vo. III, one cannot help but draw parallels with the onset and aftermath of the subprime debacle of 2007-2008. The speculative frenzy generated by an increasingly decoupled system of finance (based on mortgage-backed securities and CDOs) highlights a major contradiction of mature capitalism, viz., it is a system that “...has no endogenous means to guarantee an adequate level of private investment, yet by the same token, cannot tolerate any rise in wages that would erode the profits of the owning class. This has left the system dependent upon ...credit-driven booms and bubbles followed by crisis once the expansion of financial claims [ends abruptly]” (see Beitel, 2008, p. 42).⁵

⁴ In Chp. XXVII of Vol. III entitled, “The Role of Credit,” Marx is almost prophetic in his discussion of the formation of joint stock companies and the separation of ownership from management, and implicitly hints at the important role of moral hazard in the excessive speculation that emerges just before the onset of the crisis. He writes, “The credit system appears as the main lever of over-production and over-speculation in commerce because the reproduction process...is forced to its extreme limits, and is so forced because a large part of the social capital is employed by people who *do not own it* [my emphasis] and consequently tackle things quite differently than the owner, who anxiously weighs the limitations of his private capital in so far as he handles it himself” (p. 441).

⁵ Mandel (1971) is one of the few Marxian scholars to emphasize that, “credit makes possible a considerable reduction in the rotation-time of capital...by stimulating the circulation and consumption of commodities over and

IV. Conclusion.

This brief paper has highlighted an important and neglected countering factor to the so-called law of the falling rate of profit, viz., the effect of the turnover of total capital—comprising both its production and circulation periods. With the development of capitalism, the turnover period of total capital decreases endogenously with the rising social productivity of labour—unless it is accompanied by a significant increase in fixed capital which would lengthen the turnover period and thus reduce the rate of profit calculated on the total advanced capital. Even if the latter occurs, however, the enormous increase in labour productivity associated with the introduction of fixed capital (sophisticated machinery) could significantly cheapen both the physical elements of constant and variable capital to such a degree that there is a reduction in the value of the advanced capital, thus raising the profit rate. Marx, given the unfinished state of Vol. III of *Capital* which was published posthumously, did not explicitly include the turnover of total capital as a counteracting factor in his famous Chp. XIV where he discusses other prominent offsetting forces. More surprisingly, perhaps, Engels failed to include an explanatory note in Chp. XIV when editing the work for publication, despite his own thorough discussion of the turnover period in Chp. IV of Vol. III. Finally, implicit in Marx's prescient analysis of the expanding role of credit in the course of capitalist development is its decisive role in reducing the rotation time of total capital which, in turn, acts as a powerful but contradictory lever countering the law of the declining falling rate of profit.

beyond the real purchasing power available, credit puts off the date of the periodical crises, aggravates the factors of disequilibrium, and therefore makes the crisis more violent when it breaks" (p. 238). However, he does not explicitly identify it as an important counteracting factor to the law of the declining rate of profit.

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