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ELEMENTS FOR A STUDY OF THE PROFIT RATE: FRANCE, 1896–2019

Rémy Herrera, Weinan Ding and Zhiming Long

ABSTRACT

Considering that the rate of profit constitutes a key indicator for the analysis of the evolution of capitalist economies, this chapter proposes to study the case of France from 1896 to 2019, that is, over 124 years in total. From a series of stock of productive capital reconstructed for the occasion, a rate of profit is calculated at the macroeconomic level within a conceptual framework faithful to Marx. Over this period of more than a century, three successive long waves are identified, as parts of a secular trend towards the fall in the French rate of profit. The latter, however, recovered several times during these three sub-periods, but finally reoriented downwards, with fluctuations of an amplitude tending to decrease more and more and a deployment in a decreasing spiral of French capitalism. This long-term downward trend is mainly due to the rise in the organic composition of capital.

Keywords: Rate of profit, long waves, productive capital, organic composition of capital, decomposition of the profit rate, France

INTRODUCTION

The idea of a downward trend in the rate of profit constitutes one of the central propositions of the Marxist theory of capitalist accumulation and crises. The accompanying debates have been and remain some of the most intensely polemical, when it is a question of knowing whether or not this “law” is justified in the element of theory or of showing empirically whether or not such a trend is observed. The literature devoted to the main capitalist economies reveals strong disparities in the estimation of profit rates, due in particular to the methodology for calculating this rate, different accounting perimeters relating to the variables used (including that of capital) or even the problem of the transformation of values.

There are sufficiently abundant and quality statistical databases on France to try to shed light on this question in the case of this country. Trying to be as faithful to Marx as possible, we first present the methods mobilized to construct the stock of productive capital and to calculate the rate of profit, then our results, as well as a breakdown of the historical period studied into three successive long waves, and finally a brief analysis of the reasons for the evolution of the French rate of profit as we calculate it. It should be noted that this reflection is only a draft intended to identify some preliminary elements for a more in-depth research of this subject. Nevertheless, our provisional results are already sufficiently consistent and interesting to be presented to the readers.

METHODS OF CONSTRUCTING THE PRODUCTIVE CAPITAL STOCK AND CALCULATING THE RATE OF PROFIT

For our empirical study of the French economy, we use the World Inequality Database (various years),¹ which spans from 1896 to 2019 for the variables we need. The definition of “capital” used by this statistical database includes not only (net) foreign assets, but also domestic assets,

which include, among others, agricultural land and other natural resources, as well as residential assets, taken as the sum of the values of the dwellings and those of their underlying land.

According to Marx, capital is fundamentally a relation of production. Things are only supports of it. Asking the question of whether or not an object constitutes capital therefore amounts to questioning the nature of this thing and the role it plays in the relation of production. Failing to distinguish between essence and phenomenon, mainstream (neoclassical) writers are mistaken in considering capital as a “factor” of a “production function” – alongside labor. For in order for money to be transformed into capital, it must first buy labor power, as well as materials and tools – the latter being themselves products of past labor.

The interpretation of capital retained by the database used here, which is that of the current Western national accounting system and which can be compared to the notion of “wealth,”² remains prisoner of this vision which we consider erroneous. This is the case when, for example, housing is included in the perimeter of the capital. However, contrary to this representation, the concept of capital in Marx has as its key the relation of production. For our part, we believe that these different connotations constitute a serious problem which requires reconstructing a series of stock of productive capital, as close as possible to Marx’s original intention³ – even if the available data do not allow us to separate unproductive labor from productive labor. We must therefore grasp the concept of capital from the productive sector alone.

Under these conditions, in the present empirical study, to get closer to the capital understood by Marx, we must proceed to two types of corrections: we decide, on the one hand, to deduce from the series of productive non-financial assets of the aggregated files the national accounts certain components, in this case, inventories, housing and armament systems; and, on the other hand, to retain the component of cultivated agricultural land drawn from the series of non-productive non-financial assets. It should also be noted that the capital defined here corresponds to private properties – the French State having net assets of zero, or even negative in certain years.

By retaining a hypothesis of homogeneity of the production and circulation processes, we can calculate a rate of profit, in the manner of Long and Herrera (2018) or Herrera and Long (2021), as follows:

$$r = \frac{\Pi}{K} = \frac{Y - (Z + T)}{K} \quad (1)$$

where Π is the profit, K the total capital advanced and r the ratio of these two variables, that is, the rate of profit. Profit Π is written as the difference between gross domestic product (GDP), denoted Y , and the sum of the remuneration of all workers, Z , and taxes T (import taxes included). The total advanced capital K is itself the sum of the fixed capital K_P , corresponding to the stock of productive capital, and the circulating capital, i.e., $Z + V$, with V representing the inventories. The data used to calculate the rate of profit is all expressed in current prices, with market prices as estimated in this database, World Inequality Database.

EVOLUTION OF THE PROFIT RATE OF THE FRENCH ECONOMY OVER 124 YEARS (1896-2019)

As can be seen in *Figure 1.*, the general profile of the evolution of the rate of profit of the French economy from 1896 to 2019 reveals a downward trend in the long term. But we also notice that this rate of profit fluctuates cyclically. *Figure 1.* indeed exhibits three distinct long waves, quite complete, *à la* Kondratieff (1935). These successive waves, each of which lasts nearly four decades (respectively 47, 37 and 39 years, in chronological order) all have in common to contain two peaks and two troughs, alternating them according to a sequence that can be described as follows: from an initial low point identified at the very beginning of the sub-period, the rate of

profit first begins by rising more or less quickly towards a peak, which corresponds to the maximum level of the wave, before to move clearly downwards towards a second low point, then to go up in the direction of a second high point, located however at a lower level than the previous one, and finally to go down again to reach a second trough (most often below the first).

The first long wave opens with the last year of the serious economic crisis that marked France at the end of the Nineteenth Century (i.e., 1897) and closes with the inflection point of the Second World War (that is, 1943). This period is characterized by the expansion of colonization and the completion of the transition of French capitalism from the free competition of markets to the oligopolistic concentration of capital. Over this sub-period, the rate of profit starts from its minimum level of 7.5 percent in 1897 (with the crisis ending the Nineteenth Century) to reach its maximum of 28.2 percent in 1925; then it fell to 12.4 percent in 1934 (real beginning of the Great Depression in France) and rose to 15.2 percent in 1940 (before the devastating effects of the defeat against Nazi Germany were felt). The second wave runs from 1944 – the year in which, during WWII, the rate of profit hit a low point of 9.8 percent – until 1980 – at the dawn of the neoliberal era in France. These limits correspond approximately to those of the “*Trente Glorieuses*” (the Glorious Thirty Years), the main feature of which was the strong intervention of the public authorities (including through planning) in order to accelerate the GDP growth rate and to set up the institutions of Social Protection. Over this sub-period, the maximum level was reached in 1949 at 18.3 percent, at the time of the post-war rebound, and the minimum level in 1968 at 9.4 percent (“May events”), just before the secondary peak of 1971 at 10.5 percent. The third wave of the French capital profit rate begins with the low point of 8.1 percent in 1981 and extends until the end of the sample. This is the period of neoliberal capitalism, which was not yet over in 2018. The peak of this wave is found in 1995 at 10.2 percent and its lowest trough in 2013 at 5.5 percent, located barely below the second peak of 2015 at 6.1 percent.

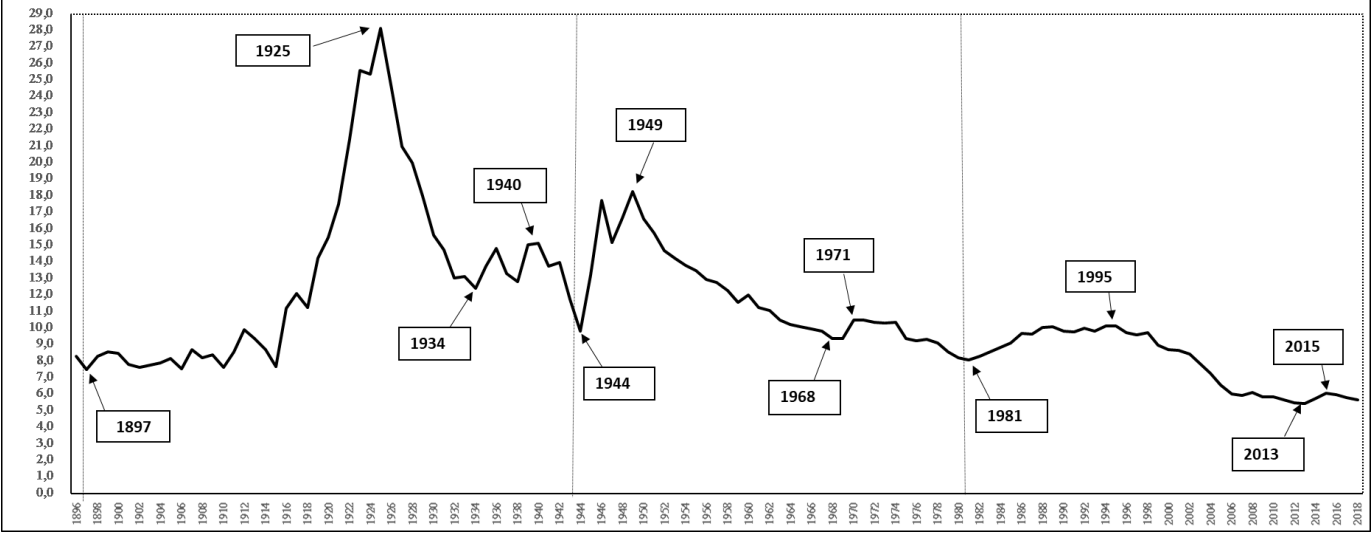
Table 1: Long waves of the profit rate of the French economy: periods, extrema, averages.
Source: our calculations on World Inequality Database

| Successive long waves | Periods | Profit rate extrema |
|-----------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First long wave | 1897-1943 (47 years) | First trough in 1897: 7.5 percent (<i>minimum of the wave</i>) First peak in 1925: 28.2 percent (<i>maximum of the wave</i>) Second trough in 1934: 12.4 percent Second peak in 1940: 15.2 percent <i>Average of the sub-period 1897-1943 : 13,1 percent</i> |
| Second long wave | 1944-1980 (37 years) | First trough in 1944: 9.8 percent First peak in 1949: 18.3 percent (<i>maximum of the wave</i>) Second trough in 1968: 9.4 percent (<i>minimum of the wave</i>) Second peak in 1971: 10.5 percent <i>Average of the sub-period 1944-1980 : 11,9 percent</i> |
| Third long wave | 1981-2019 (39 years) | First trough in 1981: 8.1 percent First peak in 1995: 10.2 percent (<i>maximum of the wave</i>) Second trough in 2013: 5.5 percent (<i>minimum of the wave</i>) Second peak in 2015: 6.1 percent <i>Average of the sub-period 1981-2019 : 8,0 percent</i> |

The downward trend in the rate of profit of the French economy between 1896 and 2019 is reflected in the decrease in its averages by sub-period: 13.0 percent from 1896 to 1943, 11.9 percent from 1944 to 1980, 8.0 percent from 1981 to 2019. The amplitude of profit rate

fluctuations is reduced over time: the strongest variations are observed in the first sub-period, with historical events of the magnitude of the two world wars and of the great crisis, then in the second sub-period, with the episode of May 1968 and the two oil shocks of the 1970s, and finally in the third sub-period (disturbances experienced by Europe; financial crisis of 2008).

Figure 1. Evolution of the profit rate of the French economy from 1896 to 2019 (percentage)



Note: Profit rate calculated by the authors from the *World Inequality Database* (various years).

DECOMPOSITION OF THE RATE OF PROFIT AND EXPLANATION OF ITS SECULAR EVOLUTION

To outline an explanation of the causes of these long-term variations in the profit rate, we use a method of decomposition of this rate of profit, inspired by the analysis proposed by Weisskopf (1979), but by calculating the organic composition of capital as the relationship between the stock of capital and remuneration, as close as possible to the vision given by Marx:

$$r = \frac{\frac{\Pi}{Z}}{\frac{K}{Z} + 1} \tag{2}$$

where Π/Z represents the rate of surplus value and K/Z the organic composition of capital. It can be observed that the organic composition of capital thus calculated for the French economy rose between 1896 and 1913, but that, at the same time, the rate of surplus value also increased rapidly, in fact at a much higher rate, which logically led to a rise in the profit rate. During the years following 1913, the rate of surplus value first decreased, then increased sharply until the peak of 1926, while the organic composition of capital decreased markedly, the two effects combined leading to the soaring of the profit rate to the maximum of the first long wave – and peak of the 124 years studied.

At the end of the Second World War, which marked the beginning of the second long wave, the French economy recovered fairly quickly and, with the rise in the GDP, the organic composition of capital and the rate of surplus value also increased, but from the year 1950, the rate of surplus value was oriented downwards, while the organic composition of capital continued to increase, at a good pace, and this until 1968, so that the combination of these two phenomena resulted by a very significant drop in the rate of profit.

At the beginning of the 1980s and the third long wave, that of the neoliberal era, the French profit rate recovered. As a matter of fact, during this same decade, from 1981 to 1989, the organic composition of capital increased, but the even faster increase in the rate of surplus value led to a rise in the rate of profit, which reached a peak in 1989 – a peak almost as high as that of this third wave, observed for the year 1995. But thereafter, the rate of surplus value having fluctuated only slightly, it is mainly the organic composition of capital which, by increasing, explains the most recent decrease in the rate of profit of the French economy.

In total, we observe, over the very long period, a downward trend in the rate of profit in France, but also several interludes of rebound or temporary stabilization, so that we are rather dealing with a downward spiral deployment of French capitalism. Consequently, we understand that the organic composition of capital, just like the rate of surplus value, fundamentally reflect the contradictions between the productive forces – therefore also productivity – and the relations of production of the economy. The successive attempts to resolve these contradictions inherent in the capitalist system, through the action in the short or medium term of counter-tendencies to the secular fall in the rate of profit in the long term, thus trigger the appearance of long waves giving to the accumulation of capital a tortuous trajectory.

CONCLUSION

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NOTES

¹ Alongside other specialists, Thomas Piketty was one of the designers of this database, on which his famous book, published in English in 2014, *Capital in the Twenty-First Century*, is based to a large extent. For a critique of the theses developed by Piketty in this book, read: Andréani and Herrera (2015) and Long and Herrera (2018).

² See here: Herrera and Long (2021).

³ Marx (1987).

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