

Flash

➤ Research

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Karl Marx II: The Return

The accumulation of productive capital in the United States between 1992 and 2000 triggered a pronounced decline in profitability of capital from 1997 onwards, due undoubtedly to decreasing returns. It could have been avoided only by maintaining high unemployment, to be able to curtail pay rises, in accordance with Karl Marx's theses.

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Capital Markets

Issue: Decline in profitability in the United States in perfect accordance with Karl Marx's theory

We will first outline Marx's theses while simplifying them:

- companies accumulate capital and increase capital intensity, or the ratio of stock of capital to production;
- to maintain the profitability of capital, the share of profits in national income (in value added) needs to grow at the same pace as capital intensity; otherwise, there is a "trend decline in the profit rate";
- the rise in the share of profits implies that real wages increase less swiftly than labour productivity, therefore wage-earners lose bargaining clout in pay talks. Such a situation entails a high unemployment rate — the so-called "reserve army of labour" — when the economy is at cruising speed.

Let us show that these trends are present in the United States.

Profitability has been trending in line with theory

Chart 1 shows that capital intensity increased in the United States in volume terms (in real terms), but not in value terms, because of the fall in the relative price of capital goods. Regarding the profitability of capital, there is thus no distortion of the capital-to-GDP ratio in value terms, and we can therefore look at profits relative to GDP.

Chart 1
USA: Stock of productive capital as % of GDP

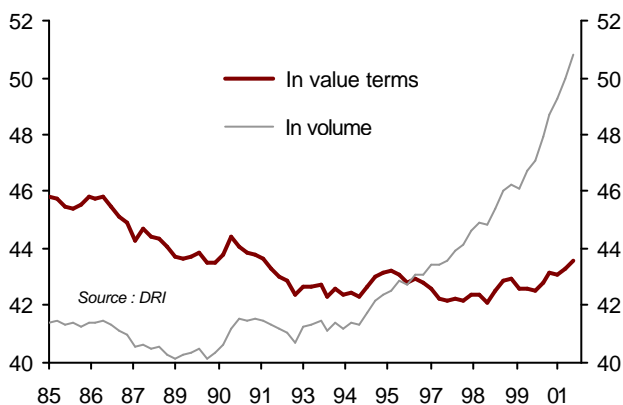


Chart 2
USA: Profits of non-financial companies as % of current GDP

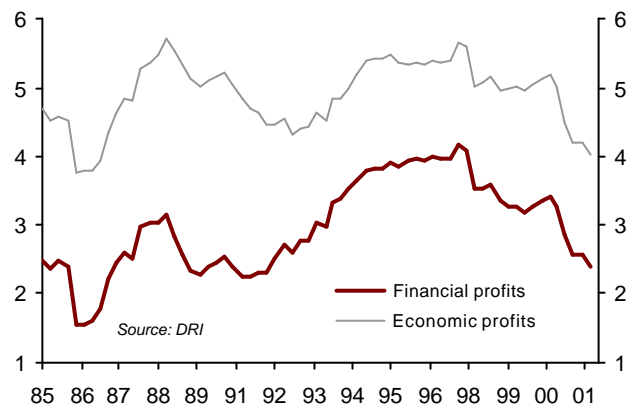


Chart 2 shows trends in economic profitability (calculated as $\frac{\text{profits-taxes}}{\text{GDP}}$) and financial profitability ($\frac{\text{profits-taxes-interest payments on debt}}{\text{GDP}}$)

Profitability increased from 1992 to 1997, before declining between 1997 and 2000. Its contraction was naturally worsened by the recession. In the first half of 2000, profitability was back to its level of 1994. We can also see that the rise in financial profitability was more pronounced, from 1992 to 1997, thanks to the decline in interest payments on debt.

Chart 3 shows that the gap between the (economic or financial) profitability of capital and the real long-term interest rate surged from 1992 to 1997, before decreasing from 1997 to 2001. This differential normally determines the incentive to invest.

There has therefore definitely been, from a given stage of the process of capital accumulation, a decline in the profitability of capital and profitability. Such a decline, in Marx's theory, results from **decreasing returns on capital.** As marginal capital productivity (in volume terms) decreases, the ratio between profits and capital falls in line with capital accumulation.

The only way such a development can be avoided consists in reducing wage costs.

Chart 3
USA: Return on capital and real long-term interest rate

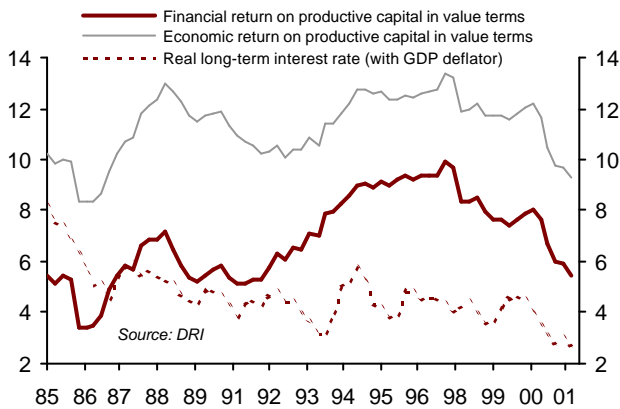
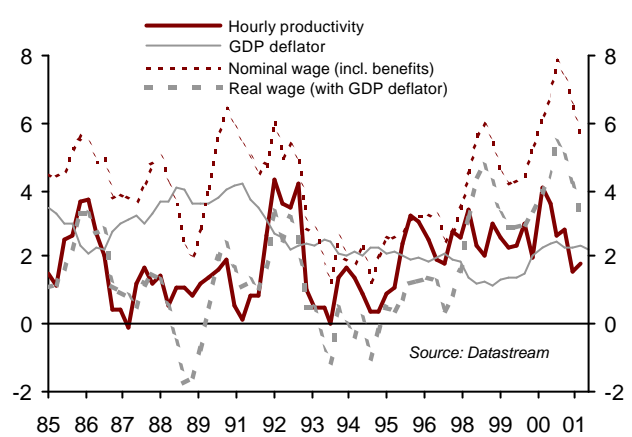


Chart 4
USA: Real wage and productivity (Y/Y as %)

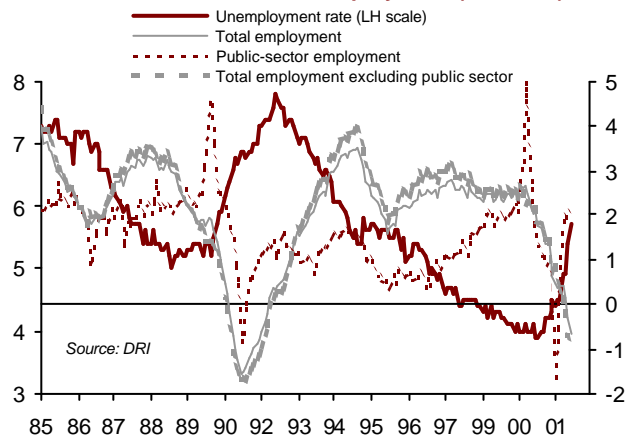


Wage costs and unemployment

Chart 4 shows that total hourly wage costs (including mandatory welfare contributions and benefits) grew more slowly than hourly productivity from 1993 to late 1997, but have outstripped productivity since end-1997.

Such a development is in accordance with trends in profitability, which rose until 1997 before declining subsequently. The break in trends in wages occurred when the unemployment rate sank to 5%, as job creation was robust from 1993 onwards (**Chart 5**). The "reserve army of labour" disappeared in 1997.

Chart 5
USA: Joblessness and employment (Y/Y as %)



An econometric analysis confirms the above result. We obtain, for the equation explaining total wage costs (including mandatory welfare contributions):

$$\begin{aligned} \text{Growth in wage costs} &= 0.61 + 0.18 \text{ inflation} + 0.35 \text{ productivity gains} \\ &\quad (1.0) \quad (2.2) \quad (4.2) \\ &\quad - 0.14 \text{ Unemployment rate} + 0.76 \text{ growth in wage costs} \\ &\quad (2.0) \quad (13.4) \quad - 1 \\ R^2 &= 0.84 \quad \text{standard deviation: } 0.6 \\ Dw &= 1.48 \end{aligned}$$

Quarterly data, from 1985 to 2001.

We can see that wage-earners have benefited from productivity gains to a large extent in the US, since a 1 percentage point rise in (annual) growth in productivity increases the rise in wages by **1.4 percentage point**.

Therefore, the share of wages in GDP has apparently increased spontaneously. To avoid such an outcome, a high unemployment rate is necessary.

Let us assume that hourly productivity gains are 2.5% per year on average (see **Chart 4**); the real wage would thus have to rise by “1 percentage point too much” (0.4 x 2.5), and this requires the unemployment rate to be 1.66% higher than natural unemployment to stabilise income sharing (long-term elasticity in wage growth to the unemployment rate is – 0.6).

In 1998-1999-2000, real wage costs rose by 1.5 percentage point per year faster than productivity, with the average unemployment average rate at 4.25% (**Chart 5**). To ensure that the rise in the real wage and productivity gains are brought back to the same level, the unemployment rate would have to rise by 2.5 percentage points (1.5-0.6), lifting it to 6.75%, or definitely above the unemployment rate that can be achieved in the United States during a growth phase.

Everything shows therefore that profitability can be stabilised in the United States only at the price of a rise in the unemployment rate to nearly 7%, its level in 1993 after the previous recession.

Conclusion: Not a long-term solution

Periodically requiring a recession to raise unemployment and restore the profitability of capital is not an efficient solution in the long term.

The only outcome to the income sharing conflict consists in ensuring that **capital accumulation generates enough positive externalities** rise in total factor productivity and accumulation of human capital. These externalities result in the disappearance of declining returns on capital. This was not the case in the United States in the expansion phase of 1992-2000, when the accumulation of productive capital consequently failed to be significant enough.