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**Profit Shares in Income for Advanced Economies:
what Influence on Macroeconomic Performance?**

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ABSTRACT

The relationships between the profit share in income on the one hand and the growth rates of output and employment on the other hand have been studied for 17 advanced economies since 1961. As a trend, the growth rates of GDP and productivity decrease when the profit share in income increases whereas the evolution of the employment growth rate appears to admit a maximum for a given profit share. To explain these facts, a new growth and distribution model is developed, combining the principles of chain-reaction, creative destruction, effective demand and consideration of the distribution process. In conclusion, increasing the profit share in income weakens GDP growth or productivity growth, as a long-term trend, contrary to the trickle-down hypothesis. The employment growth rate is maximum for a profit share in income of 1/3, given the existence of incentives to create more jobs when the profit share is less than 1/3, or to destroy more jobs otherwise. Values that are too high for the profit share, around 40%, do not seem sustainable in the long term.

Keywords Advanced countries, GDP growth, Employment growth, Profit share, Economic policies

JEL classification D33, E23, E24, E25, O40

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1. Introduction

What are the relations between the profit share in income on the one hand and the growth rates of output and employment on the other hand? This question has risen since the 2000s as shown by numerous stylized facts.

Ferri (2016) has established four new stylized facts that are different from those identified by Kaldor (1961) for the Golden age of capitalism and lately extended by Jones and Romer (2010): an increasing capital share², an augmenting wealth-output ratio, an increasing inequality process, a volatile rate of growth.

The US economy illustrates these new stylized facts. Throughout the 20th century, the US economy experienced a long period of prosperity until the year 2000 with a profit share in income still around 1/3. After the year 2000, as a trend, the GDP growth rate decreases while the profit share in income increases continuously, until it reaches 39% in 2019. The deviation of GDP from its long-trend raises important questions.

It is interesting to characterize the two periods more precisely. From 1870 to 2000, the US economy enjoyed on average a long period of prosperity; as a trend, the average annual GDP growth rate per capita has been a steady 1.8% (Jones, 2002; Gordon, 2016), while the average annual employment growth rate has been 1.2% (Maddison, 2006)³, which characterizes an economy that creates jobs efficiently.

Before the 2000s, a distribution of income, 1/3 in favor of capital, 2/3 in favor of labor, was very often considered a stylized fact, as evidenced by numerous historical works. In the first growth model of Cobb-Douglas (1928), the share of capital is a constant parameter of the model, evaluated at 30% for the US. We note an average share of 34% for the years 1909-1949 (Solow, 1957)⁴ and 32.5% for the years 1958-1996 (Young, 2010). For the 1961-2000 period, the average GDP growth rate per year was about 3.6% (a steady GDP growth rate between 3.2% and 4.2%)⁵ while the relatively stable profit share in income averaged 34.3%⁶. Thus, for most of the 20th century, the US economy experienced remarkable stability in the profit share, always around 1/3.

After year 2000, always for the US economy, the profit share in income increases rapidly while the GDP growth rate decreases. For the period 2001-2007, before the Great Recession (2008-2009), the average output growth rate decreases to 2.5% per year while the profit share reaches 36.1%. After the Great Recession, the average GDP growth rate decreases to 1.7% per year while the profit share is higher and even above 39% since 2010.

These facts are contrary to the simple belief in the trickle-down hypothesis that increasing the profit share in income generates more economic growth and more productivity.

Another stylized fact raises important questions. Most empirical studies on the Bhaduri-Marglin model (1990) find that major economies, including the United States and the European Union as a whole, have been broadly wage driven over the past few decades. Blecker (2016) paid more

² Karabarvounis and Neiman (2014) also established this stylized fact.

³ The average annual growth rate of the total hours worked (1870-1998) is deduced from Appendix E (table E-4).

⁴ Annually, the profit share varies between 31% and 40%.

⁵ The average GDP per year was regularly above 3%: 1961-1970: 4.2%; 1971-1980:3.2%; 1981-1990:3.3%; 1991-2000:3.5%.

⁶ Data on the profit share in income (adjusted share to factors costs) from 1961 to 2019 is taken from the European Commission (Annual macro-economic database -AMECO- June 2021).

attention to the temporal dimension of this distinction; rising profits may be helpful in stimulating a recovery in the short term, but the economy is driven by wages in the long term.

Nevertheless, governments have operated since the 1980s in the neoclassical belief that full employment is possible by reducing the cost of labor and allowing low-wage flexible service jobs. “The strategy appeared to work as real wage restraint was associated with higher jobs growth” Storm and Naastepad (2017, 5) concluded. Can more profit induce more employment growth? The paradox is this: how could this happen in wage-led economies?

At first glance, in recent periods after the 2000s, it appears that rising profit shares may lead to weaker economic growth and stronger employment growth in some cases. Is this the truth for all advanced economies? Are some economies outside of this assumption? To answer these fundamental questions, the methodology used will be based on two pillars.

The first consists of studying the macroeconomic fundamentals of the 17 advanced economies, twelve European, four Anglo-Saxon (Australia, Canada, United Kingdom, United States) and Japan over the long period 1961-2018; these economies and the period 1961-2018 are retained because we have accurate macroeconomic data for all these economies since 1961. The vast majority (98%) of annual values for the profit share fall between 20% and 40%, with an average value of 33.9%.

The study confirms that an increasing profit share in income is associated with decreasing GDP and productivity growths and investment rates. For the employment growth rates, the relationships are complex; nevertheless, over long periods (1961-2000), it appears that the more job-creating economies are Australia, Canada, and United States; they have experienced a profit share close to $1/3$. Many questions raised, especially on the value of $1/3$ for the profit share and its role in macroeconomic fundamentals.

The second is to use a new growth and distribution model (Villemeur, 2019, 2021, 2022) to explain the latest facts brought to light. This growth and distribution model reconciles the great ideas of Kaldor (economic growth as a chain-reaction), of Schumpeter (creative destruction through two types of investment, capacity or rationalization investments), of Keynes (effective demand and marginal efficiency of capital) and of Ricardo (importance of the wage-profit distribution).

We show two main theoretical lessons, the growth rates of output and productivity decrease when the profit share increases and the employment growth rate is maximum for a profit share of $1/3$. Thus, this model can explain the relationships studied.

In conclusion, increasing the profit share in income weakens GDP growth or productivity growth, contrary to the trickle-down hypothesis. Nevertheless, the employment growth rate is maximum for a profit share in income of $1/3$, given the existence of incentives to create more jobs for a profit share less than $1/3$ or to destroy more jobs otherwise. This optimum is perfectly illustrated by the most job-creating economies (Australia, Canada, US) which experience a profit share of $1/3$ over the long term. Thus, the paradox raised by Storm and Naastepad (2017) can be explained.

In section 2, we present the main macroeconomic relations concerning the profit share in income for 17 advanced economies since 1961. In section 3, after recalling the new production function of the new model, we present the two main theoretical lessons: the increase in profit share weakens the growth of output and productivity while the growth of employment admits a peak for a profit share of $1/3$. In section 4, we show that the two theoretical lessons are consistent with the reality for the advanced economies. In section 5, the new model is discussed. In section 6, five key findings are drawn on the influence of the profit share on the growth of GDP, productivity, and employment.

2. The 17 advanced economies and the main macroeconomic relationships

Accurate annual data are available from large databases on GDP growth, employment growth (in hours worked) and gross investment rate, as well as profit share in income (see appendix A) since 1961 for the following 17 advanced economies: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Netherlands, Portugal, Spain, Sweden, United Kingdom, United States. We will study the macroeconomic fundamentals over the period 1961-2018 for these advanced economies.

Many relationships can be highlighted between the profit shares in income on the one hand and the growth rates of GDP and employment as well as the investment rate on the other.

2.1. Profit share in income: the average value close to 1/3 over a long period

Figure 1 shows the distribution of annual profit shares in income for the 17 economies over 1961-2018 (986 values). Most values (98%) are between 20% and 43%; 91% of the values are between 20% and 40%⁷. The average of the distribution⁸ is 33.9%.

This last value characterizes an average for the 17 advanced economies that have experienced many crises and transformations over such a long period. This fact reinforces the underlying idea of the existence of a long-term regulation around the value of 1/3.

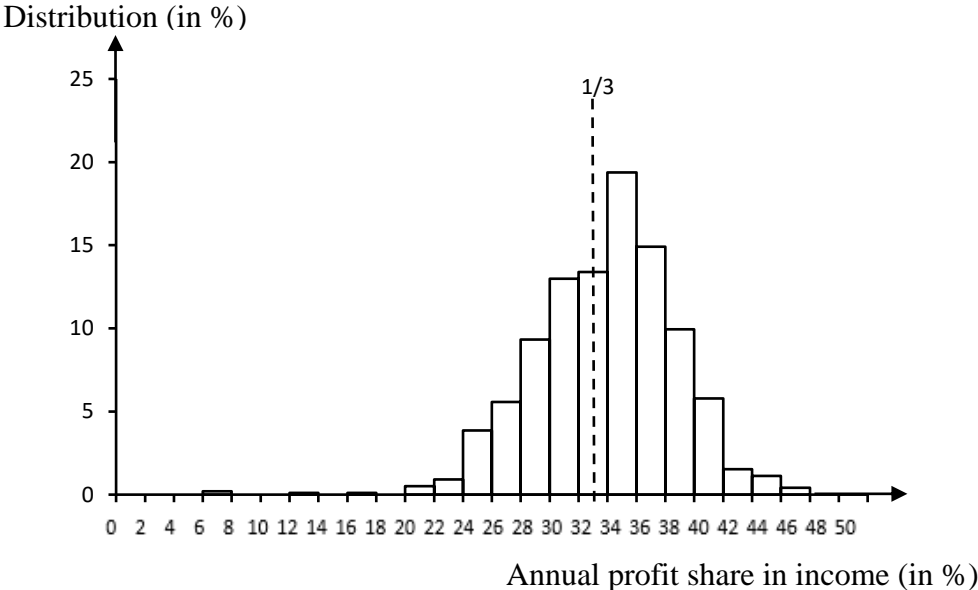


Fig. 1. Annual profit shares: distribution for 17 advanced economies (1961-2018)

This observation is reminiscent of that of Piketty (2014) over several centuries; profit share is usually between 20% and 40%. The profit share in income is well above 1/3 between 1810 and 1870 for the United Kingdom, and between 1840 and 1870 for France, which essentially corresponds to the period of the first industrial revolution. It is also the period of the Marxian analysis of industrial capitalism during which wages stagnate or even regress and profits increase. Since the 1880s, the share of profits has almost never been significantly higher than

⁷ The only values below 20% are those of Portugal during a period of great economic upheaval from 1974 to 1977 which overthrew the dictatorship. Most of the values above 40% come from two economies (Greece and Italy) which then experienced very poor macroeconomic performance, or even serious depressions.

⁸ The median value is 34.3 % and the standard deviation 0.049.

1/3. It has been well below 30% since 1920 for the United Kingdom and 1940 for France until recent decades.

2.2. Profit share in income: the irresistible upward trend

Figure 2 shows the evolution of the annual profit share for the 17 advanced economies (the average value) as well as the evolution for the US economy, over the long period 1961-2018. The general trend is irresistibly upward. At the start of the period, the profit shares are around 31 and 32%, at the end of the period 38 and 39%, for the “17 economies” and the United States respectively.

More specifically, for the 17 advanced economies, the profit share reached around 1/3 during the 1980s, as economic policy fought against the rate of inflation by limiting the rise in wages; then afterwards, the uptrend seems irresistible. For the US economy, until the year 2000, the annual profit share is around 1/3 until the year 2000; then afterwards, again for this economy, the uptrend seems irresistible.

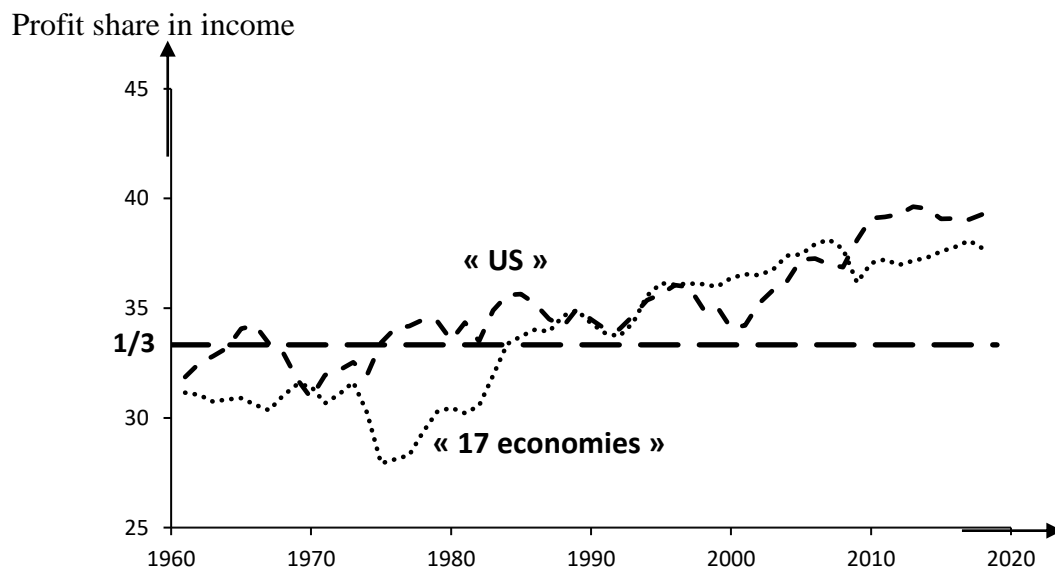


Fig.2. Profit share in income: what evolution?

2.3. GDP growth, productivity growth and investment rate: the downward trend

Advanced economies exhibit wide variations in economic fundamentals, particularly GDP growth rate, productivity growth rate, employment growth rate, investment rate, and share of profits in income, over the long period 1961-2018. To identify the relationships to study, it is necessary to define relevant periods according to economic cycles. Also, we have generally considered five characteristic periods, delimited by major crisis, for example oil crisis or financial crisis. The reference periodization, that of the United States, is as follows:

- 1961-1973: the oil crisis of 1973 put an end to a period of strong economic growth, with a recession in 1974.
- 1974-1991: crises follow one another, those of the two oil crises (1973, 1979) and the financial crisis of 1990-1991. The period ended with a year of recession and 1992 marked the return of real growth.
- 1992-2000: strong economic growth is back, driven by the emergence and rapid diffusion of information and communication technologies. The bursting of the stock market (Internet) bubble in 2000 ended this period with a significant slowdown in 2001.

- 2001-2007: economic growth slows down sharply and the great financial crisis of 2008 put an end to this period (recession in 2008).
- 2008-2018: economic growth resumes after the Great Recession of 2008-2009, but on a weaker trend than in previous periods.

The periodization used is presented in Appendix B for each economy. Of course, they may differ from that of the U.S., with the limits for each period subject to change by one or two years⁹.

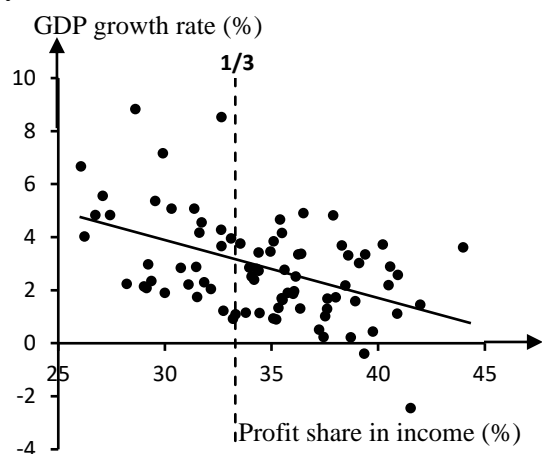


Fig. 3. Relation between GDP growth and profit share in income

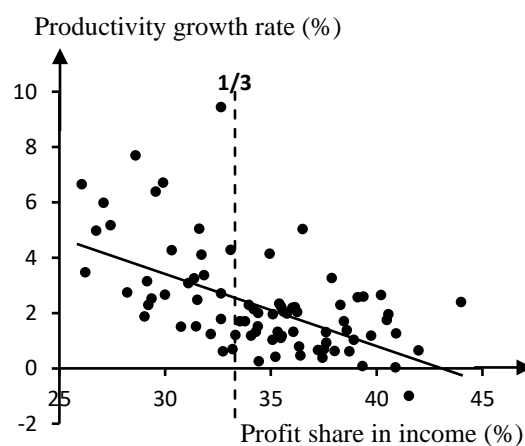


Fig. 4. Relation between productivity growth and profit share in income

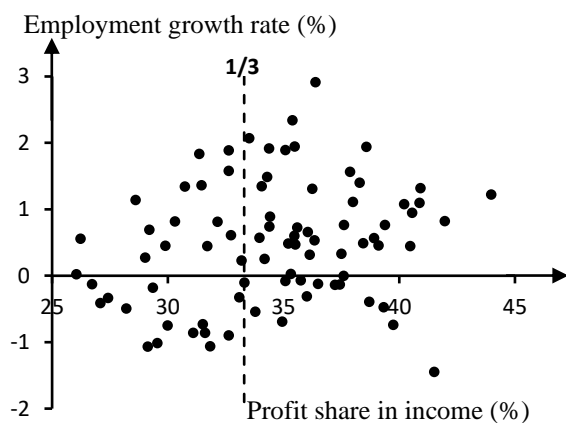


Fig. 5. Relation between employment growth rate and profit share in income

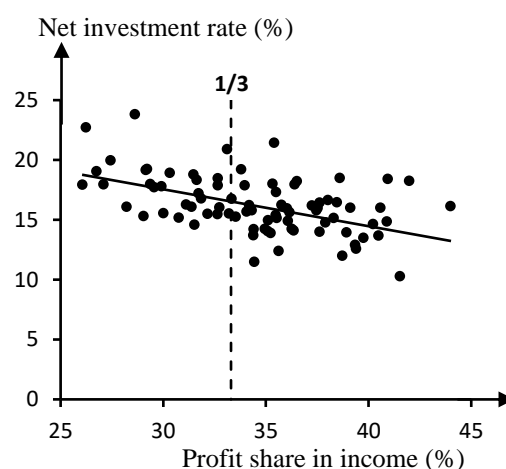


Fig. 6. Relation between net investment rate and profit share in income

For each period of every economy, we evaluate the average for the main macroeconomic fundamentals (GDP growth rate, productivity growth rate, employment growth rate, net investment rate). Figures 3, 4, 5, 6 present the averages of the main fundamentals according to the profit share in income for the 17 advanced economies and all periods¹⁰.

⁹ For example, after the 1973 oil shock, a recession or slowdown may occur in 1975 or 1976, a return to notable economic growth in the 1990s may occur in 1993 or 1994. Only Australia does not experience any recession in 2008 or 2009 but a notable slowdown. Spain, Greece, and Japan are characterized by only four periods, the crisis of 2001 not having really affected them, the third period ending with the Great Recession of 2008-2009.

¹⁰ In total, 82 macroeconomic trajectories are considered.

The main lessons are:

- Within this periodization, the profit share varies from a minimum of 26.1% (Portugal 1961-1974) to a maximum of 44.0% (Greece, 1974-2007), with an average value by 34.6%.
- The growth rates of GDP and labor productivity tend to decrease while the profit share increases¹¹. The highest rates are obtained for profit shares much lower than 1/3. The lowest growth rates are associated with profit shares greater than 1/3.
- Investment rates tend to decrease as the profit share increases¹². Higher rates are associated with lower profit shares, while lower rates are associated with higher profit shares.

The relationship between profit share and employment growth seems more complex. Positive employment growth rates track very differently, peaking for a profit share of around 36%. Otherwise, a large variability exists for negative employment growth rates.

3. The two theoretical lessons from a new growth and distribution model”

This new growth and distribution model was first described by Villemeur (2019, 2021, 2022) and highlights a new production function; it turns out to be consistent with the data for the economy of the United States (US) over the long period of prosperity (1961-2000).

In this section, we first recall the main assumptions and the new production function involving the profit share in income. Then, we show two main theoretical lessons concerning the relations between, on the one hand, profit share and, on the other hand, production, productivity, and employment.

3.1. The new growth and distribution model: the assumptions and the production function

The seminal article proposes a new model of endogenous growth, starting from the Kaldorian vision of the process of economic growth (Kaldor, 1972). Kaldor carried out a series of studies aiming to characterize the process of economic growth (1956, 1961, and 1972), specifically its relationships with the principle of effective demand, accumulation of capital, increasing returns and technical progress. He concluded the following: ‘Given that factor, the process of economic development can be looked upon as the resultant of a continued process of interaction—one could almost say, of a chain-reaction—between demand increases which have been induced by increases in supply, and increases in supply which have been evoked by increases in demand’ (Kaldor, 1972).

This vision of a chain-reaction, neglected in subsequent economic growth literature, is the foundation of a new endogenous growth model also built on many economists’ ideas. The consequence of this vision of a chain-reaction is that the process of growth is a process out-of-equilibrium (Amendola & Gaffard, 1998).

Economic growth results from a chain-reaction between demand escalations, induced by increases in supply and supply escalations, evoked by increases in demand. Each process triggers the next, which is characteristic of a chain-reaction; the subsequent process can be boosted (economic boom) or stifled (stagnation or economic recession).

The role of entrepreneurs is at the heart of this new growth model and its main foundations are as follows:

- The entrepreneurs are the source of creative destruction through investments to “produce more” or “produce differently” (Schumpeter, 1911, 1942).

¹¹ The linear regression lines are shown in the figures; the R2s are 22% and 33% respectively.

¹² The linear regression line is shown in the figure; the R2 is 25%.

- The entrepreneurs make decisions on output and employment by anticipating the supply-demand balance (“principle of effective demand”), accounting for a long-term forecast of the marginal return on capital (“marginal efficiency of capital”) according to Keynes (1936).

Other hypotheses are also made. The increasing returns are at work (Young, 1928) and must be combined with the principle of effective demand (Palley, 1996, 1997). The growth process is based on an *AK*-type endogenous growth model (Romer, 1986, Aghion & Howitt, 1998). However, capital *K* does not integrate “human capital” as many models of endogenous growth do. Piketty (2014) notes that after long-term analysis of changes in the capital/income ratio and capital/labor sharing, there is no evidence that “human capital” has altered these developments. In this new growth model, technical progress is included in the labor and capital factors. Human capital favors creating new ideas and the diffusion of innovations (Nelson and Phelps, 1966).

There are three types of investment (volume *I*):

- Replacement investment: with replacement investment, entrepreneurs maintain output and jobs. The volume of the replacement investment is δI , δ being the proportion of replacement. The volume of net investment is $(1 - \delta)I$.
- Capacity investment: through capacity investment, entrepreneurs create jobs and produce more, with increasing returns. The share of the net investment volume committed to additional production and employment is x ; it is referred to as the “Ratio of capacity investment” (Rci). The volume of capacity investment is $x(1 - \delta)I$.
- Rationalization investment: by using rationalization investment, entrepreneurs destroy jobs and maintain the same production. The volume of the “rationalization investment” is $(1 - x)(1 - \delta)I$.

In the short term, entrepreneurs formulate expectations about fundamentals, taking into account a long-term view of the marginal efficiency of capital, reflecting confidence in the long-term state. They place themselves at the equilibrium of effective demand.

At the same time, they decide to obtain the most competitive productive combinations, considering the wage-profit distribution. The entrepreneur therefore uses three limited objectives that are more controllable within the framework of a limited rationalization.

The first short-term objective is to aim at minimizing the additional cost of production, which is a function of the cost of the jobs hired and the cost of the investment made. The entrepreneur has in mind an expected profitability depending on the general state of confidence in the economy and the requirements of the financier. But the entrepreneur will seek to remain competitive in the long term by minimizing the risks taken by investing in additional production.

The second short-term objective is to reach an immediate profitability objective that is in line with the expected profitability, in order to have every chance of reaching future profitability in the longer term. The preference for the present time leads the entrepreneur to obtain an immediate profitability in line with the expected profitability.

The third short-term objective is to choose technologies that create or destroy jobs to a greater or lesser extent, while always ensuring that the expected profitability is maintained; for example, the expected profitability for a pure capacity investment must be equal to that expected for a pure rationalization investment. This is the principle of equalization of expected profitability that applies, being motivated by the preference for the present time.

Obviously, the expectations of entrepreneurs are rarely realized, given the great many uncertainties, their limited rationality and the unpredictable changes in many variables. However, entrepreneurs develop strategies (output, employment, investment, technologies,

wage, profit...) to adapt to the new context by constantly seeking competitiveness and the balance between supply and demand. For example, for the next period, entrepreneurs must decide on the expected increase in output and the expected increase in employment. They have to choose between different technologies, some creating jobs, others destroying jobs. They must also be sure of the competitiveness of future productive combinations.

The methodology is as follows: the chain reaction is modeled for the short term, then we determine the steady states (Barro & Sala-I-Martin, 1995; Aghion & Howitt, 1998), over the long term, assuming that the expectations of the entrepreneurs are satisfied and that the long-term growth is balanced¹³.

The salient theoretical result is the new production function, i.e., the long-term linear output-employment-investment relationship that steady states verify:

$$g_Y = \frac{1-\alpha}{2\alpha} g_L + \frac{A}{2} i_n \quad 0 < \alpha < 1/2 \quad g_Y > 0 \quad -\frac{\alpha}{1-\alpha} A i_n < g_L \leq \frac{\alpha}{1-\alpha} A i_n \quad (1)$$

The growth rates of output and employment are symbolized by g_Y and g_L ; α and i_n are the profit share in income and the net investment rate respectively. A is the “Productivity of the capacity investment” (Pci), i.e., the productivity per unit volume of capacity investment; it is assumed to be constant in the time. The Pci reflects the productivity of the investments used in the growth of production.

The output growth rate is a linear function of employment growth rate and of net investment rate; the elasticities depend on the profit share in income and on the productivity of the capacity investment. In this production function, the output-employment coefficient $(1-\alpha/2\alpha)$ is always greater than the same coefficient $(1-\alpha)$ in the classic Cobb-Douglas production function (1928); another difference is found in the determinant of the net investment rate instead of the capital growth rate. Note that the output-employment coefficient is equal to 1 when the profit share in income is equal to 1/3.

The production function is the result of two basic equations for the output growth rate and for the employment growth rate:

$$g_Y = A x i_n \quad g_L = \frac{\alpha A}{1-\alpha} (2x - 1) i_n \quad 0 < x \leq 1 \quad (2)$$

To establish this linear equation, we assume that the profit share in income and the net investment rate are constant over time. Recall that x is referred to as the “Ratio of capacity investment” (Rci). The Pci and the net investment rate are exogenous data. The first reflects the speed of technical progress made possible by the techniques used and the institutions that accompany them. It therefore does not reflect the level of technical progress; a technologically lagging economy could be characterized by a higher Pci than the leading economy. The second depends on monetary conditions, which are not discussed here.

In general, the greater the share of investments made in additional production capacity, the greater the growth. In other words, the more entrepreneurs manage to engage in increasing returns, the higher the growth.

For a given profit share in income α , the set of steady states is represented by the segment $G_0 G_{mx}$ of Figure 7. G_{mx} represents the maximum long-term growth path: the growth rates of output and employment are then maximum, with all new productive combinations being

¹³ In line with the studies of Harrod (1939, 1948) and Domar (1947).

engaged in increasing returns. G_e represents the growth path with stable employment, the R_{ci} being equal to $1/2$.

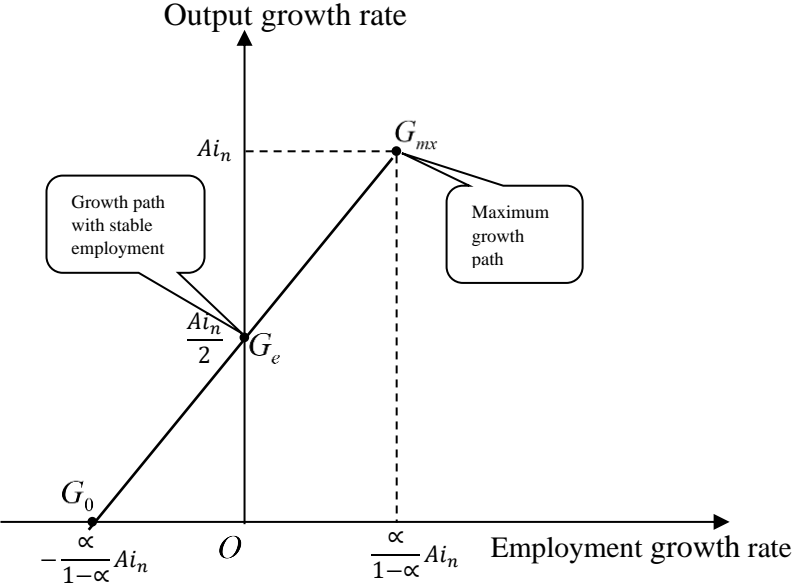


Fig. 7. The relationship between output and employment growth rates

Over the long term, a cycle of economic growth, for example with production and employment growth rates evolving around average values, will be represented in a stylized way by trajectories located on the segment G_0G_{mx} .

Now we present the two theoretical lessons regarding the relationships between macroeconomic fundamentals and profit share in income.

3.2. First lesson: the profit share has a negative influence on output and productivity

Figure 8 represents the theoretical zone defined by the set of line segments G_0G_{mx} when the profit share in income varies, but is at most equal to $1/2$.

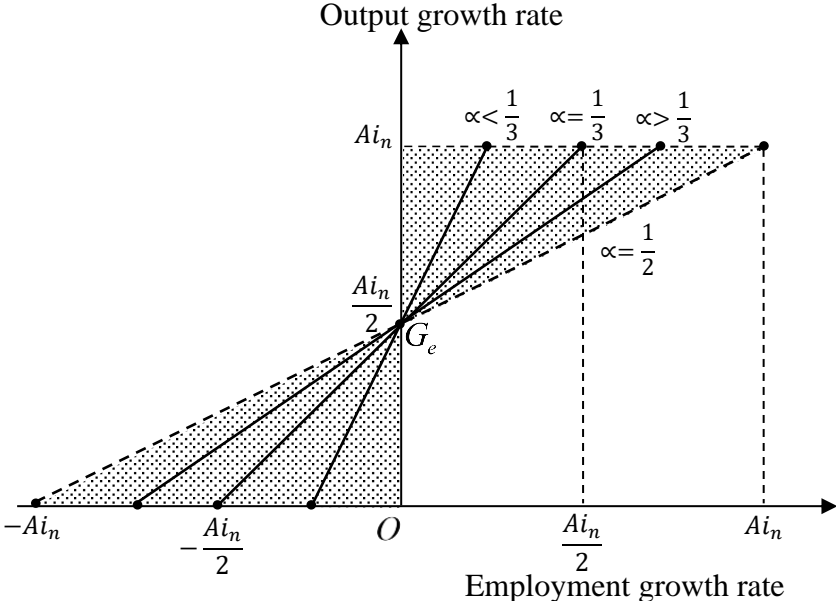


Fig. 8. Possible linear relationships

Is the economy theoretically wage-led or profit-led? The possibility that growth regimes could be either wage-led or profit-led was first opened by Blecker (1989), Bhaduri and Marglin (1990) and Marglin and Bhaduri (1990).

In Figure 8, consider a given positive employment growth rate, of course less than Ai_n , all things equal otherwise. We can see that a decrease in the profit share leads to an increase in the output growth rate; thus, the economy is wage-led. On the opposite side, if the employment growth rate is negative, the economy is profit-led. Usually, the economies have a positive employment growth rate on the long term; so theoretically, most of them are wage-led economies.

What is the influence of profit share in income on output and on labor productivity if there is a constraint on employment, through the equations (2). Suppose the economy encounters constraints on employment growth, for example due to full employment or due to an inefficient labor market with a limited number of skilled people, where n is the bounded job growth rate:

$$n = \frac{\alpha A}{1-\alpha} (2x - 1) i_n \quad (3)$$

The output growth rate and the productivity growth rates are:

$$g_Y = n \frac{(1-\alpha)x}{\alpha(2x-1)} \quad g_{Y/L} = n \frac{\alpha + x(1-3\alpha)}{\alpha(2x-1)} \quad (4)$$

The output growth rate and the productivity growth rate decrease when the profit share increases. This is the first theoretical lesson.

3.3. Second lesson: maximum employment growth is for 1/3 profit share

Now, we will deepen the theoretical role of the profit share in the production function and show that the value of 1/3 plays an important role. Let the labor productivity growth rate or the wage growth rate in relation to the employment growth rate be written from equations (1) and (2):

$$g_{Y/L} = g_\omega = g_Y - g_L = \frac{1-3\alpha}{2\alpha} g_L + \frac{A}{2} i_n = \frac{\alpha + x(1-3\alpha)}{1-\alpha} Ai_n \quad (5)$$

The number of 1/3 appears in equation (5); for this profit share, wage growth is independent of both employment growth and Rci . Thus, the wage gains in firms where employment is growing strongly will be equal to those observed in firms which are growing weakly.

This growth model explains this number of 1/3 for profit share in income. If the labor market operates in a perfectly homogeneous manner for the diffusion of wage gains, a wage standard is imposed on all firms and wage gains are independent of employment growth. In this case, the profit share in income must be exactly 1/3. The profit share in income of 1/3 characterizes a distribution that we will describe as “neutral”, a distribution that does not distort the growth of the wages according to growth of employment.

What happens if the labor market is subject to rigidities for the dissemination of wage gains? When there is a distortion of wage gains for or against firms that grow strongly, the profit share in income has a value other than 1/3.

When the profit share in income is less than 1/3, wage gains grow at the same time as employment, making firms that create jobs very attractive. We can then assume that, in the long term, this property induces economic dynamism (an increase of the Rci) and finally a decrease in the capital/income ratio. Thus, a profit share lower than 1/3 is associated with an incentive to create jobs and to increase the employment growth rate

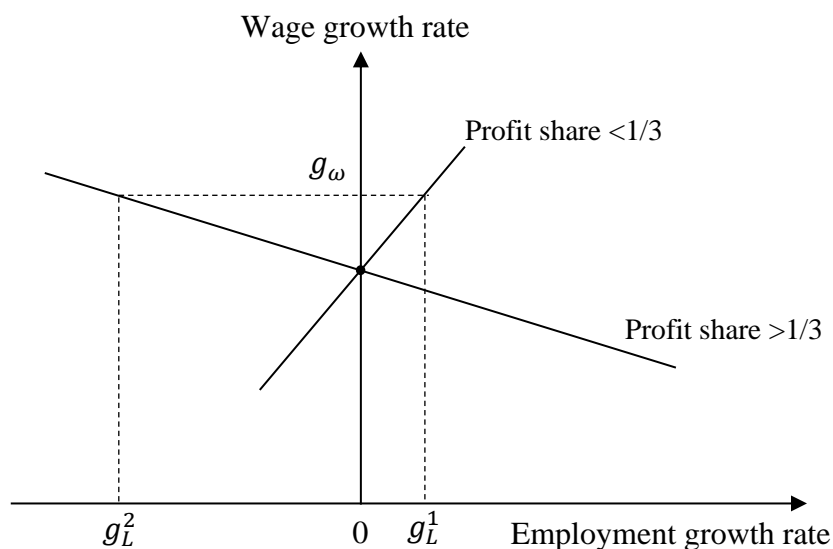


Fig. 9. The economic slowdown when the profit share is above 1/3

When the profit share in income is greater than 1/3, wage gains decline when employment increases, which does not make firms that create jobs attractive. Entrepreneurs' expectations in terms of job creation may then not be met. This property could lead, in the long term, to an economic slowdown (a decrease in the Rci) and finally an increase in the capital/income ratio.

This property is illustrated by Figure 9 which represents the evolution of the wage growth rate as a function of employment growth rate when the profit share is less than 1/3 or greater than 1/3. The wage rigidity, i.e., the wage growth rate is constant, leads to a negative employment growth rate when the profit share becomes higher than 1/3; thus, the output growth rate decreases. A profit share higher than 1/3 is associated with an incentive to destroy jobs and to decrease the employment growth rate.

The existence of these two incentives leads to anticipate an employment growth rate at its maximum for a profit share in income of 1/3, other things being equal. A theoretical regulation can be established for the profit share around 1/3, based on the incentives for creating or destroying jobs. This is the second theoretical lesson.

4. Are the two theoretical lessons consistent with reality?

With the new growth and distribution model, we have identified two theoretical lessons regarding the evolution of macroeconomic fundamentals as function of profit share. We will now examine the consistency between these lessons and the macroeconomic reality of the 17 advanced economies over the long period 1961-2018.

4.1. Are output and productivity growth rates declining when profit share increases?

Figures 3 and 4 show, in trend form, that the growth rates of output and productivity decline as the profit share increases. We also observe that the highest growth rates of output are associated with a profit share below 1/3, the lowest with a profit share above 1/3.

The same facts are also observed for productivity growth rates. The highest growth rates of output and productivity decline as the profit share increases. The lower growth rates of output and productivity also decline as the profit share increases.

Thus, the first theoretical lesson is, on the long-term trend, consistent with the macroeconomic reality of the 17 advanced economies.

4.2. Is maximum employment growth for 1/3 of the profit share?

Is the second theoretical lesson also consistent with reality? In other words, is the optimum close to 1/3 or rather 35-36% as shown in Figure 5? It is well known that the most job-creating economies over a long period are the Anglo-Saxon economies (Australia, Canada, and the United States) and this is confirmed by the data (Appendix 2). The table 1 draw the macroeconomic fundamentals for these three advanced economies of very different sizes¹⁴.

<i>Advanced economies</i>	<i>GDP Growth rate</i>	<i>Employment growth rate</i>	<i>Net investment rate</i>	<i>Profit share in income</i>	<i>Rci (Pci)</i>
<i>Australia</i>	3.69	1.76	19.4	33.7	94.5 (20.1)
<i>Canada</i>	3.59	1.63	15.4	33.2	92.1 (25.3)
<i>U.S.</i>	3.51	1.61	15.5	33.9	90.1 (25.2)

Table 1. The most job-creating economies over 1961-2000 (Fundamentals in %)

Australia, Canada, and the United States experienced a profit share in income very close to 1/3 as shown in Table 1, again during a long period of relative stability 1961-2000. Moreover, they are all positioned on a trajectory of maximum growth in output and employment and the main differences relate to the Pci; the lower value for Australia is offset by a higher investment rate.

This comparative study confirms over a long period that maximum employment growth is associated with a profit share close to 1/3. This fact reflects the existence of the two theoretical incentives.

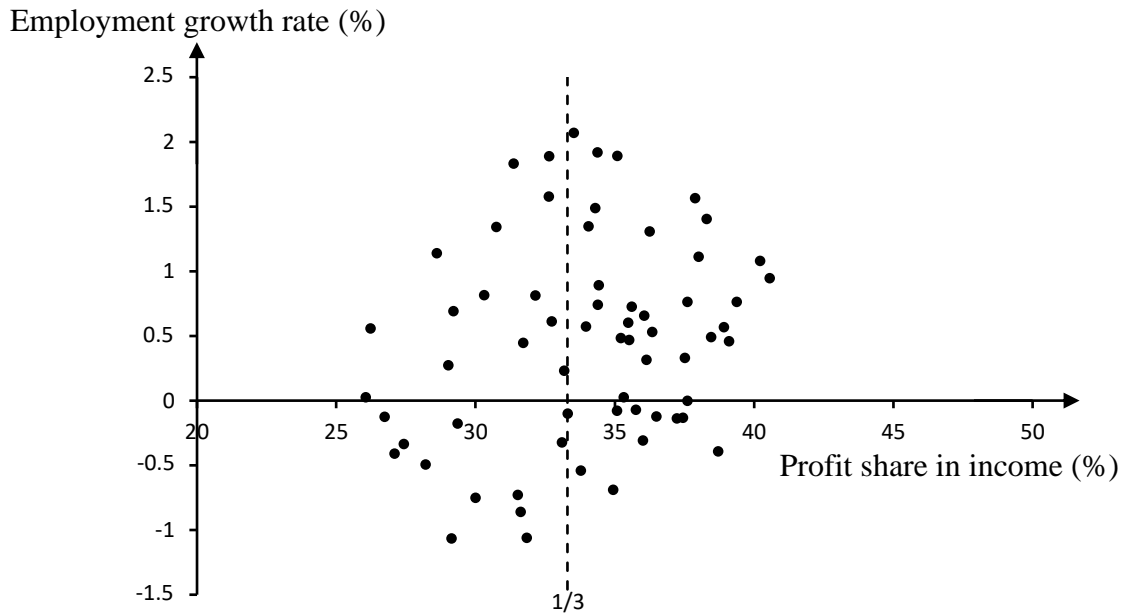


Fig. 10. Relation between employment growth rate and profit share (13 economies)

So, in this context, how to explain Figure 5 which seems to indicate a higher optimum? In Figure 5, the economies with the maximum employment growth are Spain (1994-2008) and Australia (1961-1974). Spain then experienced an exceptional employment growth rate followed by a very significant decline over the following period; for this economy, imbalances are frequent with strong creations followed by strong destructions of jobs. Like Spain, Greece and Italy have also experienced strong labor market imbalances. Furthermore, Australia seems

¹⁴ Respectively 26, 38 and 338 million inhabitants.

to have experienced exceptional and unsustainable performances over the period 1961-1974; the long period 1961-2000 seems better balanced (see above) and employment growth is weaker as well as the profit share.

Figure 10 is obtained from Figure 5 considering only 13 economies, Australia, Spain, Greece, and Italy being excluded. Employment growth is maximum for a profit share of 33.5%. This finding confirms the existence of incentives for employment growth acting through a profit share lower or higher than 1/3.

In the end, the maximum employment growth rate is reached empirically with a profit share of about 1/3, as the theory predicts.

Obviously, macroeconomic fundamentals decrease over the long-term trend when the profit share overcome the value 1/3. Can we precise the effect on the employment growth rate? In Table 2, we consider the average values of the fundamentals according to the periodization of the economies from 1961 to 2018¹⁵. From the Golden age of capitalism until the last period (after the Great Recession), macroeconomic performances (GDP growth, productivity growth and investment rate) decline, while the profit share increases rapidly from 30.9% to 37.3%. These evolutions are consistent with the stylized facts identified by Ferri (2016).

<i>17 advanced economies</i>	<i>GDP Growth rate</i>	<i>Employment growth rate</i>	<i>Productivity growth rate</i>	<i>Net investment rate</i>	<i>Profit share in income</i>
<i>1961-1973</i>	5.4	0.2	5.2	18.4	30.9
<i>1974-1991</i>	2.3	0.1	2.2	17.1	31.9
<i>1992-2000</i>	3.2	1.2	2.0	15.6	36.0
<i>2001-2007</i>	2.3	0.8	1.5	15.9	37.3
<i>2008-2018</i>	0.8	0.2	0.6	14.5	37.3

Table 2. Macroeconomic fundamentals (in %) for each period

Nevertheless, the evolution of employment growth rates is quite different, increasing until the period 1992-2000, then decreasing later; it remains ambiguous when the profit share reaches values of the order of 37%.

The growth rate of employment and the profit share increase together over the period 1961-2000 and around the year 2000, many of these economies are at full employment. We then understand the paradox raised by Storm and Naastepad (2017): the employment growth rate increases when the profit share, initially much lower than the value of 1/3, increases; thus, wage-driven economies can create more jobs when the profit share increases. This relationship is quite different when the profit share exceeds 1/3.

5. Discussion on the new growth model

This new growth and distribution model is consistent with many empirical facts; it offers interesting explanations and sheds light on new perspectives. To our knowledge, it is the only endogenous model that finds a theoretical justification for a profit share in income exactly equal to 1/3, often encountered in empirical studies.

This new endogenous growth model belongs to the out-equilibrium economics as defined by Amendola & Gaffard (1998, p.3): “Out of equilibrium, the supply and demand processes, of resources, and of commodities no longer match. They do not match at any given moment and

¹⁵ The reference periodization is that of the United States: for the other countries, we group together the closest periodization. For the three economies with only 4 periods, the long periods are broken down into two periods.

they do not match over time". Thus, two main questions arise: who is the central actor in this growth process? What are the main forces to regulate the economy and ensure during certain periods the stability of the fundamentals?

As Schumpeter theorized, through creative destruction, the entrepreneur is the central actor in this new growth model, making major decisions regarding investments and employment. In our growth model, two types of investment - capacity and rationalization - are considered with very different properties linked to output and employment. It is assumed that creative destruction manifests through both types of investment and not in innovation types as many endogenous growth models assume.

With the development of Keynes's theory of aggregate demand, the rule of aggregate demand in the growth process was recognized. However, Keynes was mainly interested in the theory of short-term unemployment. A recurring theme in alternative theories about economic growth is the role of long-term aggregate demand (Setterfield, 2010). Dutt (2010) reconciles supply and demand in long-term growth analysis and shows that "aggregate demand can have an effect on growth not only in the short term but also in the long term."

This new endogenous growth model is consistent with the ideas of Dutt and Setterfield because it shows the importance of long-term aggregate demand for one major reason: the existence of an infinite chain reaction between additional supply and additional demand where the additional demand is always decisive.

Like our growth model, others combine the ideas of Schumpeter and Keynes. Dosi et al. (2010, 2017) presented a family of evolutionary agent-based models, the "K+S" formalism, which combines both "Keynesian" (demand-driven) and "Schumpeterian" (innovation-driven) mechanisms. The results suggest strong complementariness between Schumpeterian and Keynesian policies in ensuring that the economic system follows a path of sustained stable growth and employment. The "K+S" model, analyzed through Montecarlo simulations, can reproduce a wide range of macroeconomic and microeconomic stylized facts.

Unlike the K+S formalism, this new model is based on an analytical formalism in which Kaldor's vision provides a framework based on the chain reaction between increases in demand and supply. Kaldor's perspective is an important starting point for modeling. Our steady states represent long-term growth in which profit share in income plays an important role, thereby allowing us to compare our insights and stylized facts from a quantified point of view.

The regulation of this out-of-equilibrium growth process takes place in two stages. The first stage lies in the stationary states of this long-term process; we assume that the expectations of entrepreneurs are met and that long-term growth is balanced. The second stage is the role of the profit share in income, which is developed in this article. The value of $1/3$ for the profit share is that which in theory makes the growth rate of productivity independent of the growth rate of employment; it is also the value below which there is an incentive to create jobs, otherwise an incentive to destroy jobs.

We observe that investment rates decrease in long-term trend as the profit share in income increases. This new growth model does not allow for an explanation. In fact, this is not surprising, as the financial sector is not included in this model; further work is needed to consider the financial sector and mainly the interest rate of investments.

6. The influence of profit share on macroeconomic performance: five key findings

For the 17 advanced economies over 1961-2018, we saw that 91% of the annual profit shares have values between 20% and 40%, recalling the historical observation made by Piketty over several centuries. According the value, the relations with the macroeconomic performance are very different and we can distinguish five key findings. A stylized summary of the key findings is provided.

6.1. *The best long-term GDP and productivity growth when the profit share is less than 1/3*

It is obvious that the highest GDP and productivity growth rates are associated with profit shares lower than 1/3 (see Fig. 3). For example, it is the case for Japan (1961-1973), Greece (1961-1973) and Spain (1961-1974) with GDP growth rates higher than 7% (average per year); the highest GDP growth rate (8.8%) for Japan is associated with a profit share of 28.6%.

We note that all GDP growth rates higher (8 cases) than 5% per year are associated with profit shares well lower than 1/3, comprised between 26.1% and 31.4%. We get the same results for the productivity growth rates; the best productivity (8 cases, higher than 5.03%) are also associated with profit shares lower than 1/3.

6.2. *The best long-term job growth with a stable profit share around 1/3*

It is well established that the maximum of employment growth is 1/3 of the profit share for advanced economies; job creation is accelerated by a profit share of less than 1/3, job destruction otherwise. This fact is illustrated by the high job creating Anglo-Saxon economies (US, Australia, and Canada) which experienced very high employment growth rates (1.61 to 1.76%) on average over a long period from 1961 to year 2000. And, on average, the profit share was very near 1/3 (33.2 to 33.9%). All the other economies have experienced job employment growth well below the Anglo-Saxon economies over the same period. Half the economies have destroyed jobs (the maximum is -0.8% for Germany) and half have created jobs (the maximum is 0.8% for Netherlands); and very large variations of profit shares are associated.

Thus, it seems that the maximum for employment growth is also associated to a certain stability of the profit share around 1/3.

From these two lessons, we can try to deduce the conditions required for the best long-term macroeconomic performance as US economy illustrates these good conditions. We highlight several main raisons encountered throughout the long period:

- The stability of profit share in income around the optimal value of 1/3;
- The stability of the investment rate;
- The proper functioning of the labor market with the return to full employment;
- The independence of wage gains from the employment growth rate showing that productivity gains are diffused through the economy;
- The dynamics of innovation with the emergence of the new wave of information and communication technologies and a strong renewal of companies.

The remarkable stability in GDP growth suggests that aggregate supply and demand were roughly in balance. This is no longer the case after the year 2000 until today, which shows the interest of such conditions and such relevant questions for macroeconomic stability.

Before the 2000s, the US economy is a long-term illustration of this emphasis on the process of innovation directed towards new products and services through new business activities

(Jorgenson & Stiroh, 1999; Jorgenson, 2001); the rapid diffusion of information and communication technologies (ICT) is due to the rapid decline in the price of computer-related equipment. Of course, the high macroeconomic performance during the period of prosperity 1961-2000 is also due to this wave of innovation with the US in the lead; new products and services are multiplying and maintaining a high level of capacity investment until the bursting of the internet bubble. Nevertheless, contrary to what was expected, ICT has produced a fundamental change in the US economy which did not translate into a permanent improvement in growth prospects.

6.3. The decline in the growth of GDP and productivity when the profit share increases

The increase in profit share has been well established since the 2000s for all advanced economies and the declining macroeconomic performance is consistent with the stylized fact highlighted by Ferri (2016). At the same time, economic growth is declining so much that the threat of secular stagnation has been raised (Summers, 2013). No advanced economy is known to have overcome this risk after the Great Recession, even with very low interest rates, contrary to what was expected.

After the year 2000, the US economy is very representative of declining performance as the share of profit increases. The variation in the profit share is significant, from 34.5% at the beginning to 39.3% at the end of the period, a variation never seen during the period of prosperity. During the period 2001-2007, demand was supported by an unsustainable real estate bubble. After the Great Recession, despite the stimulus policy and the influx of money from monetary easing, economic growth declined and the rate of investment as we have seen, contrary to the hopes induced by the monetary policies (Stiglitz, 2016). We can now understand the decline in macroeconomic performance induced by too high profits and too weak demand, the innovative process not being able to boost demand in new products and services.

For most of the 17 advanced economies, we find that this high profit share after the Great Recession is associated with a significant reduction in the rate of investment never seen before! At the same time, interest rates were exceptionally low. Such large imbalances raise important questions about the effectiveness of monetary policy in favor of low interest rates.

6.4. Job growth when profit share increases to 1/3

Starting from low values, the profit share increases induced highest employment growth as we saw for the 17 advanced economies. This fact seems contrary to the belief that most economies are driven by wages in the long term. This paradox raised by Storm and Naastepad (2017) is understood, regarding the incentives to create more and more jobs when profit share is increasing, being lower than 1/3, to destroy jobs otherwise.

In Europe, the governments have operated since the 1980s in the neoclassical belief that full employment is possible by reducing the cost of labor and allowing low-wage flexible service jobs. And, the employment growth increases until the beginning of the 21st century. Thus, this fact reflects the incentive to create jobs when the profit share increases, nevertheless being below 1/3.

Since the Great Recession, the employment growth rates, always positive for most economies, is decreasing in tendency, being associated with a profit share in income of 37% in average (Table 2). It seems that a profit share around 37% over the long term is inducing a rapid decrease in job growth. This fact reflects the incentive to destroy jobs when the profit share increases, being higher than 1/3.

6.5. Poor macroeconomic performance over the long term with profit share above 40%

We can note that the highest profit shares in income are linked to Greece and Italy, with more than 40% over long periods. These economies experienced a severe depression in the last period 2008-2018 (negative annual growth in GDP and employment) after the Great Recession.

In addition, two other economies (Finland and Sweden) experienced a profit share greater than 40% only over a period (respectively 2001-2008, 1994-2000); the profit share decreases in the next period and the GDP grows but no depression occurs.

Indeed, Piketty (2014) showed that historically the profit share in income was between 20% and 40%; such a high profit share of 40% has rarely been experienced in the long-term for several centuries. This fact seems to show that so high profit shares are not sustainable over the long term; the too high job destruction and the least wage gains seems to induce latter new policies leading to less profit in firms in order to retrieve better growth.

Thus, in an economy, too high a profit share, well above $1/3$, is detrimental to economic growth. Exceeding 40% in the long term seems to induce severe depression.

6.6. The stylized summary

Thus, there are trade-offs to be made between economic performance, employment performance and the profit-wage distribution. Let us attempt to summarize, in broad strokes, the salient developments in the wage-profit distribution that have been highlighted both theoretically and empirically.

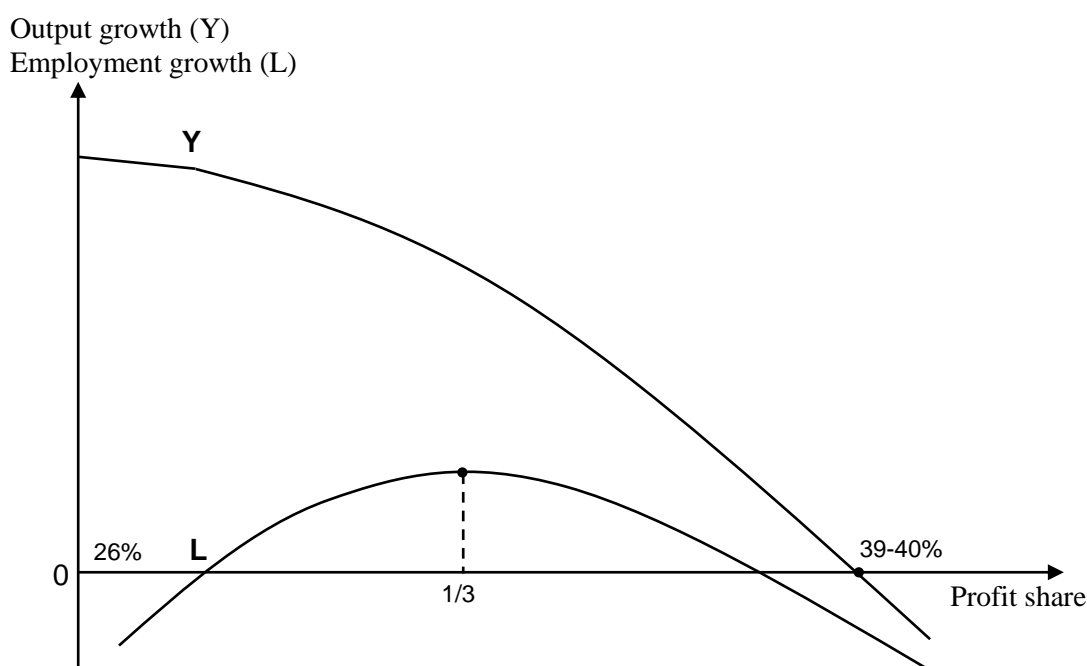


Fig. 11. Trade-off between economic performance and distribution

Figure 11 shows the major stylized changes in output and employment growth as a function of the profit share. Output growth is a decreasing function reflecting the absence of a trickle-down effect; growth stagnates for the value of about 39-40% of the profit share. Productivity growth is also a decreasing function¹⁶. From the point of view of output and productivity, the economy

¹⁶ Not represented on the Figure 11.

is "wage-driven".

Employment growth reaches a maximum for the value of $1/3$ of the profit share; from the point of view of employment, economies are "profit-driven" when the profit share is less than $1/3$, and "wage-driven" in the opposite case. Employment growth is negative for the extreme values; for some economies, employment growth is positive for weak values of profit share. Of course, each figure should be specific to each economy, even if the main trends are preserved.

A profit share well below $1/3$ is combined with strong economic growth and with job destruction or creation. The profit share close to one third is combined with strong growth in employment, as in the Anglo-Saxon economies (United States, Australia, Canada) during the last four decades of the 20th century, and even since 1875 for the United States. A profit share well above one third is combined with a strong slowdown in economic growth and employment growth. Obviously, for high profit shares the slowdown turns into stagnation and then into depression if the profit share exceeds about 39-40% for a long time.

7. Conclusion on macroeconomic fundamentals

Many lessons emerge from the empirical study of the trajectories of the 17 advanced economies over long term (1961-2018). This period is characterized by a considerable increase in the annual profit share.

As a long-term trend, the growth rates of GDP and productivity decrease when the profit share in income increases. Nevertheless, the maximum employment growth is associated with a profit share of $1/3$ as shown by Anglo-Saxon economies (Australia, Canada, and the United States) which are the most job-creating economies over the long period 1961-2000.

Too high a profit share seems very detrimental to economic growth. Thus, high values of profit shares in income, above 40% over a long period, generally lead to a severe economic shutdown, or even a depression; this is the case of Greece and Italy, the only economies to have had such a high profit share since the 1990s and to have experienced a severe depression.

The new growth and distribution model can highlight all these facts; it combines the main ideas of Kaldor (chain-reaction and endogenous growth), Keynes (effective demand and marginal efficiency of capital), Schumpeter (creative destruction) and Ricardo (distribution). Thanks to this new model, we find a theoretical justification for a profit share in income exactly equal to $1/3$, often encountered in empirical studies.

In theory, we show the existence of incentives, an incentive for job creation when the profit share is less than $1/3$, another incentive for job destruction in the opposite case. Thus, increasing the profit share can boost the employment growth rate until it reaches the value of $1/3$, otherwise lower the employment growth rate. The hypothesis of trickle down is not consistent with these stylized facts.

Five key findings can be drawn from these considerations. The first reveals that the best GDP and productivity growth rates are obtained with a profit share of less than $1/3$. The second is that maximum job growth is associated with a $1/3$ profit share. The third is the decline in performance when the profit share increases. The fourth considers that limited wage growth can induce job creation when the profit share is less than $1/3$. The fifth key finding points out that excessively high profit shares, above 40% over the long term, can lead to poor macroeconomic performance and even depression.

Ultimately, the profit share in income has a strong influence on the growth rates of GDP, productivity, and employment. Macroeconomic policies must take this influence into account.

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Appendix A. The data sources

The data are from the World Bank (World Development Indicators-WDI-June 2021) for the GDP growth rate and the gross investment rate (in % GDP), from the Groningen Center for the growth rate of total hours worked (The conference Board and Groningen Growth and Development Center, Total Economy Database, June 2021, <http://www.ggdc.net>). Data on the profit share in income (adjusted share to factors costs) from 1961 to 2018 is taken from the European Commission (Annual macro-economic database -AMECO- June 2021). The sometimes-missing data (between 1961 and 1969) come from the European Commission (Report n°73-2001). In the absence of net investment in databases, it is assumed that the proportion of replacement investment is typically 30%.

Appendix B. The 17 advanced economies (1961-2018): data (in %)

Economy	Period	g_Y	g_L	i_n	α	Rci	Pci
Australia	1961-1974	4.7	2.3	21.4	35.4	92.1	23.6
	1975-1992	2.9	1.4	18.8	31.5	103.2	14.8
	1993-2000	4.2	1.9	17.3	35.5	86.9	27.7
	2001-2008	3.3	1.9	18.5	38.6	93.8	19.1
	2009-2018	2.6	1.3	18.4	40.9	79.2	17.7
	Austria	1961-1974	4.8	-0.3	20.0	27.4	45.8
1975-1993		2.3	-0.2	18.0	29.4	45.8	28.5
1994-2000		2.9	0.6	17.9	34.0	62.1	25.8
2001-2008		2.2	0.5	16.4	38.5	60.9	21.8
2009-2018		1.0	0.3	16.0	37.5	68.4	9.3
Belgium	1961-1974	4.9	-0.1	18.2	36.5	48.9	55.0
	1975-1993	1.9	-0.8	15.5	30.0	34.3	35.8
	1994-2000	2.8	1.3	15.2	30.8	106.5	17.6
	2001-2008	2.1	0.8	15.5	32.2	86.0	15.4
	2009-2018	1.2	0.6	16.0	32.7	103.0	7.4
Canada	1961-1974	5.1	1.8	16.1	31.4	82.5	38.3
	1975-1992	2.5	1.4	15.7	34.1	103.6	15.5
	1993-2000	3.4	1.9	13.7	34.4	107.3	23.3
	2001-2008	3.7	1.4	15.2	38.3	72.1	33.7
	2009-2018	1.7	0.8	16.4	37.6	80.2	12.7
Denmark	1961-1973	4.6	0.4	17.2	31.7	55.9	47.4
	1974-1993	1.7	-0.7	14.6	31.5	34.4	34.7
	1994-2000	3.3	1.3	14.2	36.3	76.2	30.9
	2001-2007	1.6	0.5	15.1	35.5	67.5	16.0
	2008-2018	0.9	-0.1	14.0	35.1	46.3	14.5
Finland	1961-1973	4.8	-0.1	19.0	26.7	48.3	52.6
	1974-1993	2.1	-1.1	19.1	29.1	30.8	35.3
	1994-2000	4.8	1.6	14.8	37.9	68.1	48.0
	2001-2008	2.9	1.0	16.0	40.6	65.8	27.5
	2009-2018	0.2	-0.1	15.8	37.4	33.9	4.4
France	1961-1974	5.6	-0.4	18.0	27.1	45.5	68.1
	1975-1993	2.2	-0.5	16.1	28.2	39.1	35.8
	1994-2000	2.7	0.7	14.2	34.4	67.4	28.5
	2001-2008	1.7	0.6	15.4	35.5	73.8	14.9
	2009-2018	0.9	0.2	15.5	33.2	66.8	8.9
Germany	1961-1973	4.2	-0.9	18.3	31.6	40.9	55.8
	1974-1993	2.3	-1.1	16.8	31.8	33.5	41.0
	1994-2000	1.9	-0.1	16.2	35.8	48.4	24.3
	2001-2008	1.3	0.0	14.0	37.6	49.9	18.6
	2009-2018	1.3	0.5	14.1	36.3	77.5	12.0
Greece	1961-1973	8.5	-0.9	18.5	32.7	45.1	102.5
	1974-1993	1.5	0.8	18.2	42.0	81.8	9.8
	1994-2007	3.6	1.2	16.1	44.0	63.7	35.2
	2008-2018	-2.5	-1.5	10.3	41.5		

Economy	Period	g_Y	g_L	i_n	α	Rci	Pci
Italy	1961-1974	5.4	-1.0	17.7	29.6	40.8	74.3
	1975-1993	2.4	0.3	16.2	34.2	55.6	26.5
	1994-2000	2.2	0.4	13.7	40.5	58.7	27.3
	2001-2007	1.1	1.1	14.9	40.9	170.9	4.4
	2008-2018	-0.4	-0.5	12.9	39.3		
Japan	1961-1973	8.8	1.1	23.8	28.6	59.6	62.3
	1974-1991	4.0	0.6	22.7	26.2	62.1	28.5
	1992-2007	1.2	-0.5	19.2	33.8	34.3	17.6
	2008-2018	0.5	-0.1	16.2	37.2	40.8	7.8
Netherlands	1961-1974	5.1	0.8	18.9	30.3	61.3	43.8
	1975-1993	2.1	0.3	15.3	29.0	59.2	23.6
	1994-2001	3.8	2.1	15.3	33.5	109.8	22.5
	2002-2008	2.0	0.7	14.9	36.1	70.0	18.6
	2009-2018	0.9	0.5	13.9	35.2	99.2	6.5
Portugal	1961-1974	6.7	0.0	17.9	26.1	50.3	74.1
	1975-1993	3.0	0.7	19.2	29.2	69.5	22.3
	1994-2000	3.7	1.9	17.9	32.7	106.8	19.2
	2001-2008	1.1	-0.1	16.8	33.3	45.7	14.3
	2009-2018	0.2	-0.4	12.0	38.7	20.7	11.8
Spain	1961-1974	7.2	0.5	17.8	29.9	54.0	74.6
	1975-1993	2.2	-0.9	16.3	31.1	34.9	39.0
	1994-2008	3.4	2.9	17.9	36.4	203.6	9.2
	2009-2018	0.4	-0.7	13.5	39.8	21.9	14.8
Sweden	1961-1975	4.0	-0.3	20.9	33.1	46.2	41.0
	1976-1993	1.3	0.0	18.0	35.3	50.9	14.6
	1994-2000	3.7	1.1	14.6	40.2	63.7	40.0
	2001-2007	3.0	0.5	16.0	39.1	56.7	33.3
	2008-2018	1.7	1.1	16.6	38.0	104.6	10.0
United Kingdom	1961-1973	3.5	-0.7	14.2	35.0	42.2	57.6
	1974-1992	1.9	-0.3	15.9	36.0	43.6	26.9
	1993-2000	3.4	0.8	12.6	39.4	60.6	44.0
	2001-2007	2.8	0.7	12.4	35.6	65.5	34.1
	2008-2018	1.1	0.9	11.5	34.4	194.9	5.1
USA	1961-1973	4.3	1.6	15.5	32.6	80.7	34.3
	1974-1991	2.8	1.5	15.8	34.3	101.6	17.5
	1992-2000	3.8	1.9	15.0	35.1	91.8	28.0
	2001-2007	2.5	0.3	15.6	36.1	56.2	28.7
	2008-2018	1.6	0.6	13.9	38.9	69.6	16.4

