Social classes in economic analysis. A brief historical account

JRC Working Papers Series on Social Classes in the Digital Age
2022/02

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A brief historical account

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Abstract
The purpose of this working paper, the first of a series of three aiming at studying social classes from an economic perspective, is to review the role played by social classes in economic analysis. With that aim, we will first discuss the use of the concept of social classes in the analysis of classical economists. Then we will present the reasons behind the abandonment of the concept of social classes as an analytical tool by the marginalist school who triumphed in the final quarter of the 19th century, changing the economic paradigm, and by mainstream economists in the 20th Century. Nevertheless, it can be argued that the classical idea of social class (based on the source of income: wages versus profits) has somehow remained alive in modern macroeconomic analysis, if in disguise, behind the concept of functional (or factorial) distribution of income. The last part of the paper reviews the role played by the functional distribution of income in current macroeconomic analysis, and studies how the evolution of the economy and labour relations in the last few decades has made the interpretation of the functional distribution of income in terms of social classes less relevant than in the past.

Keywords: Social Class, Functional Distribution of Income, Labour segmentation
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Acknowledgements: The authors wish to thank Enrique Fernández-Macías, Rafael Grande, Davide Villani, the participants of the seminar Social Classes from the Economic Perspective, held in the JRC, Seville, the 8th of October of 2021, and two anonymous referees, for their comments on an earlier (and extended) version of this paper. The usual disclaimers apply.

Joint Research Centre reference number: JRC127236
1 Introduction

Social classes play an important role in Sociological analysis, and there is a large literature devoted to the concept, meaning and measurement of social classes. The concept of social class is used to explain behaviour and attitudes of individuals in areas as different as consumption, marriage, or political affiliation. In contrast, references to social classes are almost non existing in modern economics. This is certainly surprising if we consider that according to one of the classifications of social classes more widely used in sociology, the one developed by Goldthorpe (e.g., Erikson and Goldthorpe, 1992), social classes are defined in terms of the position of individuals in the labour market, as proxied by their occupation. Something that is part of the sphere of the economy and the productive relations, which is the field of analysis of Economics. Nevertheless, economists, or at least mainstream economists, have not considered the concept of social class as a concept with enough analytical power, or interest, to incorporate in their analysis of the economy and economic behaviour of people.

It was not always like this. Social classes played an important role in the narrative of classical economists such as Adam Smith (1723-1790), David Ricardo (1772-1823) or Karl Marx (1818-1883). But by the fourth quarter of the 19th century, with the triumph of the marginalist revolution and the growth of neo-classical economics, social classes largely disappeared from mainstream economic analysis. For classical political economists the existence of social classes was so self-evident that they did not devote much time to defining them, but it was clear that different types of economic agents, workers, landowners, and capitalists played different roles in society and were remunerated in different forms and through different mechanisms. With Marx, the role played by social classes in economic theory jumped to a higher level, as the relation between social classes is interpreted in conflictual terms and becomes the engine of change of economic systems. Unfortunately, the chapter on social classes (the last one of the third volume of Das Kapital), was left unfinished after barely one and half pages. A pity, as the chapter 52, “Classes”, starts posing the question: “What constitutes a class? (…). What makes wage-labourers, capitalists and landlords constitute the three great social classes?”.

This interpretation of the economy as a conflictual arena, where different social classes fight for the distribution of the product, was abandoned with the advent of the neoclassical school and their view of the economy as conformed by a myriad of markets where different economic agents buy and sell things, and where conflicts, or better said, disequilibria, are peacefully solved by movements in prices and quantities. Paradoxically, in a way, the neoclassical world is a world without classes, just as the dream of communist societies. Nevertheless, classes remained somewhat present in economic analysis, if stripped from all its Marxian connotations, hidden under the concept of functional distribution of income. It is precisely in the area of analysis of income distribution, an area that has gained much attention in the last couple of decades (compared with its almost marginality before 1) where we can see a return of the idea of a society formed by groups in conflict, and even the resurgence of use of social classes to describe society (if often defined in terms of deciles of income).

The purpose of this working paper, the first of a series of three aiming at studying social classes from an economic perspective, is to review the role played by social classes in economic analysis. With that aim, section two will discuss the use of the concept of social classes in the analysis of classical economists. Section 3 will present the reasons behind the abandonment of social classes by the marginalist school and mainstream economists in the 20th Century. Section four will argue that, nevertheless, the concept of functional (or factorial) distribution of income can be considered as a continuation of the classical analysis of social classes based on the source of income (wages versus

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1 Taking as a turning point the famous Presidential Address to the Royal Economic Society of Anthony B. Atkinson delivered in April 1996 with the title “Bringing Income Distribution in From the Cold”.

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profits) of individuals. This section will review the role played by the functional distribution of income in current macroeconomic analysis, but also how the evolution of the economy and labour relations has made the interpretation of the functional distribution of income in terms of social classes less relevant with the passing of time. Before concluding, section five will present some examples of resurgence (explicit or implicit) of the concept of social class in contemporary economic analysis. As we will see, this revival is often limited to the use of social classes not as an analytical tool but as a metaphor and is far less rigorous in its use than in other disciplines such as Sociology. But even so, it can be interpreted as the belated recognition of the analytic relevance of social groups defined by their access to key economic resources (classes) for the explanation of different economic phenomena. Last, as usual, section six will present the main conclusions of the paper, as well as outline future research to explore, among other things, new approaches to the definition of social classes from an economic perspective.

After presenting the aims of the paper, and before concluding this introductory section, it is also important to clarify what this paper is not about. Obviously, the study of social classes is related to the study of income distribution. But to study the distribution of income is clearly something different that to study social classes, as the former can be done without mentioning the latter and without resorting to the concept of social class. As mentioned before, and explained with more detail further down, with the marginalist revolution social classes ceased to play a major role, we could even say, a role, in economic analysis. But that doesn’t mean that neoclassical economist stopped altogether studying income distribution. Although largely marginalised compared to other fields of research, mainstream economist devoted time to study inequality, but from perspectives quite different from the approach based on social classes. Just to give an example, Simon Kuznets (1955) started a fruitful line of research, still alive more than half century later (Milanovic, 2016) about the relation between economic growth and inequality, where social classes are absent, at least in a direct way.

Obviously, all economists have been conscious of the existence of differences among individuals regarding their living conditions. The difference, and this is not a minor issue, is whether such differences are considered the result of individual preferences or genetics (if you are a thrift, entrepreneurial or risk loving person) and of the existence of transaction costs regarding collective action that allow small groups of people to conform distributive coalitions Olson (1974), or not. From this perspective the existence of inequalities would not imply the existence of social classes, as they could be the result of the existence of different social classes of individuals. From a different perspective, and regardless the existence of differences among individuals, the question is if inequalities are explained by the working of social mechanisms (operating at a superindividual level) such as power, monopoly capital and exploitation, violence, ideology, etc. If it is so, then the analysis of social classes cannot be reduced to the study of inequality.

That is why it is important to clarify from the beginning that this paper will circumscribe, as much as possible, to the study of social classes in economic analysis, without discussing how income distribution has been analysed through time by Economics.

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2 In his famous Presidential Address to the Royal Economic Society "Bringing Income Distribution from the Cold", Antony B. Atkinson (1997) argued how the subject of income distribution had been largely marginalized by economic research, with only 4% of the articles published by the Economic Journal in the previous 50 years dealing with income distribution (broadly interpreted), that is one and a half articles per year.

3 For an alternative interpretation of the dynamics behind the Kuznets Curve (an inverse U relation between economic growth and income inequality), that could be read, although is not directly expressed, in terms of conflict between social classes, see Acemoglu and Robinson (2002).
2 Social classes in classical political economy

The point of departure in our journey through the role played by social classes in Economics is, as in many other occasions, Adam Smith’s *Wealth of Nations*, published in 1776. Here we find the first, and canonical, clear distinction of social classes, both from the production and the distribution realms:

The whole annual produce of the land and labour of every country, or what comes to the same thing, the whole price of that annual produce, naturally divides itself, it has already been observed, into three parts: the rent of land, the wages of labour, and the profits of stock; and constitutes a revenue to three different orders of people: to those who live by rent, to those who live by wages, and to those who live by profit. These are the three great, original, and constituent orders of every civilised society, from whose revenue that of every order is ultimately derived (Smith 1776, Book I, chapter XI, p. 265)

According to the historian of economic thought Ronald Meek (1976), Smith is pioneer in arguing in favour of the specificities of profits, “that could no longer be treated under the heading of rent, where Petty had tended to place it; it could no longer be identified with wages, as with Cantillon and Hutcheson; and its origin could no longer be sought in the sphere of exchange, where Steuart had claimed to find it” (p. 22).

Here we have the traditional trinity of social classes: workers, merchants/capitalist and landowners, receiving, from the perspective of the distribution of the product, wages, profits and rents. In the words of Milios (2000), for the first-time classes are defined objectively, with each individual allocated to one class depending on “his or her specific economic function, independently from its particular technical or natural characteristics” (p. 285).

From the perspective of production, according to Smith, due to the guiding principle behind the wealth of nations, the division of labour, workers in a market economy will be growingly bereft of their productive autonomy and the capacity to control their work, progressively becoming just a piece in the productive process. These would, in turn, lead to the alienation of workers (Lamb, 1973):

The man whose whole life is spent in performing a few simple operations, of which the effects too are, perhaps, always the same, or very nearly the same, has no occasion to exert his understanding, or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become (…) His dexterity at his own particular trade seems, in this manner, to be acquired at the expense of his intellectual, social, and martial virtues. (Smith 1776, Book V, chapter I, p. 782)

Thus, with the development of capitalism, and the extension of the division of labour, workers will be subject to a process of homogenization regarding their work, in contrast with the pre-industrial age differentiation of tasks by trades and guilds. The same process of homogenization will be found regarding wages, as, according to Smith, and the rest of classic writers, wages are set at subsistence level (i.e., covering the reproduction needs of the worker and his family):

A man must always live by his work, and his wages must at least be sufficient to maintain him. They must even upon occasion be somewhat more; otherwise, it would be impossible for him to bring up a family, and the race of such workmen could not last beyond the first generation (Smith 1776, Book I, chapter VIII, p. 85).

Although at a given moment of time, depending on the law of supply and demand, if demand for workers is higher than supply, wages can be higher than the subsistence level, in the medium-long run, as Malthus or Ricardo will later also argue, such situation would lead to an increase in population that would, in return, re-equilibrate supply and demand, bringing back wages to their subsistence level.
Smith also argues, in what will later be known as the Theory of Compensating Differentials,⁴ that even when wages are set at a subsistence level, there can be differences among them when comparing the wages of different occupations or trades. These differences can be explained, according to Smith, by the different agreeableness, constancy and hardship of the tasks performed, or the time devoted to training and the probability of success in the profession:

When the inconstancy of employment is combined with the hardship, disagreeableness and dirtiness of the work, it sometimes raises the wages of the most common labour above those of the most skilful artificers” (Smith 1776, Book I, Chapter X, p. 121)

The consideration of these distinct social classes defined according to their role in the production process is also clear from the very beginning (first paragraph of the Preface) of David Ricardo’s (1772–1823) major work: Principles of Political Economy and Taxation:

The produce of the earth—all that is derived from its surface by the united application of labour, machinery, and capital, is divided among three classes of the community, namely, the proprietor of the land, the owner of the stock or capital necessary for its cultivation, and the labourers by whose industry it is cultivated (Preface)

In fact, for Ricardo, “To determine the laws which regulate this distribution”, i.e., what is known nowadays as the factors’ income share or the functional distribution of income, “is the principal problem in Political Economy”.

For Ricardo, as for Smith before, wages were set at subsistence level: “the natural price of labour is that price which is necessary to enable the labourers, one with another, to subsist and to perpetuate their race, without either increase or diminution” (Ricardo, 1817, Chapter 5, p. 90), so there is a source of homogeneity in the working class regarding its income.

The laws guiding the distribution of income would also explain, in David Ricardo’s view of the world, the stationary state that market economies would reach in the future. Due to the existence of diminishing returns in agriculture, with the growth of the economy, a larger share of income would go to the payment of rents, leading to a reduction of the share of profits, squeezed between growing rents and constant wages set at a subsistence level, that cannot be reduced without endangering the reproduction of the workers as a “race”. This would lead to a reduction of the profit rate⁵ and the corresponding stalemate of accumulation and growth.⁶

The concept of social classes of the classical political economists will take a much more central role in the analytical framework of Karl Marx (1818–1883), the last of them.⁷ According to Marx, the dynamic of contemporary history ultimately depends on the confrontation of the two major classes of the capitalist system, workers and owners of capital:

Our epoch, the epoch of the bourgeoisie, possesses, however, this distinct feature: it has simplified class antagonisms. Society as a whole is more and more splitting up into two

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⁵ The same would happen in the event of an increase in wages, which would necessarily lead to a reduction of benefits.

⁶ The relation between the functional distribution of income and growth will be later recovered, from a different perspective, by Michal Kalecki (1899–1970), Nicholas Kaldor (1908–1986) and Luigi Passineti (see section 4.1).

⁷ In the words used by E. O. Wright (1997), Marx presented “the most elaborated and systematic theoretical framework for class analysis” (p.2)
great hostile camps, into two great classes directly facing each other – Bourgeoisie and Proletariat. (Marx and Engels, 1848, p. 15)

For Marx, “the history of all hitherto existing society is the history of class struggles” (Marx and Engels, 1848, p. 14). “No antagonism, no progress. Till now the productive forces have been developed by virtue of this system of class antagonism” (Marx 1847, taken from Andrew, 1975, p. XX). Although it has been argued (Andrew, 1975) that Marx didn’t specify clearly what a class is, from his writings it is clear that social classes are defined in terms of the particular way income is earned, rather than on the basis of consumption or income levels. Although, obviously, there is a relation between these two dimensions.  

For Marx, “classes are (...) groups of men and women with similar position in a social division of labour, with common relation to the means of production” (Andrew, 1975, p. 458). In fact, the capitalist mode of production is characterized, and defined, by the separation of the workers from the means of production, leaving them with just their labour force to trade in the market, and the concentration of the ownership of the means of production in the hands of the capitalist class or bourgeoisie.

This approach highlights the role that economic power has in the definition of social classes, in the sense that the economic position of some people – the capitalists – gives them power over the life (time) and activities of other people – the workers (Wright, 2007). In fact, to the extent that power is partially delegated by capitalists to specific workers to exercise their authority in their name, there is the possibility of conceiving a new social class formed by workers that exercise (delegated) authority on other workers and are compensated for it. This would be later developed by the Marxist Sociologist Erik O. Wright (1997) and operationalised in his concept of contradictory locations within class relations.

When looking at specific historical contexts, Marx often replaced this binary framework by a more nuanced and multidimensional account of the class structure. In fact, according to Ollman (1968), in his different writings, Marx uses loosely the term of social class and mentions the existence of other classes such as land-owners, the petty bourgeoisie, the peasants, a lower middle class which includes “small manufactures, the shopkeeper, the artisan, the peasant” or the lumpenproletariat, the “dangerous class”. (Marx and Engels, 1948, p. 20)

The recourse to class sub-divisions will also be used by later Marxist influenced scholars such as Erik O. Wright (1977) who, along with workers and capitalists, considers the petty bourgeoisie, formed by those owners of capital that do not employ workers (self-employed), and a “middle class”, defined in terms of the autonomy enjoyed and the skills used in their jobs.

In any case, the accusation of “having a litter of standards for class membership and of changing them without prior warning” (Ollman, p. 576), should not lead us to dismiss the Marx’s concept of class as confusing, as beyond the details in terms of the “number” of classes, the core ideas of a conflict among workers and capitalist regarding the distribution of product, and the exploitative nature of the capitalist systems, are clear.

8 In the words of Marx: "The vulgar mind commutes class differences into 'differences in the size of purses' – The size of the purse is a purely quantitative difference, by virtue of which two individuals of the same class can be opposed quite arbitrary' (Die moralisierende Kritik and die kritisierende Moral, in Werke Bd. 4), as quoted in Andrew (1975, p. 460)

9 In this regard, the numbering and definition of the different existing social classes in modern capitalist economies, their cataloging and characterization would become a major industry in sociological research in the twentieth century.
2.1 A brief look at the historical context

Adam Smith and the rest of the classical economists lived in a time, during the so-called proto-industrialization and the First Industrial Revolution, of profound changes. New technologies were developed and applied, cities were growing at an unprecedented speed (with the share of urban population increasing in England from 34% at the turn of the 19th century to 79% one hundred years later, Law, 1967), and new jobs were created while old ways of doing things slowly disappeared. In the words of Daniel Defoe in his Tour through the Whole Island of Great Britain, published in 1724-6, as this was starting:

> New foundations are always laying, new buildings always rising, highways repairing, churches and public building erecting (...) fortunes of different families taking different turns, new trades are everyday erected, new projects enterprised, new designs laid; so that as long as England is a trading and improving nation, no perfect description either of the place, the people, or the conditions and the state of things can be given (p.241).

It was the time when, according to the historian E. P. Thomson (1963), “more English working people came to feel an identity of interests as between themselves, and as against their rulers and employers” (1963, p. 11), the time of the Making of the English Working Class, paraphrasing the title of his well-known book.

As argued by Briggs (1985), the complexity of the emerging English class structure was revealed during the Chartist period, especially in 1842, the time of one of the most difficult crises of the century, with a threefold class division (upper, middle and working) being incapable of capturing the nuance of the situation. Nonetheless, the available information on the evolution of skill premium from the mid-seventeenth century depicted in Figure 1 shows the existence of a process of homogenization of the working conditions of the workers, at least regarding wages. This trend is coherent with the argument advanced by Marx of a tendency towards class polarization (workers versus capitalists) and homogenization of the working class via the marginalization of the more skilled categories of labour.

This trend, although absent in some countries such as the US, was shared by other countries such as France (Beltran and Pons, 2004). For example, the skill premium of engineers and mechanics in France went from 1.6 to 1.31 from 1896 to 1930, and for builders (craftsmen vs helpers) from 1.6 to 1.4. Similar trends are found among printers and workers of sectors such as textile or shoes and leather. In Italy, according to the estimates of Federico et al. (2021) for the period 1861-1912, the skill premium remained broadly stable until the late 1880s and declined sharply in the early 1890s, showing an overall reduction during the period corresponding to the early industrialization of the country (1861-1913). According to the analysis of Beltran and Pons (2013) during the period 1870-1930 we can find similar trends in terms of reduction of wage inequality in Germany, Denmark, Netherlands, or Sweden. A similar dynamic is found during the second industrial revolution in the merchant marine in Canada (1891-1912), where “moderate skilled able-bodied seamen were replaced by unskilled engine room operatives” and “artisans were replaced by a combination of unskilled and highly skilled workers, and skilled share of total employment declined” (Chin et al, 2006, pp. 572, 575).
**Figure 1** Wage of craftsmen relative to wage of labourers, England 1200-2000.


**Figure 2** Distribution of families by social class according to social tables, England and Wales

Note: The drop of cottagers and paupers from 1798 to 1845 is explained by the Poor Law Amendment Act of 1834

Source: author’s elaboration from Allen (2019, p. 105)

Taking England and Wales once more as example, by the end of the nineteenth century, according to the analysis of 5 different social tables\(^\text{10}\) conducted by Allen (2019), two thirds of the families were considered as belonging to the working class (manufacturing workforce, the building trades, miners, labourer’s and out servants, soldiers, seamen, domestic servants, and

\(^{10}\) The social tables used are: (1) Gregory King, 1688, (2) the update made by Joseph Massie in 1759, (3) the revision of Patrick Colquhoun of 1801 using the first English census, (4) The revision of W.R. Smee in 1846 using the census of 1841, and (5) the revision of Dudley Baxter in 1867 using the census of 1861.
farm servants), while the *bourgeoisie*, which included large-scale capitalists, bankers, merchants, lawyers, high officials, and investors, made up around 8% of families; in between, the “lower middle class” consisting of shopkeepers and tradesmen plus those in science and the arts made up 16% of families (Figure 2).

3 The marginalist revolution and the demise of social classes in Economics.

In the 1870’s, in what Kaldor (2018) considers a perfect example of *multiple discovery*, a series of economists, of different countries and without previous knowledge of each other’s work, published three different books that questioned the approach of the classical economists. In England, William Jevons (1835-1882) published *The Theory of Political Economy* in 1871; the same year, Carl Menger (1840-1921) published his *Principles of Economics* in Austria; while Marie-Ésprit-Léon Walras (1834-1910) published in 1874 his *Éléments d’économie politique pure, ou théorie de la richesse sociale*, in France. Many elements differentiate the marginalist scholars from their predecessors in the field of economics, but for the purpose of these pages we will focus on two. The first one is the substitution of an objective theory of value based on the amount of labour needed to produce goods and services for a subjective theory of value based on the utility derived by the individual from the consumption of the different goods and services produced. This is important as this approach questions the idea of an intrinsic conflict between work and capital in the distribution of income and thus the economic basis of class conflict (i.e. capitalists getting their income by exploiting workers). Instead, the income of different individuals would be the consequence of a neutral set of conditions: technical (different productivity) and economic (different market situations). The second one is the change of the focus of economic analysis from social classes to individuals (as the individual is the agent who grants value to things), and the adoption of methodological individualism, according to which social phenomena can be explained as the result of individual (versus group) actions (Heath, 2020).

From the perspective of what will later be known as Neoclassical Economics, the workings of the market can be better explained by looking at individual actions and the interactions of economic agents: firms, workers and consumers. Thus, the concept of social classes loses its interest and is “definitely abandoned” (Martins, 2015, p. 1109). According to this view, that soon would become dominant in economic analysis, households decide the amount of work they want to supply in the market, taking into consideration the trade-off between the utility derived from the consumption allowed by the wages received, and the disutility produced by work. This way “the dominant (neoclassical) economic theory excludes any concept of class, and thus of class antagonism or class exploitation” (Milios 2000, p.288). If the results and the working of the market can be better studied and understood just by looking at the behaviour of individuals, acting on their own, then there is no need, or use, of the theoretical construct of social class. And if every production factor, capital and labour, is remunerated according to its marginal productivity, then there is no conflict between them, and no need or reason to talk about class conflict. In the famous words of the American economist John B. Clark (1847-1938):

The distribution of the income of society is controlled by a natural law, and this law, if it worked without friction, would give to every agent of production the amount of wealth which that agent creates. However, wages may be adjusted by bargains freely made between individual men, the rates of pay that result from such transactions tend, it is here claimed, to equal that part of the product of industry which is traceable to the labor itself; and however interest may be adjusted by similarly free bargaining, it naturally tends to equal the fractional product that is separately traceable to capital. (Clark, 1899, Preface)

Only when the market deviates from competition and workers receive submarginal productivity wages we could talk of conflict between employers and employees. And even then that situation would only apply to specific individuals and firms, and it would be the result of market imperfections of some kind.
From this perspective, as William Stanley Jevons (1835-1882), one of the founders of the marginal theory, writes: “the supposed conflict of labour with capital is a delusion. The real conflict is between producers and consumers. The capitalist employer is part of a producing system, and his conflict is naturally with the consumer who buys from him” (1882, p. 98).

This idea is also developed by no other than Lionel Robbins (1898-1984), in a little-known paper titled “The Economic Basis of Class Conflict” prepared for a symposium on Class Conflict and Social Satisfaction organized by the institute of Sociology, dealing with the economic conditions which may give rise to conflict between different classes (communities of interest according to his formulation). Regarding class wars, and from a national perspective, Robbins questions the idea of a working class as: “there is not one, there are many separate types of labour services: and their several relations in production and in the market do not give rise to a general community of interest (...) in contrast the interest of the different groups are often sharply opposed”. (1939, p. 20).

In any case, and leaving aside this question, for Robbins there are two sources conflict in the market: (1) when as individuals people are confronted by monopolistic groups, and (2) when as groups their position is contrasted with other. Regarding the first source of conflict, Robbins argued that “a universal monopoly of employers is a chimera of the imagination” (p. 21). Regarding the second, the only source of conflict that he recognises is the possibility that some opportunities of employment are only accessible to those that have command on capital (either for expenditure on training or for insurance against the risks of entrepreneurship).

Summing up, while in the 20th Century sociologists, following both the Marxist and the Weberian traditions, were busy discussing the merits of different approaches to the definition of social classes, economists concentrated in the analysis of an idealized model of perfect competition where homo economicus, in search of maximum utility, engage in free exchanges of labour, goods and services. Just to give an example of the disappearance of social classes in mainstream economic analysis, in the 700 pages of the 19th edition of what probably has been the most widely used manual of Economics, the one written by Samuelson and Nordhaus, both Nobel Prize in Economics, there is only one reference to social class, and is included in a quote of another author.

Nevertheless, although at the edges of the mainstream analysis, the concept of class, even if stripped from any antagonistic interpretation, remained alive, as we will see in next section.

4 What remains: The functional distribution of income.

Although within a very different framework, stripped of the implications of class analysis, mainstream economics maintained, in the concept of functional or factor distribution of income, some of the flavour of social classes’ analysis of classical economists. By functional or factor distribution of income we mean the participation of the factors of production in the total product. If, for the sake of simplicity, we consider two factors of production, capital and labour, then the sum of the value of all goods and services produced in a given period, as measured by its value added, is identical to the sum of the wages and benefits generated in the production process.

Let \( Y \) be total income, \( W \) total wages and \( P \) total profits, then:

\[
(1) \quad Y = W + P
\]

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11 For a detailed analysis of the work of Jevons regarding de labour-capital conflict see Bowman (1989).
Then, we can express the functional distribution of income as the share of wages from total income, $t = \frac{W}{Y}$, or alternatively, the share of profits from total income, $b = \frac{P}{Y}$. where:

\[
(2) \quad \frac{W}{Y} + \frac{P}{Y} = 1; \text{ or } t + b = 1
\]

This approach is one of the three methods used in National Accounts to estimate the total production of a country or GDP, and so this information has been available since the development of National Accounting as a result, among other things, of the Keynesian revolution and the need to have access to detailed information regarding the economic situation of a country as a requisite for good macroeconomic management.

The distributional “conflict” behind the concept of the functional distribution of income becomes evident when we substitute total wages, $W$, in equation (2) by the product of average real wages, $w$, and total employment, $E$:

\[
(3) \quad t = \frac{W}{Y} = w \left( \frac{E}{Y} \right)
\]

where $E/Y$ is the inverse of labour productivity $Y/E$, therefore:

\[
(4) \quad t = \frac{w}{\Pi}
\]

Where $\Pi$ is labour productivity. Equation (4) is known in labour economics as the equation of unit labour costs. Thus, an increase in the participation of wages in total product is translated, on the side of capital, as an increase in labour cost.

Interestingly, for many decades the analysis of the functional distribution of income pivoted around its allegedly constancy, which in fact deprived the study of functional distribution of income from its conflictual nature. According to Kaldor (1961) the constancy distribution of income was one out of six “Stylized Facts” related to the process of economic change and development that could be considered as starting points for the construction of theoretical models:

- a steady share of profits (and of wages) in societies and/or in periods in which the investment coefficient (share if investment in output) is constant (...) The steadiness in the share of wages implies, of course, a rate of increase in real wages that is proportionate to the rate of growth of average productivity (p. 178-79).

Before Kaldor, no other than Keynes (1939) himself spoke about:

- the stability of the proportion of the national dividend accruing to labour, irrespective apparently of the level of output as a whole and of the phase of the trade cycle. This is one of the most surprising, yet best-established, facts in the whole range of economic statistics, both for Great Britain and for the US. It is the stability of the ratio for each country which is chiefly remarkable, and this appears to be a long-run, and not merely a short-period phenomenon (...) The result remains a bit of a miracle (pp. 48–9, as quoted in Pencavel, 2015)

Although the supposed constancy of factor shares was questioned by other economists, such as Solow (1958):

- It has been widely believed that the share of national income accruing to labour is one of the great constants of nature, like the velocity of light or incest taboo (...) The object of

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13 The other approaches are the production method, based on measuring the value of the goods and services produced, and the expenditure method, consisting in adding the different types of expenditure (Consumption plus Income, plus Government Expenditure plus Exports minus Imports).
this paper is to suggest that, like most miracles, this one may be an optical illusion” (p. 618)

The truth is that for many decades, the constancy of the functional distribution of income was considered as a law of Economics and buttressed the consideration of the Cobb Douglass production function, which implies constant share of the output going to labour and profits, as a proper way to modelize production functions. In the terms used by Gregory Mankiw, author of one of the most widely used Macroeconomics textbook:

Despite the many changes in the economy over the past four decades, this ratio has remained about 0.7. This division of income is easily explained by a Cobb–Douglas production function \( Y = A k^{\alpha}L^{1-\alpha} \) in which the parameter \( \alpha \) is about 0.3. According to this parameter, capital receives 30 percent of income, and labor receives 70 percent. (Mankiw, 2010, p. 58, [added])

Thus, from this perspective the distribution of income across factors is not a problem, as it is the direct result of the marginal productivity of labour and capital, i.e., technology, and furthermore, it is considered roughly constant throughout time.

In any case, modern analysis of factor shares in high income countries tend to side with the sceptical position of Solow, finding falling wage shares “in virtually all OECD countries” (Stockhammer, 2013). This recognition has led to the publication of a growing number of papers dealing with the drivers of the changes in factor shares (Glyn, 2011, Neiman, 2013, Stockhammer, 2013, Giovannoni 2014a, 2014b, 2014c, etc.). Examples of the instability and reduction of the wage share are shown in Figure 3a. that reproduces the evolution from 1948 to 2020 of the share of wage and salaries of employees as a percentage of gross domestic income in the US, and Figure 3b, that reproduces the evolution of the adjusted wage share (employees and self-employed) in France, Italy, Spain, Germany, and Sweden. But it must be stressed that, as we will see in detail in section 4.2, factor’s share is a statistical concept that lacks relevant information for a class analysis. For instance, the question of the inequality of the inner distribution of wages and profits, or the identity of people considered in the group of wage earners, as there is perfectly possible to find people that are simultaneously wage and profit earners, or the existence of workers whose job is being “soldiers” in the conflict/war against workers (the so-called guard labour, Bowles and Jayadev, 2004), etc.

Figure 3. Evolution of the wage share in a sample of high-income countries.

3.a Compensation of employees/ gross domestic income (%), US, 1948-2020

![Chart showing the evolution of the wage share in the US from 1948 to 2020.](chart.png)

3. b Adjusted wage share (% of GDP at factor cost) in five EU countries, 1960-2022

Note: Adjusted to account for the wage component of self-employment mixed income.
Source: Ameco, EC.

4.1 The macroeconomics of the functional distribution of income

Is the functional distribution of income a relevant framework to explain the evolution of economic activity? Or to bring it to the topic of this paper, are social classes shares of total income a relevant variable to explain the evolution of market societies? The functional distribution of income can be, and usually is, analysed as the outcome of the process of production, as a dependent variable. But it has been argued that the functional distribution of income is also a relevant variable affecting economic activity (as an independent variable). In that case, the distribution of income among social classes would also play a role in the explanation of economic activity. In this section we will explore the arguments put forward by different authors regarding the mechanism through which the functional distribution of income, i.e., the participation of wages and profits on total output, could impact the economy. With that aim we will first review the arguments put forward in order to connect the functional distribution of income to total output through its effect on effective demand. As we will see, the shadow of social classes, as understood by classical political economy, can often be observed behind these concepts.

The first imprint of class analysis -workers vs. capitalists- in contemporary macroeconomics was developed by Kalecki (1954) and more explicitly by Kaldor (1955) and Pasinetti (1962), in their analysis of the determinants of savings.

According to these authors, workers and capitalist have different behaviors regarding savings, being the propensity to save of workers, $s_w$, lower than the propensity to save of capitalists, $s_p$: $s_w < s_p$. Under this assumption, each value of the functional distribution of income will be associated with a different level of total savings, $S$, and different aggregate saving rate, $s$.

\[ S = s_w W + s_p P \Rightarrow S/Y = s_w W/Y + s_p P/Y \Rightarrow s = s_w t + s_p b, \text{ or alternatively } s = s_w + b (s_p - s_w) \]
Starting from the “neat and simple” approach advanced by Kaldor, Pasinetti simply adds the possibility that workers, as long as they have same savings \((s_w > 0)\), will correspondingly have some participation in capital, and therefore in profits too:

\[
S = s_w (W+P_w) + s_p P_c
\]

where \(P_w\) and \(P_c\) are the profits going to workers and capitalist respectively.

Defining \(D\) as the participation of capitalists on total capital -and correspondingly total profits: \((D = P_c/P)\), equation (6) can be expressed as:

\[
s = s_w + Db (s_p - s_w)
\]

Thus, the functional distribution of income would affect the average saving rate of the economy, and through it, the size of the income multiplier and total income.

Unfortunately, it is not easy to have access to estimates of saving rates according to the condition of individuals in terms of wage or profit earner. What we do have is information about saving rates according to income decile or quartile (see table 3). This information can be then interpreted in term of source of income (labour vs. capital) under the assumption that capital earners are located in the upper end of income distribution. In any case, in the 1960’s and 1970’s few papers were published aiming at estimating saving rates by source of income that are worth commenting. Modigliani and Tarantelli (1975) with data for Italy, and Taylor (1970) for the USA don’t find differences among different types of income earners in terms of saving rates. In contrast, Surrey (1970) and Hilton and Crossfield (1970) for United Kingdom, and Kelleher (1976) for Ireland, find differences in saving behavior. To give two examples, Burmester and Taubman (1969), for the USA and 1951-64, estimate a \(s_w\) of 0.10 and a \(s_p\) of 0.22, and Murfin (1980) for UK, estimates a saving rate from labour of 0.167 compared to 0.772 for capital income.

Although as mentioned above, the different saving behavior of workers and capital implies that saving rates, and therefore consumption rates and domestic effective demand are affected by the functional distribution of income, the relation between the functional distribution of income and effective demand is more nuanced.

So far, we have seen that the increase in the participation of wages from total output would lead to an increase of consumption and, \(caeteris\) paribus, to the increase of domestic effective demand. But the reduction in the participation of profits from total output (when wages increase more than productivity) will, correspondingly, reduce the participation of profits from total output, which can lead to a reduction of investment (another component of domestic effective demand). A simple way of presenting these effects is by looking at the factors affecting the profit rate (profits in relation to capital). The profit rate, \(r\), can be expressed as:

\[
r = \frac{B}{K} = \frac{(B/Y)}{(Y/Y) + (K/Ke)} = \frac{b}{\nu} u
\]

Where, \(K\) is total capital, \(Ke\) is the capital effectively used, \(b\) is the participation of profits from total output, \(Y\) is total output and \(u\) is the rate of capital utilisation \((K/Ke)\).

In this way, a reduction in \(b\) is compatible with constant or even growing rates of profit if the increase in capacity utilization derived from the increase in domestic demand is higher than the reduction in \(b\) resulting from the increase in wages. This means that a redistribution of income towards labour, and the corresponding reduction of the participation of profits of total product (a reduction in the share of output going to the capitalist class), is compatible with an increase in total profits and the profit rate (i.e., a lower share of a larger total output).

This perspective that relates the functional distribution of income to effective demand through the different saving behavior of workers and capitalists, has been explored in more detail by some papers
(Blecker, Marglin and Bhaduri, 1990; Bhaduri and Marglin, 1990) that, from a neo-kaleckian approach, aim at differentiating the economies according to the role played by wages and profits in explaining effective demand and growth. According to this approach, capital accumulation is determined by the profit share and the level of capacity utilization, with the particularity that, while higher wages, due to the lower saving rate of workers, contribute to the increase in capacity utilization, and caeteris paribus to higher profits, investment and capital accumulation, wage increase will also squeeze the profit rate (and the competitiveness of the economy vis a vis foreign competitors) and investment. The final net impact of wage growth on these two opposite effects will depend on whether the positive impact of wages on capacity utilization through higher effective demand is stronger or weaker that its impact on profits through higher costs.

Those economies where the positive effect of wages on profits and growth, through the increase in effective demand and capacity utilization (↑u), is higher that their negative impact through lower participation of profits on total output (↓b), are considered by this literature, wage led economies. In contrast, those economies where the effect of the increase of wages on b dominate, are considered profit led economies.

Table 3 reproduces a selection of the results obtained from empirical research on the role of wages and profits as drivers of growth following the above-mentioned analysis. A quick look at the results shows how most economies are characterised as wage-led economies, specially, but not only, when looking at the role of wages versus profits in the generation of domestic demand. In some cases, when the international dimension is included in the analysis, some economies characterized as wage-led countries turn into profit led countries, as result of the negative impact of wage growth of the competitiveness of the country, via inflationary pressure -as inflation can be understood as the result of a distributional conflict, Rowthorn, (1977)- reducing foreign demand and neutralizing the positive impact of wages on domestic demand. This change is relevant when we take into consideration the growing role played by international trade in the last few decades resulting from the process of globalization.

In a way, the macroeconomic effect of changes in the distribution of income can be considered as a case of fallacy of composition. For each individual firm/capitalist, a reduction of wages would allow a higher participation of profits from total output and higher profit rate, but if all firms/capitalists reduce wages, the result would be a reduction in domestic demand and capacity utilization and the corresponding reduction of profit rates. In this regard, although the foreign sector can provide an exit from this dynamic, and only if the reduction of wages is translated into lower prices (i.e., with a constant mark-up and functional income distribution), compensating the reduction in capacity utilization resulting from the drop in domestic demand, such result would only be accomplished if the policy of wage deflation is followed by a single country, and not if it is generalized across most trading partners. This is the case of Austria, Belgium, Denmark and Ireland, countries considered by Onaran and Obst (2016) as profit-led countries, in which a reduction in the participation of wages of total product is associated with higher growth, but only because the decline in wage share was not shared by all their trading partners.

From the perspective of this paper, the debate on wage-led vs profit-led economies can be interpreted in terms of how the tension between social classes regarding the distribution of income (wages vs. profits) affects total output. In a way, for wage led economies such tension would disappear, as within certain limits higher wages would lead to higher profits, as long as it is absolute profits and not relative profits (share of total outcome) the relevant magnitude for capitalist.
Table 1. Summary of results of empirical studies on demand regimes for high income countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Author</th>
<th>Results Domestic demand</th>
<th>Total demand</th>
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<tr>
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<td>Onaran and Galanis (2014)</td>
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<td>Flaschel and Proano 2007</td>
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Source: adapted from Stockhammer (2015), p. 11.

4.2 Problems with the functional distribution of income.

The applicability of the functional distribution of income as a quasi-concept of class a la classical political economy faces different problems that might cast shadows regarding its use. The first one is
a technical problem, related with the treatment of mixed income, i.e., the income accruing to own-account workers that comes partly from their condition of owners of the capital used in the production process and partly from their condition of workers. From this binary approach of labour and capital, wages and profits, where do own-account workers fit? A second problem is the increase in the heterogeneity of labour as economies grow. And the third, the potential blurring of the relation between workers’ income and wages and capitalists’ income and profits resulting from the growth of ownership of shares by employees and of labour income by owners of capital\textsuperscript{14}.

4.2.1 The question of self-employment

As a starting point, it is important to know how important self-employment is, in terms of numbers, in high income countries. As we can see in Figure 4, in high income countries self-employment accounts for a relatively small share of total employment. In most cases, with few exceptions such as Greece or Italy, the self-employment rate is below 15%. Furthermore, as we can see in Table 2, that shows self-employment rates of the EU(15) member States over the last half century (in bold font the minimum self-employment rate), despite the talk about increasing rates of self-employment related with the coming of the digital society and new forms of gig work, the data does not show a generalized increase in self-employment rates, with the exception of the UK and the Netherlands. In fact, the general pattern is one of reduction in the self-employment rate with economic growth, and not the opposite.

\textbf{Figure 4.} Self-employment rate in the EU and the United States

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{self-employment-rate.png}
\caption{Self-employment rate in the EU and the United States}
\end{figure}

Source: author’s elaboration from Eurostat and US Bureau of labour statistics.

From a conceptual perspective, the most appropriate way of accounting for self-employment income in order to maintain the principle behind the functional distribution of income would be to allocate self-employment income partly to profits and partly to wages, depending on the role played by labour

\textsuperscript{14} A proposal of a new way of measuring income shares aiming at overcoming some of these issues with an application to Italy can be found in Fana and Villani (2022).
and capital in the generation of such income\textsuperscript{15}. But due to the difficulties in estimating the part of income that remunerates the different factors of production, a procedure often followed by National Accounts is to allocate all self-employment income to profits. This implies that the share of profits of total production is overestimated by the amount of self-employment income corresponding to the remuneration of self-employed labour. This overestimation would be small in the cases of countries such as Norway or Denmark, with small self-employment rates, but larger for countries such as Greece or Italy with more than 1/5 of the work force in self-employment. This problem is especially important when using the functional distribution of income at face value in developing countries, with much larger shares of their labour force being self-employed.\textsuperscript{16}

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Source: author’s elaboration from Eurostat

This also implies that, when analysing the evolution of the functional distribution of income in the long run, and due to the progressive reduction of the self-employment rate with economic development (Figure 5), the mere conversion of self-employment into dependent employment will produce a statistical increase in the share of income going to wages, as this conversion will automatically reduce benefits. Likewise, the transformation of dependent labour into self-employment will automatically produce an increase of profits, as accounted by National Accounts, a reduction of wages and an increase of the profit share.

\textsuperscript{15} As self-employed workers are also the owners the capital used in production, the income generated will be partly remuneration of such capital and partly remuneration for their labour.

\textsuperscript{16} Other possible methodologies suggested in order to solve this problems are: (1) applying a 2/3 rule, allocating 1/3 of mixed income to profits and 2/3 to wages (Johnson, 1954), (2) consider all mixed income as wage income (Kravis, 1959), (3) multiply the total wages of employees by the inverse of the dependent employment rate (OECD, 2001, and Ameco), (4) allocate mixed income according to the functional distribution of income of the economy before considering mixed income. For more details of the implications of the different methods using UK as example see Dunn et al. (2018).
To solve this problem, it is possible to use, for analysis of long run changes in the functional distribution of income, an adjusted form of the wage (or profit) share, estimated by imputing labour income of the self-employed, adding it to wages and subtracting it from profits.¹⁷

From a conceptual perspective, using the framework of class analysis, the decision of considering all self-employment income as profits could be justified in terms of the better socio-economic ideological identification of the self-employed with entrepreneurs and capital, compared to labour¹⁸ (even though most of the self-employed do not have employees themselves). In this regard, it is interesting to note that there is a consistent negative relation between the self-employment rate and the share of self-employed with employees. As we can see in Figure 6, in countries with low self-employment a larger share of the self-employed have employees, from 40 to 50 % in the cases of Germany, Switzerland,

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¹⁷ That is the method used, for example, in the construction of the Adjusted Wage Share by the annual macro-economic database of the European Commission’s Directorate General for Economic and Financial Affairs, AMECO. For the different ways of adjusting for self-employment see, for example, Bengtsson and Waldenström (2015)

¹⁸ In this regard, the major Spanish organization of self-employees, ATA (Federación Nacional de Trabajadores Autónomos) is part of the Spanish Confederation of Business Organizations (CEOE). In any case, two other relevant, but smaller self-employees organizations have connections with the two major Spanish trade Unions: UATAE (Unión de Asociaciones de Trabajadores Autónomos y Emprendedores) with the trade union CCOO, and UPTA (Unión de Profesionales y Trabajadores Autónomos) with the trade union, UGT. Thus, there seems to be split feeling in terms of elective affinities.
Denmark or Austria. In contrast, countries in such as Italy or Greece, with high self-employment rates, the percentage of own account workers with employees is much lower, around 25-27%.

Figure 6. Self-employment rate and share of self-employed with employees, Europe, 2019

In any case, regardless of the measurement problems related to the existence of self-employment, in relation with this issue it is important to highlight that, as shown in figure 5, at least until now, the share of self-employment in total employment decreases with economic growth, making the overall labour force more homogeneous in this regard. It is unclear whether the growth of the platform economy, should the labour legislation allow it, may lead to a spur of self-employment, if only from a formal point of view.

4.2.2 The segmentation-diversification of labour

A second question that could affect the relevance of the functional distribution of income as a tool of analysis from a class perspective is the existence of a growing diversity among the conditions of workers. If these differences increase to very high levels, the result might be a split in the working class in two or more distinct segments, making problematic the classification of the whole class of wage earners as a single entity. This could deprive of a class meaning the concept of functional distribution, as one of its components would no longer represent an internally homogeneous class of economic agents. To give an example, when the term worker is applied to the CEO of a multinational company and to a low wage employee, it can be argued that it loses its meaning or analytical power.

Although we can conceive many axes of segmentation, the socio-economic literature of class analysis has stressed two of them: Control/autonomy and Education/Skills. In both cases higher levels of control/autonomy and education/skills would translate into higher wages. Thus, these two axes of segmentation would translate into an increase in the inequality of earnings within the labour force.
4.2.2.1 Autonomy as an axis of differentiation of the working class.

The Industrial Revolution implied a process of transformation of the production system from small artisan production (and putting-out system), where workers had a relatively high level of autonomy over the production process, to factory production,\(^19\) where workers are subject to high levels of control in terms of time and organization of work. In fact, the division of labour considered by Adam Smith key to the “wealth of nations”, requires stripping the worker of any autonomy in terms of how and when (time management) to produce. The combination of these changes and the antagonism of interest between workers and employees in terms of the level of effort allocated to production,\(^20\) explains the need to design systems of control of work effort, opening two new divides between: (1) workers whose job is to control other workers and workers controlled, and (2) workers that maintain certain autonomy in carrying out their work, and workers performing tasks designed by others by the minute.

In this regard, the path-breaking paper of Stephen Marglin (1974) “What do bosses do?”, argues convincingly how it was precisely the need to control workers’ effort and time dedication to production what laid the foundation of the development of the factory system: “The key to the success of the factory, as well as its inspiration, was the substitution of capitalists’ for workers’ control of the production process; discipline and supervision could and did reduce cost without being technologically superior” (Marglin, 1974, p. 84).\(^21\)

This mechanism of discipline and control of the workers led to the development of a different kind of work, devoted not to the production of goods and services but to the control of the workers engaged in such production. The development of the so-called scientific management in the 20th century associated to the work of Frederick W. Taylor (1856-1915) and, nowadays, the design of new systems of digital surveillance (West, 2021) can be interpreted as new waves in this process of differentiation of the working class along this axis.

As an example of this dynamic, in Table 3 we can see a set of indicators of autonomy regarding capacity of changing the order of tasks, the methods or the speed of work, to apply own ideas or to assess the quality work, for the big five European countries (Germany, Spain, France, Italy and United Kingdom). As we can see, on average, around 30% of workers have very little autonomy in their work.

An alternative way of securing work effort, especially interesting for those jobs difficult to monitor, is by incentivizing the worker with better wages or better working conditions. This is what is known in economic literature as efficiency wages (Akerlof and Yellen, 1986; Katz, 1986). The existence of efficiency wages along with the existence of different levels of autonomy and command over other workers can contribute, in both cases, to the segmentation of the working class.

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\(^{19}\) As argued by Marglin (1974), in the putting-out system, the workers lose control over the product, as their role in production is limited to one of the stages of production, and therefore they have no final product to sell, but not over the process of production itself.

\(^{20}\) In Marxist terminology, the transformation of labour into labour power: employers do not buy labour in the labour market, but labour power or the capacity to work of the workers, which is in some measure controlled by the worker.

\(^{21}\) For a critique of Marglin’s perspective see Landes (1986), which stresses the technological advantages of factory production, and the rejoinder of Berg (1988).
<table>
<thead>
<tr>
<th></th>
<th>DE</th>
<th>ES</th>
<th>FR</th>
<th>IT</th>
<th>UK</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Able to change order of tasks (NO)</td>
<td>39,6</td>
<td>33,4</td>
<td>25,1</td>
<td>29,7</td>
<td>27,6</td>
<td>31,1</td>
</tr>
<tr>
<td>Able to change speed (NO)</td>
<td>30,3</td>
<td>30,5</td>
<td>30,6</td>
<td>21,9</td>
<td>26,3</td>
<td>27,9</td>
</tr>
<tr>
<td>Able to change Method (NO)</td>
<td>23,8</td>
<td>35,9</td>
<td>29,1</td>
<td>26,7</td>
<td>30,5</td>
<td>29,2</td>
</tr>
<tr>
<td>Able to apply your own ideas (rarely o never)</td>
<td>33,5</td>
<td>18,7</td>
<td>16,5</td>
<td>24,3</td>
<td>13,6</td>
<td>21,3</td>
</tr>
<tr>
<td>Able to take a break when you wish (rarely o never)</td>
<td>38,1</td>
<td>30,5</td>
<td>28,0</td>
<td>27,0</td>
<td>31,0</td>
<td>30,9</td>
</tr>
<tr>
<td>Assessing the quality of your work (No)</td>
<td>27,8</td>
<td>22,8</td>
<td>28,3</td>
<td>27,8</td>
<td>16,4</td>
<td>24,6</td>
</tr>
<tr>
<td>Average</td>
<td>33,1</td>
<td>29,8</td>
<td>25,9</td>
<td>25,9</td>
<td>25,8</td>
<td>28,1</td>
</tr>
</tbody>
</table>


4.2.2.2 Education and skills as an axis of differentiation of the working class.

A second major source of differentiation of the working class is the growth in education and human capital investment related to the development of new jobs and technologies and the complementarities between physical and human capital.

For Galor and Moav (2006), the growing role played by human capital in production (and correspondingly profits) explains the support by capitalists of the provision of public education, that in turn led to the split of the working class into different segments according to their human capital and the demise of the unitary working class. This argument fits well with the role of accumulation played by the State in modern capitalism (O’Connor, 1973) by which many of the activities of the State, education among them, can be considered as a contribution of the State to the process of private accumulation of capital, by financing from the public budget activities which reduce production costs for firms.

As late as 1973, at the end of the “Golden age of capitalism”, taking the US as example, as much as 2/3 of the US labour force had an education level corresponding to a high school degree or less. By 2019 the percentage had dropped to half (8% and 26% respectively). In terms of wages, as we can see in Figure 7, the average hourly wage gap of those with less than high school and those with an advanced degree increased by 50% in the period 1973-2019.
A clear example, but certainly not the only one, of the process of differentiation of workers resulting from growing differences in their wages and salaries is offered by the huge growth of wages at the very top of the wage distribution. Taking the US as example, in Figure 8 we can see the evolution of the compensation of the CEOs of the 350 major US corporations in relation to the average annual compensation of the workers in the key industries where the corporations operate, as estimated by the Economic Policy Institute (Mishel and Wolfe, 2019). The figure reproduces two different CEO’s compensations estimates depending on whether the stock options included in the compensation package are realized or not. This is important, as stocks-related items make up the bulk of CEO’s compensation. The figure shows a clear increase in the ratio from values under 25 in the 1960’s to values around 50 in the late 1980’s, with the ratio exploding at the turn of the century, reaching an all-time record of 386 in 2000. Although the Stock and Exchange corrections of the early 2000’s and the Great Recession reduced considerably these ratios, with the recovery of the economic the ratio increased reaching 278 by 2018 (309 for the projected 2019 figure).

22 From 68% to 74% depending on whether we considered the options granted or the options realized, in 2018 (Mishel and Wolfe, 2019, p. 11)
Although the US is the paradigmatic example of the explosion of the wage levels of CEOs in relation to the employees of the firms they manage, certainly the country is not alone. In fact, we can find similar, although smaller, ratios in many other countries, including developing countries across the world (Table 4).

Table 4. Ration between CEO compensation and average worker pay in 13 countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>229</td>
</tr>
<tr>
<td>Germany</td>
<td>136</td>
</tr>
<tr>
<td>UK</td>
<td>201</td>
</tr>
<tr>
<td>South Africa</td>
<td>180</td>
</tr>
<tr>
<td>China</td>
<td>127</td>
</tr>
<tr>
<td>Netherlands</td>
<td>171</td>
</tr>
<tr>
<td>Mexico</td>
<td>62</td>
</tr>
<tr>
<td>Switzerland</td>
<td>152</td>
</tr>
<tr>
<td>Sweden</td>
<td>60</td>
</tr>
<tr>
<td>Canada</td>
<td>149</td>
</tr>
<tr>
<td>Singapore</td>
<td>56</td>
</tr>
<tr>
<td>Spain</td>
<td>143</td>
</tr>
</tbody>
</table>

Source: Global CEO Index, as reproduced in BBC (2019).

The increase in wage differentiation is not only a product of the detachment of those at the level of the CEOs vis-à-vis the rest of workers. In fact, we can find similar trends, although less intense, for other segments of workers at the top, such as the 0.1% and 1%. In the USA, the cumulative percent change in real annual earnings from 1980 to 2018 grew by 341% for the 0.1% of employees, 158% for the 1% at the top, and just 24% for the 90% at the bottom (Gould, 2020). To give two other examples for the sake of brevity, this trend is also present in the analysis of Kopczuk et al (2000) of the Gini of earnings of US workers from 1937 to 2004, that shows a sharp reduction from 0.44 in 1938 to 0.36 in 1953 followed by a major increase until reaching 0.47 in 2004. Similar trends have been found for the UK 1966-1995 (Gosling et. al., 1998) as well as during the Labour years (1997-2010), in this case with the exception of the lower tail of wage distribution that benefited from the introduction of the minimum wage in 1999 (Lindley and Machin, 2013). Germany has also experienced a significant
increase in gross monthly wages inequality from 1992 to 2005, (Grabka and Schröder, 2018), and a reduction in inequality since 2010 explained, among other things, by the introduction of minimum wage in 2015 (Bossler and Shank, 2020).

Although for reasons of clarity we have presented in a separate section the differentiation of the “working class” triggered by the increase in education and by the different levels of autonomy enjoyed at work, de facto these lines of segmentation often go hand in hand, affecting the same workers and multiplying their impact in terms of breaking workers’ homogeneity. As we can see in Figure 9, that reproduces the average level of autonomy enjoyed by employees according to their education level, there is a positive relation between both variables, with employees with higher educational level, enjoying higher levels of autonomy at work and vice versa.

**Figure 9. Education level and autonomy of employees in the EU (15), 2005, 2010, 2015.**

Note: The index of autonomy is constructed with the following four questions of the EWCS (equal weighting): (a) Are you able to choose or change your order of tasks, your methods of work, your speed or rate of work, (b) Generally, does your main paid job involve assessing yourself the quality of your own work.

Source: Authors’ analysis from EWCS microdata

### 4.2.2.3 The rise in non-standard employment relations.

Along with autonomy and education, it has been argued that “new” forms of precarious employment, mostly related to part time and temporary employment, have developed a new, somewhat novel, axis of differentiation of the working class that could further contribute to the emptying of content of the unitary concept of working class. The existence of workers with very different attachments to the labour market in terms of working-time (full time versus part time) and duration of the employment relation (workers with open-ended contracts versus temporary workers), would translate into different work experiences, interests and earnings, developing a new cleavage in the labour markets among different groups of workers. From the perspective of class analysis, the question is whether
such segmentation of labour markets renders the concept of working class useless, whether the segmentation implies the existence of different working classes, potentially competing between themselves, or whether is just a nuance that must be taken into account but that does not render invalid the concept of working class for economic analysis.

In this regard, nowadays it is not rare to find references to the term *precariat*—opposed to proletariat—in the literature of labour market. In the words of the author credited for coining the term, Guy Standing:

> A new class is emerging – the precariat – characterised by chronic uncertainty and insecurity. Although the precariat is still a class in-the-making, divided within itself, its elements are united in rejecting old mainstream political traditions.

To have a first impression on the quantitative nature of these once atypical labour relations, in Figure 10 we can find the share of workers in the EU (28) working part-time, self-employed with no employees (solo self-employed) and with temporary contracts (in this case in relation to total employees). Together with the EU average, the figure reproduces the data corresponding to the countries with higher percentage of workers (or employees) in each category.

Although the values of each category of atypical employment cannot be added, as many part-time contracts are also temporary contracts, figure 10 gives an idea of the importance of the different types of non-standard labour relations in the EU. In this regard, two elements stand out. The first one is that these precarious ways of insertion in the labour market are by no means marginal, especially part-time, with a fifth of the European labour force with this kind of working arrangement, and temporary employment, with 14% of employees (equivalent to 12% of total employment) in this situation. Less important in quantitative terms is the share of solo self-employment, with less than 7% of total employment in the EU in this category. Nevertheless, it must be acknowledged that during last decade solo self-employment has increased in countries such as the UK (an increase of 16% from 10% to 12%) or France (from 6% to 7%). The second element worth highlighting is the large diversity of recourse to these figures of employment among EU member states.

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23 "The precariat was not part of the “working class” or the “proletariat.” (Standing, 2011, p. 6)

24 The coefficient of variation for the 3 types of employment for the EU member states are: 0,68 for part time, 0,55 for temporary employment and 0,43 for solo-self-employment.
Figure 10. Part-time employment, temporary employment and solo self-employment in the EU and member states with highest rate in each category, 2019.

Note: Part-time and solo self-employment is expressed in terms of total employment, while temporary employment is calculated in relation to total dependent employment.

Source: Authors’ analysis from Eurostat.

In any case, this issue is not new in economic analysis. In the early 1970’s, Doringer and Piore (1971), argued that labour markets are segmented between a primary and a secondary market, characterized mostly by the stability of employment in each of such markets. In their analysis, the primary sector is characterised by stable employment relations and well-paying jobs, with good career opportunities (profiting from the existence of internal labour market) and working conditions (including fringe benefits). In contrast, the secondary market is characterized by contingent employment relations with low wages and working conditions and few opportunities of advancement. In contrast to the mainstream analysis of labour market inequalities, this approach argued that these differences where not, or at least not only, the result of differences in human capital and productivity of the workers of the primary and secondary markets, putting emphases in the demand side of the market.

From a radical perspective, Reich, Gordon and Edwards (1973) argued that such segmentation was the result of a conscious policy developed by firms to split the workforce in a tactic of “divide and conquer” (p.361) so that the actual experiences of the workers were different and “the basis of their common opposition to capitalism undermined” (p. 361).

The idea of segmentation of the labour market is behind another influential analysis, that of Lindbeck and Snower (1989, 2001), that argues that some participants in the labour market, the so-called insiders, enjoy more favourable working conditions and employment opportunities than others, the outsiders, due to the existence of a turnover cost for the firm when one worker employed by the firm is substituted by another hired in the market. These costs give the insiders some degree of market power that can be used to increase their wages above the market clearing wage. Again, the segmentation of the market along the insider-outsider line would split the working class turning one type of workers, the insider, against the other, as the improvement of their working conditions would negatively affect the prospect of the outsiders to get a meaningful job.

25 For a review of the theories of segmented labour markets see Rubery (2007)
4.2.3 The potential effect of the generalization of capital ownership: what if capitalists work and workers own capital?

The relevance of the concept of functional distribution of income in economic analysis can also be undermined by the increase in the diversification of sources of income of workers’ and capitalists’ households. In this regard, it is sometimes argued that with economic growth, and the corresponding growth in workers household’s income and savings rates, the income of working households diversifies, progressively increasing their share of capital income. This dynamic is, at the same time, the result of direct investment in shares (by which workers become direct owners of capital) and of indirect investment in shares through their participation in private pension plans (by which workers become indirect owners of capital through their pension plans)\(^\text{26}\). Either way, the argument goes, employees also become owners of capital, blurring the distinction between workers and capitalists.

There are several different drivers of such process of diversification of the sources of income of worker’s households. The first one is related to the growth of wages and the corresponding increase of savings at the level of the household that can be channelled into financial investment (especially after the purchase of dwellings for own occupation, in many countries the main type of household wealth)\(^\text{27}\). This growing saving propensity with income can be clearly observed in Table 5 which reproduces the median saving rate of Germany, France, Spain, Poland and United Kingdom in 2015.

A second potential, although indirect, driver is the reform of the traditional pay as you go pensions systems in favour of capitalization systems based on individual accounts. This dynamic, together with the loss of confidence on the sustainability of public pensions, has led to the growth of private pensions funds. According to OECD (2020), pension funds’ assets rose to USD 32 trillion in 2019. For example, in the USA pension funds’ assets were equivalent to 132% of US GDP, in Canada to 89%, in Denmark to 48%, and in the Netherlands to 139%.

Table 5. Median saving rate by income quintile (Percentage of disposable income), 2015

<table>
<thead>
<tr>
<th></th>
<th>First quintile</th>
<th>Second quintile</th>
<th>Third quintile</th>
<th>Fourth quintile</th>
<th>Fifth quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>-7.0</td>
<td>12.4</td>
<td>20.8</td>
<td>29.3</td>
<td>38.4</td>
</tr>
<tr>
<td>France</td>
<td>-21.0</td>
<td>28.7</td>
<td>32.1</td>
<td>36.4</td>
<td>45.1</td>
</tr>
<tr>
<td>Poland</td>
<td>3.6</td>
<td>20.6</td>
<td>30.7</td>
<td>38.7</td>
<td>45.8</td>
</tr>
<tr>
<td>Spain</td>
<td>-20.0</td>
<td>5.5</td>
<td>17.2</td>
<td>26.6</td>
<td>38.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-21.3</td>
<td>4.7</td>
<td>12.5</td>
<td>23.8</td>
<td>36.2</td>
</tr>
</tbody>
</table>

Source: Eurostat.

Paradoxically, this process of allocation of income to private pension funds by employees might backfire for the workers themselves if pension funds exert their influence on the firms where they work in search of higher profits. In fact, the growth of pension funds is one of the elements behind the process of financialization of the economy (van der Zwan, 2017), while the process of financialization

\(^{26}\) In what Peter Drucker called “pension-fund socialism” (Drucker, 1976)  
\(^{27}\) According to the 2017 EC’s The Household Finance and Consumption Survey, for the euro area the value of the household’s main residence is equivalent to 49% of total assets, with a value over 60% in countries such as Italy or Poland, and around 42% in the cases of France or Spain. (https://www.ecb.europa.eu/home/pdf/research/hfcn/HFCS_Statistical_Tables_Wave_2017.zip?abe541bc76c621a3485e9ae0884c7d68)
is one of the factors behind the worldwide reduction of wage shares (Stockhammer, 2012; Kohler et al., 2019).

A last item to consider behind this process of diversification of sources of income of the workers is the role played by economic policy. Promoting ownership of capital through the acquisition of shares by workers has been considered by many a path to overcome the worker-capitalist divide, by turning workers into part-time capitalist. Interestingly this strategy has been defended from both sides of the ideological spectrum. From the left, as a way to increase industrial democracy, and the say of workers in the running of the firms where they work28; from the right, as a way to legitimise capitalism.

The best example of the latter is Margaret Thatcher’s policy of facilitating access to property, both houses and shares in public companies in process of privatisation, to families, in what she denominated popular capitalism. As we can see in the following speech, delivered by Margaret Thatcher in 1986, in her second mandate as Prime Minister, Thatcher took the opportunity opened by her privatization agenda to facilitate the ownership of housing and shares to the working class, aiming at empowering people and create “one nation” and “one people”, in contrast to a nation divided among classes:

> We Conservatives believe in popular capitalism—believe in a property-owning democracy (...) In Scotland recently, I was present at the sale of the millionth council house: to a lovely family with two children, who can at last call their home their own. Now let’s go for the second million! And what’s more, millions have already become shareholders. And soon there will be opportunities for millions more, in British Gas, British Airways, British Airports and Rolls-Royce (...). The great political reform of the last century was to enable more and more people to have a vote. Now the great Tory reform of this century is to enable more and more people to own property. Popular capitalism is nothing less than a crusade to enfranchise the many in the economic life of the nation. We Conservatives are returning power to the people. That is the way to one nation, one people (M. Thatcher, Oct 10, 1986, Speech to Conservative Party Conference, Bournemouth, Hampshire)29

The shares of public companies were marketed aggressively to average citizens, below market value (e.g., British Telecom), aiming, in the words of the editorial director of the free-market think-tank Institute of Economic Affairs, “to giving people a stake in capitalist economy” (Bolick, 1995, p. 541). In any case, although share ownership became more widespread as a result of this policy, “shareholder primacy remains in essence the primacy of a small, privileged elite (...). Against this backdrop, any claims that we are entering an era of ‘people’s capitalism’ are risible.” (Ireland, p.67).

As we can see in Figure 11, that reproduces the share of households owning financial assets and their value by income quintiles for the eurozone, Germany, France, Spain and Italy, the concentration of financial assets in top income groups is also evident in other high-income countries both in terms of the share of households owning assets and in terms of the value of the owned assets.

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28 For example, according to the program of the candidate Bernie Sanders for US 2020 elections “corporations with at least $100 million in annual revenue, corporations with at least $100 million in balance sheet total, and all publicly traded companies will be required to provide at least 2 percent of stock to their workers every year until the company is at least 20 percent owned by employees. This will be done through the issuing of new shares and the establishment of Democratic Employee Ownership Funds”. According to their estimates, 56 million workers in over 22,000 companies in the US would benefit under this plan. (https://berniesanders.com/issues/corporate-accountability-and-democracy/)

29 https://www.margaretthatcher.org/document/106498
This dynamic has led some researchers to argue that this progressive dissemination of capital income and rents is altering the traditional social class differentiation based on labour and capital income. For example, Standing (2011, 2016), after presenting a structure of 7 classes (Plutocracy, Elite, Salarit, Proficias – freelance professionals-, Proletariat, Precariat and Lumpen-Precariat), argues than one of the characteristics of the four first social classes vis a vis the rest is that “they gain most (or an increasing part) of their income from capital and rental income, rather than from labour”.

The role of assets vis a vis work and employment in the definition of class is highlighted in the work of Adkins, Cooper and Konings (2021) for which “employment and wage-based taxonomies of class are no longer adequate for understanding a process of stratification in which capital gains, capital income and intergenerational transfers are preeminent” (p. 548). Also, Piketty (2014), in his well-known Capital in the 21st Century, follows a dual approach of two different hierarchies: one defined by the distribution of labour income, and the other defined by the distribution of capital property, “being possible that in the future a new form of inequality structure emerges, combining the return of sharp patrimonial hierarchies together with the development of large labor hierarchies” (2015).

From our perspective, this process of diversification of income, in terms of increase in the role played by capital income in workers’ households has not been intense enough, as shown in Figure 1.10, to alter the binomial workers-wages / capitalist-profits. As argued by Christophers (2021): “The notion
that asset ownership has supplanted employment does not square with the reality that across the entire income distribution, employment income dwarfs other incomes”, p.7.

5 A resurgence of social classes in economic analysis?

The abandonment of the concept of social classes in mainstream economics, related to the triumph of neoclassical theory, has been recently challenged by the publication of different papers and books, written by different authors, from very different theoretical backgrounds, that recuperate, directly or indirectly, the concept of social class in their analysis.

In this regard, the late Anthony B. Atkinson, a well-known British economist and specialist in the economics of income distribution, suggested in a 2009 paper different ways in which the study of factor shares were relevant to understand contemporary economic challenges, questioning the words of the methodologist and economic historian, Mark Blaug (1996,) for which: “the great mystery of the modern theory of distribution is why anyone regards the share of wages and profits as an interesting problem” (p. 467, quoted in Atkinson, 2009, p. 3). For Atkinson (2009), the study of the functional distribution of income was important in order to make the connection between incomes at the macroeconomic level and at the level of the household, to contribute to the understanding of inequality in personal distribution of income, and to address the concern of social justice with the fairness of different sources of income.

Another example of this revival is the above-mentioned Thomas Piketty’s bestseller Capital in the Twenty-first Century, published in 2014. In this well-known analysis of the evolution and causes of inequality in the 21st century, Piketty studies the inequalities in the distribution of income between labour and capital: “the question of what share of output should go to wages and share to profits (...) has always been at the heart of distributional conflict” (p. 49) and the role played by inequalities in income and in capital ownership, in explaining the evolution of overall inequality:

In the case of unequal incomes from labor, these mechanisms include the supply of and demand for different skills, the state of the educational system, and the various rules and institutions that affect the operation of the labor market and the determination of wages.

In the case of unequal incomes from capital, the most important processes involve savings and investment behavior, laws governing gift-giving and inheritance, and the operation of real estate and financial markets. (2014: 243)

In fact, Piketty proposes to work with two different “hierarchies of social groups”, defined in terms of the position held by its members in the distribution of income in the first case, and wealth, in the second. The first hierarchy is defined by the distribution of income between the bottom 50 %, the middle 40 %, and the top 10 %, often with special emphasis on smaller groups within the top 10 per cent, particularly the top 1 % or even the top 0.1 %. The second hierarchy is defined by the distribution of capital property, including residential capital, following the same classification as before (bottom 50 % property owners, the middle 40 %, and the top 10 %, again with special emphasis on smaller groups such as the top 1 % or top 0.1 %). In this regard, as shown in Table 6, the allocation of social classes in terms of their position along the distribution of income used by Piketty has also been used by other economists, especially in relation to the analysis of the middle class.

This approach has been criticized on two different grounds. A first source of criticism is the consideration of the first five deciles of income wage distribution as a single class, leaving no room for the analysis of poverty as an independent category (Soskice, 2014, p. 654). Secondly, the recourse to a classification of social classes based on the position of individuals in the distribution of income or wealth has been criticized for being devoid of its relational component, hiding the conflictual nature of the relationship between classes. In the terms used by E. O. Wright: “the distribution of income
reflects a division of the national income pie into “shares”; it is not a real transfer from one class to another” (Wright, 2015).

This is especially relevant when discussing the gargantuan increase in income of CEOs of major companies that now belong to the upper tail of the income distribution. As we discussed above, this can be just considered as the result of a huge increase in wage inequality:

...this spectacular increase in inequality largely reflects an unprecedented explosion of very elevated incomes from labor, a veritable separation of the top managers of large firms from the rest of the population (Piketty, 2014, p.24)

... or, as argued by Wright, as the result of top executives having nowadays many of the powers of capital, and therefore “should not be treated as entirely due to increasing inequality in incomes from labor” (2015, p.3).

Table 6. Example of Alternative approaches to the measurement of the "middle class", MD.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Advantage</th>
<th>Disadvantage</th>
<th>Source</th>
<th>Operationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relative:</strong> MD defined as a given set of deciles or quintile of income</td>
<td>Easy to calculate</td>
<td>The size of the MC is fixed, although the relative income of the middle class can be obtained using the participation of the set of deciles/quintiles in total income</td>
<td>Howell 2014</td>
<td>Deciles 4 to 9 (?) Quintiles 3 + 4 (?) Middle 60% of the population (20-79)</td>
</tr>
<tr>
<td><strong>Absolute I:</strong> MD is defined as population between a maximum and minimum income threshold defined as % of average income</td>
<td>The somehow subjective nature of the threshold. Depending on the threshold: - too large high class - too little distance between the poverty line and the MC lower threshold.</td>
<td>Atkinson and Brandolini (2011) Ravallion (2010) Birdsall et al. (2000)</td>
<td>A) between 80% average and 167% of average. B) between 80% average and 200% of average. C) between the average and 300% of average. D) between 75% and 125% of the median</td>
<td></td>
</tr>
</tbody>
</table>

Other points of criticism in the concept of classes in Piketty’s *Capital in the 21st century* is the definition of capital itself, that combines owners-occupied real estate (i.e., home ownership) and productive capital in a single category. This is far from being a minor issue as in France, the U.K., and Italy, “the rise in domestic capital-national income ratios is almost entirely due to the rise of housing” (Piketty and Zucman, 2013). Again, regardless of the importance of access to housing in the definition of social class, the concept of capital as power lies within the realm of productive capital (or real state for rent) and not with home ownership.

The idea of class, and class conflict, is also present in the recent book of Matthew Klein and Michael Petit (2020) *Trade Wars Are Class Wars*. Although despite of the title, the book is more an analysis of trade imbalances and their social repercussion than about social classes *per se*, the message of the book is clear: wage deflation leads to the reduction of domestic demand, reinforcing the need to resort to foreign demand, via exports of goods and services, to maintain an adequate rate of utilization of
productive capacity and avoid recession. This strategy leads to trade surplus at home, job losses in competing industries and trade deficits in competing countries, that might lead to trade conflicts:

Trade war is often presented as a conflict between countries. It is not: it is a conflict mainly between bankers and owners of financial assets on one side and ordinary households on the other—between the very rich and everyone else (p.221).

From a completely different perspective, in his *The New Class War. Saving Democracy from the Managerial Elite*, Michael Lind (2020), professor at the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin, argues that the growth of a Managerial Elite, resulting from the separation between ownership and control of modern corporations (as classically studied by sociologists Adolf A. Bearle and Gardiner C. Means in 1932), has led to the rise of a new university-credentialed “overclass” of managers and professionals. According to Lind, this new class, that resonates with what John K. Galbraith (1976) denominated the “technostructure” in his *The New Industrial State*, operates without almost any countervailing powers (using again Galbraith’s, 1963, expression), in front of a split working class between natives, on one side, and immigrants and minorities, on the other.

Our third example of recent economic literature making use of the idea/concept of class is Stansbury and Summers (2020) NBER paper “The declining power hypothesis: an explanation for the recent evolution of the American economy”. In this case, the authors make the working class the center of their analysis, without even mentioning it once in their 134 pages working paper. The authors argue that the decline of workers’ power is one of the major structural trends of the US economy that can explain the existence of lower wage levels and higher profit rates (among other changes):

Worker power – arising from unionization or the threat of union organizing, firms being run partly in the interests of workers as stakeholders, and/or from efficiency wage effects – enables workers to increase their pay above the level that would prevail in the absence of such bargaining power. This power gives workers an ability to receive a share of the rents generated by companies operating in imperfectly competitive product markets and can act as countervailing power to firm monopsony power. In this framework, therefore, a decline in worker power results in a redistribution of product market rents from labor to capital owners. (p.2)

In fact, as example of the magnitude of this effect, according to one of the estimates included in the paper, the loss of worker power could explain from 41% to 76% of the increase in income share of the top 1%. The drivers of the decline of worker power considered by the authors are the usual suspects: changes in the policy environment, that has become less supportive of workers; the increase in shareholder power, leading to higher pressure to reduce labour costs; and globalization (facilitating offshoring).

6 Conclusions

In 1926, Albert Einstein said: “Whether you can observe a thing or not depends on the theory which you use. It is theory which decides what can be observed”\(^\text{31}\). And this is completely true when we try to define, observe, or increase our knowledge about social classes. People obviously differ in and

\(^{30}\) “Institutions that used to magnify the power of working-class people—trades unions, local political parties and religious congregations—have all dissolved for different reasons. By default, power has siphoned upwards in the culture, politics and the economy,” (E. Helmore: The new class war: did a liberal elite pave the way for rise of Trump? *The Guardian*, 2/2/2020).

\(^{31}\) Said to to Werner Heisenberg during his 1926 Berlin lectura. Quoted in Fullbrook (2012)
occupy different social, economic, and political positions in any society, but to see them as forming a social class requires a theory that erase their individual differences and explain their common standings.

So, the traditional approach to social classes from an economic perspective focused on the link of individuals to the production process, as the relevant economic theory of that time, the English Classical Political Economy (including in it its most relevant critic, Karl Marx) taught to see and explain. This approach substantiated the classical divide between workers, as providers of labour and recipients of wages, and capitalists, as providers of capital and recipients of profits or capital income. Together with these two categories, the classical economists also considered the existence of a third class, the landowners, whose role in the production process was circumscribed to the provision of the land required for agricultural production, receiving rents in return. Furthermore, although with differences explained by the agreeability of the different jobs, workers were relatively homogeneous in terms of their wage income, which tended towards a subsistence level, making possible the consideration of workers, and the working class, as a relatively homogeneous group.

With the advent of a new theory, the marginalist revolution, with its emphasis on the analysis of the voluntary interaction of individuals in competitive markets, social and economic classes simply disappeared and the role of classes in economic analysis was largely abandoned. In contrast to Classical Political Economy and Marxists Economy, the new economic theory used a type of conceptual glasses that forbade seeing the common characteristics beneath people in different income positions. That is, forbade seeing social classes. However, its presence remained, though in the background and in a lesser conceptual position, in the analysis of the functional distribution of income. Even if it must be acknowledged that the functional distribution of income was never a hot topic in economic analysis. In fact, when it was, for instance in the debate about the constancy of the functional distribution and the wage share, it buttressed the conclusion that classes where not that important as, in the end, the distribution of product between wages and profits, or workers and capitalists, was relatively immobile, and exogenously determined by the technology in use and not by the exploitation of one class (workers) by another (proprietors of capital).

In any case, as we have seen above, the analysis of the functional distribution of income in high income economies faces several problems that reduces its value as a tool for the analysis of social classes. Together with the ever-present problem of the mixed category of self-employed, receiving simultaneously labour and capital income, a problem that has diminished in importance with the reduction of self-employment rates as economies growth, but which could be reverted with the growth of the digital and platform economy, the simplicity of the functional distribution of income has been challenged by two other socio-economic trends. The first one is the growth in heterogeneity of workers, in terms of education, skills, autonomy and work-life experiences, making no longer possible, or at least less possible than in the past, to talk about a uniform and coherent working class. The second one, the increasing overlap of sources of income accruing to both workers and capitalists, the former also receiving income from capital and social transfers, and the later also receiving income from labour. These changes make advisable to explore, from an economic perspective, other venues to identify social classes.

Taking again the prior sentence from Einstein, it can be argued that the problem now faced by the development of a new economic analysis of social classes is that nowadays we lack an economic theory suitable for the new economy. 19th century Industrial Capitalism had its economic paradigm to explain, and that was the aim of big names of the history of economic thought such as Smith, Ricardo, Malthus, Mill and Marx. The analysis of Keynes and Kalecki among other contributed to the understanding of the Mass Consumption Capitalism of the 20th century. But now we do not have a similar conceptual structure or paradigm to give meaning to the transformations, qualifications and subtleties faced by the traditional social classes of the 21st century modern economy.
Lacking a new general approach to identify and explain the new class realities of the new economy and having showed the problems of using with that aim the theoretical glasses of past times, it is impossible at this stage to offer a new and consistent approach to the new class structure of our times. For this reason, the aim of a forthcoming working paper is a humbler one: to present a proposal to define social classes based on clear cut criteria regarding the position of individuals in relation to average adjusted consumption and average income, using the concept of economic surplus. With this framework of analysis, a third planned paper will review how the changes experienced by the economy in the last half century could impact the different sources of power available to different social classes and, through them, their size and access to economic surplus.
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