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in Retrospect, Context and Prospect

The Economic Imbalances of our Time and the Perspective of Circular Economy

Provisional Version

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the usual disclaimer applies.

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Introduction

The main aim of this work is to make a step in identifying the theories more adequate to understand the economic imbalances of our time, and more conducive to realise the objectives of a “circular economy”. These objectives can be articulated in progress (scientific and social), sustainability and social justice (PSS).
One reason for this exercise lies in the circumstance that there seems to be little synergic employ of the theories that can help explain the imbalances of our economies and the possible ways to overcome them. This is a typical problem of economics and other social sciences, which often tend to be rather fragmented.
In this regard, we have tried to build a stronger bridge between environmental economics, and a number of heterodox theories of economic imbalances that can make headway to devise a more effective and coordinated policy strategy. In particular, we employ these theories for analysing how to render more and more compatible the objectives of **(i)** full employment (however defined) and decent work; **(ii)** sustainable use of resources in all its forms; **(iii)** substantial reduction of economic and social inequalities; **(iv)** human, scientific and technological progress.

In the first chapter we analyse the systemic tendency of effective demand to lag behind the supply of full employment. The analysis of these aspects, we believe, is pivotal also for a better integration between environmental and macroeconomic objectives.

In the second chapter we address the main strands of environmental economics. We consider in particular the perspective of bioeconomy, the theories of “commons” and of “appropriate technologies”, and the various forms of ecosocialism, with an eye to their policy implications.

In the third chapter we appraise the contribution of institutional economics to the clarification of **(i)** the institutional and evolutionary nature of economic action; **(ii)** the need of an interdisciplinary approach for a better understanding of these phenomena; **(iii)** the potential of democratic planning for overcoming the failures of the state and of the market; and **(iv)** the role of social valuing for promoting an effective policy action.

In the final part we consider how these theories can jointly be employed for addressing in theory and policy action the objectives indicate above.
We underscore that such theories, however different in many respects, present notable complementarities, in the sense that the aspects more overlooked by some are more completely considered by the others.
As observed by the famous sociologist Karl Mannheim, a landscape can be seen only from a determined perspective and without perspective there is no landscape. Hence, observing a landscape (or phenomenon) from different angles (or disciplines) can help to acquire a much clearer insight into the features of the various perspectives. Hence these theories, by helping identify the manifold aspects of economic system, can make headway towards a more effective policy coordination. This would involve a horizontal level, between policies: in particular macroeconomic (fiscal and monetary) and structural (in particular, environmental, industrial, research and innovation, social). And a vertical level, between institutions (supranational, national, sub-national, local).
Such coordination would be greatly fostered by a process of social valuation involving all the considered dimensions of policy action.

1. The Role of Public Spending and Credit Creation in Sustaining Effective Demand

Introduction

As noted by several authors and witnessed by historical events, modern economic systems are increasingly moving away from a pure capitalistic system—composed of private agents acting within a self-sustaining mechanism, the market, with the state playing only the external role of controller.
To be sure, this system existed only in “mainstream” oriented textbooks even in the heyday of the “laissez-faire capitalism” of the XIX century. However, as this system seemed to approach that ideal in various respects, the theoretical foundations of these theories were little questioned. Needless to say, even in that period public intervention had played a relevant role in promoting and maintaining the institutions of capitalism. However, as the emphasis was directed to the changes brought about by the industrial revolution, and as this revolution had its most apparent driving engine in the activities of private firms, the role of public sector was easily downplayed. Other circumstances that have reinforced this tendency are: **(i)** public sector tended (and tends) to be perceived as the locus of corporatist interests, as contrasted with the dynamic forces of modern industry; **(ii)** public policies and public spending, however important, had not yet reached the overwhelming importance of today. As we know, in the past two centuries the role of public sector has steadily — with various “cyclical” ups and downs — grown in importance both from quantitative side, through a long-term increase of the share of public spending on GDP; and from a qualitative side, through a continual enlargement and diversification of its functions.
There are many reasons for this phenomenon, a noteworthy group of them referring to the role of public sector in managing the complexity and contradictions of the “mixed economies” of our days. Public action, among other things, performs an irreplaceable role in providing public goods, including the legal and institutional framework; in managing and/or regulating important economic sectors; in redistributing resources; and in promoting research and innovation.

1.1 The Impressive Increase of Public Spending and Credit Creation

Among its many functions, the public sector plays a relevant role — directly through public spending and more indirectly through credit creation — in the formation of effective demand. Now we focus attention on a number of macroeconomic implications of this aspect. We can start by noting the impressive increase of public spending (PS), not only in absolute, but also in relative terms, as shown by the ratio of public spending on GDP. The available data clearly make evident this trend. The values of the ratio have shifted, for the most important OECD Countries, from 20%-30% of 1970s to 40%-50% of recent years. In the latest 15 years, also as a result of the “austerity policies”, the ratio PS/GDP diminished in some Countries, and remained stable or slightly increased in others. However, and very interestingly for our theme, there has occurred in the same period a parallel and notable increase of the ratios of public debt/GDP and private debt/GDP for virtually all Countries, with values particularly impressive for the latter. This can be a good indication of the circumstance that the reduction in public spending, in order not negatively influence effective demand, needs to be accompanied by a parallel process of net credit creation.
By net credit creation we refer to the difference between the amount of credit creation and debt repayment over a given period. As shown by the data, the notable level of the values for the ratios of private and public debt on GDP indirectly indicates that the process of debt

repayment is, in general, slow and imperfect. What are the reasons for this central feature of modern economic systems? There can be identified the following groups of factors:

(I) The possibility for the banking system (and formerly for the government) to create *ex.nihilo* new "high potential money": namely, various forms of "fiat money", whose value is not backed by its intrinsic value ─ as in the case of golden money or banknotes strictly related to golds (or other goods) ─ but, in very generic terms, is guaranteed by public institutions.

(II) This prerogative has been in the course of time rightly or badly used according to specific circumstances. However, it is important to note that this system has constituted a central way for creating new effective demand and hence for pushing the development of the system. The new effective demand was channeled in the expansion of public sector and in financing of private ventures. In both cases the "visible hand" of public institutions in creating and guaranteeing the value of money has been paramount in the affirmation of modern "invisible hand" of capitalistic institutions.

(III) In this respect, the role of credit creation (made possible by fiat money) was (and still is) necessary not only for promoting the investment necessary for the affirmation of modern monetary economies but also for the normal working of the system.
This comes about because, as also analysed in other works (Hermann, 2015, 2017, 2018), modern capitalistic (or mixed) economies are characterized by a structural tendency of effective demand to lag behind the supply of full employment.

(IV) For these reasons, credit creation (and public spending) play an irreplaceable role in creating and maintaining effective demand. But, for this role to be effective, it is fairly obvious that the process of debt repayment should be slow and imperfect in various degrees, according to circumstances. As one can easily guess, the more imperfect such process is ─ through various mechanisms of consolidation and renewal of debt ─ the more powerful the borrower is likely to be.

In the following tables we report some data for the years 2000 and 2016. A more complete illustration can be found in the links at the bottom of the tables.

Table 1. General Government Spending as a Percentage of GDP

Nations	Year 2000	Year 2016	Nations	Year 2000	Year 2016
Australia	35.3	36.2 (2014)	Luxembourg	36.9	42.1
Austria	50.3	50.7	Netherlands	41.8	43.4
Belgium	49.1	53.3	Norway	42.0	50.8
Czech Republic	40.4	39.4	Poland	45.3(2002)	41.2
Denmark	52.7	53.6	Portugal	42.7	44.9
			Russia	Na	34.5 (2015)
Estonia	36.4	40.6	Slovak Republic	52.0	41.5
Finland	48.0	56.0	Slovenia	46.1	45.1
France	51.1	56.4	Spain	39.1	42.2
Germany	44.7	44.2	Sweden	53.6	49.4
Greece	Na	49.8	Switzerland	Na	34.3
Hungary	47.2	46.7	United Kingdom	37.8	41.5
Iceland	Na	45.0	United States	33.7	37.8
Ireland	30.8	27.1			
Israel	48.2	39.5			
Italy	45.5	49.4			
Japan	Na	39.0			
Latvia	37.3	37.0 (2015)			

Source: OECD, National Accounts at a Glance.

Table 2. Private Sector Debt as a Percentage of GDP

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Nations	Year 2000	Year 2016	Nations	Year 2000	Year 2016
Australia	156.5	218.4	Japan	259.3	231.1 (2015)
Austria	143.9	162.9	Korea	Na	252.6
Belgium	185.9	270.4	Luxembourg	297.8 (2002)	473.1
Canada	185.3	264.7	Netherlands	264.2	261.3
Chile	167.6 (2002)	197.2	Norway	226.7	295.1
Czech Republic	142.0	138.3	Poland	88.8 (2003)	126.9
Denmark	201.5	273.8	Portugal	208.3	269.7
Estonia	117.5	184.5	Slovak Republic	101,3	132.3
Finland	148.0	208.2	Slovenia	111.4 (2001)	130.1
France	177.0	234.0	Spain	181.1	207.3
Germany	171.2	147.7	Sweden	232.5	267.7
Greece	67.3	138.3	Switzerland	186.2	239.3
Hungary	105.6	141.0	United Kingdom	194.3	219.5
Ireland	197.0 (2001)	406.7	United States	180.8	201.0
Israel	123.4 (2001)	124.4 (2015)			
Italy	131.1	172.6			

Source: "Financial Indicators – Stocks" http://stats.oecd.org/Index.aspx?DataSetCode=FIN_IND_FBS, in OECD.StatExtracts http://stats.oecd.org/

Table 3. General Government Debt as a Percentage of GDP

Nations	Year 2000	Year 2016	Nations	Year 2000	2016
Australia	40.1	68.1	Japan	144.5	234.5
Austria	70.6	102.0	Latvia	Na	49.3
Belgium	120.4	128.4	Luxembourg	12.3 (2002)	27.9
Canada	102.2	114.1	Mexico	Na	53.0
Chile	Na	28.1	Netherlands	60.4	75.3
Czech Republic	24.0	49.0	Norway	32.2	42.5
Denmark	60.4	52.4	Poland	54.8 (2003)	72.1
Estonia	6.8	13.1	Portugal	62.0	146.1
Finland	51.0	75.4	Slovak Republic	57.9	60.0
France	71.9	123.4	Slovenia	33.0 (2001)	96.8
Germany	59.4	76.2	Spain	65.2	116.6
Greece	111.4	187.7	Sweden	62.7	59.4
Hungary	60.1	97.3	Switzerland	52.7	42.5
Ireland	38.7	83.4	Turkey	Na	32.1
Israel	91.2 (2001)	75.6	United Kingdom	51.3	121.0
Italy	119.0	155.6	United States	61.6	126.9

Source: OECD, National Accounts at a Glance.

What are the structural reasons for such an impressive increase in public spending and credit creation? As regards public spending, this phenomenon has been first underscored by Adolph Wagner, who remarked that economic and social development carries with it an enlargement and diversification of the functions of the public sector.
With regard to credit creation, many contributions[1] of the theories of “chartalism”, “endogenous money” and “monetary circuit” ─ which develop important insights of Keynesian, Institutionalist and Marxist traditions in economics ─ underscore the monetary nature of our economies, the non-neutrality of money, the role of public sector (meant in a broad sense, and then also including Central Banks) in guaranteeing the value of money and in orienting the banks in their policies of credit creation.
The reason why we accept banknotes of intrinsic minimal value is that we are fairly confident that their real purchasing power is monitored and guaranteed (up to a certain degree, of course) by public action. In this sense, as highlighted by many authors, money is a highly institutional phenomenon.

The theories on the role of public spending and credit creation have evolved into three lines of research, which often tend to be blurred: **(i)** public choice, chiefly belonging to mainstream domain, which investigates the role of interest groups in lobbying the political system for obtaining more public resources in their favour. The limitations of these studies lie in the circumstance that they tend to consider public spending only as a negative phenomenon—a kind of unwelcome departure from the perfect world of mainstream hypotheses; **(ii)** a number of theories belonging to the fields of institutional and evolutionary economics, which point out the potential of the institutional framework for the unfolding of the national system of science and innovation, and of the related framework of human and social capital; **(iii)** Keynesian oriented theories, which investigate the role of public spending and credit creation in ensuring macroeconomic stability and the full employment of the labour force.

Especially in the last three decades, the strands **(i)** and **(ii)** have received surely more attention than the point **(iii)**. In particular, both critics and advocates of public spending often implicitly agree that today’s level of public spending is “too high” and should be abated in one way or another. And this opinion has gained ground even among more heterodox economists, chiefly as a result of the supposed “failure” of the “Keynesian” oriented policies of the post WWII period.
However, since the data indicate that such massive increase of PS/GDP ratio has been fully compatible with the development of capitalistic system (in reality, “mixed economies”), a macroeconomic explanation is highly needed for casting more light on the profound reasons for such increase.
Public spending is important for private sector not only as a component of the effective demand but also because such component is paramount (along with credit creation) for forming the profit of firms. Since this aspect, as we have seen, remains largely implicit in Keynes’s analysis, in the next paragraph, we try to “disentangle” the macroeconomic components of effective demand.

[1] Among the several references on these issues, see in particular Knapp (1924), Fontana and Realfonzo (2005), Hein (2013), Rochon and Rossi (2017), Wray (1998).

1.2 A Keynesian and Underconsumptionist Inspired Interpretative Framework

Introduction

In the very simple interpretative framework, we do not assume specific hypotheses regarding its "micro-foundations" and/or the effects on growth, income distribution, quality of life. We assume an economic system working like a monetary circuit in which net credit creation ─ in the meaning illustrated before, and hence more or less slowly and imperfectly repaid, according to circumstances ─ plays the role of a continuous propeller.

We also posit that profits, in the meaning given below, imply a certain degree of market power and hence of markets imperfections. On that account, we tend to consider markets as social and institutional phenomena characterized by many "markets imperfections". The latter do not necessarily represent negative phenomena because they can play the role — as shown, for instance by the theory of "small menu costs" and much earlier by various institutionalist contributions — of stabilizing the economic and social relations underlying market transactions.

In the same spirit, we do not assume any direct link between profits and rate of growth. This is because, on the one side, we believe that a high profit rate constitutes a condition neither necessary nor sufficient for promoting and financing investments[2]; and, on the other side, because we believe relevant to finalise investments to the qualitative transformations of the system, which can well be compatible with a steady state.

The Components of Effective Demand

Let us consider some macroeconomic effects[3] of public spending and credit creation. On that account, it is interesting to note that, in the absence of such factors, no significant aggregate profit[4] would be possible for firms. As a matter of fact, labour cost constitutes an aggregate cost for the system of firms. This cost can be brought to zero if employees spend all their earnings but can never become a source of profit. But, very interestingly, not even the entrepreneurs' investment expenses can create an aggregate profit for the

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[2] We have addressed in more detail these aspects in https://peg.primeeconomics.org/commentary/rate-of-profit-impact-investment

[3] The main sources of "inspiration" of this framework are J.M.Keynes's theory (in particular 1931 and 1936), and the main theories of underconsumption (in particular, Foster and Catchings 1926, Mummery and Hobson, 1889). Also the work of Henry A.Abbati and the theory of Alvin H.Hansen on secular stagnation have significant complementarities with the theories of Keynes and of underconsumption.

[4] By the expression aggregate profit we mean an amount of profit which exceeds the "normal" incomes of all the workers engaged in the private sector, including the so-called executive-salaries. Needless to say, a kind of aggregate profit can be present also in a hypothetical pure private economy, but in this case it is difficult that it acquires the nature of the extra-profits typical of expansionary period driven by public spending and credit creation. As a matter of fact, in a "pure private economy", the income differences between persons and classes find a limit in the principle of the effective demand. For instance, if the entrepreneurs want to increase their profits by reducing real wages, they must also make up for the reduction in the effective demand caused by wages reduction. In a private economy, as investment goods are intrinsically related to consumption goods, the only available way for increasing the effective demand is to attain a higher level of the entrepreneurs' consumption. However, this process finds many limitations, especially in the presence of scale-economies associated with mass consumption (the entrepreneur can buy himself a yacht, but for the class of entrepreneurs buying, say, one thousand iPads each in order to sustain effective demand is likely to be a bit less practical). This aspect can help explain why the marginal propensity to consume tends to be lower for the richest sections of populations. For these reasons, we consider the consumption of entrepreneurs in the formation of aggregate profit as a relatively unimportant phenomenon.

It is pertinent to underscore that all these economic relations embody, at the same time, also a social, cultural and psychological aspect, the study of which becomes paramount for a full appraisal of the real features and problems of the examined contexts.

firms as a whole. In such case, in fact, to the profit of an entrepreneur must correspond the expense of another, so that the net result for the firms would be zero.
As a consequence, aggregate profit must derive from sources “external” to the system of firms: these sources — not considering, for the sake of simplicity, international trade whose balance is zero at world-level — take two interrelated forms: public spending and net credit creation. We can express these relations in the following way:

$$\textbf{1.}\quad \mathbf{P + L \equiv Y \equiv C + I + G \equiv a_1mG + (1- a_1)mG + a_2mCD + (1 - a_2)mCD + a_3mID + (1 - a_3)mID + mC_p + mI_p}$$

where **P** denotes the aggregate profit of private[5] firms, **L** the sum of “labour” incomes, including the “executive salaries”, **G** public spending and **CD** the amount of aggregate consumption generated by credit creation, **ID** the amount of investment generated by credit creation, **m** the value of multiplier, a_1, a_2, a_3, and $(1- a_1)$, $(1 - a_2)$ and $(1 - a_3)$ **the** ratios of the effective demand accruing to private profits and to labour incomes, $C_p + I_p$ the sum of autonomous consumption and investment originated in the private sector.
CD and **ID** indicate that, in a monetary economy, purchasing power is mostly created through a process of credit creation (both short and long term based) made available to borrowers. In this context, **P** constitutes a fraction of the aggregate income and is equal to:

$$\textbf{2.}\qquad \mathbf{P \equiv amG + bmCD + cmID}$$

Now, considering a “pure system” of private agents, we obtain that:

$$\textbf{3.}\qquad \mathbf{P + L \equiv C_p + I_p \equiv C + I}$$

such identity implies that in a private system, without public spending and credit creation, the sum of consumption and investment tends to be equal to wages and salaries and, therefore, there is little room for aggregate profit, in the meaning described above.

To What Extent Private Investment Can Replace Public Spending?

This analysis is linked to the following central question, namely, whether in the familiar identity,

$$\textbf{4.}\qquad \mathbf{Y \equiv C + I + G}$$

the terms **I** and **G** are mutually replaceable. As a matter of fact, it is on this (more or less explicit) assumption that the neoclassical economists base their reasoning—namely, that the economic space now “ineffectively occupied” by the public sector can easily be replaced by private investment. But to what degree is this alternative feasible (and advisable)? We have two main hypotheses:

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[5] Also in this case, the growing complexity of the system is coextensive with a parallel articulation of the structure of the firms, with the presence of many “mixed” forms. It is interesting to note that this analysis will apply also to the case of state-owned enterprises, provided they be organized as administratively independent bodies.

The Neoclassical Hypothesis of "Crowding out" Effect

Let us assume that we have, at the time zero, with an income multiplier equal to 1.66, and supposing that the volume of credit creation would remain the same, the following situation:

5. $$\mathbf{Y_0 \equiv C + I + G \equiv 396 + 100 + 500 \equiv 996}$$

In this case, neoclassical oriented theories tend to posit that a diminution, say, by 100 in public spending would entail a parallel increase in private investment.
In the opinion of many, if 996 is an equilibrium of underemployment, the reduction in public spending would generate an increase in **I** even higher than the correspondent reduction in public spending. In this way, the new level of $\mathbf{Y_1}$ would be higher than $\mathbf{Y_0}$. By assuming that the decrease in public spending by 100 is accompanied by an increase of I equal to 150, we obtain:

6. $$\mathbf{Y_1 \equiv 429 + 250 + 400 \equiv 1079}$$

The Keynesian Hypothesis of the Additionality of Public Spending

In this case, if the reduction in public spending of 100 is not accompanied by a parallel increase in private investment, and supposing that the volume of credit creation would remain the same, the result of the cut is, with same multiplier equal to 1.66, a diminution of GDP equal to,

7. $$\mathbf{Y_0 \equiv 396 + 100 + 500 \equiv 996}$$

8. $$\mathbf{Y_1 \equiv 330 + 100 + 400 \equiv 830}$$

In this case, even the gain for public budget will be scant.
In fact, if we assume, as a reasonable hypothesis, that the total taxation (direct + indirect) is approximately equal to 50%, the reduction of **Y** will cause a reduction of fiscal revenue equal to 166*0,5 = 83.
The net balance of this operation for public finance is then only + 100 - 83 = 17 and is only the role of the "social absorbers" that can mitigate these negative effects.

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Which hypothesis is closer to reality? For the reasons we have tried to set forth, and also on account of actual economic trends, the Keynesian hypothesis seems closer to reality.
This of course is compatible, and requires indeed, an increase of the efficiency of public spending, which can also imply its reduction in some instances.
In this regard, the real issue is to focus public spending less on the agenda of the various interest groups and more on proactive policies for economic and social development.
In this regard, the crowding out effect of mainstream economics is hard to be found as the hypothesis of perfect substitutability between **I** and **G** is very far from reality. In fact, as we

have seen, public spending and credit creation are the main drivers of aggregate profit. Furthermore, a perfect substitutability[6] between **I** and **G** finds a limit in the circumstance that the amount of investment goods need be geared to the amount of consumption goods that firms plan to produce which, in turn, heavily depends on the available income of the labour force. We can represent this situation with the general equation:

9. $$\mathbf{C = f(I)}$$

we define this equation general to imply that, in order to produce a given amount of consumption goods, many productive ways are possible. However, the possibility of choosing different productive techniques does not imply the perfect flexibility of productive factors postulated by neoclassical economics. Quite the contrary, this formulation takes into account that any kind of productive process — with their present and prospective techniques — is highly evolutionary and path-dependent as it is fully ingrained in the complexity of the social and cultural context.

The Unrealistic Hypothesis of a "Pure Private Economy"

An implication of this analysis is that a "perfect" private economy is unlikely to be attained in the modern world. Such an economy, in allowing little growth, little innovation and little change, can have as its correlate only very simple economic systems, based on vicinity and direct personal relations. But, as soon as these systems start growing, the role of public sector (and credit creation) becomes paramount, paradoxically enough, for the growth of profit associated with modern capitalistic institutions (in reality, mixed economies). Both public spending and credit creation originate from public intervention. This is evident for public spending, but also for credit creation the role of public sector is no less important. In fact, as just noted, public sector (meant in a broad sense and then including also the Central Bank) plays a pivotal role in creating and guaranteeing the value of money. Public spending and credit creation can accrue to the effective demand in numerous ways: as for public spending, in particular, **(i)** classic multiplier effects related to public consumption, public investment, transfer payments to private sector, and civil servants' incomes; and, **(ii)** as for credit creation, the various types of consumer credit and investment credit, which also combine to shape the level and forms of public spending.
For these reasons, it appears clearly that the neoclassical idea of a *crowding out* effect of public spending[7] on private sector can display, if any, only a limited effect in our

[6] As already noted, the notions of public and private action, markets, competition and efficiency are determined by the complex and evolutionary systems of norms, institutions, policies in their relation with the cultural and psychological orientations at the individual and collective level. In this respect, one noteworthy phenomenon is the growing importance of the "mixed forms" of economic activities. They are characterized by an articulated presence of "stakeholders" carrying different objectives and systems of value.
Also for this reason, it becomes more and more necessary an adequate level of coordination between institutions and policies in order to take in due account the multifariousness of these issues.

[7] In this sense, a psychoanalytic perspective can also be employed for the study of these issues. On that account, it can be very interesting to analyse how people perceive and interpret their economic and social realities and the reasons that can hinder the attainment of a more equitable and sustainable society (see also Hermann 2015a). We can observe these aspects by investigating how people tend to perceive and interpret the increase in public spending of the past decades. In this situation, a vicious circle tends to arise: in consequence of the structural tendency towards increase in public spending, it is gained ground the opinion, even across various sectors of the progressive domain, that the only remedy to the present crisis consists in a progressive reduction of public spending.
In these situations, in which the only faith in economic progress rests on a kind of a wild and unregulated competition, the market tends to be psychologically perceived as an inflexible and punitive *superego*. In that vision, the only possible thing we should do is to comply with the "needs of the market", without any further enquiry on the adequacy of the

economies. As we have tried to show, in a "pure private economy" aggregate profit is unlikely to be very high. Public spending and credit creation play the fundamental role of pushing the growth of the system, also because they contribute to create a relevant part of the effective demand, which accrues to the private sector.
It can also be interesting to note that these conclusions hold true whatever be the elasticity[8] to prices of the aggregate supply function. As a general remark, we believe that the aggregate supply function is in most cases elastic enough in the short run, and even more in the medium and long run, due to the effects of technological progress.

1.3 The Role of Structural Factors

As we have seen, a central trait of the modern "mixed economies" lies in a chronic tendency of effective demand to lag behind the supply of full employment (however defined). In this respect, we have tried to identify a number of theories and factors that can explain in the short run these dynamics. We will now turn attention to a set of structural factors: in particular, both the growing productivity of labour and the satiation for certain categories of goods combine to render the objective of full employment more difficult to achieve.
In the former case, this happens because the increase in productivity signifies that, for a given level of production, fewer jobs are required; and that, in order to secure the same level of employment, more goods should be produced and sold in the market.
In the latter case, this comes about because, since the needs of consumers are becoming increasingly tied to the immaterial and the intellectual side[9] of consumption, their fulfillment tend to depend less and less on the "material and quantitative" aspects of consumption. In fact, we do not buy books by kilos and cultural activities by mere numbers. Also, if we buy a high-tech product, we are likely to be more interested in learning well how to use it, than in changing it with every new model.

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system to respond to the profound needs of economy and society. Similar remarks can be made for the psychology of debt and credit creation.
In this regard (see also the next paragraph), the *superego* can constitute an important explanation of the difficulty to move towards a society of "free time". The *superego* represents the psychological instance through which cultural values (with their inner conflicts) are internalized by the child. For this reason, it constitutes a fundamental tie between individual and collective psychology. The *superego* can be considered as the heir of the *Oedipus* complex, since it arises from the internalization of the prohibitions and of the moral and cultural values — as perceived by the child — of the child's parents and also of later institutional figures such as teachers and other opinion leaders.

[8] It can be worth noting that the classic hypothesis of vertical aggregate supply curve, corresponding to full employment, in which there is perfect flexibility of prices and wages, is quite unrealistic for a host of reasons: **(i)** Full employment is hard to achieve not because of too high wages but owing to an insufficient level of effective demand; **(ii)** Technological progress can contribute, in a complex way, both to the rise of the unemployment and to the shifting of the "supply functions" at firm and industry level; **(iii)** The role of expectations, which makes the distinction between short run and long run more blurred; **(iv)** The phenomenon of sticky prices, which do not depend only on "market imperfections" but are often needed in order to provide the system with a minimum of stability and reliability: if everything were wild flexible, no stable economic and social life would be possible (see also the previous chapter); **(v)** Also for this reason, the decision to change prices necessitates some planning activities in order to foreshadow the possible consequences. As this activity should be made in advance, it constitutes a good explanation ─ set forth in particular by various institutional contributions and by the theory of "small menu costs" ─ of the reason why firms do not quickly adjust their prices even when it would seem more profitable to do so; **(vi)** The same phenomenon has been observed in labour markets, where both firms and workers prefer to negotiate long-term contracts.
As can easily be seen, all these relations do not take place in a *vacuum* but are heavily interlinked in the social and cultural domain. For all these reasons, an interdisciplinary approach can help to look more deeply into the microeconomic foundations of the macroeconomic aggregates.

[9] See, for instance, R.Skidelsky and E.Skidelsky (2012) and J.K.Galbraith's (1958) *The Affluent Society*.

These aspects constitute a significant explanation of the tendency of the socio-economic systems to move from work activities resting on "the economic motive" to activities — social, cultural, scientific, artistic — more based on the expression of the real needs and inclinations of persons.

In this regard, what are the effects of technological progress on job creation? The increase in productivity requires a growing amount of goods for guaranteeing the same level of employment. Of course, firms can introduce new products on the market, but this would not solve that structural issue. In fact, even if new jobs are created in these fields, the increase in productivity extends also, and perhaps even more, to the new products. This could contribute to explain that every innovative wave tends to create fewer and fewer jobs. For instance, it is easily observable that, whereas the durable goods typical of 1960's and 1970's involved hundred thousand workers, innovative cycles of today high-tech products would employ no more than some thousand workers.
All this suggests that a kind of "forced" over-consumption is the only and very imperfect way, in our present economies, for attaining some kind of full employment level.
How many high-tech items, cars, clothes, etc., should we buy to sustain the effective demand? For a host of economic, social and environmental reasons, this system is untenable in the long run. In this respect, the problem becomes to identify the set of institutional and policy arrangements for moving along a new avenue of economic and social progress**.**

The Nature of the Problem in a Nutshell

We can delineate some aspects of these problems by developing a very simple scheme which, of course, needs become far more complex in the analysis of specific issues.
Let us denote with **N** the number of workers — who are supposed to work approximately for the same time and with the same productivity — π the average labour productivity and **Y** the aggregate product. Supposing that, for the sake of simplicity, the product is homogenous, consists of additive units and is sold at the unit price, we obtain:

1. $$\mathbf{N\pi = Y}$$

Supposing **N =** 1000 be the level of full employment (however defined), and π **=** 5, the corresponding value of **Y** for a given time span will be equal to:

$$\mathbf{1000*5 = 5000}$$

Now, if, for instance, the productivity increases by 20% the potential product will be equal to:

$$\mathbf{1000*6 = 6000}$$

As it can be easily seen, in order to maintain the same level of employment, it is necessary that the new product of 6000 will be produced and sold in the market.
Conversely, if, with the new level of productivity, the product sold would remain at 5000, the productive capacity could not run at full blast. As a result, the new level of employment will be equal to,

4.

$$N = \frac{Y}{\pi} = \frac{5000}{6} = \mathbf{833{,}3}$$

with a corresponding drop of 166,6 units (1000 – 833,3).
In this way, 166-167 labour units will be made redundant. Thus, in order to secure full employment, it is necessary to sell on the market 6000 units. How can this be accomplished? There are two main ways, with all the degrees of intermediate cases: **(a)** a corresponding reduction of prices, in which case the benefit of the productivity increase will be transferred on consumers; **(b)** the invariance of prices, which implies that the benefits of the productivity increase will not change the level of mark-up.
As for the case **(a),** which more closely corresponds to neoclassical economics, the required flexibility of the factors of production rarely occurs in practice. As also noted before, for a number of reasons prices, wages and mark-ups tend to be rather sticky, also because these "prices" tend to reflect the social and institutional arrangements upon which economic activity is framed.
But also supposing a sudden realization of that condition, the problems of satiation pointed out before would still remain, and even getting worse over time. As a matter of fact, the increased vent of product, by compelling us to buy a growing quantity of goods, would rapidly induce satiation for many of them. This being the case, the elasticity of the demand would be in most cases inferior to the unity, which implies that it is not convenient for firms to reduce prices.
As for the case **(b)**, its realization demands ─ not considering the phenomenon of satiation for many products ─ nothing less than a parallel increase of the demand in the form of disposable income of the consumers. As we have seen, the main channels for attaining such increase are a continual expansion of the share of public spending and credit creation on GDP.

1.4 Can Prices and Wages Flexibility Realise Full Employment?

From the previous account it appears that the prevailing productive paradigm, based on ever-growing consumption and on unlimitedness of natural resources, is becoming more and more unfit for ensuring a sustainable and equitable development of economic systems.
For this reason, measures aimed only at increasing effective demand are important, but not sufficient for thoroughly addressing these problems.
As for the neoclassical oriented policies of reducing public spending and taxation, we have seen that — although it can be possible and advisable to realize a better rationalization and accountability of public sector — it is utterly unrealistic to believe that public spending can be easily and massively replaced by private spending.
For these reasons, policies based on these premises are unlikely to be effective in sustaining the effective demand.
At this stage, it can be interesting to wonder if the other central prescription of neoclassical economics can work in our economies. As we know, such prescription relates to the importance of realizing a high level of "flexibility[10]" of productive factors, and in particular of prices and wages.

[10] In this discussion, of course, we do not refer to the desirability that "productive factors" should possess a degree of flexibility but to the simplistic idea (see also the previous paragraph on the complex reasons underlying the

We have just seen that, in presence of an increase in productivity, a corresponding reduction of prices is in many cases unlikely, owing to a low level of the elasticity of demand, to absorb the corresponding demand.
Now we can wonder what happens in the hypothesis of a money-wages reduction — which we need not suppose, for our reasoning, substantially different from a real-wages reduction — with an unchanged level of labour productivity.
For instance — and even letting apart the circumstance that sticky prices also reflect the complexity of socio-economic relations and hence cannot be properly explained through the lens of a simple framework of market imperfections — in presence of a rate of unemployment (however defined) of 20%, can a corresponding reduction of labour cost restore full employment?
Our impression is that measure can possibly have some positive effect on employment in the short run. Such effect, however, tends to vanish in a longer while. Why? First, even in the short run, there is no guarantee that a reduction of wages of, say, 20% would entail a corresponding increase of employment. In fact, if the entrepreneurs perceive that this reduction is due to the weakening of workers' contractual power, they would be induced to increase the intensity and duration of the workday. These measures can be accompanied by the attempt of further reducing the wages, which can be made more effective by prospecting a delocalization of production in lower labour cost Countries.
But even supposing that such reduction can work in the short period, in the long run the effects are likely to disappear because the factors just depicted — also in conjunction with the increasing difficulty of effective demand to reach the full employment level discussed before — tend to grow stronger over time.
In fact, as observed in the previous sections, in the capitalistic, or "mixed", systems of today, the "natural" tendency of entrepreneurs is to reduce as much as possible labour cost in order to try to acquire price competitiveness and increase their profits.
In this regard, we can also note that, as underscored by many studies on technological accumulation, a policy action based only on the reduction of labour cost will contribute — by disregarding the need of a proper development of human and social capital for upgrading the capacity of a country to compete in the higher levels of the value chain — to marginalize and impoverish that country.

1.5 Towards a Steady State

A central aspect of a novel economic system relates to the building a society less based on the "economic motive" and more on the unfolding of the true inclinations and potentialities of persons.
This comports that this system will be fully compatible with limited growth, steady state, or de-growth. The objective of our work is not that of indicating what option is preferable but how to facilitate the move towards this path of progress.
It can be interesting to note that this more "qualitative" tendency was noted by important economists, and now we mention some significant examples. The first one can be found in the most "heterodox" classical economist, John Stuart Mill. In his appraisal of the long term economic evolution, he remarks that the structural tendency towards the stationary state does not imply a static way of living but, on the contrary, constitutes the necessary condition for the full expression of the more advanced aspects of personality. The central element for attaining such a state is the control of population. In his words,

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phenomenon of sticky prices) that un unlimited flexibility can easily be attained and that, once achieved, would be able to realize an economic growth of full employment.

“There is room in the world, no doubt, and even in the old countries, for a great increase of population, supposing the arts of life to go on improving, and capital to increase. But even if innocuous, I confess I see very little reason for desiring it….I sincerely hope, for the sake of posterity, that they….[the future generations]…..will be content to be stationary, long before necessity compels them to it.
It is scarcely necessary to remark that a stationary condition of capital and population implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, and moral and social progress; as much room for improving the Art of Living and much more likelihood of its being improved, when minds ceased to be engrossed by the art of getting on. Even the industrial arts might be as earnestly and as successfully cultivated, with this sole difference, that instead of serving no purpose but the increase of wealth, industrial improvements would produce their legitimate effect, that of abridging labour. Hitherto it is questionable if all the mechanical inventions yet made have lightened the day’s toil of any human being….Only when, in addition to just institutions, the increase of mankind shall be under the deliberate guidance of judicious foresight, can the conquests made from the powers of nature by the intellect and energy of scientific discoverers, become the common property of the species, and the means of improving and elevating the universal lot. [John Stuart Mill, 1994, (1871): 128, 129, 130].”

Another relevant contribution to these issues has been provided by J.M.Keynes, in particular in the final part of the *Essays in Persuasion.*
This can appear a bit surprising because Keynes, owing to his proposals for recovering from economic depression, is often depicted as the theorist of the short period. This opinion tends to be reinforced by his famous expression “in the long run we will be all dead”.
However, from the reading of the *Essays* we discover that the long-term perspectives of economy and society play a central role in his analysis.
For Keynes, focusing attention on short-term problems constitutes only a part of a more profound awareness of the structural transformations of society. The pith of these changes will centre on a substantial shortening of the working time, made possible by the increase of productivity. The main obstacle to the attainment of this potential rests not in a technical but in a psychological difficulty, which can be related to an unconscious feeling of guilt related to the presence of *superego*. He pinpoints, with great psychological intuition, the difficulty of people to employ leisure time for a better realization of their personalities. In his words,

“We are being afflicted with a new disease of which some readers may not yet have heard the name, but of which they will hear a great deal in the years to come—namely, *technological unemployment*. This means unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour….But this is only a temporary stage of maladjustment. All this means in the long run *that mankind is solving its economic problem*….[but, despite this opportunity]….Yet there is no country and no people, I think, who can look forward to the age of leisure and of abundance without a dread. For we have been trained too long to strive and not to enjoy…[hence, in this perspective, economics]….should be a matter for specialists—like dentistry. If economists could manage to get themselves thought of as humble, competent people, on a level with dentists, that would be splendid!. [Keynes 1963 (1931), 364, 368, 373].”

Also J.K.Galbraith's *The Affluent Society* complements in interesting ways with this analysis. In his words,

"To furnish a barren room is one thing. To continue to crowd in furniture until the foundation buckles is quite another. To have failed to solve the problem of producing goods would have been to continue man in his oldest and most grievous misfortune. But to fail to see that we have solved it, and to fail to proceed thence to the next tasks, would be fully as tragic. [Galbraith 1998 (1958): 260]."

In order to solve these problems, it becomes central to reduce the all-important role of production. To that purpose, Galbraith observes, there is no other way that to loosen the dependence of the income on production. This can be achieved, firstly, by increasing the duration and the amount of unemployment benefits and other forms of support for people who cannot carry out work activities. And, secondly, by increasing public spending on essential public goods, in order to achieve a better "social balance" between public and private property, and thus abate the phenomena of social and environmental decay.
But how can these measures be financed? In this regard, an increase in taxation, both direct and indirect, is the only way to attain a better balanced economic and social system. There is, however, a general reluctance to tax increase, both in progressive and conservative domains. In fact, any change in the tax regime will trigger the debate on equality, with the likely result that the reciprocal vetoes will render arduous to attain significant changes.
Furthermore, the conventional wisdom is prone to cut taxation in any case, even if this involves a reduction of essential public services. Therefore, a tax cut for the poor, although it may seem more equitable, threatens to undermine the central goal of the elimination of the causes of poverty and degradation. In this sense, Galbraith complains, "The modern liberal rallies to protect the poor from the taxes which in the next generation, as the result of a higher investment in their children, would help eliminate poverty.", (Ibid: 230).
To eradicate poverty, in fact, not only a higher income is needed, but also a thorough understanding of the social causes that determine such plague. These negative factors, such as, for example, insufficient resources for primary and secondary education, can be eliminated mainly through higher public investment. In this sense, "Poverty is self-perpetuating partly because the poorest communities are the poorest in the services which would eliminate it.", (Ibid: 240).

2. The Various Perspectives of Environmental Economics

In this chapter we will consider, without any claim of completeness, a number of significant theoretical contributions ─ belonging to different but interrelated fields ─ that can be useful for a better understanding of the issues of sustainable development.

2.1 The Slow Rise of Environmental Economics

As is known, the economics of the past centuries had paid scant attention to environmental issues. In fact, both classical and neoclassical economics rest on the hypothesis of unlimited natural resources which, for this reason, can be freely exploited for maximizing the growth of the system. Also Marx, while highlighting the contradictions of the economic system, does not directly question the hypothesis of unlimited natural resources.

True, in the XIX century significant concepts related to environment protection were developed, but not until the first half of the XX century environmental issues received some attention in economics. This was realized through the notion of externalities in neoclassical economics, and, in a more comprehensive way, through the concept of social costs put forward by William Kapp in 1950. His analysis underscores that, in a system of "free market", firms have an incentive to reduce their private costs in order to maximize profits or, in particular for the less efficient ones, simply to keep head above water. In such situations, the costs more easily reducible are those that can be more widely "externalized": these are the "social costs" related to job safety inside the firm, and, outside the firm, the noxious emissions and other forms of environmental degradation.

Another relevant contribution of that period (1956) was *The Affluent Society* of John Kenneth Galbraith which laid bare the intrinsic contradictions of an economic system based on the primacy of private goods (production and consumption at any cost) over public goals.

However, it can safely be said that, with the exception of the mentioned and of few other contributions, in that period (broadly the 1950's and the 1960's) environmental issues remained rather in the shadow, both in theory and in policy action.

2.2 The Bioeconomy of Nicholas Georgescu-Roegen

Actually, environmental economics grew as a distinct discipline only in the early 1970s. An important scholar who steered that course was Nicholas Georgescu-Roegen. In his main work, *The Entropy Law and the Economic Process*, by applying the insights of physics and biology to the analysis of economic process, he set forth a new discipline, the bioeconomy. Such discipline has far reaching implications not only for environmental issues but also for the main concepts of economics. The core concept of his analysis is that of entropy, which constitutes the central feature of the physical and biological evolution. In the first part of his book, he carries out a detailed analysis of how the concept of entropy has revolutionized the realm of physics, allowing it to broaden its horizon from static mechanics to thermodynamics.

This implies a major shift from the analysis of quantitative forces in a (supposedly) static setting ─ like a ball on a billiard ─ to qualitative transformations in a dynamic setting, typical of the evolutionary processes. This new perspective comports a parallel revolution in the core concepts of economics and its methodological underpinnings: namely, from a positivistic conception (in a broad meaning) according to which economics should imitate the static ─ and the supposedly sharply precise "laws of physics" ─ to a dynamic and evolutionary perspective in which due account is given to the complex, qualitative and

dialectical aspects of real world. In this way, environmental issues ─ so far relegated in the storeroom ─ enter the scene from the front door. The concept of entropy applied to environmental issues is relevant for, at least, the following aspects: **(i)** It highlights, as just noted, the evolutionary and qualitative transformations of the system, and such perspective is particular suitable for grasping the holistic nature of the environmental and economic issues. **(ii)** It points out a central aspect of environmental problems, namely, the irreversibility and pervasiveness of environment degradation: once the free energy of the environment is transformed in a "bound and polluting" energy, such process is irreversible and nothing can bring the system to the previous state. **(iii)** The previous aspects of complexity and irreversibility pinpoint the structural uncertainty of environmental issues. This feature acquires particular importance for addressing the harmful effects of production and consumption. As these effects are not wholly known or foreseeable, a central precautionary concept applies: it is not the citizen that must provide hard evidence on the harmful effects of, say, industrial emissions but, conversely, it is the producer that most provide hard evidence, before starting production, on the safeness of such substances.
However, it should be noted that, in our view, Georgescu-Roegen does not fully unfold the potential implied in these premises. In the final chapters of the book ─ although underscoring the irreversibility of environmental degradation and making other interesting remarks on the contradictions of our economic systems ─ he does not propose a clear course of policy action. Basically, he thinks that in our economies (capitalistic and socialistic alike) little can be done to build a sustainable economy. Hence, sooner or later humans will be thrown, after the exhaustion of natural resources, in a new primitive condition. The roots of such pessimism can be found in the interpretation of social conflicts which, in his view, are determined by some inexorable "biological innate propensities" of human beings. These conflicts are bound to increase with the growth of economic surplus and the result is the formation of "economic élites". We can note that this view disregards the aspect which he stressed more in the previous parts of the book: namely, the circumstance that entropy embodies a qualitative and irreversible transformation of material structures and living beings.
In this regard, as noted before, the entropy should render the observer more aware of the complexity of socio-economic phenomena and of the necessity of an interdisciplinary approach for their thorough investigation. For instance, in the case or environmental degradation and the quest for economic power, such an analysis can cast light on the following aspects: **(i)** if people use natural resources in a self-destructive way, it seems unrealistic to attribute such behaviour to some deterministic "biological laws" such as those governing animals' behaviour: in fact, if such laws were working in humans and animals alike, such laws would steer a self-preservation behaviour. In fact, there are virtually no examples among animals of a collective self-destructive behaviour. **(ii)** If only humans have a real choice ─ even though often not completely free ─ on how to organize their material and spiritual life, the central question arises about the social, cultural and psychological factors moulding individual-society relations. This would focus the analysis on, among others, the following aspects: **(iii)** what are the real motivations of persons and how can be promoted, distorted or frustrated in social life? For instance, if we find in a society a diffuse predatory behaviour aimed at possessing, say, polluting luxury goods, how should we interpret such behaviour? As a necessary expression of "biological laws" or as a kind of deviation – which most often assumes the character of a psychological disturbance and can be reinforced by social habits─ from the true motivations of persons? **(iv)** And, relatedly, does the *homo oeconomicus* maximize money only for "material reasons"? Or does the quest for money also cover the (mostly unconscious and frustrated) need of being accepted by following a socially approved behaviour?

A relevant implication of this interdisciplinary approach for green economics is that, as socio-economic behaviour is much more open to the manifold influences of the context, the role of policies in orienting individual and collective action towards a sustainable and equitable society becomes paramount.

2.3 Further Developments of Environmental Economics

Georgescu-Roegen's approach was, notwithstanding its pessimistic vein, definitely important in building the strand of environmental economics. Of course, he was not alone in carrying out such perspective. We can mention, among others, the contributions of Kenneth Boulding and Barry Commoner, who underscored the structural ties between, ecological, social and economic capital.

All these contributions helped to establish environmental (or ecological or green) economics as a distinct discipline. From this new awareness, in the following years two principal strands unfolded: **(i)** one, more "orthodox[11]", that relies on the framework of neoclassical economics to the analysis of environmental issues. **(ii)** the other, more holistic[12] and "heterodox", that adopts the perspectives of the bioeconomy and other cognate approaches.

Such conceptual frameworks have led to different policy prescriptions: in particular, with the above **(i)** advocating market-based instruments such as environmental taxes and permits; and with the above **(ii)** proposing some kind of economic planning.

In this respect, while agreeing on the possible usefulness of market based instruments, we also believe that these measures need be integrated with a democratic and comprehensive planning aimed at transforming in a sustainable way the economic system. Within the latter aspect, two relevant, and intertwined, perspectives have emerged in the previous decades: "appropriate technologies", the "commons" and "ecosocialism".

2.4 Appropriate Technologies, The "Commons" and Ecosocialism

Appropriate Technologies

The notion of appropriate technologies was introduced in E.F.Schumacher's book *Small is Beautiful*, and highlights the inadequacy of applying an abstract notion of "efficient technology" to the policies for developing Countries. What matters for upgrading their productive systems is that technologies be geared to the reality of their socio-economic conditions. For instance, in an agricultural setting it could be much more useful to promote ─ instead of setting a high-tech plant totally disjointed from the context ─ a light industry based on relatively simple technologies but that can create a good synergy with agricultural products. A pivotal aspect in assessing the various technological options is the active involvement of all the interested subjects.

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[11] See, among others, Daly and Farley (2010), Pearce and Turner (1990).

[12] See, among others, Hiedanpää and Bromley (2016), Jackson (2017), Kenneth and Heinemann (2006), Löwy (2015), Macekura (2015), Pepper (1993), Swaney (1988), Wall (2010).

The Notion of "Commons"

An interesting proposal in this respect has been to extend the notion of "commons" (namely, institutions of "common pool of resources"), to the production processes most dangerous for the environment. As extensively analysed by Elinor Ostrom (1990), in most cases a sustainable and equitable management of these resources is provided by institutional forms that go beyond a sharp dichotomy between the "State" and the "Market".

In her words, "What one can observe in the world, however, is that neither the state nor the market is uniformly successful in enabling individuals to sustain long-term, productive use of natural resource systems. Further, communities of individuals have relied on institutions resembling neither the state nor the market to govern some resource systems with reasonable degrees of success over long periods of time.", (Ostrom, 1990: 1).

Then, she goes on to analyse many "commons" that witness their highly specific and context-dependent characteristics. However, such situations display also relevant common traits. These are constituted by the presence of (often seemingly) conflicting goals between private and collective benefits, the possibility of "free riding", the necessity to establish a set of operational rules. In brief, commons exist when there is the presence of a common good with allows the possibility of private appropriation. As such, it is a concept different from the classic public good where the individual benefit does not detract from collective benefit (for instance, a public park).

On that account, while the analysis chiefly centers on a kind of "middle level commons" ─ typical examples are grazing land, fishing areas, water basins, irrigation systems ─ she is well aware of the extensive nature of this concept and of its links with the economic and social domain. In this sense ─ along an ideal continuum from the "state" to the "market" ─ many institutions and economic activities embody one or more aspects of the typical commons.

We can mention, on the "state-side" spectrum, the characteristics of the legal and institutional framework and the public goods provided by it. It is interesting to note that also the market acquires the character of a public good. In fact, it is created and maintained by a well defined set of norms and institutions which allows anyone to enter and exit a market without paying for it. And, on the "market-side" spectrum, we can consider, at the very least, the classic public utilities (water, gas, electricity, telecommunications) and the corporations operating in strategic sectors (for instance, natural resources, material and immaterial infrastructures).

Ecosocialism

In this sense, the notion of appropriate technologies is fully compatible ─ and indeed constitutes a distinctive element ─ with the main versions of ecosocialism[13]. This notion comprises a broad range of theoretical and political formulations, whose common trait is an improved awareness that gross economic inequalities and environmental problems constitute two prongs of a common malady. This resides in the contradictions of capitalistic economies, which require a coordinated policy action to overcome them. For this reason,

[13] See, for instance, the "Belem Ecosocialist Declaration",
http://climateandcapitalism.com/2008/12/16/belem-ecosocialist-declaration-a-call-for-signatures/
A good analysis of these issues can be found, among others, in Löwy (2015), Macekura (2015), Pepper (1992), Swaney (1988), Wall (2010).

attempts to solve the environmental problem without addressing the huge issue of inequality between and within Countries can attain only a transient and limited success. But also the reverse holds true, in the sense that policies aimed at substantially reducing inequalities without dealing with the environmental problems will soon give rise to new forms of injustices.
Once ascertained the common root of high economic inequalities and environmental problems, the problem poses itself as to the choice of a suitable policy strategy. While, in fact, the vast majority of ecosocialists would agree on realising some mix between market mechanisms and public intervention, their opinions widely differ as to the relative importance of public and private action. And, relatedly, opinions also differ as to the priority to give to different objectives. This comes about especially in situations of severe economy deprivation and when it seems to exist, at least in the short run, an irreducible trade off between economic growth and environment protection. For instance, in developing Countries plagued by poverty and environmental decay, a good number of people[14], even of progressive stance, tend to believe that putting the growth to the fore ─ even at the expense of environment ─ can become necessary in the first steps of economic development. Ecosocialists have various and manifold relations with the following environmental perspectives (also in the next section), whose boundaries are often blurred: **(a)** Deep ecology, **(b)** Democratic socialism, **(c)** Centralised socialism.

While acknowledging the circumstance that no policy action can be perfect, we believe that only a coordinated policy strategy, which gives due weight to both economic and environmental objectives, can really hope to move along an avenue of sustainable and equitable development.

2.5 Guild Socialism, Economic Democracy and the Role of Public Sector

Among the various types of democratic socialism[15], an interesting proposal is that of “guild socialism”. It was chiefly elaborated by George Douglas Howard Cole (1918 and 1920), and by Sidney and Beatrice Webb (1920), and is close knit with Fabian socialism. The central idea of guild socialism is that a proper realisation of socialism implies an enlargement of the concept of democracy. From a formal level, related only to the choice of political representatives, to a substantial dimension, representing the various roles that citizens perform in society. Particular relevance is attributed to the role of various productive sectors. Thus, it is quite normal that people engaged in, say, railway sector, would attach a special importance to that sector. And that the various interests composing the sector would demand every good provision: for instance, better working conditions for the workers, better transport conditions for the users, more investments and profits for the various forms of management. Of course, these demands must be confronted with those of other groups, but what matters is not to repress, but to promote such course. This requires an improved democratic participation of the workers to the management of firms and, for users, better ways to solicit their needs.

But, critics can claim, would not this system reinforce corporatism, with all its drawbacks? We think that guild socialism will work, when properly managed, to the opposite direction.

[14] A good account of this conflict in the development policies of supranational institution is provided by Macekura (2015).

[15] For a comprehensive treatment of the issues related to the theories of communism, socialism and social justice see the encyclopedic works of Cole (2002) and Salsano (1982).

As a matter of fact, corporatism, in the sense of specific interests of persons and groups related to their activities, has always been present in our societies. Of course, it can hopefully become ─ as a result of social and psychological progress ─ more responsible and mature. However, corporatism is unlikely to be totally eliminated, because, as just noted, it seems reasonable the persons tend to attribute special relevance to their activities. What should be drastically abated, of course, are the unfair relations arising when some groups acquire a dominant position at the expense of the others. But trying to achieve such goal by suppressing "by decree" corporative interests would not eliminate corporatism. It would only add power to the corporative interests of the ruling party.

The issue of power concentration acquires a special relevance also for the tendency of "pure capitalism" (if such system ever existed!) to transform itself into a "managed capitalism" (or "mixed economies"). The analysis of Rudolf Hilferding (1924) is relevant also for our days. It underscores a strong tendency towards the concentration of capital, which can be favoured by various forms of scale economies (productive, organisational, managerial). The previous forms of industrial, commercial and banking capital tend now to be subsumed under the form of financial capital (Hilferding 1910). This situation, by pushing the system farther away from perfect competition, calls for a massive strengthening of the role of public sector.

There are many ways through which public action shapes economic system: for instance, fiscal, monetary and industrial policies, the fixation of standards for the various markets, policies influencing the activity of banking and financial sectors.

These policies are, of course, influenced by the more powerful groups. On that account, one of the main task of democratic socialism is to steer a course towards a socio-economic system based on participation and democracy. In order to carry into effect such process, it becomes necessary, as pointed out by guild socialists, to ensure free expression to the various interest groups. As a matter of fact, this is the best means to curb corporative power, because in this way these interests would be better offset against each other. Another major advantage is that this open confrontation will improve the process of social valuing (see also later) and then the effectiveness of policy action.

However, moving along such avenue of progress is anything but easy. It requires, notes Hilferding, a psychological change of the workers making them more prepared to be actively involved in the management of economic and social activities.

Such change can be greatly promoted by a shortening of the working hours and by a parallel action of promotion of culture and knowledge, in particular among the disadvantaged classes and groups of society. In this case, in fact, inequality affects not only the economic side but also, and perhaps even more, the possibility to gain access to education and culture.

3. Institutional Economics, Social Valuing and Democratic Planning

3.1 The Institutional Economics' Perspective

Institutional economics originated in the United States in the first decades of the XX century. Its cultural roots can be identified in the philosophy and psychology of Pragmatism — in particular in the theories of Charles Sanders Peirce, John Dewey and William James — and in the German historical school, whose principles were developed by a scholar, Richard T.Ely, who had a considerable influence on the formation of the first generation of institutionalists.

The principal founders of institutional economics are Thorstein Veblen, John Rogers Commons, Walton Hale Hamilton, Wesley Mitchell and Clarence Ayres.
Relevant contributions were also provided by L.Ardzooni, A.A.Berle, J.C.Bonbright, J.M.Clark, M.A.Copeland, J.Fagg Foster, I.Lubin, Gardiner C.Means, Walter Stewart and many others.
Significant contributions with important connections to institutional economics were provided by, among others, John Kenneth Galbraith, Fred Hirsch, Albert Hirschman, Gunnar Myrdal, Karl Polanyi and Michael Polanyi.
Within institutional economics, two main fields can be identified: **(i)** the *old (or original) institutional economics*, constituted by the first institutionalists and by subsequent scholars who shared their main concepts; and **(ii)** the *new institutional economics* (NIE), composed of later scholars adopting principles having important references in the Neoclassical and Austrian schools.
We will focus chiefly on the *old institutional economics* (from now we will indicate it as OIE or institutionalism), and in particular on Veblen's and Commons's contributions, but we are aware that many other authors would deserve more attention, and we will address some of them throughout the work.
In this regard, it is interesting to observe the significant links between the OIE and, among others, the following theories: **(i)** various strands of sociology and social psychology, including the "Sociological or Ecological School of Chicago", the social psychology of William James and of William Ogburn; **(ii)** a number of theories of technological innovation, often referred to as neo-Schumpeterians, which share important concepts with the OIE: for instance, the importance of path-dependency processes in explaining the characteristics of science, technology and innovation in any given context.
The pivotal concepts characterizing the *old institutional economics* can be summarized as follows: ceremonial/instrumental behaviour, instincts, culture, evolution, habits, path-dependency, tacit knowledge, power, technology, collective action, social provisioning, market imperfections, social planning, working rules and social valuing. As noted by numerous authors, the OIE does not present a completely unitary framework. Within this ambit, three main strands can be identified:

(I) An approach first expounded by Thorstein Veblen, stressing the dichotomy between ceremonial and instrumental institutions; the role of habits of thought and action; the cumulative character of technology in its relations with the workmanship and parental bent propensities; the role of the business enterprise in modern economy and their effects on the business cycles.

(II) An approach initiated by John Rogers Commons, which focuses attention on the evolutionary relations between economy, law and institutions; the nature of transactions, institutions and collective action, also in their relations to business cycles; the role of conflicts of interest and the social valuing associated with them; the nature and evolution of ownership, from a material notion of possess to one of relations, duties and opportunities; the role of negotiational psychology for understanding economic and social phenomena.

(III) An approach developed Walton Hale Hamilton, Wesley Clair Mitchell and other scholars, dealing with "market imperfections" at micro and macro level and their effects on economic systems. The aspects more widely investigated are market power, the duplication of firms and the inefficiency of many industrial sectors, the insufficient capacity to consume of middle-low income classes, the dynamics of business cycles.

Notwithstanding several differences between these approaches, the elements of convergence are remarkable. For instance, between the concepts of ceremonial and instrumental institutions, on the one side, and the process of social valuing, on the other. In this sense, the observed differences tend to concern more the issues addressed than the basic aspects of the OIE.

The leading ideas of the institutional economists appear to be the following: **(i)** the belief in the complex and interactive character of "human nature", and the consequent importance of the social and institutional framework for its amelioration; **(ii)** the refusal of any abstract and deductive theorizing detached from the observation of reality, and the consequent emphasis on inductive methodology based on case studies and statistical analysis; **(iii)** the importance attributed to institutions and policies in addressing economic and social problems; **(iv)** an interdisciplinary orientation — in particular with the philosophy and psychology of pragmatism and other related contributions of social psychology — in order to acquire a more realistic account of the characteristics of human nature in its individual and social unfolding.

This new wave had its seats in a number of important universities — in particular, Amherst, Chicago, Columbia, Wisconsin — which became the springboard, through their institutional economists, of important collaborations with numerous research institutions and governmental bodies.

The general sentiment pervading these initiatives was one of optimism about the possibilities of social progress and was by no means confined only to institutional economists as it involved the philosophy and psychology of pragmatism, and various strands of psychology, sociology and political science

In brief, institutional economics stresses that the presence of an institutional context — with its values, norms, conflicts, organizations, routines, habits and customs — constitutes a necessary factor for the human activity of social provisioning. In other words, every economic action embodies, at the same time, also a social, institutional, historical and psychological dimension. Thus, an understanding of economic actions demands a joint analysis of all these dimensions which, for this reason, necessitates the adoption of an interdisciplinary approach.

For instance, as also noted before, on numerous occasions Commons analyses Dewey's theories and those of other pragmatist philosophers while, in turn, Dewey was influenced significantly by Commons's analysis of the increasing importance of organizations and institutions in modern life. The following passage from Commons clearly expresses the links between institutional economics and the different meanings of Pragmatism:

“(In the discussion on Pragmatism)...We are compelled, therefore, to distinguish and use two meanings of pragmatism: Peirce's meaning of purely a method of scientific investigation, derived by him from the physical sciences but applicable also to economic transactions and concerns; and the meaning of the various social-philosophies assumed by the parties themselves who participate in these transactions. We therefore, under the latter meaning, follow most closely the social pragmatism of Dewey; while in our method of investigation we follow the pragmatism of Peirce. One is scientific pragmatism—a method of investigation—the other is the pragmatism of human beings—the subject-matter of the science of economics....Not until we reach John Dewey do we find Peirce expanded to ethics, and not until we reach institutional economics do we find it expanded to transactions, going concerns, and Reasonable Value.", (Commons, 1934: 150-151, 155).

In this way, many Veblen's and Commons's concepts could be jointly applied in the analysis of the issues addressed by Dewey since, as we have noted, these issues lie at the heart of institutional analysis as well: for instance, Commons’s concepts of institution, transaction, collective action, working rules, going concerns, reasonable value, ownership and negotiational psychology, point up the conflicting and interdependent nature of collective action. These concepts can complement well with Veblen's analysis of the dichotomy between the pecuniary and serviceability motives of economic action having their roots in different propensities of the person which, in turn, can be weakened or reinforced by the habits of thought and action which define the characteristics of the social structure.

And, relatedly, the concepts addressed by Veblen can help to shed light on the dynamics of human action — in particular, in the issues of work and participation, and the role played by habits and the cultural heritage embedded therein — and how they impinge on the structure of collective action as analysed by Commons.

These concepts allow us to overcome the dichotomy, so often present in social sciences, between individual and collective action through a definition of collective action that considers the individual and the collective element as two complementary aspects of every human action within the social context. Thus, instead of considering the individual on one side and society on the other as two opposing entities, we have the motivations and actions — the "wills in action" — of individuals which simultaneously assume an individual and collective dimension. This integrated vision of the dynamics of social action was reached through the study of the various forms of collective action in their various interrelations.

Thus, in the sphere of the most structured collective action — institutions — the concept of transaction in its three forms (bargaining, managerial, and rationing) enables us to understand the role of individual actions in determining the dynamics of its development and distinctive features; meanwhile, in the sphere of the most "individualistic" transactions, the concept of institution makes it clear that even the simplest bargaining transaction is an expression of collective action in that its economic, legal, and social basis can be found in existing institutions, which are defined as the combined whole of "collective action in restraint, liberation and expansion of individual action.", Commons (1934:73).

3.2 Social Valuation, Policy Action and the Role of Democratic Planning

A joint application of the concepts elaborated by Dewey, Veblen and Commons can make headway towards a systematic collaboration between institutional theories, psychology and psychoanalysis, especially in light of the increasing areas of convergence between psychological and social sciences[16].

Such collaboration can lead to a better understanding of the features and evolution of social valuing[17] in any given context, which, as previously observed, is expressed in the complex tangle of motivations, conflicts, and expectations, both at individual and collective level. The nub of that process is effectively set forth in the following passage,

"To conceive of a problem requires the perception of a difference between 'what is going on' and 'what ought to go on'. Social value theory is logically and inescapably required to distinguish what ought to be from what is....The role of social value theory is to provide analyses of criteria in terms of which such choices are made.", (M.Tool, in Hodgson, Samuels e Tool, 1994: 406, 407).

A significant development has been made by Commons through the introduction of the concept of reasonable value, which pinpoints the conflicting and context-specific nature of the process of social valuing. These concepts are set forth in the following passages,

"The preceding sections of this book brought us to the problems of Public Policy and Social Utility. These are the same as the problems of Reasonable Value and Due Process of Law. The problem arises out of the three principles underlying all transactions: conflict, dependence and order. Each economic transaction is a process of joint valuation by participants, wherein each is moved by diversity of interests, by dependence upon the others, and by the working rules which, for the time being, require conformity of transactions to collective action. Hence, reasonable values are reasonable transactions, reasonable practices, and social utility, equivalent to public purpose....Reasonable Value is the evolutionary collective determination of what is reasonable in view of all changing political, moral, and economic circumstances and the personalities that arise therefrom to the Suprem bench.", Commons (1934: 681, 683-684).

Reasonable value is by definition an imperfect process whose characteristics can be interpreted as the synthesis of the conflicting and evolutionary components of collective

[16] For an analysis of some important contributions applying psychological and psychoanalytic perspectives to the study of social sciences refer to Ammon (1971); Bastide (1950); Desjarlais and others (1995); Erikson (1968); Fine (1979); Gay (1985); Horney (1939); James (1890); Kahneman and Tversky (2000); May (1972); Nisbett e Ross (1980); Ross and Nisbett (1991); Sullivan (1964).

[17] As is known, the theory of social value has a long tradition in social sciences. Also John Dewey, in particular in his *Theory of Valuation* (1939), which is closely related to the issue of institutional economics, addressed this issue from an interdisciplinary perspective. The following passages from Marc R.Tool effectively express the meaning of the concept of social value for institutional economics, "To conceive of a problem requires the perception of a difference between 'what is going on' and 'what ought to go on'. Social value theory is logically and inescapably required to distinguish what ought to be from what is....In the real world, the provisioning process in all societies is organized through prescriptive and proscriptive institutional arrangements that correlate behaviour in the many facets and dimensions of the economic process. Fashioning, choosing among and assessing such institutional structure is the 'stuff and substance' of continuing discussions in deliberative bodies and in the community generally. The role of social value theory is to provide analyses of criteria in terms of which such choices are made.", (M.R.Tool, in Hodgson, Samuels e Tool, 1994: 406-407).

action. The imperfection of social valuing is also caused by its partly unconscious and conflicting character, often embodied in habits of thought and life. In this sense, social value process goes at the heart of the nature of political economy, which is considered not an activity stemming from the application of abstract laws but as a collective and evolutionary decision-making process involving many institutions. In this sense, political economy has a close relation with law and ethics,

"If the subject-matter of political economy is not individuals and nature's forces, but is human beings getting their living out of each other by mutual transfers of property rights, then it is to law and ethics that we look for the critical turning points of this human activity.", (Commons, 1934: 57).

3.3 Implications for Economic Planning

The stress put by many institutional economists on political economy brings to the fore the issue of economic planning. Should it exist at all, and, in the affirmative case, what kind of economic planning is preferable?

As we have tried to show, the idea of a perfect and optimising market, conceived of as an exogenous and self-equilibrating mechanism, is a kind wishful thinking. What comes about in real economies is that markets are created and maintained by an evolving set of law, institutions and policies most often oriented by the stronger groups. Furthermore, various kind of public goods cannot be delivered by the market and then require a direct public action.

For these reasons, a kind of economic planning is always necessary for attaining the objectives of policy action. We shift then to the second question, namely, as to what kind of economic planning is preferable.

On that account, OIE provides interesting contributions (see, in particular, John M.Clark, 1939, Dugger, 1988, Trebing, 1988). It identifies three kinds of economic planning: corporate, totalitarian, and democratic.

Corporate planning is the reality of modern capitalism. In this system, the operation of “free market forces” is heavily conditioned by the interests of big corporations. They possess a wide array of instruments to influence the structure of all the relevant markets in which are engaged. In Dugger’s words, “The corporation is privately efficient [in the pursuit of its goals], but it is not socially efficient because its low-cost, high-productivity performance benefit those who control it, generally at the expense of those who depend upon it but frequently also at the expense of the society at large.”, (Dugger, 1988: 239).

Corporate planning is highly hierarchical, since the key decisions are made by the top managers with little involvement of workers and citizens at large.

Totalitarian planning is a system characterised by a public purpose which is pursued through a highly hierarchical structure. As already noted, such organizations ─ although have sometimes achieved important results in building infrastructures and poverty alleviation ─ are flawed by a fundamental lack of accountability and democratic representation.

Government members are appointed by the ruling (and single) political party. In such instances, there is no guarantee that **(i)** the party is organized democratically and expresses the needs and experiences of all the groups and classes of society; and **(ii)** that government members and public officials are really accountable for their behaviour.

This system, then, by acquiring a marked self-referential character, makes it arduous any objective and pluralistic assessment of the policies adopted and the results achieved.

We switch then to the third alternative, democratic planning. This system, although it does not always work miracles, is definitely more promising. We need not spend many words on the beneficial aspects of this planning. As a matter of fact, by allowing a more complete process of participation, it renders possible a corresponding improvement of the process of social valuation. As noted before, such process, by promoting a comparison between different policy options ─ and the related set of interests, opinions and values related to them ─ constitutes a fundamental way for improving the capacity of policy action to respond to the profound needs of economy and society.
In this regard, OIE envisions the following macro-objectives (see, in particular, Dugger, 1988, Tool, 1986) of democratic planning:

(1) Overcoming the dichotomy, identified by Veblen, between the objectives of profit and serviceability related to the production of goods; this can be attained by reducing the artificial scarcity and the "invidious distinctions" stemming from market power and ceremonial status, and by making a better and participatory use of the community's knowledge.

(2) Overcoming the dichotomy, underscored by John Fagg Foster, between structures and functions. Such dichotomy can occur because structures, even if, at least in theory, should be instruments for delivering some functions, can easily outlive their utility. This can happen in various degrees ─ as when, for instance, an organisation becomes a kind of a white elephant ─ and is directly related to the "ceremonial" aspects and power relations residing in the institutions. Also in this case, a broader participatory process, by improving the process of social valuation, can help abate such dichotomy.

(3) Implementing the "instrumental value criterion", (see, in particular, Tool, 1986), which pertains to the goal of "the continuity of human life and the non-invidious re-creation of community through the instrumental use of knowledge". This encompassing goal, which constitutes the cornerstone of the institutionalism, requires the attainment of the two intertwined objectives: **(a)** an accountable and participatory democracy in which every citizen can play an active role in decision-making; and **(b)** a substantial reduction of economic and social inequalities.

Needless to say, these objectives will be interpreted differently according to the features of every considered context. This comes about because the relevance of democratic planning lies in the process it engenders for improving participation in decision-making.
In this respect, the relevant aspect of democratic planning is its flexibility, which calls for its application to a wide array of contemporary issues, often reaching out to a supranational dimension. These include the building of peaceful relations, the reduction of gross inequalities between persons and economic areas, and, as a pivotal theme traversing the previous issues, the solution of the environmental problems. The role of democratic planning in pursuing these objectives is expressed in the following passage,

"Environmental planning is another pressing need….Reduction of known emissions, coupled with increased recycling, improved conservation, and safer storage must be begun as soon as possible….Hence, an international environmental protection agency is sorely needed to coordinate efforts, to disseminate information, to provide technical aid to the different national agency, to provide emergency aid in the event of major catastrophes, to monitor changes in global ecosystems, and to help resolve international disputes arising in the continuous process of improving the quality of life in an age of spreading industrial abundance.", (Dugger, quoted: 247).

This perspective is particularly appropriate for shedding light on the links between market structure and the attainment of PSS objectives.
In fact, as we have tried to show, the market should not be appraised as an "exogenous mechanism" but as an institution created and maintained by a complex web of norms, institutions and policies and, therefore, heavily embedded in the social and cultural domain. In these dynamics, social value process plays an exceedingly important role, because it permeates all the economic, social and cultural relations occurring therein. However, social value constitutes an evolutionary and imperfect entity, heavily rooted in consolidated habits of thought and life, which often acquires an implicit and conflicting character. For this reason, one significant explanation of financial crisis and other drawbacks pervading economic systems can be traced back to the shortcomings of the social value process — namely, of policies, institutions and, more generally, of the dynamics of collective action — to respond to the profound needs of society.

Conclusions: Towards a Sustainable Paradigm

As we have tried to show, we believe that much more than a simple *laissez faire* option for moving towards a progressive, sustainable and equitable economy. The theories addressed provide significant elements for a more realistic account of the actual working of economic systems. In this respect, a more far-reaching theoretical background would help achieve a better coordination of many relevant dimensions of policy action. We can mention, in particular:

(I) Macroeconomic policies targeted at driving, in a sustainable way, effective demand to the level of supply of full employment; this requires, within a principle of subsidiarity, an adequate and efficient level of public spending; progressive taxation; a permanent low level of interest rate; a reform of the banking system aimed at discouraging speculative ventures and promoting productive activities.

(II) In following these policies, we should not overlook the structural transformations of the system. As we have seen, they have as their correlate the tendency towards a progressive immateriality of production and the growing relevance of non-economic relations in social life. In order to orient these processes ─ which are emerging in a rather twisted and confused way ─ towards individual and social progress, a provision of a citizen's income seems particularly suitable. However, in order to avoid the risk that these measures would induce "laziness" and marginalization, it is expedient to gear these provisions to social and educational activities.

(III) In pursuing these activities, it would be preferable to follow a policy of a tendentially balanced public budget. As a matter of fact, a policy of deficit spending, although far more advisable than a policy of "austerity", has the serious drawback of increasing the burden of interest payments. In this way, a growing share of public spending is diverted from objectives of public utility to rent. We think that this aspect plays a two-fold role in depressing the economic system, because: **(a)** the multiplier effects of rent-based incomes are likely to be lower than that of public spending; **(b)** public spending directed to public purposes is likely to be more useful than rent for economic and social progress.
In order to overcome these drawbacks, it is pertinent to note that, as highlighted by the "Haavelmo's theorem" (1945), public spending can have an expansionary effect even if it is accompanied by an equal amount of taxation.

(IV) Policies for promoting human capital in the workplace, through an on-going upgrading of the workers' competencies coupled with the improvement of their motivation and participation.

(V) Policies aimed at fostering scientific, cultural and technological development; and other structural policies directed at the building a more equitable and sustainable society.

In addressing these issues, we have not regarded as a central issue which regime (moderate growth, steady state, or de-growth) is most suited in abstract terms for realising the PSS objectives. This is because we believe that much depends on the situations of the various contexts and on how we measure economic phenomena. On that account, although we believe in a structural tendency towards a steady state or a moderate de-growth, we consider it central to identify the ways to foster (here and now) an enduring and substantial progress along these pathways.
This process can be strengthened by a joint use of the theories addressed in the work (and by other pluralistic contributions). In fact, these theories, however different in many respects, present notable complementarities, in the sense that the aspects more overlooked by some are more completely addressed by the others. Hence these theories, by helping identify the manifold aspects of economic system, can make headway towards a more effective policy action for realizing a progressive, equitable and sustainable economy.

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