ABSTRACT. The purpose of this article is to show that, contrary to neoliberal belief, social welfare services and spending cannot be regarded as a cost whose funding should depend on wealth created by the private sector. Social welfare services and spending should be instead recognised as the driving force behind a development dynamics based on knowledge-intensive production and behind an economy whose main productive force is the intellectual quality of the labour force. In the first part, we shall briefly present a not ideological way to represent the relationship between public debt and private debt. In the second part, we shall present a series of stylised facts which highlight in macroeconomic and social terms the key role played by welfare state institutions in the genesis, development and reproduction of a knowledge-based economy (KBE). In the third part, these general considerations will be corroborated and explained through an international comparison between the Nordic welfare model and the neoliberal or Anglo-Saxon welfare model. This comparison reveals a strong positive correlation between the level of development of welfare state institutions and that of a knowledge-based economy while teaching us another crucial lesson for welfare policy: a low level of social and gender inequalities is an eminently favourable factor for the adoption of more advanced forms of work organisation and for the competitive ability of the economic system.

KEYWORDS: welfare state; public debt; cognitive capitalism; work organisation; European Union.
JEL CODE: I30; J5; P51.
1. Introduction

The current crisis is a systemic crisis of capitalism whose resolution implies a process of social transformation able to radically redefine both the distribution rules and the regulations and social purposes of production. On the one hand, this crisis expresses the structural contradiction between the logic of cognitive and financialised capitalism, and on the other hand it shows the social and institutional conditions underlying the growth of a knowledge-based economy (KBE) and necessary to the very preservation of the ecological balance of the planet.

Some observers had initially argued that the failure of the finance-led growth model characterised by neoliberal welfare reform policies would have triggered a New Deal. Therefore, capital, for its own sake, should have been forced to become aware of the need for a new compromise between capital and labour that was able to combine cognitive capitalism and KBE while addressing the imbalances resulting from unequal income distribution, inadequacy of demand and financial instability. It seems to us that the strong sceptical arguments against this thesis are widely confirmed by the evolution of the crisis. The rediscovery of the virtues of Keynesian policies stopped at the threshold of a series of urgency measures that have allowed to save capital while socialising the losses and avoiding the tailspin of world economy into a deflationary spiral similar to the one occurred in 1929. Apart from that, everything should go back to the way it was, or almost. Nowadays it is increasingly clear that the same return of the regulatory intervention by the State is needed to ensure the continuity of neoliberal policies aiming to dismantle the welfare systems, privatise public services and create a precarious labour force.

A proof of this is the way in which the same transformation of private debt into public debt – made it necessary in order to prevent the collapse of the credit system and boost the economy – has now become the crucial factor for a new and violent speculative wave in the financial markets and the pretext to impose austerity policies and drastic cuts in public spending. After holding central banks and governments hostage using the threat of a collapse of the whole credit system and therefore obtaining extraordinary and unconditional concessions, capital - strengthened by the certainty of impunity and the effectiveness of the threats it can produce – holds now the whole society hostage in order to dictate without conditions a further

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2. As regards this point, please refer to Vercellone (2010).
3. The new health care law passed in the United States does not change the assessment of the strength of this general trend. Although this law extends health coverage to 32 million people, it just slightly copes with the fact that the US health system is far behind compared to the European health systems. Besides, it simply represents a compromise with the private health insurance system which remains a key pillar of the US health care system. Under the pressure of a violent media campaign funded by private health insurance companies (that Obama had candidly saved from bankruptcy without asking for any political or economic compensation in return), the reform has been actually deprived of what was originally supposed to be the most radical and innovative element: the fact that it would have established a public health insurance available to all and competing with the private health insurance companies.
acceleration in the process of dispossession of the common⁴ and parasitic widening of the market sphere. It should be noted that such evolution of economic policies is not just socially unequal but is likely to revive certain causes of the crisis related to the inadequacy of demand. It is also deeply short-sighted in terms of long-run economic efficiency as it leads to dismantle the social and institutional conditions ensuring the development of a knowledge-based economy. Thus, a new phase of the crisis emerges where “conflict between capital and labour has never been so clear⁵”, as Frédéric Lordon highlighted. This new stage of the crisis which is marked by rising unemployment and austerity policies will give rise to increasingly sharp social conflicts and deep political instability, as the case of Greece and the resulting divisions aroused in European countries have already proved. What is at stake here is providing a simple but equally radical alternative. The option is between the parasitic logic of capital which is unable to reform itself and seems to be blinded by the mere willingness to preserve rent in the short term, like l’aristocratie d’ancien régime did, and the collective strength of the fourth estate – precarious and cognitive workers – able to elaborate a development model exiting from capitalism in crisis.

In this context, the purpose of this article is to show that, contrary to neoliberal belief, social welfare services and spending cannot be regarded as a cost whose funding should depend on wealth created by the private sector (that is wrongly considered the only wealth-creating sector). Social welfare services and spending should be instead recognised as the driving force behind a development dynamics based on knowledge-intensive production and behind an economy whose main productive force is the intellectual quality of the labour force (or as it is usually called, using an ambiguous expression, human capital).

The article is divided into three parts.

In the first part, we shall briefly present a not ideological way to represent the relationship between public and private debt.

In the second part, we shall present a series of stylised facts which highlight in macroeconomic and social terms the key role played by welfare state institutions in the genesis, development and reproduction of a KBE.

In the third part, these general considerations will be corroborated and explained through an international comparison between the Nordic welfare model and the neoliberal or Anglo-Saxon welfare model. This comparison reveals a strong positive correlation between the level of development of welfare state institutions and that of

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4. Our approach to the notion of common is based on a critique of the naturalistic approach typical of the economic theory of common goods, inspired by the work of Elinor Omstrom (1990). We define the common as the potential of expanding social cooperation which attends the paradigmatic transformation of productive forces and the prominence of new forms of labour in contemporary capitalism such as the increasingly socialized production of knowledge. Consequently the common is not relegated to specific common goods such as water, for example. Conversely the naturalistic approach leads to a subordinate position that is not able to overcome the public-private dichotomy. In Toni Negri’s recent writings, the common refers to a form of socialization that breaks down the former divisions between work and life, between production and reproduction, and between material and immaterial. See Curcio and Özselçuk (2010).

5. See Lordon (2010).
a knowledge-based economy while teaching us another crucial lesson for welfare policy: a low level of social and gender inequalities is an eminently favourable factor for the adoption of more advanced forms of work organisation and for the competitive ability of the economic system.

In conclusion, we shall highlight how the alternative between two polar development and regulatory models of a knowledge-based economy is determined by the key issues of collective services and social wage.

2. The European public debt

Talking about public debt today represents a very thorny issue for the following reasons: 1) the forma mentis, or mindset, of most economists, politicians and even citizens – especially in Europe – is a victim of an entirely faulty view which reduces public debt to the debt of a bad head of household who splashes money around, while it rather should be regarded as a funding source necessary to sustain socially profitable investments; 2) in the light of the so-called European sovereign debt crisis, one should critically analyse the experience of the European Monetary Union (therefore analysing the policies of the European Central Bank) whose performance depends on extremely delicate political decisions; 3) it is not possible to restrict the issue of public debt to a (although correct) blame on the orthodox economic theories that have encouraged the rise of liberalism and to a parallel enthusiastic rediscovery of Keynesianism; in fact, it is necessary to reckon with the failures of public intervention which is an issue that has been wrongly left in the hands of thinkers who are inspired by an individualist philosophy that is against any form of Welfare State worthy of this name. These intellectuals have first legitimised the idea – expressed in the strongest possible terms by Margaret Thatcher – that there is no such thing as society, and then have legitimised the practice consisting in setting up an economic policy to “reassure the markets” to the detriment of any form of democratically legitimised sovereignty.

The public debt is the sum of all budget deficits covered by selling government securities, i.e. by borrowing loans in exchange to promise to pay interests to the purchasers of the bonds. The public debt is sustainable when the ratio between debt and social income (approximated by GDP) of the State decreases or at least remains stable. This also means that the payment of interests on public bonds is sustainable if the loans are productive, i.e. if they are used to generate and grow the social income. It follows that the increase in public debt may not be due to the increase in public spending but it rather depends on the spread between the interest rate and the nominal GDP growth rate: if the latter is lower than the interest rate, the debt will rise.

6. Here, we allude to socialised and not deferred salary characterising the pension system in both Italy and France. In this case, as for the unemployment benefits, workers get paid during the period they do not work according to the contributions they paid into a common fund.

7. On this point, see Pasinetti (1998) and Sylos Labini (2003). The core argument is described in the Box 1 below, where we propose also our reading of the theoretical relationship between public and private debt, according to a post-Keynesian approach.
The austerity policies demanded by the European Union are based on the belief that public spending needs to be cut in order to reduce public debt. This is a mistake, as clearly pointed out by the signatories of the *Manifeste d'économistes atterrés* (*Manifesto of the appalled economists*) published in France by Askenazy, Coutrot, Orléan and Sterdyniak (2010): in the short run, the existence of stable public expenditures restrain the size of recessions; in the long run, public investment and expenditures (education, health, research, infrastructures...) stimulate growth. It is wrong to say that any public deficit further increases public debt, or that any reduction of the public deficit reduces debt. If reducing the deficit weighs down economic activity, this will make debt even larger. As a matter of fact, reducing social income also generates a decrease in tax revenue which brings about a further spread between the interest rate and the GDP growth rate. Particularly in a context where European countries are the main trading partners for the other European countries, the European Union being, on the whole, a rather closed economy. As a consequence, a simultaneous reduction of public spending in all EU countries cannot but generate a worsened recession, and thus a further increase in public debt.

**INSERT HERE BOX 1**

Today, the explosion of public debt in Europe is mainly due to the bailout plans of the banking and financial sectors following the crisis occurred in 2007: the average public deficit in the Euro area was only 0.6% of GDP in 2007 (public debt was 66% of GDP) but it becomes 7% of GDP in 2010 (public debt is 85% of GDP).

**INSERT HERE TABLE 1.1**

As Table 1.1 shows, from 2007, the public debt-GDP ratio in Europe seems correlated with increasing amount of the private debt-GDP ratio. The explosion of the government debt after 2007 was the result of a necessity to save the private sector, in particular the financial sector.

**INSERT HERE TABLE 1.2**

Table 1.2 shows the relevance of the debt of financial institutions as percentage of GDP, especially in Ireland, Netherlands, Denmark and UK.

The rise in public debt occurs while public spending, as a proportion of GDP, is stable or declining in EU since the early 1990’s, also due to the tax competition between European states (see Figure 1).

**INSERT HERE FIGURE 1**

The dangerous relationship between the Euro area and financial markets is partly in the DNA of the European Union. The Maastricht Treaty prohibits central banks of the European Union to fund states which must find lenders on financial markets. The European Central Bank is also not entitled to subscribe directly to the public bonds issued by European states as it has been conceived as a body independent from the
governments of the member states and thus it does not act as an issuing bank. These features of the ECB, based on as widespread as arguable economic theories, have contributed to the crisis despite the extraordinary measures put in place by the central banker. Both Jean Claude Trichet (President of the ECB in office from 1 November 2003 to 31 October 2011) and Mario Draghi (incumbent President of the ECB) have acted without the main European political leaders safeguarded the stability of the monetary area. Over the past two years irresponsible statements have been made and extemporaneous measures have been taken, especially by the German Chancellor Angela Merkel: from the refusal to help out Greece to the idea of setting up two European currency areas, from requesting private investors to take part in bailing out the European states that are in financial straits to the creation of the European Financial Stability Facility (EFSF) which lacks the necessary liquidity to actually safeguard financial stability and which has been created in a not clear way.

Faced with such foolishness, financial speculation has moved consistently: the political chaos characterising the European Union has spread the fear of failure to pay interests and has encouraged sales transactions of bonds of European countries in trouble. As a result, interest rates on public debt soared, thus increasing the so-called spread in respect to German bonds. In this way, the unsustainability of the Greek, Irish, Spanish, Portuguese and Italian (the so-called PIIGS) public debt is fuelled. The rating agencies have in a sense adapt themselves to speculation.

Facing the increase in interest rates which makes unsustainable the public debt of the PIIGS (due to financial speculation fostered by the ECB that has not been

8. The ECB may be considered as more akin to a currency board than a central bank, as De Cecco promptly noted: “The ECB Statutes do not give it the mandate to act, if necessary, as a lender of last resort. Supervisory powers will be left to the member banks, over their respective national banking systems. If financial fragility arises as a critical condition for the whole EMU financial market, the absence of positive enabling rules will not totally exclude the ECB from the possibility of acting as a Lender of Last Resort. But supervision by the member banks(or by the national supervisory agencies) ought to uncover cases of banking illiquidity in most of the countries of the EMU, at the same time, and report them to the ECB, of such a diffusion and gravity as to prompt its action as lender of last resort, after an interpretation of its status such as to grant it those powers. Suppose, however, that illiquidity is experienced by just one of the member countries’ banks. The national central bank of the country in question, if it has a stock of liquid national debt, can exchange government bonds for the illiquid paper of the banks that are in trouble. What if, however, the illiquid assets of the banks in trouble are of non marketable sort? Were they marketable, even if at a capital loss, there would be no illiquidity problem. Thus, the very nature of the lender of last resort is denied if national central banks are restricted to exchanging low-grade paper against good marketable paper.” See De Cecco (1999, p. 9-10).


10. Financial markets have repeatedly questioned whether the EFSF or its successor, the European Stability Mechanism, are large and effective enough to rescue larger Eurozone economies that are at risk, particularly Spain and Italy, which have seen their borrowing rates rise to near unsustainable levels.
designed to act as lender of last resort but it has rather been generated by the inadequacy of the European ruling class), the claim is to reduce public debt by cutting social expenditure, thus leading the European Union to a dreadful recession.

Recent empirical studies (Panizza and Presbitero 2012) point out that the correlation among high public debt and slow growth does not imply causality: it may be that slow growth causes high debt. The case that public debt has causal effect on economic growth still needs to be made. Nevertheless Austerity has been the main prescription across Europe for dealing with the continent's nearly three-year-old debt crisis11.

The dismantling of Welfare State institutions confirms the political decision to abandon development strategies that aim at making the European Union economy a KBE.

3. The driving force behind Welfare State institutions in the development and reproduction of a knowledge-based economy

In order to analyse the crucial role played by Welfare State institutions in the development and reproduction of a knowledge-based economy it is necessary to start from a stylised fact that is often cited in the economic theory of the knowledge-based economy. This is the historical dynamics through which the so-called intangible capital (R&D, software but above all education, training and health) has exceeded the portion of physical capital in the global capital stock and it now represents the main factor for economic growth and competitiveness. The interpretation of this stylised fact provides four main closely related meanings to better understand not only the role played by social welfare services but also the deep and hidden meaning of those policies proposing their privatization.

The first meaning is that the trend of increasing the share of intangible capital is closely related to the development of collective services and welfare state benefits. These collective services have allowed the development of mass education and an extraordinary increase in the average level of training of the labour force. This vast educational apparatus generated what we may call a diffuse intellectual or collective intelligence that is what in fact explains the most significant part of the increase in “the so-called intangible capital” which now represents the key element of growth and competitiveness of a territory.

The second meaning, therefore, is that the so-called intangible capital essentially corresponds to the intellectual and creative qualities of the labour force. Despite the ambiguity produced by terms such as intellectual capital, intangible capital or human capital, these expressions do not refer to capital but to the social and cooperative power of cognitive labour in the production of value and wealth. Thus, there would be a preponderance of the living knowledges of labour over dead knowledges incorporated in fixed capital and in corporate organisation. Two tendencies show the extent and importance of this transformation in the knowledge-based economy.

11. It confirms the “absolute paradox” of economic policy in contemporary capitalism, described by Alain Parguez (2007).
On the one hand, at micro-economic level, the activities and forms of work organisation based on the Taylorist division of labour lose their importance and are confined to a logic of price-based competition. In the knowledge-based economy – where the creation of value is external to the sphere of production – activities based on a cognitive division or organisation of labour play an increasingly central role. In this framework, productive effectiveness no longer depends on reducing the operating time required to carry out individual tasks. Effectiveness is rather based on the knowledge and versatility of a labour force able to maximise its ability to learn and adapt to a dynamics of continuous change within a logic of competition based on quality and innovation.

On the other hand, at macro-economic level, this means that the conditions for the reproduction and formation of the labour force are now directly productive and that, paraphrasing Smith but overturning his conclusions, the source of the ‘wealth of nations’ now lies outside of the borders of the enterprise. In other words, the main factor determining competitiveness and attractiveness of a territory increasingly relies on the so-called collective factors of production (level of education and training of the labour force, quality of infrastructure and research, etc.). These collective factors of production are mainly produced by public and collective services provided by the Welfare State and are freely exploited by the enterprises, particularly multinational corporations, that hence benefit from rent without having contributed to their formation in any way. We can immediately notice that these facts have an extremely important implication for territorial development and welfare policies. One of the most important lessons learned from the analysis of cognitive capitalism is in fact that it is far more convenient to give priority to investment and social welfare policies addressed to people and aimed to develop the collective factors of production rather than prioritising tax relief policy and free grants to businesses. Why? Because, in the new international division of labour, the presence and development of a highly skilled labour force are key factors for building long-term businesses and creating knowledge-based production – mainly involved in the creation of surplus-value – in a territory. The territories specialised in the Taylorist model of production or linked to cost-based competition are instead subject to high capital mobility. In this case - as it recently occurred in France where social conflict arose in response to the increase in dismissals “demanded by the Financial Markets” or resulting from a process of delocalisation of companies that were still making profit - enterprises often follow predatory strategies that make them leave a territory as soon as they can no longer benefit from tax relief or when another territory applies more attractive policies of fiscal and social dumping.

The third meaning is that, contrary to a commonly held idea, the real leading sectors of the knowledge-based economy are not found in the private laboratories of R&D, but, quite opposite, in the collective production of man for and by man (health, education, public and university research, etc.) traditionally provided by the institutions of the Welfare State according to a non-commodified logic. This element is systematically omitted by mainstream economists and the OECD and this

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omission is much more suspicious when witnessing an extraordinary pressure to privatise these institutions. The explanation for this omission is connected to the increasingly strategic role played by bio-political control, or bio-power\textsuperscript{14}, and by commodified colonisation of the institutions of the Welfare State in the valorisation of capital. In fact, health, education, training and culture not only constitute lifestyles and consumption norms but they also represent an increasing portion of production that so far, at least in Europe, has been mainly provided outside the logic of commodification. Particularly, it should be noted that in advanced capitalism countries facing strong stagnation trends, health and education are the only sectors to experience growing social demand even in a crisis context\textsuperscript{15}. These factors, far more than any other argument related to a supposedly superior efficiency of private management, allow to explain the extraordinary pressure exerted to privatise the collective services of the Welfare State.

Certainly, in these sectors the extension of a commodified logic is theoretically possible. However, at the same time, health, education and research correspond to the key sectors of a knowledge-based economy and to those activities that if carried out according to a commodified logic would produce unsustainable inequalities and a drastic decrease in the social effectiveness of this production. Again, as for knowledge goods, subordinating these sectors to the profit and commodified logic cannot but lead to an artificial rarefaction of resources in relation to solvable demand and to dismantle the creative forces underlying the development of a knowledge-based economy. Here we find one of the main manifestations of the crisis of the law of value. Its forced permanence increasingly relies on a pure rentier logic of exploitation deprived of those progressive elements (the development of productive forces as an instrument to reduce scarcity) that, in some respects, had characterised the production of standardised commodities in industrial capitalism. Particularly, at the macro-economic and social level, there are three factors that make the extension of profit-oriented capitalist rationality to the collective production of man for and by man totally counterproductive. The first factor is connected to the intrinsically cognitive and emotional dimension of these activities where labour no longer deals with inanimate material production but with man itself in a relationship of co-production of services (that must ensure at the same time the principle of equality based on citizenship rights). For instance, in care work or training the criteria for economic and social efficiency cannot be merely quantitative but they must take into account a series of qualitative variables that the management accounting is unable to calculate unless as cost or unproductive downtime. The second factor is linked to the deep distortions that the application of the principle of solvable demand would introduce in the allocation of resources and in the right of

\textsuperscript{14.} Bio-power is a term coined by Michel Foucault. It relates to the practice of modern nation states and their regulation of their subjects through “an explosion of numerous and diverse techniques for achieving the subjugations of bodies and the control of populations”. See Foucault (2007/1977, p. 1-4).

\textsuperscript{15.} See Eurofound (2012), p. 20-21: “Interestingly, most of the workforce in the health sector works in the EU15. With the notable exceptions of Greece, Italy, Portugal and Spain (all well below 10%), the other EU15 countries plus Norway range between 11% and 20%, with three countries over 15%: Sweden (16%), the Netherlands (18%) and Denmark (20%).”
access to these common goods. By definition, the production of commons is based on free and open access. Therefore, it cannot but be financed by general taxation, social contributions or other forms of mutualization of resource. The third factor is related to the lack of the mythical figure of the consumer, for instance in sectors like health or education, who would make his own choices on the basis of a rational calculation of the costs and benefits motivated by the pursuit of maximum efficiency in terms of investment in his own human capital. This is certainly not the main criterion (fortunately) that motivates a student in his pursuit of knowledge. It is neither the criterion used by the ill who, in most cases, feels trapped in a state of anxiety that makes him unable to make a rational choice and rather traps him into a commodified logic where selling hopes and illusions is a way to make profit.

Finally, the fourth meaning is that health, education, research and culture do not just orientate consumption norms and lifestyles. These activities also represent a reservoir of highly skilled jobs where new forms of workers' self-management could be developed and experienced on the basis of a co-production approach involving service users and leading to elaborate radically alternative criteria to measure and identify wealth.

All these reasons explain what is at stake in the antagonism between the neoliberal rentier strategy of dispossession of the common and the project of re-socialising the economy relying on the democratic re-appropriation of the institutions of the Welfare State and on an alternative model of development based on the centrality of production of man for and by man.

4. Lessons from an international comparison: the Nordic and the Anglo-Saxon welfare model

A comparative approach at international level allows to support this general theoretical presentation of the strategic role played by the Welfare State in a KBE with other empirical elements. In fact, many stylised facts show that countries that have more advanced Welfare State and social service systems are also more competitive in a KBE.

Particularly, this international comparison shows the superiority of the Nordic Welfare model and the KBE compared to the Anglo-Saxon neoliberal model by using a dichotomy that would rank other countries' welfare systems according to their proximity to one of the two models. But this is not the subject of our article. Here, we shall limit ourselves to draw some useful elements from this comparison in order to strengthen the “weapons of criticism” against policies attacking the welfare state institutions while trying to deduce some useful insights to define strategies of exodus from “cognitive capitalism in crisis”. The first element that immediately emerges when focusing our attention on some structural parameters concerning both economic efficiency and social justice is that where welfare systems are more advanced, like in the Nordic countries, we can see two features that are in sharp contrast with the neoliberal Anglo-Saxon model:

16. See Monnier and Vercellone (2010).
in the employment structure there is a greater prevalence of social services representing between 30% and 35% of jobs (around 10 percentage points higher than in the US)\(^\text{17}\);

the percentage of commodified services to individuals (like home help or care services) and commercial activities (like McDonald's and Wal-Mart but more generally hotel and catering services), which play a central role in the Anglo-Saxon jobs market and where the most part of precarious, atypical, "unskilled" and underpaid jobs is to be found, is much lower in Nordic countries (even compared to other countries such as France and Italy).

These two features of services structure in the Nordic countries – namely the importance of social services and the relatively weak impact of the most precarious services – are closely related to five other parameters essential to develop a KBE able to combine high levels of economic efficiency and high levels of social and gender justice.

1) The importance of social services (provided by State, Regions, local councils and third sector organisations) seems to prevent the dualism of the labour market and income inequality typical of the Anglo-Saxon model where commodified services to individuals and commercial activities prevail.

2) The quality and extension of collective and social services (education, health, crèches, home care services for elderly and people with disabilities, lifelong training) granted on the basis of universal rights considerably reduces gender inequalities. The rate of female activity is much higher and above all women suffer much less discrimination in terms of remuneration, qualification and career opportunities compared to other welfare models.

3) In countries where non-commodified social services account for a greater proportion in the employment structure, the level of salary and qualification of the labour force is much higher in the economy as a whole. This is what Jean Gadrey, by opposing the Nordic welfare model to the Anglo-Saxon one, calls the model of mass vocational qualification\(^\text{18}\). Two factors help explain this configuration. First, social services and production activities of man for and by man provided by the institutions of the Welfare State and third sector organisations are by nature cognitive labour-intensive activities. Second, universal access to social welfare services and benefits generates indirect effects on the intellectual quality of the labour force and an egalitarian and cooperative culture which develops within social relationships and productive activities.

4) The welfare system of the Nordic countries shows that the level of development of the institutions of the Welfare State is therefore positively interrelated with the presence of a large number of enterprises which adopt

\(^{17}\) See Gadrey (2003a).

more advanced forms of work organisation and break with the Taylorist model in the private sector. In this respect, the results of the third European survey on working conditions in the private sector enterprises employing 10 or more workers carried out in March 2000 by Eurofound (the European Foundation for the Improvement of Living and Working Conditions) are clear although those responsible for the survey and the several articles devoted to analysing its findings curiously avoid mentioning this correlation.

This survey identifies four main forms of work organisation:

− Discretionary learning form which includes the principles of the cognitive organisation of labour. This form is characterised by high levels of autonomy in work, task complexity, self-assessment of quality work and strong individual and collective learning dynamics in the workplace, notably with regard to problem-solving activities related to unforeseen events such as dysfunctions in production and with regard to innovation processes.

− Lean production form which corresponds to the principles of the Japanese model. It is characterised by limited levels of autonomy in work, strict quantitative production norms to regulate work pace and quality supervision;

− Taylorist form;

− Traditional or simple structure form which is usually used by small entrepreneurial companies.

The analysis of the survey findings provides many elements supporting the theses we developed so far. First of all, they confirm the prevalence of cognitive labour: the discretionary learning form is by far the main form of work organisation in EU and it corresponds to 39% of workforce in the private sector (see Table 2). This proportion would doubtless be higher if the quantitative and qualitative impact of public services and non-market sectors were surveyed too. However, the geographical distribution of this form of work organisation is very uneven and we can see a strong correlation between the level of development of welfare institutions and the level of more advanced forms of work organisation.

The table highlights that this form of work organisation is particularly common in Nordic countries. In fact, the proportion of workforce engaged in the discretionary learning form exceeds 50% in Denmark, Sweden and the Netherlands and 47% in Finland. In Italy, the presence of this model is rather small compared to the European average although it remains the major form of work organisation19.

19. In the most recent survey carried out by the European Foundation for the Improvement of Living and Working Conditions (2012) we do not find the percentage of employees by country in each organisational class. However, we may find the following interesting passage: “Autonomous multiskilling task rotation systems are deemed to be associated with higher performance for companies as well as motivation for workers. Such schemes are slightly more common among the middle age group of workers (35–49 years) – 11% – and are practised by 18% of managers, 14% of professionals and 11% of technicians. They are also common in health (19%), education (12%), financial services and construction (11%). … Three countries are at the vanguard of this practice: Denmark, where 35% of employees in organisations with
In addition to the role played by social services and the higher education system, two more elements of the Nordic welfare model help explain, with a strongly positive correlation, these performances²⁰:

- a well developed lifelong vocational training system which allows to integrate the ensemble of socio-professional categories in the cognitive organisation of labour forms;
- an unemployment benefits system based on high benefit and allowance rates and objective rights that allow workers to combine mobility and income security. This is a key factor for fostering the social process of knowledge production that indeed requires a long-term horizon and income security in order to allow workers to engage in a lifelong training process.

Finally, the table highlights another very important element related to the relationship between the level of development of a KBE and the Welfare State. It is the exposure index, calculated by Lundvall and Lorenz (2009), which measures the degree of exposure and thus vulnerability to global competition and outsourcing processes of emerging economy countries. It clearly shows that the exposure index to global competition for Nordic countries is significantly below average. In short, although other socio-economic elements obviously come into play, there is a certain correlation between the level of development of the Welfare State, the spread of more advanced forms of work organisation based on cognitive labour and the competitive ability of a country.

5. Concluding remarks

In conclusion, the analysis here produced allows to better understand the reasons why, in the context of the current crisis, the option between two polar regulatory models of the knowledge-based economy is determined by the key issues of social services and Welfare systems.

The first model corresponds to neoliberal policies of dismantling the welfare state according to a logic where the extension of the market sector would match the dismantling of the conditions essential to the development of the KBE. The persistence in pursuing this logic would condemn EU countries, and particularly Italy, to an inevitable decline and to an increasingly marginal and dependent position in the new international division of labour.

The second model is based on policies aimed at strengthening welfare

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²⁰ or more employees work under this type of scheme, the Netherlands (25%) and Norway (18%). In 14 countries (Albania, Bulgaria, Cyprus, the Czech Republic, Greece, Hungary, Italy, Latvia, Malta, Poland, Portugal, Romania, Slovakia and Turkey), these practices are marginal and cover less than 5% of the workforce, with the other countries lying in between.” Eurofound (2012, p. 73-74).

institutions which are regarded as acting as provider of collective services and income distribution system. This model could open the way to turning the crisis into an opportunity to create an alternative development dynamics based on two main axes. The former refers to prioritising investments in social services and in production activities of man for and by man (health, education, lifelong training, public research, etc.) which ensure at the same time the satisfaction of basic needs, the growth of a knowledge-based economy and an environmentally sustainable development model. The latter refers to the increase in the forms of guaranteed access to income (for instance, for students and temporary workers) based on universal and objective rights with a view to implementing an actual unconditional guaranteed social income. Not only these forms of guaranteed income would have positive effects on sustaining the demand and mitigating the effects of work precarisation, but also would allow to combine mobility, workforce training and income security. More generally, it should be noted and emphasised that the claim of an unconditional guaranteed social income is based on the dual idea of rethinking the concept of productive labour in cognitive capitalism. In fact, this claim relies on both the extension of social time and activities that, either directly or indirectly, take part in creating surplus-value and on the idea that labour can produce wealth, that is use value generated outside of the market sectors, even though it does not produce capital. In this perspective, the proposal of an unconditional guaranteed social income would allow to recompose the entire workforce around a new socialised component of wage that would strengthen its bargaining power by subtracting part of value captured by capital through rent. At the same time, the weakening of monetary restraint in wage relationship would encourage the development of jobs that escape the logic of commodified labour and the transition to a non-productivist model based on non-commodified forms of cooperation in knowledge intensive activities.

Therefore, from this point of view, the unconditional guaranteed social wage should be regarded as both a primary income for individuals and a collective investment of society in knowledge.

Acknowledgments

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6. Références


De Grauwe P., Only a more active ECB can solve the euro crisis, CEPS Policy Briefing, No.250, August, 2011.


Keynes J.M., The General Theory of Employment, Interest and Money, Macmillan,
London. 1936.


Vercellone C., “La these du capitalisme cognitive. Une mise en perspective

Box 1. Public debt, private debt and the debt-GDP stability

A typical measure of the burden of debt is the debt to GDP ratio that we may define as:

\[ d = \frac{D}{Y} \]  \hspace{1cm} (1)

where \( D \) is the inherited stock of debt and \( Y \) is the flow on income that is the gross domestic product. We may compute the rate of growth of \( d \) as:

\[ \frac{\dot{d}}{d} = \frac{\dot{D}}{D} - \frac{\dot{Y}}{Y} \]  \hspace{1cm} (2)

The change in the stock of debt is equal to the budget deficit plus interest payments on government debt:

\[ \dot{D} = (G - T) + iD \]  \hspace{1cm} (3)

where \( G \) is government spending, \( T \) is the tax revenue, \( i \) is the rate of interest. We may substitute (3) into (2):

\[ \frac{\dot{d}}{d} = (i - g) + \frac{(G - T)}{D} \]  \hspace{1cm} (4)

where \( g \) is the rate of growth of income. It easy to understand that even for a positive but constant public deficit - (\( G - T \)) – the debt-to-GDP ratio will be falling in time if the rate of growth exceeds the rate of interest.

To analyze the relationship among public debt and private debt, we may substitute into (4) the following equation that derives from the traditional definition of the GDP in a closed economy:

\[ G - T = Y - C - I \]  \hspace{1cm} (5)

where \( C \) is consumption and \( I \) is private investment. Following Keynes (1936, ch. 7) we consider \( I \) as “the net addition to all kinds of capital equipment, after allowing for those changes in the value of the old capital equipment which are taken into account in reckoning net income. Investment, thus defined, includes, therefore, the increment of capital equipment, whether it consists of fixed capital, working capital or liquid capital”. We may also substitute the saving \( (S) \) to the excess of income over what is spent on consumption, \((Y-C)\).
The (4) becomes:

\[ \frac{d\dot{d}}{d} = (i - g) + \frac{(S - I)}{D} \]  \hspace{1cm} (4.1)

If \( S \) is higher than \( I \), the rate of growth of \( d \) also increases; vice versa, if \( I \) is higher than \( S \), then the rate of growth of \( d \) decreases.

What is the role of the private debt? It reduces \( S \), but we may have, in a first approximation, two different cases:

1. if the private debt is used to finance \( I \), and if \( I > S \), then the rate of growth of \( d \) decreases;

2. if, however, the reduction of \( S \) is used to sustain \( C \), because consumers are dealing with a loss of purchasing power, then the increasing uncertainty may reduce \( I \). Consequently the probability that \( S > I \) increases. In this case, the rate of growth of \( d \) increases.

Note that in the above analysis we do not consider the effect on \( g \).
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Source: Eurostat, Banca d’Italia. The public debt is only the Central Government debt. The private sector includes the debt of financial institutions, non-financial businesses and households.
Table 1.2 *Financial institutions debt-GDP ratios (%)*.  

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<th>Country</th>
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<th>Rate of growth (2007-2009)</th>
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*Source: Eurostat, Banca d’Italia.*
Figure 1. Total General Government Expenditure % of GDP in the Euro Area

Source: Eurostat
Total general government expenditure is defined in ESA-95 §8.99 by reference to a list of categories: intermediate consumption, gross capital formation, compensation of employees, other taxes on production, subsidies, payable property income, current taxes on income, wealth, etc., social benefits, some social transfers, other current transfers, some adjustments, capital transfers and transactions on non-produced assets.
Table 2. National Differences in Forms of Work Organisation.

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<th>Country</th>
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<th>Lean production</th>
<th>Taylorist organisation</th>
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<th>Exposure Index</th>
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