Private Debt, Public Virtues

On the relationship between welfare and household debt.

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Abstract

The aim of this article is to explain the different levels of private indebtedness in a number of selected countries. Previous sociological literature has tried to explain indebtedness by the quantity of welfare spending, searching for a relation between the lack of welfare and the increase of household-debt. In this theoretically oriented paper, I argue that to understand the influence of welfare on debt, the quality of welfare spending matters more than the quantity. The institutional qualities of different welfare regimes may influence people, making them more or less risk adverse towards borrowing money. In northern countries, higher debt ratios are more common because social protection is more extensive, while in continental countries, where welfare benefits are more narrow and and tend to target the already employed and the elderly, people are more risk adverse toward debt. The proposed theory is supported by an illustrative empirical analysis using data from the LIS and Comparative Welfare Entitlements Dataset.

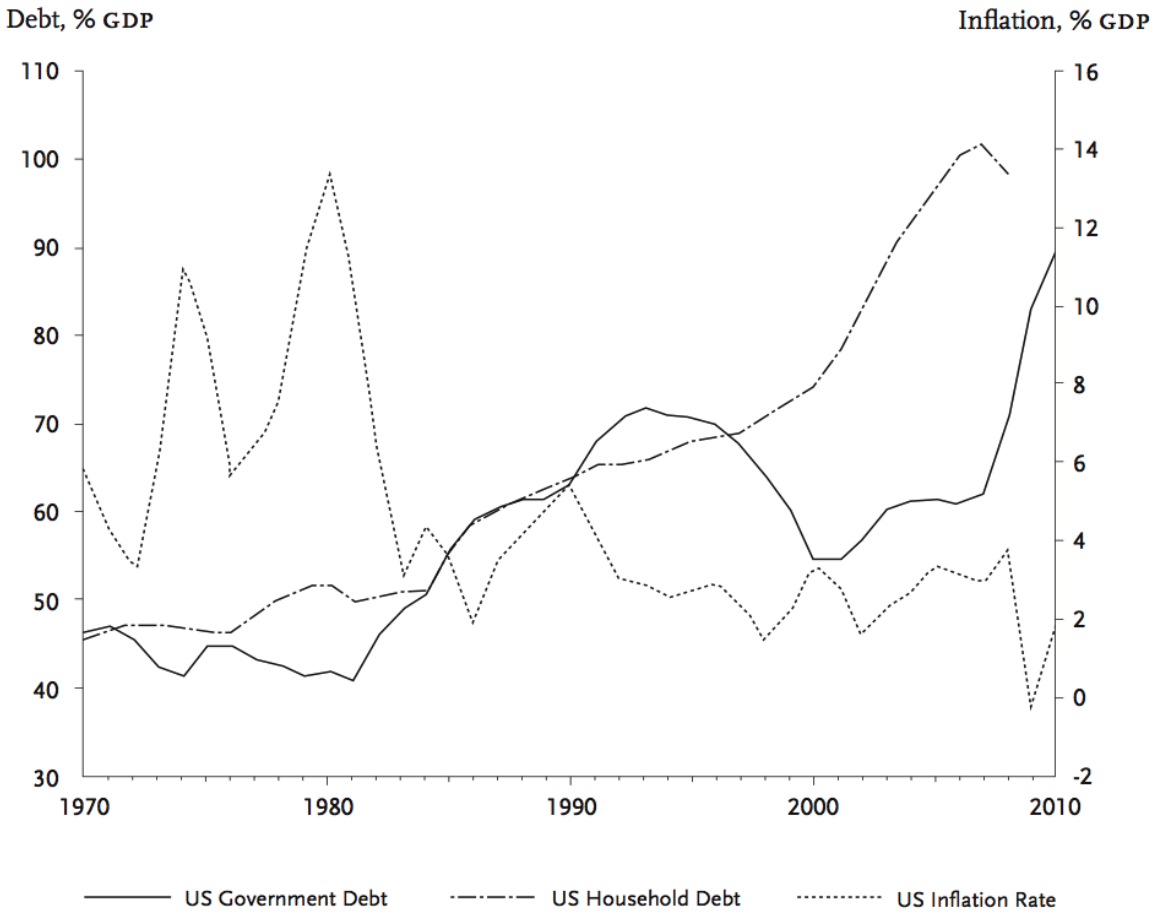
For at least 40 years, the study of political economy has mainly been a comparative effort. Literature has made important contributions to the study of the complex nexus of economics and social institutions, outlining different models of capitalism. After the great crisis of 2008, we saw a renewed interest in discussions on capitalism, focusing more on its common trends than its varieties (Regini, 2014). The works of Krippner (2012), Streeck (2014), Piketty (2014), and Duménil & Lévy (2013) follow the tradition of the great classical political economists, such as Malthus, Marx, and Polanyi, formulating general laws and attempting to understand the crisis as a product of the internal contradiction of capitalism.

In particular, Streeck and Krippner give a historical reading of the last 30 (or less) glorious years of capitalism as an attempt orchestrated by democratic governments to *buy time*, when facing the rising of demands of workers: "…more than two decades of uninterrupted growth resulted in a deeply rooted popular perception of continuous economic progression as a right of democratic citizenship – perception that translated into political expectations" (Streeck, 2011). After the stagflation crisis of the 70s, the impossibility of dealing with those expectations led, according to Streeck and Krippner, to a regime based on low inflation, higher unemployment, and high public deficits.

High public debt helped to secure social cohesion and avoid class conflict (Streeck, 2014); in the meantime, the resilience of many governments on credit, as well as the monetary stability obtained with strict inflation control, facilitated the development of the financial industry (Krippner, 2012). The growth of public debt was also, according to Heilbroner, "an unexpected – and very unwelcome – consequence of the anti-inflation policy" itself (Heilbroner & Bernstein, 1989). As the sudden rise of public debt was perceived as more and more unsustainable, a widespread program of fiscal consolidations tried to contain and reduce this burden, since the late 80s.

In the 90s, further financial deregulation made credit access easier for borrowers, and financial engineering and securitization made it safer for lenders (Fligstein & Goldstein, 2012). As a consequence of the fiscal consolidation of governments, the burden of debt started to shift from the public to private: it was up to the private sector to finance what the state used to finance with deficit spending, as a sort of 'privatized Keynesianism' (Crouch, 2009). According to Streeck (2011), the fourth and last stage of this history is the crisis, provoked by the overaccumulation of private debt (see also Mian & Sufi, 2014). Even if, for a decade, the system worked on raising the leveraging household budgets, this was not sustainable in the long run and provoked a financial crash that involved the lending institutions, mainly banks, as well as the financial industry in general. Private debt was the first stage of a complex financial industry, structured like an inverse pyramid. As a consequence of this crisis, governments had to bail out a large part of the banking sector. The bailout and the recession forced governments to borrow a lot to compensate for the loss of the banking sector (Leijonhufvud). The consequent and subitaneous rise of public debt and a chronic lack of growth started another round of the national fiscal crisis, particularly in Europe and South America, which still endures today.

FIGURE 1: Last 30 (less) glorious years of Capitalism (USA).

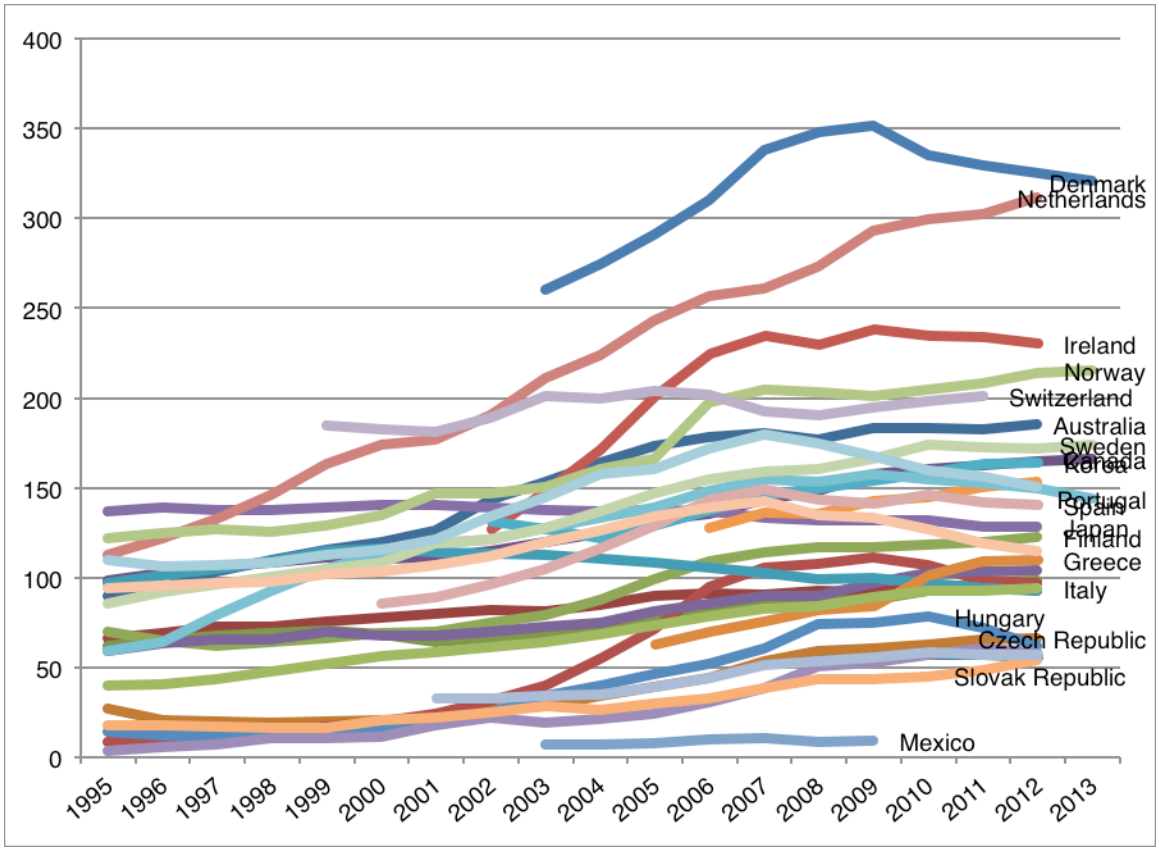


Source: (Streeck, 2011) - Higher inflation during the '70s; the fell in inflation rates was compensated by an increase of government debts. While also government expenditure was controlled, we assisted to a rise of household debt. During the crisis, we saw public debt to rise again to face private losses.

The study of the internal contradictions of capitalism and the development of a new critique of the political economy was long overdue, and it is an important step in understanding the crisis. But the institutional and political differences between countries remain significant (Acemoglu & Robinson, 2014). Krippner and Streeck, among others, observe the crucial role of the rise of private debt as one of the decisive characters of financialization, and that is indeed true; as evident in figure Figure 2, the level of household debt rose everywhere. However, as we will see, the reasons behind that rise greatly vary, and

cannot simply be explained by the incapability or unwillingness of capitalism to fulfill the political expectations that it generated.

FIGURE 2: Household debt calculated as the percentage of the net disposable income (NDI)



Source: OECD (2014), Household debt (indicator). doi: 10.1787/f03b6469-en (Accessed on 12 September 2014)

Not all household debt is equal. In this theoretically oriented paper, I aim to explain the different levels of private indebtedness in a number of selected OECD countries. For example, why do Scandinavians and Americans borrow so much, while Germans and Italians are much more prudent?

My objective is add my input to the history delineated by Streeck and Krippner. The reasons for mutations of the economic system are not just produced by governments that are in need of *buying time*, or that want to appease the voters and try to reduce social conflict, but

they are mainly new problems created for the transition, from an industrial society to a service economy: while the cost of industrial goods is becoming lower, the cost of personal services is increasing more and more. Education, healthcare, childcare, and so on are the heaviest finical burden that societies have to face. Political decisions about where to (re)distribute that rising cost have an influence on the behaviors of consumers, especially towards debt-taking.

Welfare regimes are central in shaping those perspectives. Welfare is the tool used by society to redistribute the rising cost of labor, and that redistribution reshapes the view of risks in a society. I argue that the *risk redistribution* operated by welfare changes people's *risk aversion*. According to Barr (2001), welfare is a 'collective piggy bank' designed to insure against risk. Welfare – through unemployment benefits, education, healthcare, and other services – can significantly influence the earning potentials and financial security of the population, reshaping its risk redistribution.

I will use Baumol's *cost-disease theory* (Baumol, 1967) to explain the persistent rise of inequalities in the labor market, linked to the development of a service economy, which leads to weak labor prospects for an increasing share of the population. Subsequently I will reread Gosta Esping-Andersen's theory, in light of Baumol's *cost-disease*, to understand what strategies *welfare regimes* (Esping-Andersen, 1990) can deploy to face those problems, and what are the different outcomes. In the end, I will use private debt as a proxy to study the influence of welfare on individual prospects.

I argue that the differences in the distribution of debt across nations follow the same logics used by people at the micro level: stable financial and labor prospects encourage people towards debt, while uncertain perspectives lead to more debt-shy behaviors; this is consistent with Modigliani's life-cycle theory.

In the same way, some welfare models help to form more stable financial and labor perspectives for their citizens, *redistributing the risks,* like providing personal services (childcare, healthcare, etc.) or protections from risks of the labor market (unemployment, aging, etc.). I argue that those welfare services can influence how people behave in the face of life uncertainties, making them less risk-adverse towards debt, such as in the Scandinavian case.

Welfare generosity in itself is not the most important criterion: continental welfare is generous, but it focuses its actions on retirees and people who are already working. Thus youths are still risk-adverse towards debt, and that explains the moderate to low indictment in Germany, France, or Italy. A more universalist wealth redistribution could explain why Scandinavians show the highest level of private indebtment.

After a short review of the literature about the rise of indebtedness and the welfare-debt trade-off hypothesis, I will introduce the cost-disease theory of Baumol, which explains why the cost of services has been constantly on the rise since the Second World War. I will particularly focus my attention on the three solutions that Baumol proposes to face the *cost-disease*. The third part of the paper is about how the different welfare regimes, identified by Gosta Esping-Andersen, are an attempt to apply Baumol solutions to a national economy. In the fourth and fifth part, I will present how those three welfare solutions influence the risk aversion of individuals while taking debt, and I will provide some macro evidence of the phenomena relative to the debt-welfare relationship, using data provided by the Comparative Welfare Entitlements Dataset (CWED) (Scruggs, Detlef, & Kati, 2014).

1. Literature Review

For many years, economics paid little attention to the phenomenon of household debt, as it was simply considered to be a neutral redistribution of money from one group (debtors) to another (creditors), with no serious effect on financial stability or inequality (Bernanke, 2000). Some scholars accorded importance to private debt, and they viewed it as an important element when explaining monetary instability, like Fisher (1932) or Minsky (1982). But their contribution to the understanding of debt was somewhat at the margins of economic science. In sociology, the study of household debt, along with other monetary phenomena, has long been ignored (Ritzer, 2011). After the crisis of 2007, a small but growing amount of literature, both in economics and sociology, focused attention on the rise of leverage to explain the reasons behind the crisis. The scholarly debate developed itself along the classic line of supply and demand. Is the rising of indebtedness supply or demand-driven?

The typical economic explanation is demand-driven. According to the classic model of Modigliani (Ando & Modigliani, 1963), income starts low for young adults while they begin their working lives. Young families face many expenses tied to housing and children, but as they expect their economic situation to improve over the years, they feel confident in borrowing to face those costs. Their confidence in the future makes them less risk-adverse, and as we will see in the fourth part, this explanation of indebtedness is coherent with data. Nevertheless, this approach does not fully explain the differences between countries.

Others explanations of debt are linked with behavioral factors like people's tendency to consume, as well as temptation and self-control issues. According to (Finocchiaro, Nilsson, Nyberg, & Soultanaeva, 2011; Tversky & Kahneman, 1974), overconfidence can influence borrowing, because people tend to underestimate the importance of future economic downturns. Other scholars underlined the role of financial literacy as an element that can

influence the tendency of families towards higher leveraging. Another typical explanation is 'Keeping up with the Joneses', referring to the peer pressure influence on the consumption propensity of families and individuals; group inequality and Veblen consumption can explain a large part of debts, especially for poorer households (Bellet, 2014).

A quintessential sociological interpretation of the phenomenon, which underlines the important role of financial innovations, is mostly supply-driven. According to scholars such as Fligstein & Goldstein (Fligstein & Goldstein, 2010; Fligstein & Goldstein, 2011), Fourcade & Healy (Fourcade & Healy, 2013), Poon (Poon, 2007; Poon, 2009), and MacKenzie (MacKenzie, 2011), the reason behind the increased leveraging of families is market liberalization and deregulation of the financial and banking sector, along with technological innovations like securitization and credit scoring. Van Gunten (Van Gunten, Forthcoming) explains debt differences across countries, looking at how the regulatory context is debt-friendly. Additionally, economists like Atif Milan and Amir Sufi use the same argument, driving a comparison with the financial innovations that led to the crisis of 1929: "The form of innovation was not subprime mortgages – it was instead installment loans related to automobile purchases and others consumer durables – but the parallels are striking. Household debt went over 100 percent of GDP only twice in the last century, in 1929 and 2006." (Mian & Sufi, 2008)

Another interesting body of work within the sociological literature is about the relationship between the welfare state and debt, which is also what is done here. The comparative works of Prasad, Trumbull, and Quinn (Prasad, 2012; Trumbull, 2012) study such a correlation. They show that for historical reasons in United States, social progressive movements and trade unions always used credit as an instrument for attaining social justice, while in Europe, progressive politicians were much more interested in developing welfare

institutions. As reported by Prasad, we can observe a negative trade-off between household debt (calculated as a % of net disposable income, minus household assets) and welfare in OECD countries. The lack of formal welfare had encouraged trade unions to use debt as a social policy in the United States, and it was also helpful to stimulate consumption; while on the other side of the Atlantic, the unions were much more skeptical, and governments never encouraged internal consumption, but exports instead.

Furthermore, Schelkle and Gerba (Gerba & Schelkle, 2013) empirically studied the welfare-debt hypothesis with longitudinal methods, and they came to the opposite conclusion: welfare favors the rise of household debt, and they even argue that welfare "may have contributed to the most severe crisis of the post-war era". Also, Goldstein does not see a relationship between the lack of welfare and debt in United States, as he remarks that debt is mostly held by the middle and upper class, and the indebment of the lower income group has not risen over the years. Hay (2011) and Montgomerie (2006) argue that the development of a mortgage economy is particularly tied to the Anglo-Saxon liberal model of growth.

The literature on the welfare-debt hypothesis is still ambiguous and struggles to find a consensus. With this contribution, I hope to build a theory that can explain both why welfare may have a complementary role, as explained by Schelkle, Gerba, and Goldstein, and a supplementary role, as explained by Prasad and Trumbull, depending on the institutional context. Yet before that, we should understand why the institutional context matters in shaping people's future perspectives.

2. Cost Disease: What Is It?

Before a discussion about the rising of debt, we need to discuss the rise of the cost of welfare. If welfare is becoming more and more expensive, this is because the labor in the service sector is becoming so. In this section, I will introduce the theory of *cost disease*, and in the next, I will determine what it means for entire countries.

In 1967, William Baumol published a book, *Performing Arts: The Economic Dilemma* (Baumol & Bowen, 1993), in which he meticulously studied all the economic problems relating to theaters, opera, orchestral music, and dance. In the book, Baumol proposed an interesting and economic explanation for why the aforementioned activities are generally very expensive and, consequently, why they often need a significant amount of public funding and other subsidies in order to run. Baumol noted that for a string quintet to perform Beethoven, we still need the same amount of work and number of personnel today as we needed in 1826 *alla prima*. Obviously, this specificity is intrinsic to the nature of the task, and there is no other way to boost productivity. Nevertheless, the rest of society has changed greatly since 1826, and thanks to industrialization and technological innovation, overall productivity has skyrocketed.

According to Baumol, the level of wages both in the performing arts and the industrial sectors tend to rise. Still, increases in productivity only occur in the industrial sector, while productivity of the performing arts remains unavoidably stagnant. This explains why the average costs of the art sector tend to rise. Baumol gives us an example: the watchmakers of Geneva increased production from 12 clocks per hour in 1670 to 1,200 clocks per hour in 1975; but playing Dido and Aeneas (1688) by Henry Purcell (1659–1695) demands the same amount of work today as it did before. So, given that the wages in both sectors have risen, playing Dido and Aeneas today will be very expensive.

To recap, we have a constant increase in wages, both in the industrial and the artistic sector. However, only in the industrial sector do we have an increase in productivity, while in the artistic sector, productivity remains stagnant and should be balanced by a growth of the share of people working in the service economy. This creates what Baumol called 'unbalanced growth and the cost disease of the performing arts'.

In the following years, Baumol applied the idea of cost disease to explain a number of phenomena, such as the cost rise of many sectors other than the performing arts. In a 1967 paper (Baumol, 1967), he tried to describe why large cities tend to run into deficit. He argued that given the vast amount of services that a city should provide, cost disease will be particularly tough. According to Baumol, cost disease is congenital to the technological structure of an economy. He divided the economy into two main sectors: the *technologically progressive* and the *technologically stagnant*. The former is the industrial sector where, thanks to technological innovations, a constant rise in productivity can be expected. The latter is the service sector, which is afflicted by cost disease. The distinction between the two sectors is grounded in the role of labor. In the technologically progressive (capital-intensive) sector, with the same amount of work (input), we have a larger output of goods due to improvements in the technology of production. In contrast, in the service sector (labor-intensive), the input of labor is equal to the output. As Baumol stated: "The basic source of differentiation resides in the role played by labor in the activity. In some cases, labor is primarily an instrument, an incidental requisite for the attainment of the final product, while in the other fields of endeavor, for all practical purposes*, the labor is itself the end product*." (Baumol 1967, p. Emphasis added.)

The model used by Baumol is quite trivial, and his division of society into stagnant and productive sectors is somewhat arbitrary but nevertheless quite powerful. It is based on three assumptions:

(1) $$Y_{1t} = aL_{1t}$$

(2) $$Y_{2t} = bL_{2t}e^{rt},$$

where Y is the output at time t; L is the labor employed, which grows at a constant rate; and r is in the case of (2), the technologically progressive sector. To simplify this, it means that the output of the productive sector tends to rise, even if the quantity of labor (L) is constant. This is because the progressive sector can raise the output per man-hour due to technological innovation, e^{rt}.

(3) $$Wt = We^{rt}$$

If only the productivity of the progressive sector tends to rise, the wages of both tend to rise at the rate of the progressive sector, which has clear influences on the final cost:

$$C_1 = W_t L_{1t} / Y_{1t} = We^{rt} L_{1t} / aL_{1t} = We^{rt}/a$$

$$C_2 = W_t L_{2t} / Y_{2t} = We^{rt} L_{2t} / bL_{2t}e^{rt} = W/b$$

Here, Baumol explains how the cost (*C*) of goods or services is obtained through the multiplication of wages (*W*) and labor (*L*), divided by output (*Y*). We can see that in the progressive sector (*C2*), the cost tends to remain stable over time, while in the service sector (*C1*), the cost tends to rise.

Baumol's model explains why, given the 'sticky' productivity of the service sector, an increase in output will only be possible with an increase of the work force allocated to the stagnant sector. For this reason, over time, "more and more of the total labor force must be transferred to the non-progressive sector and the amount of labor in the other sectors will tend to approach zero". That is why the service sector is labor-intensive and the progressive sector is capital-intensive: the latter uses technological innovation to save work.

In 1985, Baumol updated the paper to include a third category of labor (Baumol, Blackman, & Wolff, 1985): the asymptotically stagnant, which encompasses all the new types of work in the service sector that use strong technological innovation such as informatics, broadcasting, data processing, and other high-tech industries. In those activities, the progressive component is strong, but at the same time they demand a constant quantity of human input, and in the long run the cost of the human workforce will become more and more important. Baumol took an example from the technological sector, where the cost of hardware falls significantly over time, while the cost of software and all related human services has an inexorable tendency to rise. In 1993, he wrote another paper using the same idea and applied it to the cost of education and healthcare (Baumol & Bowen, 1993). He showed how, after the Second World War, the price of those services rose and continue to rise.

Here lies the problem. If the service sector – which involves healthcare, education, insurance, administration, support of the indigent, etc. – is chronically afflicted by cost disease, how can the welfare of a nation be sustainable if the burden of those service costs continues to rise? As Baumol emphatically put it: "a[n] economic specter haunts the democratic governments of the world's most prosperous economies. The rising cost of healthcare and education cast a shadow over virtually every election, while increasing costs of other services play a part in the growth of the homeless population and the deteriorating sanitation of city streets" (Baumol, 1993). So, are we ineluctably victims of cost disease and the unbalanced growth between sectors?

Baumol's theory is quite an exception in social science; not only did he explain with simplicity and elegance the phenomenon which, as we saw, was first formulated in the 1960s (in relation to the field of the performing arts), but he also predicted – with a high degree of accuracy – the constant rise of service costs in the following decades, up until now (Baumol, 2012). We have vast empirical documentation that could validate the cost disease theory; for example, in terms of the rising cost of healthcare, Martins, de la Maisonneuve and Bjornerud (Oliveira Martins, De la Maisonneuve, & Bjørnerud, 2006) study the case of long-term care expenditure in OECD countries, reporting that both demographic and technological factors tend to influence the rise of costs. If we look at the public expenditure for education and healthcare in the United States, France, Sweden, and Italy, the trends are clear: everywhere we see a constant increase of public expenditure devoted to those services.

2.1. How do we deal with the cost disease at the micro level? Baumol's suggestions.

Organizations like theaters, schools, hospitals, and waste management, as well as restaurants, customer services, etc. face the same problem. Those organizations, where "the labor is itself the end-product", face a constant and increasing cost and size of labor, and there is little or no way to improve the productivity with technology. How can those organizations remain functional and profitable? They have to decide where to shift the burden of the increasing cost. According to Baumol (1967), there are three main strategies.

The first is to push the cost of cost disease on prices. For example, that would mean that in the face of an increase to education costs, students would have to pay more – either by themselves or funded by family. In other words, this strategy shifts the burden of the cost disease onto the final consumer.

The second strategy would be to go off the market. In this case, when facing a rise of the cost of professional firefighters, a community decides to provide those services on a voluntary basis. In other words, this strategy is to "depend on voluntary public support". A number of NGOs, NPOs, and charities "have already long survived on this basis" (Baumol 1967). Another typical example is to internalize the cost of childcare, eldercare, and other services within the family, where women are usually occupied full-time with those activities, but without remuneration. The off-the-market strategy also has evident shortcomings: inexperience/unprofessionalism can lower the quality of the service provided. Providing services on a voluntary basis can be good if one talks about amateur dramatics, but it becomes problematic for important services like welfare of the poor, healthcare, and so on. This solution has gained particular attention under the label of *Compassionate Conservatism* (Olasky, 1994; Olasky, 2000), as a social policy doctrine which would like to see a greater share

of welfare services provided by volunteer associations, like charities or faith-based organizations.

The third and final strategy is to socialize the cost disease. In this case, society (as a whole) takes on the burdens of the service, redistributes its cost on the general taxation, and uses professional workforces/services. That happens in the case where most of the services like education, healthcare, and childcare are public. This usually raises a question about legitimacy. For example, why should the public subsidize a theater if only the higher-income groups go to the theater? Another problem that could rise is the overexploitation of common resources or the problems linked with social justice themes, because those systems are particularly vulnerable to a form of *freeriderism*, like tax evasion.

Countries and governments face the same problems that are faced by small organizations at the micro level. As Baumol mentions, public budgets are the first victim of the cost disease and they are "perhaps unavoidably subject to a variety of growing financial pressures" (1967). Welfare services that governments and cities provide are the kinds of personal services that are particularly hurt by cost disease; services to the poor, education, and healthcare have a tendency to become more and more expensive.

3. How do we deal with the cost disease at the macro level? Gosta!

Governments, in order to fulfill their citizens' welfare needs, have to deal with cost disease, and they have to decide how to do this. There is no perfect solution, and no way to permanently fix it. However, as we have seen with Baumol, we have three main options: 1) we let the market set the prices for all the welfare services we need; 2) we finance those services through the government; or 3) we push those services out of the market domain. In other

words, we let consumers face cost disease alone, and let competition try to limit the cost of the unbalanced growth, or we use general taxation in order to provide those welfare services and try to control their price. Those solutions can be controversial because they have a clear political connotation. If the level of public spending and taxation rises, the centrality of the government will be reinforced. Otherwise, if the other policy is adopted, it will result in a more market-oriented solution.

In the vast sociological literature on welfare, Gosta Esping-Andersen has provided an original theoretical contribution to the definition of welfare (Esping-Andersen, 1990; Esping-Andersen, 1999). He conducted theory-driven empirical research and defined welfare as the capacity for *decommodification*. The idea of decommodification (and probably the word itself too) was invented by a Hungarian anthropologist, Karl Polanyi; in his *magnum opus*, *The Great Transformation* (Polanyi, 1944), Polanyi explained how liberal ideals and ideology came into power because of a complex combination of elements, both economic and political. Traditionally, the market, like any other social activity, has been regulated by specific social norms in order to maintain cohesion in society. Often, cohesion was retained by brutal power and obscurantism, but with the rise of the bourgeoisie, traditional power and ideology have been challenged. Polanyi argues that while the market and the bourgeoisie have liberated us from the oppression of aristocracy and clergy, it also exposed us to a new series of social risks produced by the market. Polanyi thinks that there exists a double movement: the spreading of the market, throughout all spheres of life, is counterbalanced by a reaction of social forces trying to protect people from the market forces, due to welfare measures.

In his book, Gosta Esping-Andersen operationalized the idea of decommodification in several dimensions, and found that the degree of decommodification depends on *how* protection is organized and *who* is protected. The welfare state is then a redistribution

mechanism, but this does not automatically entail more equality (Esping-Andersen & Myles, 2008).

With Baumol, we have understood that the cost of welfare tends to rise given the nature of the technological structure of society, and that the cost disease is created especially on the labor market. As we have seen, there are – according to Baumol – three different strategies to deal with cost disease. Those three strategies hold true also at the macro level. Rereading the classification of Esping-Andersen through the lens of Baumol's theory can help us to shed light on how, in the Western world, societies deal with cost disease at large, and which strategies they enact to protect society from the market. We have three models:

(1) In liberal welfare systems, cost disease is not socialized; the cost of services is decided by the markets, and competition is the only obstacle to cost disease. That explains the significant rise of tuition fees in universities and the growing cost of healthcare. Liberal welfare is residual, meaning it covers only extreme situations of poverty, and all those policies are strictly means-tested. One of the outcomes of this system is the tendency to blame those who cannot survive in the market, and welfare dependence carries a stigma.

(2) In continental welfare, cost disease is generally redistributed within the same classes ('corporatist' welfare) or absorbed by families (particularly in the Mediterranean welfare subgroup). This welfare system is based on the socially conservative ideas of Otto von Bismarck from Germany. His idea was to redistribute wealth not between the classes, as with universalist welfare, but within the classes, and keep the traditional gender role of women in families. Hence the name 'conservative welfare'.

(3) In the Scandinavian welfare system, the price of cost disease is redistributed among the population by general taxation. Scandinavia has the youngest welfare system, with its

characteristics having been defined only at the end of the Second World War. According to Esping-Andersen, "the social democratic welfare state is particularly committed to comprehensive risk coverage, generous benefit levels, and egalitarianism" (Esping-Andersen, 1999). As said before, the task of universalist welfare is to pool risk in order to provide generous income replacement and a series of services to requalify people and maintain full employment. The main actor of the Scandinavian model is the state.

According to Esping-Andersen, "there are only three institutions relevant to and capable of welfare production": State, Family, and Market (Esping-Andersen, 2000). He also mentions, "Some add the third sector, but no society can function with this as the dominant welfare producer." Evidently, those three models are simply the ideal, because reality is nuanced.

Baumol predicted a constant rising cost of the service sector; welfare is composed almost entirely of services to the person (childcare, education, healthcare, elderly care, etc.), and care services – especially – are consumed at the same time of their production. In Scandinavian countries, the cost of those services is redistributed through general taxation, which helps to provide high-quality performances to all of the population. At the same time, that model created a lot of employment opportunities especially for woman in care jobs, thus achieving a high female employment ratio. Universal welfare scores higher on the decommodification scale, as it protects and redistributes more.

Conservative welfare scores less, but not necessarily because it is less generous than Scandinavian welfare, but because it is more selective in its targets: families and older people are more protected, and often not through free services, but through monetary incentives (generous retirements, stay-at-home premium, etc.). Using Baumol's ideas, we could say that in continental welfare, the cost of welfare is externalized to families, and the burden of welfare is

especially on woman, who have to provide services like childcare or eldercare that the state does not provide.

As we have seen, liberal welfare decommodifies very little if anything at all, except for those left behind by the market. The market, through insurances, provides safety nets for part of the active population. In USA, universal programs like Medicare and Medicaid exist for the elderly and those at the bottom of the income distribution. This system also pushes students to have the highest student debt, and healthcare debt is the cause of most family bankruptcies (Tiagi).

4. How is household debt distributed in Europe?

One of the original points of Esping-Andersen's work hinges on the fact that the welfare state is seen as a redistribution mechanism, and therefore as a stratification tool. We know that the labor market generates classes. According to Goldthorpe (2004), class is a particularly useful indicator of three key elements: economic security, economic stability, and economic prospects (Goldthorpe & McKnight, 2006). Thanks to class, we can estimate the wealth of a person, the stability of position, and the person's prospects for the future. The work of Esping-Andersen adds an additional layer to this and explains how and how much welfare can counterbalance the effect of the labor market or reiterate its effect.

The liberal welfare system does not restratify and leaves the class composition unchanged. The conservative welfare model provides more security within classes, and particularly to people that already work. The stratification is more age and gender-based. In the Scandinavian model, there is an active effort to provide free services and income substitution to the larger part of the unemployed population, without age or gender

discrimination. As Goldthorpe suggests, this has a profound impact on a *person's prospects for the future.* If we look at the distribution of debt in Europe, we will see how those prospects perform.

For the purpose of studying the *qualitative* distribution of debt in Europe, I used a harmonized dataset: the Luxemburg Income Study Database (LIS)[1]. While the LIS is about the financial *flows* of families, and there are no variables about asset or liabilities, the survey allows us to indirectly identify indebted households and individuals by asking them if they are repaying some debt (mortgages or others forms of debt). I recoded my dependent variable, HMXINT (interest paid, household, and monetary), in a *dummy* (a variable that can only take two values). The interest paid is a proxy for the presence of debt. Doing so, we are to identify who is holding debt, and we can describe the characteristics of an indebted population in 10 selected countries, both at the household and individual level. The research would not (and cannot) consider the quantity of debt, but just its qualitative distribution. The data mainly came from the 2004 survey, and – when available – I also used the following waves (of 2007 and 2010).

1. Luxembourg Income Study Database (LIS), www.lisdatacenter.org. Luxembourg: LIS.

TABLE 1: Indebted Households

	Italy	Austria	Netherlands	Finland	Norway	United Kingdom	Switzerland	Slovakia	Ireland	Estonia
Tot. Debt	14.80%	25.80%	54.10%	39.00%	88.00%	46.10%	41.20%	3.60%	33.80%	11.60%
Age										
<35	19.90%	32.90%	58.40%	47.70%	94.30%	54.60%	36.40%	5.50%	39.50%	18.20%
35-44	20.00%	34.60%	64.80%	57.30%	95.40%	66.10%	39.60%	3.80%	50.70%	13.50%
45-54	17.10%	23.90%	61.70%	43.30%	95.00%	57.70%	53.00%	2.20%	37.20%	7.70%
55-64	9.80%	15.40%	51.10%	23.00%	87.70%	29.00%	50.20%	1.30%	14.50%	3.40%
>65	2.70%	7.40%	21.60%	8.80%	53.90%	5.90%	37.90%	0.40%	2.90%	1.00%
Education										
<= Primary	12.80%	16.70%	35.30%	37.60%	71.60%	30.20%	36.80%	1.40%	20.80%	3.20%
Secondary	18.30%	24.60%	57.10%	35.70%	87.80%	54.90%	41.50%	3.00%	34.90%	9.00%
>= Tertiary	21.00%	25.30%	66.00%	48.00%	92.50%	55.90%	41.20%	5.20%	42.50%	15.50%
Immigration										
Not Immigrant	15.00%	24.10%	52.60%	N/A	88.40%	N/A	48.10%	3.00%	34.80%	13.70%
Immigrant	12.90%	16.50%	35.00%	N/A	84.20%	N/A	16.70%	3.40%	27.60%	5.40%
Health										
Disabled	4.90%	13.10%	N/A	15.50%	85.10%	22.90%	N/A	1.60%	14.80%	4.30%
Income Quintiles (1)										
1	4.80%	12.00%	14.10%	8.30%	65.30%	15.30%	24.00%	2.00%	9.80%	2.30%
2	11.30%	22.70%	37.00%	24.30%	86.30%	31.10%	30.40%	2.60%	22.60%	4.60%
3	14.30%	31.40%	65.20%	44.50%	94.00%	51.40%	43.40%	4.70%	43.50%	8.00%
4	17.90%	31.60%	76.10%	59.10%	97.60%	64.90%	46.40%	3.90%	48.70%	11.50%
5	26.40%	32.30%	79.70%	59.80%	97.40%	67.50%	61.20%	5.20%	45.70%	32.40%
Relative Poverty										
Poor	6.70%	13.80%	20.20%	7.40%	62.80%	19.90%	26.30%	2.40%	13.20%	3.30%
Household Size										
One	9.00%	19.10%	26.30%	14.60%	72.60%	19.70%	29.00%	2.40%	13.30%	3.40%
Two	11.60%	25.30%	47.50%	34.40%	90.30%	31.50%	37.90%	3.00%	23.40%	5.30%
Three	13.40%	29.30%	63.10%	51.90%	93.50%	48.60%	41.30%	3.10%	38.00%	8.70%
Four	17.60%	29.00%	68.90%	53.30%	95.70%	60.30%	44.10%	5.30%	43.30%	10.90%
5 or more.	23.40%	27.30%	77.30%	53.20%	95.60%	64.30%	52.50%	4.70%	47.50%	28.00%
Household type										
One Person	4.80%	11.80%	21.90%	15.00%	69.80%	22.50%	18.70%	0.50%	11.80%	2.90%
Single Parent	9.40%	24.10%	22.90%	32.00%	92.10%	29.30%	25.00%	1.30%	18.80%	6.50%
Couple, No Children	8.90%	14.30%	50.30%	27.20%	81.50%	35.90%	38.10%	2.20%	22.40%	5.30%
Couple, With Children	19.90%	37.70%	69.80%	58.40%	97.80%	66.10%	50.90%	4.90%	46.60%	19.80%
Other	10.70%	19.90%	30.90%	33.20%	93.20%	32.50%	44.70%	2.80%	17.10%	9.30%
Working Status										
Employed	19.40%	28.80%	62.20%	48.90%	95.50%	59.70%	40.20%	4.10%	39.90%	13.60%
Mainly employed	19.40%	28.70%	63.20%	48.90%	95.50%	60.90%	39.00%	4.20%	40.50%	13.50%
Unemployed	10.80%	21.80%	37.60%	18.90%	N/A	30.50%	27.60%	2.90%	23.20%	5.30%
Retired	4.80%	9.60%	35.50%	11.90%	52.00%	6.90%	N/A	0.70%	3.80%	1.60%
Job Intensity										
Permanent employment	N/A	29.80%	62.80%	50.60%	N/A	N/A	N/A	3.80%	43.40%	13.70%
Short-term employment	N/A	22.30%	39.40%	31.30%	N/A	N/A	N/A	4.20%	22.00%	17.80%
Job Characteristics										
Managers / professionals	N/A	31.70%	68.20%	55.10%	N/A	67.40%	N/A	5.90%	43.30%	23.50%
Other skilled workers	N/A	29.40%	61.40%	45.20%	N/A	59.90%	N/A	3.80%	40.50%	10.40%
Labourers/elementary	N/A	21.90%	39.70%	37.00%	N/A	43.70%	N/A	1.30%	28.50%	6.40%

Source: LIS dataset 2004.

All statistics are calculated using weights (pwgtpop); (1) Equivalent disposable income; income have been top and bottom recoded for each countries, the maximum is ten times the median income, and the minimum is 0. The income variable used (dhi) is the sum of labour and capital income, private transfers, work-related insurances transfers, universal benefits, and social assistance benefit. minus income taxes and social insurance contribution paid.(2) Here the poverty line is defined at the 50% of the median equivalent income.

In Table 1, I present the distribution of debt in Austria, Estonia, Finland, Ireland, Italy, the Netherlands, Slovakia, Switzerland, and the United Kingdom in 2004. Across those countries, we see that the total number of indebted families varies widely; the lowest rate of indebted households is found in post-socialist states: in the Slovak Republic, only 3.6% of families owe debt – which is the lower rate in the Eurozone[2] – while in Estonia the percentage is higher, with 11.6% of population involved. Yet by far, the highest percentages are shown by northern European countries like the Netherlands, where more than half of the population holds debt (54.1%) or Norway, where 88% of households are in debt. On October 1, 2013, Bloomberg report that the newly-elected Norwegian government had "plans to offer tax breaks to encourage consumers to set aside savings in an effort to help the nation deal with its record household debt burden"[3]. As we can see, the quantitative difference between countries are large, especially if we compare *post-socialist* countries, like Slovakia or Estonia, to central European and Nordic countries.

If we look at the *qualitative* distribution of debt within countries, we can observe a surprisingly similar pattern between all the considered countries. For example, people of the 35-44 age range are those who tend to hold more debt. While those under 35 are also in a lot of debt, it is still slightly less than the 33-44 population. Those who are older than 44 tend to have less and less debt. In Ireland, Estonia, and Slovakia, the over-65 group is essentially debt-free; Austria, Italy, Finland, and the United Kingdom show less than 10% of the over-65 population holding debt. The statistics are higher for northern countries, with the Netherlands at 22% and Norway at 54%.

2. "Household debt lowest in Eurozone." *The Slovak Spectator.* Retrieved from http://spectator.sme.sk/articles/view/46339/16/household_debt_lowest_in_eurozone.html

3. "Norway to Fight Record Household Debt Load as Government Formed." *Bloomberg.* Retrieved from http://www.bloomberg.com/news/2013-10-01/norway-to-fight-record-household-debt-load-as-government-formed.html

Another similar pattern found in every country is the distribution of debt according to the education level of the respondent. Those who completed secondary or tertiary education show significant levels of debt, as opposed to those who only have primary education. This can be explained in two ways: either those with better education also have better financial knowledge, and are thus more confident to borrow money; or simply, those who have better education are also richer, and so can access credit more easily.

Decomposing debt possession by equalized income quintiles shows that in fact, debt across Europe is a middle or upper class phenomenon. With the exception of the Netherlands and Norway, this again shows an important presence of debt even in the most poor-income quintiles. I computed a poverty line if the income is below 50% of the median income, and against that we can see a polarized distribution between our countries: in Switzerland, 26% of the population in relative poverty has debt, and in Norway, this number grows up to 62%. According to a recent report of the IMF (Cheptea, Mordonu, & Shirono, 2013), Norway is experiencing a boom of the housing market, sustained by petrol prices. This "pose[s] significant risk to the Norwegian economy, given the high level of household debt" (p. 11). If the prices of the household fall down too quickly, Norway will risk a 'debt-deflation' moment, where people hold more debt than assets, and it would be difficult to deleverage, according to their conclusions: "Norwegian households have limited finical financial buffers in the event of a house price correction or other negative shocks to the economy" (p. 18).

Another pattern that holds true for every country is the distribution of debt according to the size of the household. Having children causes a big boost to debt: the share of indebted families grow with the size of the family.

If we compare the family structure with debt, we observe some differences across countries. In Italy, Austria, and Estonia, single parents experience a higher rate of indebtedness than couples without children. This fact underlines how having children can impose a great financial burden on families. The indicator that I use as income already includes private transfers, work-related insurances transfers, universal benefits, and social assistance benefits. So to some extent, in the case of those countries, the social protection of families does not cover the whole financial cost of having children.

TABLE 2: Indebted Households '07 and '10

	Ireland 07	Italy 08	Slovakia 07	UK 07	Ireland 10	Italy 10	Slovakia 10	UK 10
Tot. Debt	34.70%	15.60%	6.00%	43.30%	34.30%	29.00%	7.90%	39.00%
Age								
<35	41.20%	20.60%	9.00%	51.10%	39.20%	37.50%	11.10%	44.60%
35-44	52.00%	22.70%	9.40%	64.50%	54.30%	38.10%	13.60%	58.80%
45-54	37.30%	18.70%	2.80%	54.00%	39.40%	34.90%	5.40%	52.80%
55-64	15.20%	8.60%	1.60%	26.30%	17.10%	22.20%	2.30%	25.50%
>65	3.40%	3.40%	1.20%	5.00%	2.80%	8.20%	1.20%	4.80%
Education								
<= Primary	20.10%	14.20%	3.80%	23.30%	18.60%	26.80%	5.50%	19.50%
Secondary	36.70%	17.30%	4.80%	46.20%	31.80%	32.20%	5.70%	41.60%
>= Tertiary	40.30%	19.70%	8.00%	53.40%	44.30%	34.70%	11.10%	49.60%
Immigration								
Not Immigrant	36.10%	15.60%	5.10%	N/A	36.20%	28.80%	6.60%	N/A
Immigrant	26.20%	16.70%	3.70%	N/A	24.60%	36.90%	8.40%	N/A
Health								
Disabled	14.20%	7.40%	2.00%	17.50%	17.70%	16.10%	3.40%	16.30%
Income Quintiles (1)								
1	13.20%	9.70%	4.70%	14.00%	14.80%	22.00%	5.40%	13.50%
2	22.60%	14.30%	4.80%	29.60%	20.50%	26.00%	8.40%	26.50%
3	43.10%	15.40%	7.80%	46.70%	33.90%	31.50%	7.50%	41.40%
4	45.90%	18.20%	6.20%	56.90%	45.10%	31.60%	8.70%	52.90%
5	43.70%	20.90%	6.90%	63.70%	53.70%	35.50%	9.80%	57.80%
Relative Poverty								
Poor	11.80%	8.20%	6.10%	13.30%	12.40%	22.50%	3.80%	12.20%
Household Size								
One	10.60%	6.00%	1.60%	20.00%	13.80%	12.10%	2.60%	18.40%
Two	19.10%	9.60%	4.40%	32.70%	20.10%	16.40%	4.70%	26.90%
Three	32.70%	16.10%	7.70%	46.80%	33.60%	30.90%	7.70%	44.90%
Four	45.30%	21.00%	7.10%	62.60%	46.20%	41.10%	10.30%	57.90%
5 or more.	46.50%	22.70%	6.00%	54.60%	43.20%	37.60%	8.90%	48.40%
Household type								
One Person	10.60%	6.00%	1.60%	20.00%	13.80%	12.10%	2.60%	18.40%
Single Parent	18.50%	9.30%	3.90%	29.00%	20.80%	23.90%	4.30%	26.10%
Couple, No Children	21.40%	9.90%	5.00%	34.70%	22.10%	16.30%	4.70%	27.90%
Couple, With Children	49.10%	20.60%	7.90%	62.30%	46.90%	37.70%	10.90%	57.50%
Other	23.10%	14.00%	4.40%	26.80%	17.60%	28.40%	4.60%	24.40%
Working Status								
Employed	39.90%	19.90%	7.10%	55.90%	44.00%	36.40%	8.90%	51.50%
Mainly employed								
Unemployed	24.70%	11.80%	3.30%	27.70%	26.60%	26.80%	3.90%	25.00%
Retired	3.60%	4.50%	1.30%	5.90%	3.10%	10.00%	1.20%	5.20%
Job Intensity								
Permanent employment	43.20%	20.30%	7.00%	N/A	46.40%	61.10%	8.80%	N/A
Short-term employment	26.50%	15.70%	5.80%	N/A	35.10%	34.60%	8.10%	N/A
Job Characteristics								
Managers / professionals	42.20%	30.30%	9.40%	64.80%	56.70%	40.60%	10.70%	59.70%
Other skilled workers	40.00%	19.80%	6.70%	55.40%	40.60%	40.40%	8.80%	51.30%
Labourers/elementary	29.60%	17.70%	4.10%	39.10%	27.40%	35.80%	6.60%	33.50%

Source: LIS dataset 2007, 2010.

* All statistics are calculated using population weights (pwgtpop); (1) Equivalent disposable income; income have been top and bottom recoded for each countries, the maximum is ten times the median income, and the minimum is 0. The income variable used (dhi) is the sum of labor and capital income, private transfers, work-related insurances transfers, universal benefits, and social assistance benefit. minus income taxes and social insurance contribution paid. (2) Here the poverty line is defined at the 50% of the median equivalent income.

In Table 2, I resumed all the data available to date in the LIS, describing the qualitative distribution of debt of four countries (Ireland, Italy, Slovakia, and the UK) in 2007 and 2010. In both 2007 and 2010, the distribution pattern of debt did not change at all, and we found more or less the same characteristic that we observed with the 2004 data.

TABLE 3: Difference between '07 and '10 (in %)

	Ireland	Italy	Slovakia	UK
Tot. Debt	-1.15	85.90	31.67	-9.93
Age				
<35	-4.85	82.04	23.33	-12.72
35-44	4.42	67.84	44.68	-8.84
45-54	5.63	86.63	92.86	-2.22
55-64	12.50	158.14	43.75	-3.04
>65	-17.65	141.18	0.00	-4.00
Education				
<= Primary	-7.46	88.73	44.74	-16.31
Secondary	-13.35	86.13	18.75	-9.96
>= Tertiary	9.93	76.14	38.75	-7.12
Immigration				
Not Immigrant	0.28	84.62	29.41	N/A
Immigrant	-6.11	120.96	127.03	N/A
Health				
Disabled	24.65	117.57	70.00	-6.86
Income Quintiles (1)				
1	12.12	126.80	14.89	-3.57
2	-9.29	81.82	75.00	-10.47
3	-21.35	104.55	-3.85	-11.35
4	-1.74	73.63	40.32	-7.03
5	22.88	69.86	42.03	-9.26
Relative Poverty				
Poor	5.08	174.39	-37.70	-8.27
Household Size				
One	30.19	101.67	62.50	-8.00
Two	5.24	70.83	6.82	-17.74
Three	2.75	91.93	0.00	-4.06
Four	1.99	95.71	45.07	-7.51
5 or more.	-7.10	65.64	48.33	-11.36
Household type				
One Person	30.19	101.67	62.50	-8.00
Single Parent	12.43	156.99	10.26	-10.00
Couple, No Children	3.27	64.65	-6.00	-19.60
Couple, With Children	-4.48	83.01	37.97	-7.70
Other	-23.81	102.86	4.55	-8.96
Working Status				
Employed	10.28	82.91	25.35	-7.87
Mainly employed				
Unemployed	7.69	127.12	18.18	-9.75
Retired	-13.89	122.22	-7.69	-11.86
Job Intensity				
Permanent employment	7.41	200.99	25.71	N/A
Short-term employment	32.45	120.38	39.66	N/A
Job Characteristics				
Managers / professionals	34.36	33.99	13.83	-7.87
Other skilled workers	1.50	104.04	31.34	-7.40
Labourers/elementary	-7.43	102.26	60.98	-14.32

Source: LIS dataset 2007, 2010. (Author calculations)

The perceptual difference is calculated as following:
((2010-2007)/2007)*100

In Table 3, I showed the perceptual difference between 2007 and 2010, and here we can observe some interesting facts. While in 2007, the quantitative dimension was very similar to 2004, in the 2010 data – after the global financial crisis of 2008 – we observe two interesting phenomena: in Slovakia and particularly in Italy, the shares of households with debt skyrocket, with a growth near to 85% in Italy. However, in Ireland, we can observe a slight decrease in the rate of indebted families, and even more so in the UK. With such little data, it is difficult and imprudent to explain why, but I suggest that in the UK, a general process of deleveraging is occurring, which is probably also helped by the relaxed money policy applied to the pound by the Bank of England. Eurozone countries are instead fixed in a high inflationary control, and perhaps have more difficulty in complying with their internal devaluation (in the case of Ireland), or else they use debt to cover the lack of liquidity. While waiting for a clearer picture of what is going on in Europe, these data create more questions than answers. Why do Italian households go into debt after the crisis and not before? Why, in Great Britain, is it the opposite? Answering those questions is not easy and would require a deeper analysis which takes into account various elements, from the housing market and the welfare redistribution, to the growth model (Hay, 2013a; Hay, 2013b).

4.1 Let's do a Probit.

The results of the descriptive statistics are tested in a multivariate analysis of Table 4, where the results from four different probits are reported, gradually controlling for all

variables. The first three models include every country and the ensemble of the population surveyed. In the fourth model, I control with the variables about immigration status and disability. Those variables are not present in every country, so we lost four countries (Switzerland, Finland, the Netherlands, and Great Britain; however, the model still includes Austria, Estonia, Ireland, Italy, Norway, and Slovakia. In adding the control variables about work conditions, we lost Norway as well.

TABLE 4: Probability of Household Debt
(Probit estimations)

	Model 1	Model 2	Model 3	Model 4	Model 5
Age					
35-44	0.171 (***)	0.177 (***)	0.168 (***)	0.06	0.061
45-54	0.048 (**)	-0.007	0.013	-0.121 (***)	-0.122 (**)
55-64	-0.42 (***)	-0.472 (***)	-0.362 (***)	-0.421 (***)	-0.404 (***)
>65	-1.03 (***)	-1.029 (***)	-0.823 (***)	-0.892 (***)	-0.789 (***)
Education					
Secondary	0.225 (***)	0.102 (***)	0.13 (***)	0.023	0.044
>= Tertiary	0.324 (***)	0.091 (***)	0.151 (***)	0.117 (**)	0.128 (**)
Income Quintiles					
2		0.311 (***)	0.307 (***)	0.153 (***)	0.132 (**)
3		0.57 (***)	0.556 (***)	0.334 (***)	0.311 (***)
4		0.673 (***)	0.656 (***)	0.477 (***)	0.451 (***)
5		0.869 (***)	0.845 (***)	0.691 (***)	0.568 (***)
Relative Poverty					
Poor		-0.311 (***)	-0.269 (***)	-0.368 (***)	-0.306 (***)
Household Size					
Two			0.034	0.2 (*)	0.18 (*)
Three			0.093 (**)	0.182 (**)	0.161 (*)
Four			0.303 (***)	0.398 (***)	0.395 (***)
5 or more.			0.293 (***)	0.382 (***)	0.387 (***)
Household type					
Single Parent			-0.013	-0.023	-0.028
Couple, No Children			0.315 (***)	0.117	0.121
Couple, With Children			0.407 (***)	0.252 (***)	0.236 (***)
5 or more.			(omitted)	(omitted)	(omitted)
Immigration					
Immigrant				-0.162 (**)	-0.16 (**)
Health					
Disabled				-0.038	-0.05
Working Status					
Employed					0.027
Mainly employed					0.016
Unemployed					-0.18 (**)
Constant	-0.791 (***)	-1.13 (***)	-1.581 (***)	-1.217 (***)	-1.229 (***)
No. Of Observations	183101	182479	182479	88103	61554
Pseudo R^2	0.197	0.224	0.244	0.22	0.119

Source: LIS dataset 2004.

Country dummies are included. (***) coefficient is significantly different from zero at the 1% (**) 5% (*) 10%.

The results of the probit confirms, more or less, what we saw in Table 1; in model 3, we observe a positive and significative tendency of young households (35-44) to hold debt, and then a significative and negative tendency when becoming older. Family size is positive and significant as well, and the effect of having children is clear: families with four or more members have a higher probability to hold debt. In model 3, education matters; even controlling by income quintiles, there is a significant and increasing probability to hold debt with the rise of education level. So education could be, on its own, an element that makes people more confident when deciding to hold debt.

Due to the missing data, the fourth and fifth model are less representative of the European situation. Nevertheless, there is an interesting observation which is at least valid for Austria, Estonia, Ireland, Italy, Norway, and Slovakia. When controlling for immigrant status, disability, and work conditions, we observe that the effects of education still hold true, but only for the university level. There is a significative and negative effect of immigration on the probability of holding debt, and that is true for unemployment as well. Being disabled is not a significative, which shows that luckily, the costs of healthcare for disabled people are covered without necessarily incurring debt. Job intensity does not seem to be a significant measure either.

In general, those results once again confirm the 'life-cycle' hypothesis of savings and debt, first formulated by Modigliani and Ando in the 60s (Ando & Modigliani, 1963). Household debt allows families and individuals to smooth out their expenditures throughout their lives. As the results of the probit have shown, those who hold debt are young couples with children. They need more money to set up their adult life, particularly for education and buying a house, to deal with the financial burden of children. Growing older, their financial needs will settle and, hopefully, they will be able to easily repay their debt. Yet it is also

important to underline that those are rich and educated young families. Statistically, poorer and less educated families encounter many obstacles in finding money for those crucial years of their life, so – from a normative point of view – we should ask ourselves if debt is the best way to deal with the needs of young families, or if debt is another *stratification* tool that may reiterate an unequal social order. Sociologists are starting to study how access to credit (through credit scoring) can influence and *stratify* the opportunities of the individual (Fourcade & Healy, 2013).

In this section, we have observed two things: Nordic countries have the highest share of families holding debt, even more than Anglo-Saxon countries. Meanwhile, within countries, debt is distributed following an identical pattern. Why are the differences between countries so evident, while the micro distributions, are so similar?

5. Is there a welfare-debt relationship?

So far, we have seen how household debt is distributed within countries and how the same patterns apply to every country. Debt is mostly held by young and wealthy families. In his classic theory, Modigliani gives a convincing explanation of this phenomenon: young and wealthy families are less risk-adverse because they expect their income to rise later in life. If Modigliani's theory explains the micro level, it fails to give a convincing explanation of the macro one; why does the debt distribution of households vary so much between countries?

Following the intuition of Modigliani, we may hypothesize that the wealthiest countries are also those with the highest levels of private indebtedness. That would be partially true, especially in the Scandinavian case, but it does not explain why wealthy countries in Continental Europe – like Germany, France, and Belgium – hold so little debt.

As we saw in the literature review, the common explanation mostly deals with the supply side, explaining the differences in access to credit resources, and a demand side, explaining how the quantity of debt is influenced by the institutional and political setting. In this paper, we will take the second approach.

I argue that the redistribution operated by the welfare reshapes and restratifies class, therefore influencing what (according to Goldthorpe) was the "wealth of a person, the stability of position, and the person's prospects for the future". Thus, as Modigliani explained, welfare state contributes to people's prospects for the future, and people's prospects for the future influence their willingness to take on debt.

First, the quantity of welfare spending directly influences the quantity of debt in a negative way: the more money the state invests in society, the less people will be indebted. The welfare-debt trade-off hypothesis has been supported, as we saw, by the works of Prasad and Trumbull, among others. That hypothesis is theorizing a substitutive relation: debt is used to compensate for the lack of welfare.

To test this hypothesis, I will use the Comparative Welfare Entitlements Dataset 2 (CWED) and the Debt to Income data from OECD. The CWED is a database developed by Lyle Scruggs and Detlef Jahn, gathering data about welfare spending in public pensions, employment insurance, and sick pay insurance in various countries. It includes entries since the Second World War from a number of different sources, harmonized together. In fact, it updates the numbers behind the model used by Gosta Esping-Andersen for his decommodification index. Following the Esping-Anderson approach, the database combines a series of variables to understand the generosity of those programs, covering the benefit replacement rate, or how much the public benefit covers the income from market sources, the

benefit durations, the cost of entrance, and so on. The database provides four indexes of welfare generosity: total welfare generosity, then a sub-index for unemployment, a sub-index for pension generosity, and finally a sub-index for sick days insurance.

I will use OLS with panel-corrected standard errors, as it is very likely that the macroeconomic factors tie each country to the economy as a whole, so it would seem reasonable to allow a correlation of the disturbances across countries. My independent variable is private debt to income ratio from the OECD, and I use the total Generosity Index calculated by the CWED, as the dependent variable, to test the substitutive hypothesis. The time period for the analysis is from 1995 to 2011, for each country of the dataset. Jackknife post-estimation was conducted to ensure results to be robust to the exclusion of individual data points.

TABLE 5: Household Debt and Total Welfare Generosity

DEBTINC	Coef.	Jackknife Std. Err.	t	P>t	[95% Conf.	Interval]
TOTGEN	0.6189758	0.4068296	1.52	0.129	-0.1817724	1.419724
Debt	108.9124	11.99834	9.08	0	85.29648	132.5283

R-squared = 0.0052. Countries in analysis: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, Greece, Spain, Portugal, South Korea, Czech Republic, Estonia, Poland, Slovakia, Slovenia.
Dependent variable: Debt of households, percentage of net disposable income. (OECD)

As we can see in Table 5, the results of this first regression are very poor, and there is no significant correlation between the generosity of the welfare state (as computed by CWED) and the level of private indebtedness. We should also reject the idea of a straightforward substitutive relationship between welfare and debt. The coefficient is also slightly positive, meaning that there is a relationship, what Schelkle and Gerba call a 'complementary effect' (Gerba & Schelkle, 2013), namely that a more generous welfare pushes people towards more indebtedness.

What may explain the different levels of prevalence of household debt, among countries, is that it is not the quantity, but rather the *quality* of welfare spending.

My hypothesis is that in Scandinavian countries, the levels of debt are particularly high because welfare protection is universal and helps to shape stable income prospects for the whole population, that "expect to be assured of a minimum income all their life". Those welfare programs cover the vast majority of the population, which makes them less risk-adverse. Whereas in continental welfare, unemployment is mostly reserved for those who have already worked, and it is less generous in terms of coverage and age. The main welfare contribution is retirement. A system, which mostly protects insiders of the job market and old people, would not incentivize risk-taking for the younger generations, and that could explain why the levels of debt remain low.

If we separate the total Generosity Index into its three components, namely pensions, unemployment, and sick pay insurance, and we run the OLS with panel-corrected standard errors, we may test what is the impact of those three programs on the quantity of debt, and better understand what is the generosity that increases household debt; so for debt that works as a complementary, what kind of transfer may substitute the need of household debt?

TABLE 6: Household Debt and Social Insurance programs
(OLS with panel-corrected standard errors estimations)

		Model 1	Model 2	Model 3
Household debt vs. Income (*Constant*)		224.325 (***)	183.076 (***)	188.397 (***)
		(16.54)	(18.66)	(19.91)
Welfare measures				
Pension Generosity Index		-7.913 (***)	-8.161 (***)	-8.722 (***)
		(1.34)	(1.26)	(1.41)
Unemployment Generosity Index			4.440 (***)	3.302 (**)
			(0.99)	(1.13)
Sick Pay Insurance Generosity				1.245
				(0.67)
	N	288	288	288
	R2	.0675	.1082	.1132

p<.001 (***) , p<.01 (**), p<.05 (*)

Notes: Standard error in parentheses. Years: 1995-2011. Countries in analysis: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, Greece, Spain, Portugal, South Korea, Czech Republic, Estonia, Poland, Slovakia, Slovenia.
Dependent variable: Debt of households, percentage of net disposable income.
Model 1: OLS with panel-corrected standard errors, pension
Model 2: OLS with panel-corrected standard errors, pensions + unemployment
Model 3: OLS with panel-corrected standard errors, pensions + unemployment + sick pay

Each of the three models adds a component of the total Generosity Index. The results of the regression on a panel of OECD countries show that more generosity in the sick pay insurance has a positive (but not significant) effect on the quantity of debt. Unemployment insurance has a positive and statistical significant effect, while pension insurance has a negative and significant impact on the quantity of debt. Using only macro data, we risk committing ecological fallacies; also, the identification is not very clear, but that could simply suggest that the relationship between household debt and welfare is more complex than what we have previously known it to be.

Welfare states with particularly generous pension schemes focus their attention on seniors; from the micro distribution of debt, we know that seniors are less likely to hold debt. In continental welfare, and especially in the Mediterranean welfare, besides pension there is

not much else. This fails to encourage the youth to form families, live alone, have children (Barbieri, 2011), and finally, hold more debt.

Instead, generosity on the unemployment and sick pay insurances has a positive effect towards debt. Those services help to provide and shape more stable financial outlooks for the general populations. That helps to increase the willingness to take on loans, as people feel more confident and are less risk-adverse. That could also explain why the lending rates are so high in welfares that do not target the protection of specific age groups.

6. Conclusion.

Sociological literature has room to study the outcomes of social welfare on fields relevant for financial stability and macro-prudential policies, like household debt. With my contribution, I propose a theory that, drawing from the relevant literature in the sociology of welfare, tries to explain how different institutional settings may influence the quantity of debt in different ways, opposing the idea that the welfare-debt relationship is always unidirectional, positive or negative. The quantity of money spent on welfare does matter, but *where* this money is spent matters more; the quantity of welfare matters less than its quality. If social welfare only targets a particular risk more than others, for example aging, the risk redistribution will be different, and then so will the behavior of the people towards debt.

In this case particularly, we saw that generous unemployment and sick pay insurance programs may actually increase the quantity of privately-held debt, probably because they help to shape stable financial outlooks. In contrast, more generosity on pension insurances tends to lower the quantity of debt. I do not think that is a direct effect; it is more likely that the welfare

is particularly concentrated on older people and insiders. Other social patterns emerge in this institutional context, such as low fertility rates. All that entails risk for the youth is avoided; debt burden is in the same category.

Another interesting aspect of the situation is that welfare can contribute to create instability in the economy, which follows the old Minskyan adage: "stability is destabilizing" (Wray, 2011). For example in Sweden, to face the rise of household debt, they have actually increased the obligatory reserves in banks over the minimum international standard of Basel (Ingves, 2013), and they have also put a cap on how much debt can be taken. In Canada, the household debt also increased to worrisome levels.

Welfare alone cannot explain those phenomena; most of them have to do with periods of irrational exuberance, like the tulip mania. However, we need to understand that social policy can be a factor in their genesis; this is an aspect that remains completely overlooked.

More research is needed to understand the details of how social policy can shape behaviors towards debt at the micro level. Yet as a first step, the theory proposed in this paper, which attempts to recognize the significance of different institutional contexts, can fill in the gap created by other ad hoc theories.

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