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INEQUALITIES BETWEEN LIBERAL DOCTRINE AND KEYNESIAN-ORIENTED CONVENTIONAL ECONOMICS

The increase in inequalities over the last thirty years has been supported by the statements of liberal economic thought. According to liberalists, economic inequality is a necessary condition to achieve the objectives of economic growth and market efficiency. The failure of the Efficient-market hypothesis, with the financial crisis of 2007, brings forth the need to reconsider the theoretical basis of perfect individual rationality, taking into account more realistic models of individuals with limited rationality. This is how the role of conventions in decision making comes into play, and more specifically the chapter twelve of Keynes' General Theory, through the analysis of anticipations in condition of uncertainty, where the conventional nature of the investment decision is highlighted. But the Keynesian convention is insufficient to better explain how financial markets operate, when the convention is lacking. Thus, the present paper proposes a review of the "Keynesian conventional economy", updating it in the "oriented conventional economics".

JEL: B15; B26; D81; D91; E12; E13; I14

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Over the past thirty years, the economic conditions of individuals have seen an increase in inequalities[1]. The rich have become richer, the middle class has shrunk, and the poor have slipped considerably deeper into poverty. When considering the advanced economies, economic inequality, measured in terms of both income and wealth, has increased sharply and income disparities have even reappeared at the levels of a century ago. Moreover, it is particularly important to remember that inequality also remains high at the global level, despite the dynamic growth of the main developing countries, such as China and India, where domestic inequalities are exploding (Franzini, Pianta, 2016, p. 3).

The inequality of the 20th century was marked by the transition from agricultural to industrial society, where class structure and the balance of power established the functional distribution of income between capital and labour. Whereas now the

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[1] For example, between 1980 and 2014, in the United States, the real average income of the richest 1% of the population increased by 169 % and its share in the national income more than doubled (from 10 to 21%). For the 0.1%, the super-rich, it was even better, as their real average income increased by 281% over the same period and their share in the national income almost tripled (from 3.4% to 10.3%) (Stiglitz, 2018, p. 7-19). The United States rank first in the race for the most unfair countries on the planet (at least among the developed economies). Over the last 25 to 30 years, the Gini index (the parameter commonly used to measure income inequality) has increased by about 29% in the United States, 17% in Germany, 9% in Canada, 14% in the United Kingdom, 12% in Italy and 11% in Japan. The more countries follow the American economic model, the more consistent the results seem to be with what is happening in the United States.

expansion of finance in economies redefines the process of capital accumulation and the dynamics of income and wealth distribution (Franzini, Pianta, 2016, p. 5).

One is amazed to learn that the wealth currently held by the richest 1% of the world's population is the same as that of the rest of the world (Philippon, Reshef, 2009; Rapporto Oxfam, 2018).

The prevailing liberalist economic thought states that economic inequality is a necessary condition to achieve the objectives of economic growth and market efficiency. For example, an expression of this thought can be found in the hypothesis of *Trickle-down economics* (Quiggin, 2015, p. 232-272).

Furthermore, in the liberalist doctrine we find the *Efficient-market hypothesis* (Samuelson, 1965; Fama, 1970; Fox, 2009), born at the time when the Keynesian era was drawing to a close, and put to the test in terms of credibility by the financial crisis of 2007. The *Efficient-market hypothesis* states that financial markets are the best possible guide for the value of economic goods and, therefore, for investment and production decisions. All this means that financial markets use information in a totally efficient way and that they are sufficiently well developed to understand all the important sources of risk; thus, the price of a share represents the best available estimate of its future value.

The *Efficient-market hypothesis* focuses attention on financial markets, a feature of a finance-driven capitalism that has appeared since Bretton Woods's collapse in the 1970s. The *Efficient-market hypothesis* requires financial deregulation, the abolition of controls on international capital flows and the expansion of the financial sector.

The analysis developed by the *Efficient-market hypothesis* shows that perfectly rational investors operating in perfectly efficient financial markets will eventually produce the best estimate of any financial activity (Quiggin, 2015, p. 128).

The failure of the *Efficient-market hypothesis* during the financial crisis highlights the need to reconsider the theoretical basis of individual rationality, trying to replace it with more realistic models that consider limited rationality and choices in uncertainty (Boudon, 1989).

The analysis of individual rationality, from a broader perspective, leads to the questioning of the role of conventions in decision making. Keynes (1936), in chapter twelve of his *General Theory*, through the analysis of anticipations in uncertainty[2], underlines the conventional nature of the investment decision. Keynes states that there is a convention in the financial markets that can guide investors' anticipations.

[2] It is particularly important to point out that this uncertainty refers to an uncertainty that cannot be predicted in terms of risk (Knight, 1921). It is therefore necessary to understand how this uncertainty can be overcome in order to make action possible. Keynes himself raised the issue of individual action in conditions of uncertainty. In this respect, he found a valid reference for it, and for the role of conventions in the financial market in particular, in the Economics of Convention. Keynes suggests that uncertainty is the human condition, a radical uncertainty that is not considered by the classical assumption of a defined and calculable future. There is only vague and uncertain knowledge, fluctuating states of trust, courage, fears and hopes, managed in the best possible way with strategies and conventions, which themselves can be swept away by new events (Skidelsky, 1998, p. 109).

This convention builds the investment decision, becoming a practice on the financial market. In a context of uncertainty, how is a correct assessment of the return on investment determined? How do you determine the average market opinion and the idea that your own opinion will be formed based on it? Keynes' answer is based on a convention, which Orlean (1989; 1999) calls a 'financial convention'. This convention is very important, because it allows a certain stability in business, as long as one can rely on the convention given[3].

But what happens if there is no longer any reliance on the convention? The Keynesian convention is therefore incomplete because it is unable to better explain how financial markets operate. At this stage, a structure should be offered to the uncertainty of the future, allowing a reaction to surprises, as they appear, and widening the horizon of possibilities to which the financial markets are able to react. The production of possibilities should have an orientation, even if the future is unknown, because if there is an orientation, the future is not without a direction (you are aware that the future depends on what you do today and that it can be controlled). An external institutional intervention is therefore essential, when the market goes into crisis (due to uncertainty) and stops working, in order to change expectations and restore a future horizon. This institutional intervention, however, must not be directed on the market through the purchase of securities, but must instead allow others to buy, so as to act on trust without leaving it to the market to restore trust it.

The present work therefore seeks to call into question the claim that the price system can be the only form of coordination and orientation of individual actions. The effort to overcome this hypothesis requires the search for other forms of coordination in order to regulate and guide the behaviour of individuals. In this regard, a review of the *Keynesian Conventional Economics* is proposed, updating it in the *Oriented Conventional Economics*.

Expansion of finance and growth of inequality

As one starts the analysis of inequality, the debate often focuses on the fact that it is largely due to globalisation, a phenomenon which is beyond the control of the nation-states. In fact, inequalities have now gone beyond the fence of national economies, as they have been captured by global processes such as the international flows of capital, goods and workers, and the expansion of finance.

The 1970s were marked by a shift of capital towards finance, as it offered excellent opportunities for accumulation. Thus, since the 1980s, capital has taken over labour, producing a transfer of at least ten percentage points of gross domestic product from the wage share to the capital share in the developed countries. This scenario helps to explain the increase in wealth inequality caused by the growing

[3] The launch of the structured research programme on the Economics of Convention dates back to the work of Dupuy, Eymard-Duvernay, Favareau, Orléan, Salais, Thévenot (1989). For further information on the stability of conventions see Boyer, Orléan,1992.

value of financial assets and the increase in the incomes of the super-rich. For example, in the 350 largest companies in America, the ratio of managers' remuneration to that of average employee wages rose from 30 to 1 in 1978, to 383 to 1 in 2000, and to 296 to 1 in 2013, thus unequivocally reflecting the new power of capital over labour (Franzini, Pianta, 2016, p. 7-8).

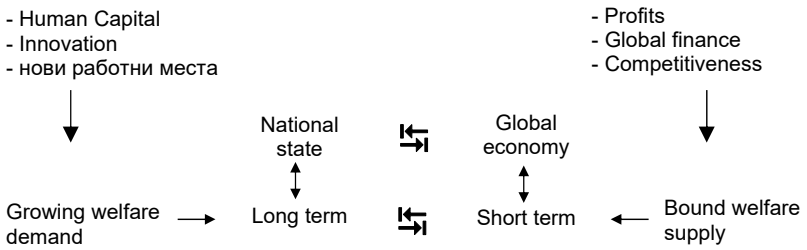
Finance has become a much more profitable sector than the real economy. Before the 2007 crisis, financial services accounted for 7.6 % of GDP, a figure that fell to 6.6% in 2012 and rose to 7.3% in 2014. By comparison, in the 1950s, financial services accounted for 2.8% of GDP in the US economy. Between 1950 and 1980, the financial sector achieved between 10% and 20% of total company profits. At the end of the 1980s, financial profits increased to 26% of total profits; they remained at this level on average during the expansion of the 1990s and increased to 46% in 2001, before reaching an average of 32% during the expansion of the early years of the new century, before the Great Recession (Stiglitz, 2016, p. 50).

This can be seen reflected in the very high wages in the financial sector, which supported the enrichment of the richest 1% of the population. Profits in the world of finance have increased much more than in the real economy, and at the same time we have seen the process of deregulation (Philippon, Reshef, 2009). Between 1979 and 2005, the number of financial operators, among the richest 1% of the population, increased by 80% (from 7.7% to 13.9%); during the same period, their presence in the even higher range, that of 0.1%, also increased from 11% in 1979 to 18% in 2005. In the same period there was a significant increase in salaries as a result of the deregulation process. In 1980, average wages in the financial sector were consistent with those paid by the rest of the economy; in 2006, there was a 72% pay gap between finance and other business sectors. This remuneration is not justified solely on the basis of skills, since the data show that 30-50% of this remuneration is made up of annuities.

In the financial sector, the remuneration structure has stimulated not only the pursuit of immediate profits, but also the taking of excessive risks. Thus, remunerations have reached levels that are not justified by their productivity; these increases have been made at the expense of workers, investments and shareholders, and contribute to the increase in inequalities. The concept that companies aim to maximise the current value of their shareholders and that all other objectives are secondary has revolutionised business management theories, which prioritised the longevity of companies, and these were a means of promoting social interests. This concept of a company states that short-term strategies should take precedence over long-term ones, such as investments that produce value through innovation and employee enhancement. The conflict between very short-term (speculative) investments and long-term investments needed to improve human capital and social cohesion, between the increasingly widespread short-termism in finance, the labour market and management strategies and the increasingly desired long-termism in public policies, is growing. Through a simple schematic, it is possible to show how the national state, the only one able to plan long-term policies necessary for productive

investments in human capital and innovation and the protection of new needs, becomes increasingly distant from the global economy, which, in contrast, is based on the short-term objectives of profitability and competitiveness (Morselli, 2011, p. 136-137).

Schematic 1



Schematic 1 clearly shows the contrast between short term and long term objectives. Moreover, it is easy to perceive the increase in the distances between the global and borderless flows of capital and goods, and the identities linked to the territory where individuals live and work, with the consequent reduction in the willingness to finance investments such as social investments, the benefits of which are deferred over time.

Perhaps even J. M. Keynes, who analysed the economic effects of short-term speculation, if he opened his eyes, would be amazed at the extent of the short term today. In 1940, shares were held on average for about seven years, in 1987 they were held for two years, and in 2007 they were traded every seven months on average (Konczal, Stanley, 2013).

The shareholder who only shows interest in the short term goes in search of immediate profits, i.e. pays attention to quarterly results. The primary objective of finance should be to provide the necessary funds for productive activity and not to turn businesses into sources of liquidity for financiers. This scenario increases economic inequalities and is detrimental to the long-term economy.

The dynamics of capital and the growth rate between wealth and inequality

Economists are looking for new theories to explain the existing imbalances in the economy, and, in particular, they have focused their attention on increasing wealth in relation to income. In this scenario, as Piketty pointed out (2013-2014, p. 93), the capital/income ratio increased, especially in the economies which are marked by slow GDP growth. Piketty states that the return on capital is higher than the growth rate of the economy ($r > g$) and, as a result, wealth grows much faster than income. This means that if the return on capital does not decrease, a process of increasing inequality is triggered.

Piketty states that today the return on capital is around 5%, while GDP growth rates in advanced countries are around 2%. Considering a long-term analysis, the average rate of return on capital in the UK ranged between 4% and 5% between 1770 and 1930; then, in 1940, it increased to 7%, then fell to 3% in 1980 and 1990; and, finally, recently it exceeded 4%. In France, there were fluctuations between 4% and 6%, with peaks of 7% in 1920 and 1950 (Piketty, 2013-2014, p. 318). In view of the above, the gap between the return on capital and the growth rate of the economy is considerable.

This analysis, taking into consideration the distribution of income, can only be adjusted to indicate the returns from which capital as a whole benefits, without taking into account its specific forms. However, with regard to production, it is necessary to focus only on productive capital, since the increase in the product, and consequently in the income, depends on it. The increase in the value of financial or real estate assets has no direct impact on the production of goods and services, whereas it can change the distribution of income in favour of financial or real estate annuities. If the expansion is only generated by the growth of non-productive assets, it is not possible to expect an increase in production, capital productivity and profit rates, as Weil (2015) also stated.

For example, according to Stiglitz (2016, p. 27-28), if the value of real estate assets increases as a result of higher real estate prices and not as a result of structural improvements, the economy does not become more productive because no new workers have been hired, no wages have been paid and no investments have been made. In economic terms, this gain is due to a land rent; the increase in the value of real estate is partly due to urbanization, but to a greater extent it is due to the financialization of the economy and the increase in the supply of credit that is usually assigned to those who already own wealth. The capitalised value of annuities creates wealth, so if annuities increase, wealth increases. For example, if monopolistic power increases, the value of profits and consequently the wealth of the economy increases. However, the productivity of the economy decreases, and so does the value of wages net of inflation. All this implies an increase in inequality.

The above scenario makes it possible to highlight the effects that the dynamics of capital accumulation have on economic growth and inequality. Inequality increases when profits increase more than wages; when returns on capital, which increase thanks to financial activities, are higher than growth rates; and when financial expansion leads to high annuities that change the distribution of income to the detriment of the wage share.

Inequality and Trickle-down economics

Some important economists, such as Adam Smith[4], John Stuart Mill and John Maynard Keynes[5], favoured the redistribution of income through progressive taxation, and even today we find many economists who support this statement.

[4] Adam Smith, although considered the founder of the liberal economy, argues that “A tax upon house-rents, therefore, would in general fall heaviest upon the rich; and in this sort of inequality there would

Other economists say that you should let the rich get richer and richer and wait for the benefits to come down to the poor. However, this idea seems to have stopped working from 1945 onwards, when a sharp reduction in inequality was accompanied by a context of full employment and prosperity. This was a very important historical achievement, since we were in the presence of a society that, in the vast majority, was marked by a middle class, thus dulling the Marxist criticism of capitalism that appeared anachronistic (Quiggin, 2015, p. 231-232).

From the 1980s onwards, the process of privatisation of public enterprises and public services has shifted most of these activities on the market, eliminating the conditions that had counteracted inequalities until then (Atkinson, 2015). Thus, inequality and supporters of tax cuts for the rich reappeared, and the renewed focus on Trickle-down economics accelerated the process of financial globalization.

Thus, the growing prosperity of the years after 1945, accompanied by a reduction in income inequality and a decrease in differences between social classes, seemed to be a refutation of Trickle-down economics. Economic historians Goldin and Margo (1992) called this period of high equality the 'Great Compression', which came unexpectedly as a result of the New Deal and the Second World War.

From the beginning of the 1980s onwards, the gains in equality were reversed. This is partly due to changes in income distribution. In fact, profits increased at the expense of wages and the distribution of wages became less egalitarian. These changes were supported by a public policy that replaced the highly progressive post-war income taxation of the post-war period with a flatter taxation system. Maximum rates were cut to 40% or less (Quiggin, 2015, p. 234).

Then, again since the 1980s, there was a turnaround and an increase in inequality. In fact, Bradbury (1986), Burtless (1990) and Krugman (1996) highlighted the disappearance of the American middle class.

The implications for the Trickle-down hypothesis are that the benefits of an additional investment go to those whose savings finance that investment. This means that cutting taxes on the rich can result in more savings and investment for them, thus making them even richer. But there is no reason to expect any benefits for the rest of the community. Moreover, it is particularly important to remember that the neoclassical model, which is used to obtain estimates of dynamic benefits, incorporates the Efficient-market hypothesis. It is assumed that the additional investment caused by more favourable tax treatment is allocated efficiently, so as to produce higher growth rates in the long run. But the economic crisis has shown that the additional investment ended up in real estate or speculative companies that went into crisis when the financial bubble burst. And with the drastic tax cuts,

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not, perhaps, be anything very unreasonable. It is not very unreasonable that the rich should contribute to the public expense, not only in proportion to their revenue, but something more than in that proportion" (Smith, 2006, p. 1017). Therefore, as Rothschild (2001-2003, p. 126) says, Smith was in favour of progressive taxation.

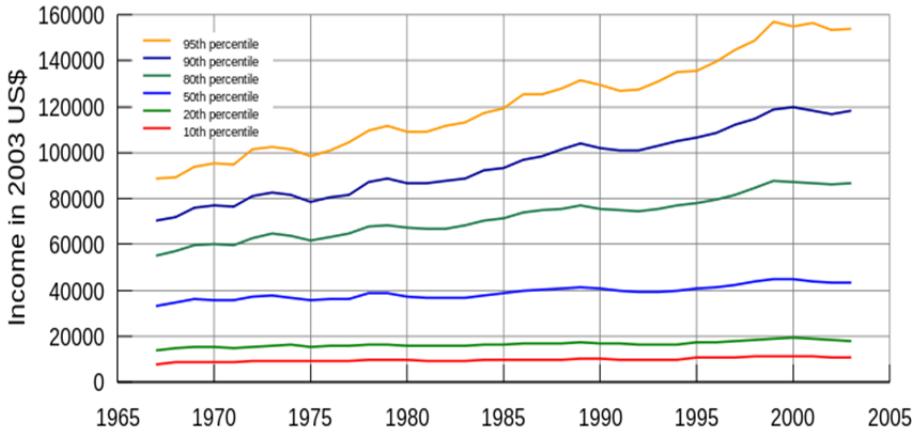
[5] For more on these statements, see Quiggin, 2015, p. 231-232.

governments found themselves with inadequate financial resources to convince investors that their bonds were a safe investment (Quiggin, 2015, p. 241-242).

Supporters of Trickle-down economics never specified the period of time in which the benefits of growth were expected to flow down to the less well-off. But just as the crisis of the 1970s was the end of Bretton Woods, the financial crisis of 2007 is undermining the era of liberalism driven by finance. The experience of the United States in the liberal period, from the 1970s up to about the financial crisis, appears to repudiate the Trickle-down hypothesis. The income of the wealthiest Americans grew considerably. The income of the fifth percentile of the income distribution doubled, and that of the highest 0.1% quadrupled (Quiggin, 2015, p. 249-250).

Whereas the earnings of households in the central part of the income distribution have been much lower, the scenario for those in the lower part of the income distribution, where no earnings are reported, is even worse (Figure 1).

Figure 1



Source. https://commons.wikimedia.org/wiki/File:United_States_Income_Distribution_1967-2003.svg

From the above analysis it becomes clear that the dictates of Trickle-down economics have only increased inequality. The abnormal increase in remuneration in the financial sector and in the managers' wages has not produced a more efficient and productive economy with benefits for all. The financial crisis of 2007 has shown that the incomes that reach the different groups of a community do not represent the reflection of their marginal contribution.

Liberalism and Efficient-market hypothesis

The Efficient-market hypothesis represents the basic theoretical doctrine of liberalism; it states that financial markets are the best possible guide for the value

of economic goods and, consequently, for investment and production decisions. This implies that financial markets use information as efficiently as possible and are well-developed to understand all economically relevant sources of risk (Samuelson, 1965; Fama, 1970; Fox, 2009). The Efficient-market hypothesis assumes financial deregulation, the abolition of controls on international capital flows and a strong expansion of the financial sector.

The consideration of the Efficient-market hypothesis began with the statement that asset prices, like shares, cannot be predicted in the light of their previous movements, as technical analysts point out; prices follow a 'random walk', as Malkiel (1999) states in his work. A corollary of the Efficient-market hypothesis states that it is not possible to implement an effective long-term investment strategy, because in an efficient market, where information is disseminated evenly and at no additional cost, price changes must be unpredictable, i.e. they must follow a random path.

If all operators have all the information available at the same time, any possibility of profit is exploited immediately and consequently included in market prices. The only price changes that can materialize are those that are unpredictable and cannot be anticipated by anyone because they are not included in any information, thus, they must necessarily be random. The more efficient the market, the better it works, and the more random and unpredictable its movement is. This is a concluding reasoning that shows a certain weakness as it is held on the assumption that the market is efficient and that prices perfectly reflect all the information.

There is a possibility that the market is not efficient and that its performance can be anything but random. Rather, one wonders whether the normal functioning of the markets can be explained on the basis of the idea of complete information, or, as Piel (2003, p. 20-65) states, it is better to start precisely from the lack of information (Miller, 1956) as the engine of economic dynamics; from the lack of knowledge and not from information as a basic resource.

For example, Grossman and Stiglitz (1980) say that hypothetical information-efficient markets are not found in reality: if everyone were able to know everything and knew what others know, there would be no opportunity for profit. Instead, the degree of market inefficiency measures the willingness of operators to engage in obtaining information that allows them to exploit imbalances and gaps in order to make a profit. We are far from thinking that information is distributed symmetrically[6] and is available to everyone free of charge. Indeed, obtaining and updating it involves costs, and the differences in its distribution are the main factor that investors and

[6] As a reference, it is possible to highlight the case of the used car market, as reported by Akerlof (1970). The seller has more information than the buyer, i.e. on the quality of the used good, which is not incorporated in the price. Uncertainty about quality means that the market no longer functions as an efficient coordination tool. By shifting the context to a conventionalist scenario, the problem is not so much in the asymmetry of information between seller and buyer as it is in the situation where an assessment based on a market principle concerning price meets another type of assessment of the situation. Therefore, there is no basis for a compromise that would make possible a common assessment of the situation, in the sense of a common qualification of the transaction good.

speculators use in their activities. Therefore, information does not matter so much for what it says, but more so for the additional information that can be obtained by observing what others know, that is to say, for information that goes beyond what prices transmit. This information is not available to everyone; it is expensive and unequally distributed.

Shleifer (2000) points out that the behaviour of investors cannot be explained only on the basis of explicit information; those that seem to be deviations from rationality are not random, but rather show regularity and structures to be deepened, i.e. they show their specific rationality.

Such behaviours are by no means random and do not follow a random path, but they are predictable and can be observed in order to exploit the tendencies, act in the opposite way and achieve profits. In fact, Soros (1995, p. 375) refers back to this mechanism his extraordinary successes on the financial markets. He says that the market is not always correct, and that it cannot be correct either, because it does not merely show an external circumstance, but rather it helps to provide the information it is supposed to transmit. And for this reason the market can never be in equilibrium – it must instead be in a condition of dynamic imbalance, which is neither efficient nor rational and can be exploited in a way that is not random at all (Esposito, 2009, p. 85).

Rationality is also called into question (Orléan, 2010); the theoretical analysis underlying the Efficient-markets hypothesis shows that perfectly rational investors operating in perfectly efficient financial markets will be able to make the best estimate of the future value of financial assets. The failure of the Efficient-market hypothesis in reality, with the financial crisis of 2007, requires the need to also reconsider the theoretical bases of individual rationality. In fact, attempts have been made to replace perfect rationality with more realistic models of how individuals make choices under conditions of uncertainty. Many of the works in question define themselves as ‘behavioural economics’ and derive from the theoretical developments of Kahneman and Tversky (1979). We are far from the standard theory that assumes that individuals are calculating machines, while they also rely on ‘heuristics’ (since we do not always have much time available) such as ‘representativeness’, which often leads to systematic overestimation or underestimation in judging the probability of an event.

(Quasi) rational decisions

It is particularly important to understand whether individuals understand the validity of the principles of rational choice and, above all, why, under certain conditions, they more or less systematically depart from them. At the basis of the social sciences we find the behaviour of the actors (Viale, 1997) and therefore a sort of actor theory which tries to identify and define the characteristics of the individuals who, through their actions or decisions, give rise to collective phenomena of a social and economic nature.

Why do we behave in a given way? What are the effects of the context on choices and decisions? Every action refers to a theory of mind, although in economics

it is only deductively recovered from the principles of choice attributed to the actor by the postulates of economic theory. But in many cases this way of proceeding, in delicate segments such as those represented in the financial economy, dulls the criteria considered essential for a rational decision that must be taken on the basis of an understanding of the consequences of the various options available, such as, for example, the most convenient expected value. It is known, however, that very often the investor triggers strategies of choice aimed at assessing only whether the information on an investment allows him, or not, to exceed a certain threshold of appreciation. A phenomenon amplified, in the example of the financial markets, by two more behaviours. The first one concerns the orientation of the attention towards the average values expressed by the market. The second one concerns the mechanism known as 'focusing' (Thaler, 1994), which occurs when decision-makers focus on short-term data to the detriment of information in the long term.

It is clear that the mechanism of focusing, and hence of concentration, on some of the variables influencing the decision-making dilemma may be useful, in contexts marked by excessive complexity, to exemplify the decision. But it is also clear that this can lead to sub-optimal choices. In fact, focusing and concentration can give rise to the phenomenon of information asymmetries. Think of the representation of information about the true/false dilemma. We are usually inclined to represent the contents of the true and neglect the contents of the false (Legrenzi, 2003).

Further asymmetries can be traced with regard to decisions in conditions of uncertainty. In fact, every sensible individual declares that he prefers to avoid risk in conditions of uncertainty. In actuality, this is a widespread stereotype, found to be true only if we are faced with the category of earnings. This can be demonstrated by the usual and verifiable fact of bullish expectations in the financial markets that have been disappointed. In these cases, either one leaves the market immediately or one is led to assume a greater propensity to risk in the hope of compensation. It is not plausible that these are optimal choices, and it is not so true that these are not widespread choices (Morselli, 2017a).

A further reason for reflection is related to the prevalence that we assign to the 'change' factor as an alternative to the 'state' factor. It is on the basis of change that we often tend to represent the conditions, regardless of whether they are physical or economic. We focus on what 'changes our lives' or what we imagine to be life-changing based on the context in which we express judgments and decisions and in reference to the context imagined depending on the judgment and/or decision.

Rationality and the interweaving of economics and psychology

In the neoclassical orthodox theories, the tribute to rational abilities is utmost and the one to the psychological ramblings leading to decision is very small. On the other hand, it is obvious that endowments of unlimited reasoning are at odds with the representation of a mind characterized by cognitive limitations and weaknesses. Absolute rationality, however, suffocates a priori any contribution from the various expressions of the human psyche.

The neoclassical economy and its axioms transferred to the traditional game theory, bound to von Neumann and Morgenstern (1944), represent the exaltation of the primacy of unlimited reason. By now, the theory of unlimited rationality has left the way open to research into the paths of human reasoning and the fallacy of some of its logic. An erraticity involving all the procedures leading to the decision. In fact, various research has highlighted a sort of systematic tendency of the actor to make mistakes in logical reasoning. An example for all this is the behavioural approach in the analysis of decisions under risk, which was represented by the prospect theory developed by Kahneman and Tversky as an economic alternative to the expected utility theory (Kahneman and Tversky, 1979; Tversky and Kahneman, 1992). There are at least two explanations in this regard: 1) the first one hypothesizes that the mind, when proceeding with reasoning, applies a limited number of abstract rules that correspond to a limited use of deductive logic; 2) the second one hypothesizes that no logic guides the reasoning since it is based on the elaboration of mental models that respond to the representation of the situation.

As far as judgment is concerned, it is plausible that every individual tends to make judgments about the likelihood of events that are as more correct as the relevance of the principles of probability calculation become more apparent. If, on the contrary, the contexts appear very complex (Thévenot, 1989), with little regard for the applicability of normative principles, the error of judgment may be systematic. Kahneman and Tversky (1979) link these mistakes to thinking modes called 'heuristic'. The most important one is that of representativeness (Bar-Hillel, 1980; Kahneman, Tversky, 1973), by virtue of which the likelihood of belonging of a subject is assessed on the basis of its resemblance to the most representative member. This usually leads to systematic overestimations or underestimations in judging the probability of an event.

In the end, as far as the choice is concerned, it is known that it should be based on consistent preferences, multiplied by the likelihood of their occurrence. In actuality, individuals elaborate preferences based on the nature and context of decision, resulting in an inconsistency referred to or related to the axioms. Kahneman and Tversky (1979) still show how chances have a non-linear impact on the decision. Changes (in losses and profits, or in levels of well-being) have an impact and a relevance greater than the stable states of well-being. This significantly affects how one decides in the different contexts of choice. It is sufficient to change the decision-making reference from probability of loss to probability of gain in order to get contradictory responses while maintaining the same end result.

It was unavoidable that these results on the various and progressive stages of the decision led to assumptions of new models of rationality based on the real features of economic action, freed from the interpretative constraints of the numerous 'a priori's' and thus supported by mind theories generated in an empirical way. As Egidi and Rizzello (2004) have already pointed out, the true constraint to a rational decision lies in the need to build the context of the decision. To do this, it is necessary, on the one hand, to guide the search for relevant information, and on the other hand, to

build a mental model that best represents the decision-making context. It is on these two sides that the limitations of unlimited rationality appear, as well as the main assumptions of cognitive critique, which are linked to Simon's insights (1955, 1990): (1) the real constraints of the actor's computing and processing capacities; and (2) the real constraints of the complexity of the environmental structure.

The first of these assumptions can be traced back to the optimization under constraints. Starting from the assumption that the potential information is very large, whereas the resources available to the actors are limited, stop rules should be set up based on which one optimizes the search by calculating the costs and benefits associated with each additional search segment that stops as soon as the costs exceed the benefits. It is difficult to understand the contents of optimization except through arbitrary procedures of exemplification.

The second assumption concerns the aforementioned judgment heuristics, namely, models of limited and empirically constructed rationality. A role is assigned to the unconscious components, and yet the rationality that is derived is intentional. Using, in the analysis of choice, a comparative model with respect to orthodox axioms, one defines as irrational all that deviates from those axioms. But does so without assessing the role of deductive consequences and their success not only in terms of problem solving but also in adaptive responses to the environmental context in which they are generated. In this regard, as Viale (1997) already highlighted, these theories seem to be more interested in the criticism of the axiomatic 'a priori's' of limited rationality than in the elaboration of a theory of independent action.

The most recent assumption is related to Gigerenzer and Todd's (1999) so-called frugal heuristics, which maximize in some respects the goals of the analysis of limited rationality regarding cognitive narrowness and environmental adaptability. After all, heuristics is a mode of judgment that sacrifices formal rigidity and the completeness of an algorithm for the values of simplicity and speed (Kahneman, 2013, p. 109-117).

Keynes and the economic Theory of Convention

The analysis of individual rationality, from a broader perspective, highlights the role of conventions in interactive decisions. Convention, understood as a type of coordination (Dodie,r 1993; Rallet, 1993), has always been the subject of reflections in economics, but has sometimes not been kept at the centre of the debate because economic theory has entrusted the coordination of human behaviour to prices (Stigler, Becker, 1977).

Keynes (1936), in chapter twelve of his *General Theory*, through the analysis of anticipations in uncertainty, highlights the conventional nature of the investment decision. Keynes highlights that there is a convention in the financial markets that can guide investors' anticipations. This convention builds the investment decision, becoming a practice on the financial market; but, at the same time, it produces inefficiency in the economic system, when it leads to a level of interest rate incompatible with full employment (Dostaler, Maris, 2009, p. 77-81).

Moreover, Keynes (1921) says that the state of the forecast depends not only on the probability judgement assigned to the state of affairs, but also on the weight given to the arguments supporting this judgement, since it is necessary to take into account the extreme precariousness of the bases on which we form our evaluations on the expected returns. This precariousness comes from the role of the financial market, which produces much greater profits than those deriving from real investments, since speculation comes into play and it becomes important to understand how evaluations are carried out, conditioned by various factors.

In such a scenario, uncertainty takes on a dual importance: (1) there is a temporal uncertainty that highlights the ignorance of the agents about the factors that govern the return on an investment over the years and that eliminates all hope based on estimates based on objective elements; (2) there is a strategic uncertainty, because the development of stock prices depends on the behaviour of other market operators, therefore the problem of anticipation seems insurmountable to the extent that it appears as a game of cross anticipations that assumes a power of disproportionate reflectivity on the part of speculators (Morselli, 2017b). The valorisation of uncertainty can also be traced in Shackle (1988, p. 164-165), who strongly criticized the mainstream approach, since it does not consider the important role played by time on the way of considering uncertainty.

In such an uncertain framework, how is a correct assessment of the return on investment determined? How do you determine the average market opinion and the idea that your own opinion will be formed based on it? Keynes' answer is based on a convention, which Orlean (1989; 1999) calls a 'financial convention'. This convention is very important, because it allows a certain stability in business, as long as one can rely on the convention given. Convention is presented as an interpretative scenario which intervenes in the evaluations of individuals, participating in the interpretation activity which may lead to a change in the assessment framework, adapting to the state of reliability granted to the forecasts. According to Batifoulier (2001), it is in this context that the changes in speculative behaviour, i.e. in the relevance judgment of the basis of assessment which may lead to its revision or even abandonment, are highlighted. When the constitutive rules are not given, agents are unable to make the calculations that are necessary in the strategic approach. They operate on the basis of a representation of the world in which they are placed, i.e. a conventional basis allowing for collective harmonisation. In fact, it operates as a collective reference, allowing coordinated decisions, and such a reference is arbitrary[7], therefore there is no point in seeking its objective foundations.

Again, taking into account chapter 12 of Keynes' General Theory (1936), it is possible to define the economic meaning of conventions, and in this case the convention is used to explain the decision in the financial markets. Keynes puts aside the concept

[7] Convention means a pact, and more precisely, an arbitrary pact. Convention is a context on which an agreement is reached without obligation. Such an agreement is, of course, influenced by the balance of power, but it is artificiality recognised. Both principles (arbitrariness and artificiality) mark the conventions according to Hume's thought (1739-1896, p. 248-252).

of intuition to give space to the concept of convention, which becomes a central point in the infinite intersection of individual anticipations that confront each other. Convention as a common stabilizing representation – on the basis of this statement, Keynes forms his theory that unemployment is not to be attributed to excessively high wages, but to a high interest rate, whose level results from a convention and not from economic calculations. If Keynesian unemployment is caused by insufficient actual demand, it is assumed that a component of this scenario is given by the investments of entrepreneurs. If the interest rate is high, the investment will be reduced as will the actual demand and the need for labour. However, the interest rate is not directly fixed by the marginal productivity of capital in the long run, but rather by the behaviour of speculators in the financial market who share a belief that the current state of the economy will remain. This convention, the arbitrary nature of which Keynes points out, allows decisions to be taken without doubt for an indefinite period of time, since everyone thinks that the market will always continue with the same trend.

This description of the Keynesian convention shows how the gradual replacement of the notion of rule with that of price has the effect of significantly losing the coordinating role of the market and constitutes a necessary condition for the study of convention.

However, this condition is not sufficient, since it must be followed by a new concept of rationality, with the further shift from substantive to procedural rationality (Simon, 1976; Koumakhow, 2009). Therefore, strategic analysis will be considered, through the revision of the convention in terms of anticipation.

In such a scenario, convention can be defined as a coordination of anticipation according to the thought of Lewis (1969), who provided the necessary basis for the development of the notion of convention applied to the game theory[8]. He states that convention is necessary for rational individuals who seek to address and solve problems related to coordination.

Conventions and coordination between rational individuals

The interest in the analysis of conventions is based on the conviction that they can achieve a form of equilibrium different from the one presented by Walras (1954). This equilibrium is achieved by means of a pricing arrangement which does not alter the distinction between the private and public sectors. The pricing arrangement leaves individual preferences unchanged and does not affect privacy, and even if new prices were to be determined, Walrasian *tatonnement* would act as if the previous equilibrium prices had played no role.

The mechanism of convention, on the other hand, has a permanent effect on the way agents behave by assessing the behaviour of other members of the population. In this case, convention becomes a generalised belief based on the behaviour of the group, making coordination easier. Unlike Walras' equilibrium, conventional equilibrium modifies interaction, because it modifies individuals. According to Orlean (1987), convention is a social mediation that interposes the force of its evidence between the different social actors. This represents a fundamental point, since on the one hand,

[8] For a deeper look into the advantages of the coordination process, see Appendix 1.

it leads us to go over the theme of the rationality of conventions, while on the other hand, it indicates the theme of the social identity of *homo conventionalis*. Convention modifies individuals and their relationships, introducing new elements of a collective and social nature that escape the pure logic of strategic rationality.

According to Sugden (1986), when agents follow a convention, they are guided by something that goes beyond the axioms of rational choice. This something originates from the past experiences of the group that lead to a convention through a long journey of trials, errors and imitations.

According to Lewis (1969), convention is a regularity of behaviour whereby everyone conforms to the behaviour he believes others will adopt. Then, one can be rational even by assuming an arbitrary behaviour, as happens following a convention. Acting on an arbitrary basis is, a priori, acting without a clearly expressed reason, therefore one is tempted to associate arbitrariness with irrationality, with the evidence of being able to discard a scientific analysis of the arbitrary with the excuse that an irrational behaviour cannot be formalized. But Lewis (1969) thought about it, and with his arguments he took advantage of the arbitrary behaviour of rational actors subjected to a problem of coordination.

Convention represents one of the solutions to this type of problem – it is true that it is arbitrary, but it is rational to follow it if everyone does the same, because the objective we try to achieve is to coordinate by adopting the same behaviour as others. Therefore, arbitrariness represents a solution that one does not try to justify by precise arguments, but which is needed to coordinate, therefore it can be rational to act without apparent reasons (Morselli, 2017b).

Lewis had the merit of giving the notion of convention an operational meaning that has allowed its effective application in several fields. One of these concerns the cooperative games linked to the name of Schelling (1958), in which it is possible to identify mutual interests and in which it is necessary to reach an agreement without having the possibility of negotiation. In such games, one thinks that one can get non-antagonistic spaces, and thus, it is necessary to assign roles to imagination and rational logic in these spaces. Schelling seems to rely on creativity, whereas Lewis gives a more important role to rational common knowledge; a role that allows everyone to know that others are rational and will behave accordingly. Common knowledge transfers the power of coordination from the imagination to reality. Thanks to rationality and common knowledge, individuals tacitly know what others will do. In order to coordinate, individuals need to know what others have done in the past; convention is the specific tool for repetitive decisions and uses, whereas the main point of Schelling is a first-time theory. Knowing how others will behave and how they know what my behaviour will be is fundamental to using convention. That is to say, everyone must know that everyone knows how to behave. For both Schelling's and Lewis' convention, it is possible to reach an agreement without the need for prior communication[9]. In a

[9] In this regard, each player seeks clues that the other might think the former will think of, appealing to imagination rather than rationality. Lewis, through a link to this reasoning, presents his concept of tacit

sense, both approaches coordinate anticipations, but the originality of Lewis' approach lies in demonstrating how conventions can solve a problem of coordination between rational individuals (Batifoulier, Merchiers, Urrutiaguer, 2002).

What happens if there is no longer any reliance on the convention?

Keynes (1973, p. 372) makes a clear distinction between risk and uncertainty. In fact, for him, the risk appears when the probabilities can be known and measured, whereas uncertainty is evident when it is not possible to know these probabilities. Keynesian thinking is based on irreducible uncertainty, because knowledge of the future is scarce, and expectations very often derail towards disappointment. Therefore, Keynes refuses to think that market participants have perfect or sufficient knowledge of future events. He considers the calculable future compatible with a considerable amount of stability[10].

The technique for transforming uncertainty into calculable risk is based on the convention that the current situation will continue indefinitely unless there is a specific reason to predict a change in the near future. Indeed, it is assumed that the assessment of the current market is correct in relation to our current knowledge, and that the scenario will undergo a change only in relation to changes in our knowledge. This convention is supported by the practice of observing the long term as a succession of short terms, thus creating the illusion that at any given moment the investor is in possession of all the information available regarding the future price of shares. With the intervention of convention, the investor can encourage himself as a result of the idea that the only risk he faces is a change in the news in the near future. Therefore, for the individual investor the investment becomes sufficiently safe during the individual short terms, and therefore during the entire succession of short terms, if it is possible to count on the absence of an interruption of the convention (Keynes, 1973, p. 152-153).

But what happens if there is no longer any reliance on the convention? The Keynesian convention is therefore incomplete because it is unable to better explain how financial markets operate.

Every consideration about the future is subject to sudden and violent changes as soon as the news changes because the market is affected by optimistic and pessimistic opinions, which are unreasonable but legitimate, where there is no robust basis for a reasonable calculation. Suddenly, operators begin to review their plans and the habit of stability and certainty ends. The new scenario could prescribe a new conventional basis of assessment.

At this stage, a structure should be offered to the uncertainty of the future, allowing a reaction to surprises, as they appear, and widening the horizon of possibilities to

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convention, which concerns a solution to a problem of coordination, in terms of a regularity of behaviour (Dupuy, 1989).

[10] Moreover, Lawson (1985) stated that, in the world of risk, the hypothesis that individuals follow rational decision-making rules is possible, but this hypothesis becomes unconvincing because the parameters are too unstable to quantify the predictions of events that may occur in the future.

which the financial markets are able to react. The production of possibilities should have an orientation, even if the future is unknown, because if there is an orientation, the future is not without a direction (you are aware that the future depends on what you do today and that it can be controlled).

To expect to control uncertainty is an impossible mission, because if it could be controlled it would not exist; in other words, it would be like expecting to give up on the future. This means accepting the instability of the financial system, which, however worrying it may be, cannot be denied. Thus, it is necessary to ask for the capacity to orient such instability in order to avoid being exposed to the turbulence that leads to crisis without any orientation. During the 2007 crisis, external intervention seemed essential, because the market was no longer functioning. Uncertainty, which had managed to stop every action, was to blame since no one knew how to evaluate the prices of securities.

An external institutional intervention is therefore essential, when the market goes into crisis (due to uncertainty) and stops working, in order to change expectations and restore a future horizon. This institutional intervention, however, must not be directed on the market through the purchase of securities, but must instead allow others to buy, so as to act on trust without leaving it to the market to restore trust.

During the 2007 crisis, the first formulation of the Paulson plan (Gaggi, 2009, p. 101-115) provided for the direct acquisition by the State of the toxic or, in any case, illiquid securities that clogged the portfolios of the banks, so as to allow them to resume normal banking activity. The aim was to restore the efficiency of the market so that it could subsequently work independently. The State intervened directly in the market in order to obtain causal control that has an effect. In this instance, this intervention was not successful, since the State became an operator like the others which invests directly in the banks' securities, having the problem of respecting the dynamics of the market and, therefore, of setting a price which does not excessively alter them. In fact, even the remarkable USD 700 billion fund of the Paulson plan, within a global traffic of USD 1400,000 billion in derivatives, did not impress the markets which continued their downward trend insensitively.

Instead, the reaction to the measures designed by Europe was different, and it was subsequently followed by the United States as well (Onado, 2009, p. 91). In this case, the institutions did not intervene directly in the market, but allowed market operators to buy. In this respect, it was decided to intervene on confidence directly, without leaving the market with the difficult task of restoring it. The European Central Bank has introduced a public guarantee for interbank loans; European governments can provide guarantees on new bond issues by banks and even buy them directly, in addition to being able to recapitalise risky banks (Esposito, 2009, p. 245).

It should be noted that in such a scenario, external institutional intervention is more possible than real, since it is not achieved through timely spending of public money, but comes from the use of public money to guarantee investments in the event that it is needed. One can also think of an extreme hypothesis, that is, that the entire operation could have a negligible cost, without the need for rescue

interventions, if it is possible to rebuild confidence immediately after the announcement of the external institutional intervention.

It seems that this type of intervention has worked; in fact, the reaction of the markets to the measures that directly affect confidence has been very efficient, although they have maintained the considerable volatility of those who are not aware in what direction the future will move, but at least think they have one, since the external intervention has guaranteed the conditions for hypothesizing possibilities.

Therefore, when the reliance on the convention is interrupted, external institutional intervention is necessary to impose a new conventional basis, capable of coordinating and orienting the decisions of rational individuals who operate within a market that has ceased to function and is looking for a future horizon. In this context, one calls into question the claim that the price system can be the only form of coordination and orientation of individual actions. The effort to overcome this hypothesis implies the search for other forms of coordination. The function of the convention cannot be terminated, because when it is interrupted it can be reactivated by the interaction between individuals and institutions. In this regard, a review of the *Keynesian Conventional Economy* is proposed, updating it in the *Oriented Conventional Economy*. The latter provides for a new lasting conventional basis, uninterrupted and institutionally supported, which would have a structure oriented towards the uncertainty of the future, and thus widening the horizon of possibilities to which the financial markets are able to react.

Conventional Economy and Institutionalism

According to Veblen (1919) the hypothesis of optimizing rationality is unrealistic, because it is limited by the human brain and the lack of information. The behaviour of individuals is shaped by the interaction between instincts and institutions (Hodgson, 2006), which influence the perception of reality, leading to the formation of preferences. Therefore, preferences are endogenous.

There is a double interaction between individuals and institutions: institutions influence individuals, facilitating choices and shaping goals and desires; and individuals influence institutions, changing habits of thought and social rules, to form new institutions and adapt existing institutions to emerging needs (Morselli, 2018).

Furthermore, according to Commons (1934), the concept of collective action is linked to the definition of an institution. Commons refers to collective actions related to the activities of organizations (trade unions, banks, corporations, lobbies, etc.). These are organised groups which contain conflicts of interest between one another and are in opposition to other groups, while within the groups themselves, the same values, common interests and similar objectives are found. Conflicts are determined by the shortage of resources and the conflicting values that underlie their decisions.

Commons (1932) states that the economy must take three principles as its basic unit of analysis, namely ‘conflict, mutuality and order’. Consequently, it must consider the transaction, since it contains these three principles, and through control and the capacity to govern the economy it is necessary to convey order, mitigate conflicts and achieve mutual gains. Collective actions, through laws, social

habits and organizations, regulate the individual behaviour at the moment of the negotiation of a transaction; for example, when an agent negotiates a contract with another agent, both act in the context of collective actions that determine the choices and, on this path, all the economic relations of the individuals.

It seems essential to accept the conventionalist hypothesis, if we want to build institutions that can solve the complex problems of exchange and at the same time are immune to some incentives that are incompatible with an efficient conduct. Therefore, if all the innovations have not succeeded in creating the necessary conditions to develop efficient markets theorized by the neoclassical theory[11], the answer is to be found either in the conventionalist hypothesis or in a hypothetical legislation that favours the increase of the aggregate income and that obliges those who earn to compensate those who lose with transaction costs that are sufficiently low to turn out advantageous (Morselli, 2018).

However, if individual benefits are achieved through collective compensation, it must be noted that even in the most favourable of institutional systems it is not easy to meet two conditions: 1) the interested parties must have both the information and an interpretative framework suitable for evaluating the final results; and 2) all must have equal access to the decision-making process.

The fact that individuals are obliged to integrate into their strategic decisions variables that depend on the decisions and actions of economic actors who may be at enormous distances means that they are faced with a great deal of uncertainty. This uncertainty concerns the evolution of the structure of the markets, the technology and the variability of the macroeconomic conditions themselves.

Conclusions

We have seen that today's inequality is essentially linked to the sharp increase in the incomes of the very few rich, to the detriment of the rest of the population, which is increasingly slipping into poverty. The nature of this inequality does not fail to have significant consequences for society. The neoclassical statement that inequality supports economic growth because it rewards the worthiest individuals is no longer credible. This is so because the incomes and wealth of the richest people are less and less the result of an increase in economic activity that can benefit the entire economy, and more and more the result of financial speculation and privileges that are a burden on the economy in general.

The idea of liberalist economic thought states that economic inequality is essential to achieve the objectives of economic growth and market efficiency. The Trickle-down theory and the Efficient-market hypothesis, representing the base of the liberalist doctrine, have accelerated the process of financial globalization and increased inequalities. The Trickle-down hypothesis incorporates the Efficient-market

[11] According to North (2006, p. 95), the neoclassical theory gives us an interpretation of how markets work in more developed economies, but it has never been able to explain their evolution. This theory has three limits that need to be overcome in order to understand the process of economic change: no friction, static nature and no consideration of human intentionality.

hypothesis in order to derive an estimate of the benefits produced, and the latter theory highlights how the perfect rationality of investors, operating in efficient financial markets, provides the best estimate of any financial asset.

The financial markets are the best possible guide for the value of economic goods and, therefore, for investment and production decisions. Thus, share prices reproduce the best possible estimate of their future value. However, the financial crisis of 2007 has brought these convictions into question.

The economic system needs signals and guides to function efficiently. Many economists argue that prices describe decision-action guides. It has often been thought that human behaviour was only coordinated by prices, without the need to resort to rules or conventions. Even if we assume that the price system is the only form of coordination, rules are needed to coordinate behaviours. The market, if left to its own devices, is not in a position to operate efficiently, nor are the prices able to ensure their coordinating function without the definition, even minimal, of constitutive rules. At this point, convention comes into play, which means that the existing state of affairs will repeat itself indefinitely, unless there are specific reasons to expect a change.

We have seen convention appear concretely when Keynes (1936) studied the decision-making processes in the financial markets. Faced with an uncertain context, speculators and investors are forced to adopt the only possible behaviour – that of acting as if the past were repeating itself; as if the state of affairs were continuing indefinitely. The conventional assessment of markets represents a pseudo-certainty, coming from the interaction of a mass of ignorant people[12]. That is why earning on the stock exchange means anticipating the change of convention.

The liberalist theory tries to explain the coordination of behaviour through prices, assuming that the rules that underlie the interactions have already been given. Thinking that the rules represent data that is preliminary to the interactions in turn gives the agents unlimited information about its context. It is pointed out that the characteristics of the situation, and at the same time the rules that frame the interactions, are not learned at a given time, therefore, in order to be able to act and

[12] If for the classical economists the market is the meeting place of the *homo oeconomicus*, endowed with fixed preferences from which the curves of supply and demand emerge, for Keynes it does not result from the interaction of autonomous individuals – it is a collective subject in itself. It is the blind, sheepish, ignorant crowd, panicked and sensitive to all the movements it causes. Keynes imagines a continuously unstable system, devoid of balance, in which everyone strives to discover how the average opinion is made, what he calls the 'market crowd'. Therefore, it is important to guess what others think, and the most skilled in the game will guess it at the third or fourth degree of mutual predictions: I know what others will do, but the others know what the others and I will do, so I know knowing what the others know, knowing that I know, and so on and on. A specular game from which speculation arises. Aware that our individual judgment is worth nothing, we try to conform to the judgment of the rest of the world, which is perhaps better informed. The Keynesian individual abandons his ideal in exchange for the ideal of the crowd: 'better to be wrong with the crowd than to be right against it'. So, one sets the price of a stock exchange stock or the interest rate, i.e. trying to guess the direction of the crowd while we are lost in the midst of that same crowd. All this is the stock market, a meeting of average opinions, of camouflage and self-referential mechanisms, that is to say the 'market crowd' (Dostaler, Maris, 2009, p. 77-79).

coordinate with other individuals it is essential to know the context in which one operates. This understanding is built up through the interpretation of the situation, that is, through the collection of information and the observation of the actions of others. The interest in the formation of the representations that each one produces (about the context in which one operates), leads to highlight a characteristic of individual rationality different from the traditional one, that is, the ability that individuals have to interpret their reference environment.

And that is when convention appears in its formulation as a constitutive framework. In fact, it concerns a rule that acts at a logical level above behaviours, thus participating in their institution. Convention represents a collective reference that is expressed through collective behaviour and intervenes in the assessments made by individuals, allowing coordinated decisions. This convention is very important, because it allows a certain stability in business, as long as one can rely on the convention given. However, this stability of the convention can be interrupted, so a new conventional basis of assessment is needed in order to provide the uncertainty of the future with a new structure, where financial markets can react. An external institutional intervention is therefore desirable when the market stops working, due to uncertainty, in order to change expectations and restore a future horizon. The objective must be to rebuild the convention, after its interruption, through the interaction between individuals and institutions. A new orientation must be indicated, which is structurally lasting and institutionally supported by taking a step forward, updating the Keynesian Conventional Economy into the Oriented Conventional Economy.

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Appendix 1

The advantages of the coordination process

The analysis of the benefits of a process of economic policy coordination is rooted in time, starting with the work of Hamade (1976).

The simplest case is represented by the coordination between two countries, where it is possible to record two essential results: the non-cooperative equilibrium point (Nash equilibrium) and the cooperative equilibrium point (Pareto-optimal).

The non-cooperative equilibrium point leads to a less favourable result for both countries than the co-operative equilibrium point. Therefore, the advantage for both countries to seek a cooperative solution in the context of Pareto-optimal solutions is clear, provided that the advantages of cooperation can be shared fairly.

The application of the general theories of economic policy coordination to cases of fiscal policy has been the subject of several macroeconomic models. To name but a few, we recall those of Bensaid and Gravel (1993); Bryson (1994); and Muet (1998).

In this analysis we consider a simplified version of the Muet model (of the Mundell-Fleming type) which studies the situation of two countries in a monetary union. If we go on to examine the fiscal aspects, a choice is made between unemployment (and production) and budget balance, which allows each country to determine its own fiscal policy. The model is log-linearized on a logarithmic scale and the variables represent the deviation from a reference situation. The following definitions are used: g stands for public expenditure (fiscal policy tool); q stands for gross domestic product; s stands for budget balance; zq and z stand for the impact of supply and demand shocks on q and s.

The collective utility functions of each country U and U^* are written, as follows:

(1) $$U = -½\left(q^2 + w^\circ s^2\right)$$

(2) $$U^* = -½\left(q^{*2} + w^\circ s^{*2}\right)$$

The reduced form of the IS-LM model in an open economy is represented by the following equations, remembering that (3) and (5) concern one country and (4) and (6) concern the other country:

(3) $$q = ag + bg^* + zq$$

(4) $$q^* = ag^* + bg + zq^*$$

(5) $$s = cg + dg^* + z$$

(6) $$s^* = cg^* + dg + z^*$$

The parameters a, b, c, d have the following sign; a is positive; b has an uncertain sign but with a value lower than a in absolute value, which means that the fiscal policy of the other country has a lower impact than the national policy; c is negative for the budget balance target; d has a partially uncertain sign, reflecting the impact of the policy on the public expenditure of the other country.

The *non-cooperative Nash equilibrium* is determined by the following equations:

(7) $$\partial U / \partial g = -(a \cdot q + w^{\circ} \cdot c \cdot s) = 0$$

from which $q = -w^{\circ} \cdot (c / as)$

(8) $$\partial U^{*} / \partial g^{*} = -(a \cdot q^{*} + w^{\circ} \cdot c \cdot s^{*}) = 0$$

from which $q^{*} = -w^{\circ} \cdot (c / as^{*})$

This equilibrium is insufficient since the crossed derivatives to the Nash equilibrium are non-zero. A change in the budgetary policy of one country could, therefore, improve the collective usefulness of the other since:

(9) $$\partial U / \partial g^{*} = q / c \cdot (ad - bc)$$

(10) $$\partial U^{*} / \partial g = q^{*} / c \cdot (ad - bc)$$

Considering the uncertainty that weighs on the sign of b, the general result on the effects of a fiscal policy can theoretically be indeterminate; however, it is acceptable that the Nash equilibrium reflects a borderline case, which does not correspond to the usual interdependence that exists between two countries in a monetary union.

The more in-depth study of the choice between unemployment and budget balance leads to reduced forms, such as:

(11) $$s = cg + dg^{*} + z$$

and

(12) $$s^{*} = cg^{*} + dg + z^{*}$$

An analysis of the possible solutions of choice leads to two important results: in the case of a symmetric depressive shock, which affects both supply and demand, each country has an interest in a relaunch from the other country, since this relaunch simultaneously reduces both unemployment and its budget deficit; in the case of an asymmetric depressive shock, which affects demand, the effect is depressive in both countries, since the transmission of shocks is positive.

Therefore, these results highlight the benefits of a process of coordination of fiscal policies. Moreover, the coordination of fiscal policies is only one aspect of the necessary over-coordination that must take place between monetary policy and fiscal policy, within the framework of a monetary union.

The positive effects of the coordination process can also be traced during the financial crisis that has affected the global economy since 2007 (Caballero and Krishnamurthy, 2009). Governments and central banks have succeeded in restoring confidence in the financial markets and the banking system through effective international coordination so as to avoid systemic paralysis. The crisis has highlighted a considerable capacity for coordination on the part of individual countries in rapidly adopting shared decisions to deal with the emergency. Although, in the case of Europe, and the Eurozone countries in particular, monetary and budgetary policy decisions still take a long time, as the structures of the Member States of the European Union differ widely in terms of imbalances in the balance of payments and the level of public debt.

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