

Institutions in the economy and some institutions of contemporary mainstream economics: from the late 1970s to the 2008 financial and economic crisis

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The relations between economics and the economy have attracted a great deal of interest, especially since 2008, when the great recession began. The study of these relations can benefit from an institutional perspective. Institutions are understood here as socially shared systems of rules of behavior or of thought. Since the 1970s, economists have written a great deal on institutions. In other words, institutions have (again) become a popular subject *in* economics. Much less explored are the institutions *of* economics and how they relate to institutions in the economy.

This is the subject matter of a larger research project of which the present paper is the third installment. The first two installments dealt with the discipline of economics itself, initially suggesting an institutional approach to economics from a theoretical viewpoint (Dequech 2014) and then applying this approach to examine some social norms and conventions of contemporary mainstream economics, with a focus on the United States from the late 1970s to 2008 and on mainstream economics in general, as well as on the mainstream segment of two subdisciplines, namely, macroeconomics and financial economics (Dequech 2016). The present paper extends this institutional framework to investigate the relations between institutions in the economy and those institutions of contemporary mainstream economics, macroeconomics and financial economics, again focusing on the United States between the late 1970s and 2008.

The institutional approach proposed here helps us understand how some systems of mental and behavioral rules are socially shared among economic agents and policymakers in part because they are socially shared among academic economics, as well as how they may exert on economic agents and policymakers some of the same types of influence that they have on economists. On the other hand, this approach points out some important limits to the influence of the institutions of economics outside academia and shows how the institutions in the economy also influence the institutions of economics, thus characterizing a recursive interaction between them.

Mainstream economics is defined in terms of prestige and influence within academia. More precisely, 'mainstream economics is that which is taught in the most prestigious universities and colleges, gets published in the most prestigious journals, receives funds from the most important research foundations, and wins the most prestigious awards' (Dequech, 2007: 281).

Several shared rules of thought of contemporary mainstream economics and of those two subdisciplines will be mentioned below, but the arguments that these rules are institutions and, more specifically, social norms and conventions will be taken as given here (see Dequech 2016). Otherwise the present paper would be too long.

The paper is organized as follows. The first section after this introduction contains some theoretical remarks on the relation between the institutions of economics and institutions in the economy, while the next three sections examine this relation in a concrete setting, namely the three pre-2008 decades in the United States, highlighting issues related to the financial and macroeconomic crisis. Section 2 deals with the economy and mainstream economics in general; section 3 considers the financial sector and mainstream financial economics; section 4 discusses the macroeconomy and mainstream macroeconomics. Concluding remarks follow.

1. Institutions in the economy and the institutions of economics: some theoretical remarks

The relation between economics and the economy is one of recursive interaction between them. Let us then consider how the institutions of economics may impact institutions in the economy, before commenting on how influence may flow in the other direction as well, that is, from the economy (or the external reality, more broadly) to economics.

Economic agents and policymakers are exposed to the influence of economics through several different channels: (a) academic learning of economics; (b) non-academic (or informal) learning, that is, the use of teaching instruments (whether in academic format or not) by people outside academia who are interested in learning economics; (c) the participation of economists either directly as policymakers themselves or indirectly as advisors to policymakers, in State or multilateral organizations; (d) the work of economists as partners, directors, board members, employees or consultants in private organizations, such as firms, trade associations and think tanks; (e) the presence of economists in the news media; (f) the presence of economists in courts of law, as expert witnesses; and (g) networks of interpersonal relations.

There may be systems of rules of thought and of behavior that are socially shared by economic agents and policymakers at least in part because they are socially shared by economists. The specific explanations for social sharing and conformity among economic agents and policymakers may be similar to some of those which apply when dealing with academic economists. At least five such explanations seem to be relevant.

First, a very important factor is *epistemic legitimacy*, in the sense of a socially recognized appearance of compatibility with specific socially accepted epistemic values. Economists are specialists with several years of training. In addition, the ideas of mainstream economics, in particular, have prestige and influence (including a large number of followers) in academia, especially when defended by economists employed by top-ranking universities. In principle, this gives them an advantage in terms of the ability to influence people outside academia (although this ability will vary with the specific idea to be imported from academia and the external circumstances). It is therefore understandable if many economic agents and policymakers share the belief that the mental models of mainstream economists are well-founded (or at least have less fragile grounds than those of other economists and those of non-specialists).¹

Second, in a few cases, these models or aspects thereof may even appear to be the *natural or inevitable* way of thinking about the economy.

In these two explanations, the institutional rules of thought in economics – and especially in mainstream economics – may thus be considered epistemically legitimate or natural *in the eyes of several economic agents or policymakers adopting them*.

Third, individuals in the private sector or in government may also be concerned with the possibility of *social sanctions* and with the accountability of their acts. If so, they may find some ideas from economics appealing because these ideas look legitimate *in the eyes of others*. This makes it easier to justify one's decisions, especially if they yield bad results, and avoids the sanctions that could occur if one adopted unconventional ideas. Here again mainstream economics has an advantage over its non-mainstream counterparts, for the same reason as before, namely, generally higher chances of looking legitimate in the eyes of many individuals.

¹ For Campbell (1998: 390), prestigious academic ideas have an advantage when it comes to influencing what he calls paradigms, 'broad cognitive constraints on the range of solutions that actors perceive and deem useful for solving problems,' as distinct from 'programs,' which are 'precise, concrete, and policy-specific courses of action articulated consciously by policy makers and experts' (p. 390).

Fourth, it is also possible for people outside academia to expect some benefit from *coordinating with others*, especially if they believe that the opinion of others tends to become a self-fulfilling prophecy. In some cases, this may lead them to adopt an institutional rule that they expect that others, because of the influence of economics, will adopt. Possible examples may include rules that guide the formation of expectations about economic growth, inflation, interest rates, etc. Once more, its academic prestige and influence may give mainstream economics a head start in the competition to affect the real world. On the other hand, there exist powerful limits to the ability of mainstream economics to shape reality in its own image, and this is also true when the issue is the possibility of academic ideas becoming self-fulfilling prophecies. This possibility has to be carefully examined with regard to the specificities of each case.

A fifth factor is the possibility of *informational differences*, so that economic agents and policymakers may follow academic economists because the latter may have more information, which is costly to collect.

The institutions of economics may exert on economic agents and policymakers at least some of the same kinds of influence that they have on academic economists. The primary or most direct type is the *cognitive* influence. More specifically, the institutions of economics may exert a *profound cognitive influence*. Economic agents and policymakers select, organize, and interpret information through mental models that economics may provide or partly mold. These models are not necessarily mathematical and have various degrees of precision and generality.

The institutions of economics may also influence people outside academia in *motivational* terms, especially in a *profound* sense, regarding the values that individuals uphold, the objectives they pursue and the obligations they must fulfill. This includes an influence on the ideology of economic agents and policymakers.

Moreover, the institutions of economics are able to make the models of private agents and policymakers more epistemically legitimate. They may also give moral and political legitimacy to people's ideas and practices. All this is part of the *legitimizing* influence of the institutions of economics. Economics is not always the original source of economic ideas outside academia (which is often difficult to pinpoint), but it affects their legitimacy and diffusion.

The possible influence of economics must not, however, be overestimated. In particular, economists must avoid the mistake of assuming that private agents (or policymakers) think like them – the fallacy of intellectual similarity, as one may call it.² Considerable similarity, even if not coincidence of models, is implied by the rational expectations hypothesis. It attributes to all economic agents expectations that are derived from, or at least consistent with, the correct model of the economy, which the economist adopting the hypothesis supposes is his own model. Economists of many different persuasions, however, may commit the fallacy of intellectual similarity. In reality, academic economists themselves do not agree on the right model, even within the mainstream of the profession. In general, one should not expect the agents' forecasts to be consistent with a single model, even if mainstream economics exerted an exceptionally strong profound cognitive influence on them.

Not only are there factors other than economics that affect people outside academia, but also economics itself is influenced by the external reality. Two sets of aspects may be highlighted in this regard. First, empirical events may affect the economists' ideas, at least in the sense that some special phenomena may contribute to changing the balance of opinion in economics.

² There is some resemblance between my argument and Pierre Bourdieu's discussion of the 'scholastic fallacy' (Bourdieu and Wacquant, 1992: 70). Unsure of how far the resemblance goes, I have decided not to use the same expression.

Second, people develop values, ideas, and interests before becoming academics, and they continue being exposed to the motivational and cognitive influence of external institutions while in academia. The external ideological climate may influence academic economists. In addition, there are factors outside academia that may appeal to their perceived interests. One of them is funding, whether those interests be purely academic or economic. Funding may affect the direction and content of academic activities. It may lead people to defend ideas that they would not have at all or would not defend without it. Funding also improves the conditions for the development and diffusion of some ideas, in comparison with others. Private funding depends not only on the economic resources of private agents, but also on the perceived interests of these agents, on how legislation taxes inheritance and gives fiscal incentives for donations, and on norms of philanthropy. Public funding for academic activities also depends on economic factors, such as the government budgetary rules, the sources of public expenditures, and how they are affected by the level of economic activity. The other factor that may appeal to the interests of academics is the possibility of getting jobs and consulting opportunities (in the private sector, the government, or multilateral organizations), as well as partnerships. This possibility depends on whether the economists' ideas are seen by agents outside academia as compatible with their own ideas and interests (see also Zingales 2014: 131, in whose opinion academic economists discuss the capture of regulators by vested interests, but wrongly neglect or dismiss the possibility of capture in their own case).

Interests – of academics, private agents or policymakers – appear more than once in this discussion. The notion of interests is, however, much more complex than is often suggested. Interests are not intrinsic to an individual or even to a social position. Interests are a mix of objectives and ideas. They are *perceived* interests. Generic objectives can indeed be established with reference to a specific social position in combination with a specific institutional logic, for example, a financial investor guided by the market logic (Dequech 2013b). An individual occupies, however, more than one social position (Lawson 2003: 58-59) and may be guided by one of various institutional logics or mixes thereof. This requires ideas about which objective or which set of (possibly conflicting) objectives should be pursued and whether this conflicts with one's obligations. Moreover, turning generic objectives – such as pecuniary gain – into more specific objectives also requires ideas. When dealing with instrumental actions, neoclassical economics assumes maximization of utility or some other variable as the specific objective, but this neglects important issues. First, in many real-life situations, fundamental uncertainty and, in particular, the possibility of innovation imply that there is not a maximum 'out there' waiting to be discovered. Second, procedural uncertainty also prevents maximization.³ In contrast to what is usual in neoclassical economics, the decision situation is not given to the individuals involved (as Herbert Simon and others point out); it has to be constructed in each one of their minds. Third, people need to think about short-term and long-term objectives, as well as the possible trade-offs between them. Fourth, ideas about feasibility may lead people to reconsider their objectives (as recognized by authors discussing moving aspiration levels or adaptive preferences). This includes ideas about one's past experiences and about the future reactions of

³ Fundamental uncertainty is the lack of knowledge resulting from the possibility of nonpredetermined structural changes. Procedural uncertainty results from the contrast between the complexity of the situation and the agents' limited mental and computational capabilities. For a discussion of these and other types of uncertainty, see Dequech (2011).

other people to one's actions. In sum, interests are not determined independently of ideas, but depend on how people think about both their positions and objectives.⁴

For example, the interests of private agents were mentioned above when considering the fact that these agents often provide academics with (a) funding for economic research and teaching in economics departments, business schools, and law schools and (b) job, consulting, and partnership opportunities. The generic objective of private agents does not by itself dictate the kind of economics that they should support. Admittedly, profit-seeking businessmen – when acting strictly as such – do not wish to support an economic approach that defends the abolition of capitalism,⁵ but it is not intrinsic to their social position and to the market logic that they all should promote, say, free-market economics. It all depends on the ideas underlying their conception of their interests, even if their interests are conceived of selfishly. In turn, their conception of interest and thus their attitude toward academics may be affected by conventions and social norms that guide their thinking.

As the previous paragraphs show, the influence of external reality on economics flows from, among other sources, many institutions in the economy. The latter include not only organizations, but also several formal and informal behavioral rules, as well as mental models.

In turn, these institutions in the economy may in part reflect a previous influence of the institutions of economics on the cognition and motivation of private agents and policymakers. This would mean, for example, that the perceived interests of private agents may have been partly molded by economics. In this process of mutual influence between economics and the economy, it is often impossible to locate exactly the initial point of origin from which a specific case of influence has sprung. This is why it is appropriate to speak of a relation of recursive interaction between (the institutions of) economics and (institutions in the) economy.

2. Institutions in the economy and some institutions of contemporary mainstream economics

We can now consider some important aspects of the relation between the institutions of contemporary mainstream economics and institutions in the post-1975 economy, particularly in the United States. Special attention will be paid to issues related to the recent financial and macroeconomic crisis. The first set of comments concerns mainstream economics and the economy in general, before a more detailed discussion of finance and the macroeconomy in relation to the mainstream subset of the corresponding subdisciplines.

(a) The rule of mathematical formalization and the perception of uncertainty

At the top of the list of possibly unifying traits of contemporary mainstream economics lies the rule that prescribes the use of mathematical models, if one wants to be rigorous. Economic agents and policymakers may use mathematical models originated in academia for different

⁴ Positions are associated not only to objectives, but also to obligations. The notion of identity, as I understand it, is particularly relevant in the case of duty-bound, non-instrumental action, guided by what March and Olsen (1989) call the logic of appropriateness, while I see interested action as instrumental, guided by the logic of consequences (although March and Olsen do not always clearly separate the logic of appropriateness from goal-seeking behavior, as discussed in Dequech, 2013a: 106-107). Curiously, Campbell (2002: 24, 33-34) refers to research on the influence of identities on how actors define their interests. Campbell (p. 24) considers the distinction between these two logics, but does not elaborate on whether and how one should conceptualize interests so as to make them pertinent to the logic of appropriateness. For other discussions of how interests depend on ideas, see Blyth (2002, chapter 2) and Rodrik (2014).

⁵ In contrast, Friedrich Engels acted as a profit-seeking businessman in order to have an income large enough to support Karl Marx and promote the communist cause.

reasons. They may genuinely believe that mainstream models are rigorous because of the use of mathematics, in which case a core institution of contemporary mainstream economics will have influenced their epistemic values and their cognition.⁶ In addition, both these people and those who perceive serious limitations in these models – and perhaps want to pass on the impression that they know more than they actually do – may believe that others will be impressed by their use of mathematical models (especially if the models' mainstream pedigree is known), in which case the legitimating influence of mainstream economics is highlighted.

Just like mainstream economists have neglected some types of uncertainty that have been less suitable to mathematical formalization, economic agents and policymakers may make the same mistake, under the influence of the institutions of mainstream economics. As argued in Dequech (1999: 422), uncertainty perception depends on knowledge, which in turn 'is conditioned by the social context in which it is produced. One's theory of economic reality is ... crucial for one's assessment of uncertainty. ... Uncertainty perception may ... be negatively affected by the existence of economic theories that neglect fundamental uncertainty [and, to a lesser degree, procedural uncertainty]. An important point in this regard is that economists influence how non-economists see reality. ... The mainstream view in academic economics ... is considered a form of knowledge, supported by the prestige of the universities in which it is taught and of the journals in which it is published. Some decision-makers may adopt this view, by, for example, studying economics or business, hiring as employees and consultants people who have been trained in the mainstream, and so on.'

Blocking or reducing the *perception* of some types of uncertainty is not, however, the same as actually eliminating, or reducing the degrees of, these types of uncertainty. In this latter sense, mainstream economics has not been able to mould reality in its own image.⁷

Moreover, the influence of mainstream economics on the perception of some types of uncertainty outside academia has its limits and may be weakened or destroyed. This is even more so in times of crisis, as awareness of uncertainty increases and confidence is reduced or lost. As Dow (2015: 38) notes, however, fundamental uncertainty (together with the procedural type, one might add) is relevant not only during crises, and 'periods of economic stability in fact owe much to the mechanisms that have evolved over time to address uncertainty.'

Dow adds that 'mainstream theory encouraged inattention to the way institutions and conventions had previously evolved to promote confidence in money, and financial stability more generally, thus reducing uncertainty' (2015: 43).

(b) Ideology and the role of the State in the economy

The institutions of economics may exert different types of influence on people's ideology, particularly on the views that policymakers and private agents hold of the role of the State in the economy.

Although mainstream economics in the period under consideration was not unified around a single ideology, the acceptance of rules of thought in favor of free markets greatly increased between the late 1970s and 2008. Something similar happened among both policymakers and the public, in part due to the cognitive, motivational, and legitimating influence of the institutions of

⁶ While the focus here is on mainstream economics, there also exist many non-mainstream mathematical models.

⁷ This is contrary to Callon's (1998) radical version of the performativity thesis, concerning neoclassical economics (an important subset of contemporary mainstream economics).

mainstream economics. Some important examples regarding financial and macroeconomic issues are given below.⁸

On the other hand, the greater acceptance of these ideas in academia itself has also reflected external factors. One of them was stagflation, which seriously injured the previously dominant neoclassical synthesis.⁹ Another important element has been the provision of funding to academic activities of free-market economics, by various organizations (the following statements are based on several texts: Blyth 2002, chapter 6; Backhouse 2005; Rodgers 2011, chapter 2; Mirowski 2013; Fourcade 2009; Fourcade and Khurana 2013). The Mont Pelèrin Society dates back to 1947, when it was founded under Friedrich Hayek's leadership and with the participation of several academic economists and other intellectuals. According to Backhouse (2005), the Mont Pelèrin Society did not sponsor academic research, nor studies on economic policy, but it served as a network – and it still does. Among the funding providers for free-market economics there were or are the Volcker Fund (dissolved in 1962) and the Earhart, Scaife, Olin, Bradley, Coors, and Walgreen Foundations. There are also several individuals and companies. In academia, the beneficiaries of these funds are departments, schools, and research centers. At the University of Chicago, the main academic stronghold of free-market economics, this has happened in at least three units: the Department of Economics; the Law School; and the Graduate School of Business. Some think tanks are also research centers, like the Hoover Institution, at Stanford, and the Mercatus Center (formerly the Center for the Study of Market Processes), at George Mason University.¹⁰ The provision of private funding by several businesspeople is an attempt to promote their interests, but, as argued above, their choice of free-market economics is not inevitable; nor is it necessarily unanimous. It depends, in particular, on socially shared mental models that guide these people's conceptions of their interests and on how widespread among them these models are.¹¹ In addition, as shown below, there have been pecuniary incentives in the form of jobs, consulting, etc. Finally, the change in the external ideological climate probably also affected economics, as it was affected by economics.

⁸ Campbell (1998) points out the influence of mainstream economics on the 'paradigms' employed by actors in the 1970s and 1980s, but seems to have a narrower conception of neoclassical economics than I do, associating this school of thought more strongly with free market ideas and less with the kind of Keynesianism that prevailed in the 1950s and the 1960s, while I see neoclassical economics as compatible with both.

⁹ Post Keynesians like Paul Davidson have complained that the neoclassical synthesis made itself vulnerable by focusing on aggregate demand and later adding the Phillips curve as an afterthought to deal with the supply side, instead of following Keynes and building models of both aggregate supply and demand, as the precursors of Post Keynesian economics, like Lorie Tarshis, Sidney Weintraub and others, were doing at the time.

¹⁰ On the other hand, according to Backhouse (2005: 381), '[f]unding to liberal causes has been as large, if not larger, but it has been less narrowly focused on achieving specific goals.'

¹¹ Palley (2012: 7, 13) seems to establish a more direct causal relationship, from interests to ideas, stating that 'the policy adopted reflects the economic views of the winners, and those views in turn reflect the economic interests of the winners. ... [Neoliberal] thinking, supported by the economic and political interests that benefited from it, pushed a remaking of economic policy.' When pointing out the interaction between power and wealth, on the one hand, and ideas, on the other, Palley (2012: 205-207) endorses the Marxian proposition that the ruling ideas are the ideas of 'the ruling class.' The combination of these arguments runs the risk of implying that (a) the individuals of 'the ruling class' have all the same interests, determined by their social position and independent of ideas, and (b) these interests inevitably lead them to favor neoliberalism.

3. Finance and mainstream financial economics

The institutions of mainstream financial economics have played an important role in shaping institutions in financial markets in the pre-2008 decades.¹² At least three interrelated aspects of this process must be considered.

The first aspect is the introduction and diffusion of financial innovations. In financial markets, like elsewhere, innovations need to be seen as legitimate. In financial economics, there has been a prevalent rule of thought according to which the creation of appropriate new derivatives reduces uncertainty and thus improves welfare. In the words of David Colander et al. (2009: 252-253), ‘mathematical portfolio and risk-management models have been the academic backbone of the tremendous increase of trading volume and diversification of instruments in financial markets’. Philip Mirowski (2013: 181) maintains that modern financial theory – with Chicago as its ‘prime initial incubator’ – ‘provided direct intellectual inspiration and justification for most of the so-called innovations in financial derivatives and automated equity trading of the last three decades’ (see also p. 178). When translated into the framework proposed here, this illustrates the cognitive and legitimating influence of the institutions of economics.

Donald MacKenzie (2006: 252) explicitly points out ‘the legitimacy role of economics in regard to the development of derivatives markets’ (also pp. 147-150). This includes moral and political legitimacy.¹³ MacKenzie also discusses how option theory, in particular, guided many actors in their thinking about options markets, regarding not only the legitimacy of these markets, but also the way in which the markets work and how agents should act in them.¹⁴ This in turn may have been supported by the epistemic legitimacy of the Black-Scholes-Merton model within financial economics, but MacKenzie also points out other factors. One of them was the model’s public availability, which resulted from its academic character. Competing approaches existed, but ‘there was a temptation not to disclose the details of a model. ... Keeping the details private may have been perfectly sensible for those who hoped to make money from their models, but it was a barrier to the adoption of those models by others’ (2006: 163). One could add that the model’s diffusion probably reinforced the moral and political legitimacy of the options markets, as it exposed more people to the views of respected financial economists.¹⁵

Among the financial innovations that had serious negative consequences are, of course, those related to mortgage securitization and the subprime crisis. The existence and weight of other new financial products, as part of a larger process of financialization, helped amplify the extension

¹² For Jovanovic (2009: 3), ‘the daily working of financial markets rests more and more on the concepts, theories or models originated’ in financial economics (my translation).

¹³ ‘[A]s recently as 1970 markets in financial derivatives were either non-existent or (by today’s standards) small-scale, and many current financial derivatives were illegal. Derivatives were haunted by the impression, held not only by lay people but by many market regulators, that they were simply wagers on the movement of prices. This was not merely a general obstacle to the development of derivatives markets. The way in which the legal distinction between gambling and legitimate futures trading had been drawn in the United States made cash-settled derivatives contracts illegal, and until the 1980s this blocked the emergence of stock-index derivatives such as index futures and index options. Economists [...] helped make the Chicago financial derivatives markets possible by providing initial legitimacy. Black, Scholes, and Merton provided the capstone, decisively undermining the regulatory view that derivatives were morally dubious instruments of gambling’ (MacKenzie 2006: 252).

¹⁴ MacKenzie (2006: 249-250) also notes some flow of influence from markets to financial theory, although his book focuses on the other direction.

¹⁵ Pozner, Stimmler and Hirsch (2010) discuss how the financial sector had to struggle to regulate itself and thus make its activities legitimate from the legal point of view. The implication is that the morally and politically legitimating support of mainstream financial economics was not enough by itself.

and the intensity of the financial crisis (including a banking crisis), as well as its transformation into a global economic disaster.

The second noteworthy aspect is a specific manifestation, in financial markets, of the influence of mainstream economics on uncertainty perception outside academia. This influence occurs through the mathematical or non-mathematical models that people use to interpret reality. It is noticeable in socially shared models of portfolio choice, asset pricing, and risk assessment that have been developed in, or strongly marked by, economics. Particularly relevant – and conspicuous by their failure – in the context of the recent crisis were models of risk assessment.¹⁶ Among specific examples one can mention Value at Risk (VaR)¹⁷ and the copula method applied to default correlation.¹⁸

The cognitive influence of the institutions of mainstream economics has negatively affected the perception of both fundamental and procedural uncertainty in financial markets. As a result, confidence – which, as suggested in Dequech (1999), can be treated as the willingness to use expectations as a guide to practical action and thus depends on uncertainty perception and uncertainty aversion – has been unduly inflated. In turn, exaggerated confidence implies insufficient precaution.

Risk assessment is closely related to financial innovations when the object of risk assessment is a new asset. Moreover, the very possibility of innovations – financial and otherwise – and other types of nonpredetermined structural change creates fundamental uncertainty and makes the past and the present much less reliable guides to the future than mainstream economics assumes them to be. This problem is compounded by the existence of procedural uncertainty regarding not only the future of the economy, but also the nature of the assets themselves, as very complex assets have been created. As an example of exaggerated confidence, the biggest issuers and packagers of mortgage-backed securities (MBS) in the U.S. retained a significant portion of these assets, according to Fligstein and Goldstein (2010: 57-58) – and got into trouble because of this.¹⁹

In financial markets, like other markets, institutions are indispensable to help define not only the objects that can or cannot be bought and sold (as discussed above in reference to the required legitimacy of financial product innovations), but also the quality of these objects. Shared mental models of risk assessment are part of this process. So are credit rating agencies, organizations

¹⁶ Fukuyama and Colby (2009) state, without elaborating, that '[m]any economists and business school finance professors went to work for investment banks and hedge funds, helping them to devise the complex models that, in retrospect, have proven so inadequate in predicting risk.'

¹⁷ Among the earlier developers of VaR was, for instance, Kenneth Bargade (PhD in economics, Princeton, 1975), when he worked at Bankers Trust. For a critique of VaR, see Crotty (2009).

¹⁸ According to MacKenzie and Spears (2013), one of the originators of this method was Oldrich Vasicek, who had learned of the Black-Scholes-Merton model while working at Wells Fargo, where Black and Scholes were consultants. The method later evolved and spread through a 2000 article published by David Li in the *Journal of Fixed Income*, which has some distinguished financial economists in its editorial board. Although Li has a Ph.D. in statistics and his contribution owes much to actuarial science, he also has a master's degree in economics and was aware of Vasicek's work. MacKenzie (2011: 1802-1804) describes how the credit rating agencies were led to abandon the relative simple procedures they used until the 1980s, in favor of more complex models that were initially adopted elsewhere and often used option theory.

¹⁹ Nelson and Katzenstein (2014: 370, n. 70) also note this fact, interpreting it in terms of excessive risk taking, which is similar to exaggerated confidence. The argument that confidence depends on both uncertainty perception and uncertainty aversion and the present discussion of the influence of mainstream economics on uncertainty perception mean that there is an institutional factor behind excessive risk taking. Hence the latter may not be so 'accurately captured by the rationalist optic' of mainstream economics as Nelson and Katzenstein suggest (p. 370).

supposedly in charge of reducing uncertainty about the quality of several financial assets. They provide certificates of quality, and have a legal authorization to do so.²⁰ However, when they adopt models of risk assessment that neglect strong types of uncertainty that are important in reality, they mask this uncertainty and prevent the people who rely on their evaluations from adequately perceiving it.

The influence of mainstream economics inside the credit rating agencies varies with the extent that they (1) employ, consult with, or are run by, many economists (or other professionals) with a mainstream background²¹ and/or (2) use models and methods whose development and diffusion has been influenced by mainstream economics. In addition, their analysts may also follow, or be reassured by, the opinions expressed by mainstream economists in academic and non-academic settings (see the references below to Orléan 2009).

Credit rating agencies played a pivotal role in the process that led to the subprime crisis and the ensuing global economic and financial crisis. In the words of Stiglitz (2010: 7), ‘the mortgage companies could not have done their mischief without being aided and abetted by the banks and rating agencies. The banks bought the mortgages and repackaged them, selling them on to unwary investors. U.S. banks and financial institutions had boasted about their clever new investment instruments. They had created new products which, while touted as instruments for managing risk, were so dangerous that they threatened to bring down the U.S. financial system. The rating agencies, which should have checked the growth of these toxic instruments, instead gave them a seal of approval.’

André Orléan (2009: 36-41) notices that, before the crisis, statements by Alan Greenspan and later by Ben Bernanke, reports by the Fed, the BIS, the IMF and the ECB, as well as several academic studies, had denied the occurrence of an exaggerated growth in real estate prices. For Orléan (2009: 48), the rating agencies ‘have done nothing but to conform themselves to the beliefs of their milieu, retransmitted by the most eminent voices. Other rating agencies would have done the same or, if they had behaved differently, would have lost their clients’ (my translation). Orléan (2009: 47-48) goes as far as stating that the incapacity to anticipate the subprime crisis did not result from ‘mistakes’ made by the rating agencies. This may be right in the sense that the agencies correctly pursued their short-term pecuniary objectives, given their incentives and the lack of supervision by the government (whether this will be in their long-run interest depends on the reactions to their possible failures. In principle, they could suffer reputational sanctions and formal penalties, perhaps even the loss of their legal permission to issue ratings). Even if some individuals inside these agencies had a greater perception of uncertainty than their formal models implied, they may not have had the proper incentives to admit the true extent of their own ignorance and the resulting unreliability of their assessments. One can even identify a norm proscribing warnings against excessive confidence (see also Campbell, 2010: 89, on risk managers in investment banks). The fact remains, however, that the rating agencies failed miserably in their risk assessments, partly under the influence of mainstream economics.²²

²⁰ In the United States, [o]nly a Nationally Recognized Statistical Rating Organization (NRSRO) can rate a debt instrument. This designation is conferred by the US Securities and Exchange Commission (SEC). There are currently ten NRSROs, but the three big ones – Moody’s, Standard and Poor’s, and Fitch – account for 99% of all outstanding ratings for asset-backed securities (ABSs)’ (Rona-Tas and Hiss, 2011: 230).

²¹ I am not aware of any study on the credit rating agencies that provides information regarding whether and where their analysts studied economics or financial economics.

²² This may have hurt their reputation, as Carruthers (2010) argues, but, for a few years after 2008, they did not seem to have been inflicted any harsh punishment for their errors, in the market or elsewhere. In early 2015,

The conventions and social norms of risk assessment, together with the incorporation of the agencies' ratings into legislation, helped generate a convention of liquidity regarding new financial assets that would turn out to be very illiquid. This shows both how liquidity has something conventional about it and how a convention about the liquidity of an asset may be fragile, without the support of other institutions (on this dissolved appearance of liquidity, see also Carruthers 2010 and Davidson 2009: 84-95. Rona-Tas and Hiss 2011 discuss this in terms of (a crisis of) price anchoring).

The third aspect of the process through which the institutions of financial economics helped mold institutions in financial markets in recent decades is regulation. Again there was in financial markets a manifestation of a larger phenomenon: in this case, the influence of mainstream economics on the socially shared rules guiding non-academic thinking about the economic role of government.

The decades preceding the financial debacle of the late 2000s were marked by the softening of several regulatory constraints. The mainstream economics of the period provided the profound cognitive and motivational orientation and/or the epistemic and political legitimacy for this policy.

A mainstream rule of thought that fostered changes in regulation was the efficient market hypothesis: without government interference, markets will process information efficiently (whatever that means exactly) – see also Crotty (2009) and Davis (2009: 41-42).²³ Although controversial, the rule of adopting this hypothesis has been influential enough within the mainstream, and even more so in the 1970s and 1980s.

Reducing regulation is not, however, the same as making financial markets more efficient. Many critics would argue, on the contrary, that its use in policymaking has not turned the efficient market hypothesis into reality.²⁴ In any case, the idea that markets are efficient did help inspire the introduction of index funds (funds that buy and hold every stock in an index), as MacKenzie (2006: 85, 325n) notes; in turn, one can add, these funds give rise to a convention of portfolio choice based on imitation and a related social norm.

Regulation is also closely linked to financial innovations and risk assessment. Mainstream economics helped bring into the policy arena the belief 'that the new assets shifted risk to those agents most willing and best able to bear it; that on balance, financial innovation which allowed for extensive and sophisticated hedging strategies served to make financial markets more complete, robust, and safe; and that most steps by the government to stiffen financial regulation would cause harm to the economy while failing to reduce risk' (DeMartino, 2011: 161). As Carruthers (2013: 543) remarks, '[t]he supposed virtues of private risk management techniques, including credit rating (but also metrics like value-at-risk, and hedging tools like credit default swaps and other derivatives), played a substantial role in justifying financial deregulation.'

however, one of them, S&P, agreed to pay almost US\$1.4 billion to settle a lawsuit led by the Justice Department, with several American states.

²³ The efficient market hypothesis also 'provided a compelling rationale for the re-orientation of companies toward shareholder value. Financial markets knew things that individual executives or bankers could not; as such, it was best to defer to their judgment. ... Corporations oriented toward share price cannot exist without institutional supports. Thus, law and economics theorists further reconceptualized the institutions that surround the corporation, including managerial labor markets, takeover markets, and the law itself. According to these scholars, shareholder value was not just True North for the corporation, but also for the institutions in which it was embedded, guiding their actions in hitherto unsuspected ways. ...*[T]he science and institutions of finance co-evolved to a degree unknown in most other domains*, often with the aid of financial economists themselves' (Davis, 2009: 20, 22, 56, emphasis added).

²⁴ This implies limits to the ability of 'neoliberal' theories to make themselves true. Compare with Bourdieu (1998).

Informal norms and conventions related to policymaking regarding financial markets were present in the realm of not only financial regulation, but also monetary policy more broadly, guiding the thought and the behavior of individuals within the Fed, who in turn stipulated formal rules. Mainstream economics has affected these informal and formal institutions. Many people among the Fed directors and staff have been trained in economics (some information on this is provided below) or even have had a distinguished academic career in economics.

The informal testimony of Robert Shiller (2008), for example, is indicative of social norms and conventions within the Fed. When discussing the stance of the Fed in the process leading to the 2008 financial crisis, Shiller, who was on the economic advisory panel of the Federal Reserve Bank of New York from 1990 to 2004, argued that experts in the Fed – like the economics profession – were subject to groupthink (a notion introduced by psychologist Irving Janis). As suggested in Dequech (2013a), groupthink involves a combination of social sanctions and epistemic legitimacy of the majority view (which leads to conformity with conformity). Indeed, Shiller (2008) states that ‘[d]eviating too far from consensus leaves one feeling potentially ostracized from the group, with the risk that one may be terminated. ... In addition, ... [w]e all want to associate ourselves with dignified people and dignified ideas.’

On the other hand, there was also a flow of influence from outside to inside academia. As with the general rise of free-market economics, there is the issue of private funding. In addition to funding for research, some authors have pointed out other factors that appeal to the interests of academic financial economists, particularly pecuniary benefits. For Francis Fukuyama (2011), for example, ‘Wall Street seduced the economics profession not through overt corruption, but by aligning the incentives of economists with its own. It was very easy for academic economists to move from universities to central banks to hedge funds—a tightly knit world in which everyone shared the same views about the self-regulating and beneficial effects of open capital markets. The alliance was enormously profitable for everyone: The academics got big consulting fees, and Wall Street got legitimacy’ (also cited by Crotty 2011). See also Posner (2009: 259) and, for additional references, DeMartino (2011: 166-167).

4. The macroeconomy and mainstream macroeconomics

As in the case of the financial sector, the influence of the institutions of contemporary mainstream economics on institutions in the macroeconomy involves both private agents and policymakers.²⁵ At the same time, there have been limits to this influence.

In the pre-2008 decades, the institutions of mainstream economics provided, or at least legitimized, some socially shared rules of thought adopted by macroeconomic policymakers. This includes monetary policy, on which some comments have already been made in the discussion of financial markets, and fiscal policy.

From 1979 to the mid-1980s, the Fed was guided by monetarist ideas, whose influence within mainstream economics grew in the 1970s – although it would wane later. The Fed did not manage to control the money supply, contrary to a basic monetarist assumption that it does so, and would abandon monetarist ideas for the sake of pragmatism, but the monetarist experiment did manage to increase unemployment and weaken the workers’ bargaining power (Vercelli 2011).

²⁵ Davis and Hands (2013) suggest that ‘herding behavior in the economics profession and the professional investment community reduced diversification in modeling and analysis of macroeconomic performance; herding behavior is in part structural and built into social–institutional processes affecting both scientific analysis and policy-making ... [F]ailures in the structure and incentives in [E]conomic knowledge production spill over into the general economy.’

These consequences were reinforced by the implementation, at the same time, of policies of labor market deregulation or flexibilization. These policies are not strictly macroeconomic ones, but they find inspiration or at least legitimacy in two sets of rules of mainstream macroeconomic thought. The first is the pre-Keynesian argument, still accepted by New Keynesians, that unemployment is due to wage and/or price rigidity. This had not been contested by the neoclassical-synthesis version of Keynesianism, which took rigidity as a given and then argued for aggregate demand stimulus as the practical solution to unemployment. But the rigidity argument may also suggest a different policy, namely, an attempt to eliminate rigidity itself and bring the real world closer to the ideal of competitive general equilibrium theory (as also noted by Davidson 2009: 19 and Palley 2012: 39). This alternative became more appealing when the second macroeconomic argument that supports labor market flexibilization gained acceptance into mainstream macroeconomics: according to this argument, the natural rate of unemployment is the long-run rate and cannot be altered by fiscal or monetary policy. It can be reduced only by altering institutional factors, such as those that give bargaining power to workers.

The natural-rate-of-unemployment argument also implies that governments should not use fiscal and monetary policy to pursue sustainable full employment. Its influence has led to, or at least reinforced, the acceptance of higher rates of unemployment by fiscal and monetary policymakers (as Palley 2012: 189 observes with regard to the Fed).

In addition, macroeconomic policymakers, at the Treasury, the Fed and elsewhere, remained oblivious to the increasing fragility in the macroeconomic dynamics, with the help of socially shared mental models that neglected it or did not even consider connections between different agents in the different sectors of the economy, assuming instead a representative agent (see also Colander et al. 2009 and Stiglitz 2009: 295). Some of the reasons for this increasing fragility are factors that were mentioned above in different contexts and involve the role of mainstream economics. For instance, the rise of unregulated securitization and speculation implied, at the macroeconomic level, greater systemic risk. And policies of labor market deregulation or flexibilization, by increasing job precariousness, held up the growth of real wages. This made aggregate consumption more dependent on debt, instead of current income (Vercelli, 2011), precisely when household debt was growing without very solid backing. This process was reinforced by higher inequality, which reduces the average propensity to consume.

The mental rules of assuming a representative agent, rational expectations and intertemporal optimization are the core of the specific type of microfoundations underlying the new synthesis or new consensus that was forged in mainstream economics in the late 1990s and promoted models of macroeconomic equilibrium with fluctuations triggered by exogenous shocks.

Arestis and Sawyer (2008: 762) point out the close association, in the previous two decades, between monetary policy and this new consensus. This is consistent with a two-way relationship. So is the large presence of economics PhDs within the Fed. Justin Fox (2014) states that ‘the Federal Reserve System is almost certainly the nation’s largest employer of PhD economists, with more than 200 at the Federal Reserve Board in Washington and what is likely a similar number (...) scattered among the 12 regional Federal Reserve Banks’ (see also Mirowski, 2013: 191-193). Fox also provides data showing that economics PhDs have become the majority among the members of the Federal Open Market Committee (FOMC) in the last decades. On the one hand, the participation of economists in government organizations allows economics to influence policy making. Some authors have argued that the new consensus in macroeconomics has provided the intellectual foundation for the conduction of monetary policy in the United States and other countries (e.g., Mankiw, 2008). In contrast, Mirowski (2013: 193) stresses the flow in the other direction. In his view, by employing or funding ‘a substantial proportion’ of the

academic economists specialized in monetary policy and macroeconomics, the Fed and other central banks ‘have had an enormous intellectual influence on the profession.’ About the post-1980 U.S., Mirowski (2013: 190) maintains that the Fed has played an important role in steering the profession in a ‘neoliberal’ direction.

In the case of fiscal policy, too, there are reasons not to overemphasize the guidance provided by the mental rules of mainstream macroeconomics. Fiscal policy has been sometimes based on budget deficits, by cutting taxes and/or by increasing expenditures. Some sense of pragmatism has played a role in the conduct of macroeconomic policy. In addition, the Reagan administration, in particular, seems to have been influenced by supply-side economics, which was not part of the mainstream.²⁶

As in the case of policymakers, the opinion of private agents and the mental models they use to interpret reality matter a great deal. Keynes (1936: 162) noted that ‘economic prosperity is excessively dependent on a political and social atmosphere which is congenial to the average business man.’ An important question is, how do private agents react to economic policy?

Under some circumstances, it is possible for some conventions to become self-fulfilling prophecies, in goods and financial markets.

Consider, for example, an increase in government expenditures. If private agents believe that this will bring positive results and (depending on how it is announced) reduces uncertainty, they will be more optimistic and confident, so that results will indeed be good; if they believe the contrary, results tend to be bad.

Economists have discussed different possibilities of a negative reaction of private agents to higher government expenditures. Several mainstream economists have argued that agents will cut down consumption and investment in anticipation of higher future taxes, in a future reversal of fiscal policy to compensate for the current increase in the budget deficit. This argument, often labeled Ricardian equivalence, has been controversial even within mainstream macroeconomics (see Dequech 2016 for some references). Apart from Ricardian equivalence, even a few economists in favor of Keynesian policies have conjectured other reasons for a negative reaction on the part of private agents. One of these explanations also includes a reduction in private expenditures, but now in anticipation of a different problem. Fernando Carvalho (2008: 20-21) claims that budget deficits were interpreted, in the 1980s, as creating inflationary pressures and requiring a future increase in interest rates, so as to fight inflation by reducing aggregate demand. Carvalho does not refer to any empirical work on this or to the possible role of economics. Thomas Palley (2011: 18) considers a similar interpretation by private agents, but a different reaction, focusing on bond holders: ‘if bond holders believe current budget deficits inevitably entail higher inflation and higher interest rates [even if the economy is far from full employment], they may sell now to avoid future losses.’ Then interest rates would rise indeed. Palley is explicitly concerned with how ‘belief in mistaken economic theory’ can lead to self-fulfilling prophecies of bad outcomes (p. 18).

Another possibility must be added to this list. Rating agencies may downgrade their rating of sovereign bonds of the country implementing an expansionary fiscal policy, whatever the specific reasoning of the agencies’ analysts. The agencies’ prediction that the macroeconomic situation of the country in question will worsen may fulfill itself, because of the very downgrading of the rating and the consequent need to raise domestic interest rates. This power

²⁶ For Campbell (1998), the influence of supply-side economics is located at the realm of ‘programmatic ideas’ and was facilitated by the compatibility of supply-side economics with what Campbell sees as the core assumptions of neoclassical economics, whose influence is upon ideas as ‘paradigms.’

has allowed the rating agencies to more or less enforce a norm of fiscal austerity in the last decades.

If the reactions of private agents matter, so does the possible role of economics in this process. The institutions of contemporary mainstream economics may indeed influence the mental conventions and social norms guiding the interpretation of fiscal policy by private agents. This has quite likely been the case within the rating agencies and perhaps in bonds markets. Economists who favor deficit spending must beware of the fallacy of intellectual similarity, in this case the danger of assuming that all private agents will react positively to this kind of policy. In goods markets, however, other forces, possibly more powerful than contemporary mainstream economics, are also at work. Investment and production decisions are guided primarily by expectations regarding the specific product market in which each firm operates (together with the confidence in these expectations). If the government announces an increase in public expenditures, producers will consider, first and foremost, whether this represents a direct boost on the demand for their specific goods. The aggregate level of government expenditures and its impact on the future of public finances are of secondary importance in this context. While economists often think of government expenditures as an aggregate variable, these expenditures occur at the micro level, in specific sectors. If, for example, the government announces that it is going to have many more hospitals built, and if a certain firm is a hospital builder or a supplier of hospital equipment, the decision-makers in this firm have good reasons to become more optimistic and to act accordingly. It would be ludicrous to imagine these decision-makers curtailing their investment plans or this firm's owners and employees reducing their consumption in order to start saving to supposedly pay higher taxes in the future. A favorable reaction of the agents more directly affected by the higher level of government payments will, in turn, generate positive indirect effects, and so on, throughout the economy. Agents may be guided by a convention that projects the recent situation into the future, as Keynes (1936) suggested. If so, the higher level of government expenditures may, by increasing current sales, succeed in leading private agents to produce and invest more (see also Pollin, 2010: 15). If there are any agents at all in the real world who think along the lines of Ricardian equivalence, the most plausible explanation would be that these agents have been influenced by the subset of mainstream macroeconomics that does accept this argument. And if there are real agents who do not think like this, then the proponents of Ricardian equivalence have committed the fallacy of intellectual similarity.

5. Concluding remarks

This paper has developed an institutional approach to the relations between economics and the economy, considering in particular mainstream economics in the thirty years or so up to 2008, especially in the United States. Behavioral rules and mental models within economics are often shared not because they are dictated by the empirical evidence and/or clearly superior to the alternatives, but because of various social factors. They are institutions. They are capable of exerting several types of influence on academics, including the profound variants of the cognitive and motivational influences. Through a variety of channels, the institutions of economics – and especially those of mainstream economics – can also influence the thought and the behavior of economic agents and policymakers, thus contributing to the transformation and/or reproduction of institutions in the economy. At the same time, there are limits to their influence. Other factors in addition to, and sometimes more powerful than, economics affect people outside academia. Moreover, economics itself is influenced by the external reality, and this influence too has an institutional character.

The applied discussion has highlighted institutions of mainstream economics and institutions in the economy that are closely related to the recent financial and economic crisis. We need more empirical studies on how private agents interpret the economy and how their interpretations may have been influenced by economics, with a focus on the factors that lead private agents to share some mental models and behavioral rules. The same is true of policymakers. Still, it is very plausible that the institutions of mainstream economics have both reflected and contributed to shaping and legitimizing institutions in the economy from the late 1970s until 2008, in the United States and other countries. They played important cognitive, motivational, and legitimating roles in the process leading to the great recession.

This has raised or reinforced serious doubts as to the quality of shared mental models in mainstream economics and their superiority in comparison to the alternatives. It has also put into question the behavioral rules that confine several alternative approaches to the margins of the discipline. At first, it may have seemed that economics could go through very important institutional changes, but this has not been the case so far. The conservative power of the institutions of mainstream economics has been remarkable. In addition, economics departments have not been the object of much external pressure to change, from universities or from outside academia.

In the absence of such external pressure, prospects may be better outside the economics departments of the most prestigious universities. Considerable progress has been made in the study of economic issues by scholars working in departments of sociology, political science, philosophy, history and anthropology, in business schools, and elsewhere. Their work is quite compatible with, and complementary to, that of several economists who have been barred from mainstream economics. These different groups of social scientists have much to offer to each other. Being currently marginalized in their own discipline, non-mainstream economists could greatly benefit, both intellectually and institutionally, from an association with the mainstream of other disciplines. At the same time, with their different background, they could share their own specialized knowledge of both the economy and economics with their colleagues who are not economists. In recent years, interdisciplinarity has been discussed more often, but new initiatives are still needed within the most prestigious universities, in order to create adequate institutional conditions for further dialogue and collaboration between social scientists interested in the economy, especially those who are critical of neoclassical economics.

Some authors have rightly questioned the current barriers separating the social sciences disciplines. Perhaps an interesting experience would be the creation of a department of social sciences that congregates the currently separate disciplines or, more specifically as an alternative to departments of mainstream economics, the creation of a department of 'socio-economics' or 'political economy' (or some other label) that brings together those different scholars and disciplines.

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