The macroeconomics of financialization: a bibliometric survey

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Resumo

O objetivo deste artigo é apresentar uma visão geral da literatura macroeconômica sobre a financeirização entre os anos de 1992 e 2017 a partir de uma abordagem bibliométrica. Em particular, pretende-se delinear o estado da arte desta literatura, identificando obras e autores-chave, bem como os principais ramos nos quais se subdividem. A financeirização é um neologismo que ganhou impulso entre os acadêmicos de diversas áreas das ciências sociais aplicadas. No caso da economia, a maioria dos trabalhos centra-se na dimensão macroeconômica desse processo, com especial ênfase ao exame de seus possíveis impactos em variáveis como distribuição de renda, gasto em consumo e investimento, crescimento econômico, etc. Com base nas análises de acoplamento bibliográfico e co-citação, sugere-se a identificação de três grupos principais nesta literatura. Assim, espera-se contribuir para a organização da literatura sobre o tema, a fim de facilitar a comunicação entre os autores e também elaborar e examinar novas hipóteses de trabalho para pesquisas futuras.

Palavras-chave: financeirização; economia heterodoxa; macroeconomia; bibliometria; VOSViewer

Abstract

The purpose of this article is to present an overview of the macroeconomic literature on financialization, between the years of 1992 and 2017, from a bibliometric approach. In particular, we intend to outline the state of the art in this literature, identifying works and key-authors as well as the relevant branches that stand out. Financialization is a neologism that has gained momentum among academics from diverse areas within the applied social sciences. In the case of economics, most of the works are focused on the macroeconomic dimension of this process, highlighting its impact on variables such as income distribution, expenditure in consumption and investment, economic growth etc. Anchored on bibliographic coupling and co-citation analysis we suggest three main groups in this literature. Hence, we hope to contribute to the organization of the literature on this subject, in order to facilitate communication among authors and also to elaborate and examine new hypothesis for future researches.

Keywords: financialization; heterodox economics; macroeconomics; bibliometrics; VOSViewer

JEL Code: B50; E44; E66

ÁREA 6 – Dinheiro, finanças internacionais e crescimento

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1. Introduction

Financialization is a neologism which has shown relevant growth in the recent academic literature – mostly in the areas of geography, sociology and economics. As for the latter, *mainstream economics*[3] critiques are the main responsible for its dissemination[4], starting in the decade of 1990. Van der Zwan (2014, p. 102) highlights, in this respect, that "[...] financialization studies challenge several conventional wisdoms on state–market relationships in scholarship on finance capitalism". These studies would be responsible for bringing major issues to the fore, such as the role of the State in the economy, the unequal distribution of power, income and wealth among social classes, and the institutionality of contemporary capitalism.

However, perhaps the only common element among the many works and authors is precisely the absence of a concept of financialization with a shared meaning, aside from the general notion of the growing importance of finance in the working of the entire economy and society (van Treeck 2009; Palley, 2016). This fact, in turn, has led some authors to question the use of the term financialization as an analytical category (Toporowski, 2015). Sawyer (2016) correctly suggests that the most widespread definition for financialization is given by Epstein (2005, p. 3), who states that "[...] financialization means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies". On this matter, Hein (2013, p.2) classifies this definition as "vague and widely accepted". Consequently, the diversity of particular uses of the term – consistent, in general, with Epstein (2005) – must reflect varied phenomena (theoretically and historically).

Thus, in the face of the heterogeneity of studies on financialization, certain works intend to, at least partially, organize this literature into subjects and approaches. Among the most relevant are van der Zwan (2014), Orhangazi (2008), van Treeck (2009) and Lapavitsas (2011, 2013). Nevertheless, these efforts are limited by the traditional bibliographical research of a large and diverse literature. In this sense, a comprehensive survey of the literature on financialization is yet to be done, and bibliometrics can be a useful tool for this matter.

In particular, among the different analytical dimensions presented by this literature, it is worth noting the relevance of certain macroeconomic issues. Financialization is examined as a phenomenon that must be understood as a new pattern of accumulation forged in the decades of 1970-80, particularly

[3] Understood as what "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, p. 281).

[4] Christophers (2017) points out for the absence of the financial market as a part of the 'economics models' as a possible explanation for the difficulty of the mainstream in "identifying" financialization.

in the United States, whose impact is felt on trajectories of growth and income distribution. In general, this group analyses how expenditure decisions and indebtedness are shaped by the increasing weight of finance in contemporary capitalism.

The purpose of this article is to present an overview of the macroeconomic literature on financialization between 1992 and 2017 from a bibliometric approach. Specifically, it is proposed to identify the main fields within this main area of macroeconomics. This study, therefore, is based on two movements of approximation to the literature. First, we highlight the main groups that compose the literature on financialization in general. Second, after identifying the one that seems to condense the macroeconomic debate on financialization, we analyze their inter-relations. The same general procedures taken in the first step are reproduced for this subset.

Besides this introduction, this paper is organized in four sections. The second section deals with data and methodology. The third section refers to the identification of the relevant groups within the macroeconomic literature dedicated to financialization via the criteria of bibliographic coupling and co-citation applied to the literature as a whole. The fourth section, in turn, replicates the previous bibliometric analysis to the macroeconomic research on financialization. With this, we sought to identify possible branches in the macroeconomic literature on this theme. The fifth section ends with brief concluding remarks.

2. Data and methodology

The data set on the financialization were extracted from the indexation database Scopus (Elsevier)[5]. The publications that were selected contained at least one of the following terms in their titles, abstracts or key-words: "financialization"; "financialisation"; "financeirização"; "financiarización"; "financiarisación"; "financiarisation"; e "financiarization". Therefore, it should be noted that the universe of what we consider to be the literature on financialization refers only to those publications and authors that have made explicit use of the term.

Thus, 1393 publications were collected for the years between 1992 and 2017. Evidently, we cannot exclude possible errors, omissions and others issues in the nature of bibliographic data. Wrong or absent citations; self-citations; alterations in the indexing of authors' names; even inconsistencies related to the indexing of subjects are not unusual. In addition, nearly all the publications are written in English

[5] Other relevant bibliographical bases for the applied social sciences can be listed, such as Web of Science, Jstor and Google Scholar. Despite presenting a larger coverage for the matter in case, only Scopus and WoS standardize bibliographical references and other information in the publications (source and type of document, author affiliation, etc.), allowing the applicability of bibliometric techniques. The Scopus base was selected for containing a larger number of publications by the time of data collection (December, 2017).

and under the format of articles. Books (and chapters) are about only 10% of the sample. Therefore, not surprisingly Epstein (2005) is not part of the present selected data, despite the general effort in expanding the indexing of scientific publications through several formats.

The examination of the macroeconomic research on financialization demands the identification of this group within this literature as a whole. Accordingly, the present analysis is conducted by two movements of approximation. First, we identify the main branches that compose the overall literature. Second, after identifying the one that seems to condense the macroeconomic debate on financialization, we analyze their inter-relations. The same general procedures taken in the first step are reproduced for this subset. However, it is expected the presence of texts that do not correspond to the general theme of their group, since the method is based on approximations. This is due, in part, to the bibliometric techniques, since they are capable of indicating main references and relevant trends. The plurality of themes and authors, on the other hand, is found as a result of the still consolidating literature on financialization.

The identification of possible branches within the overall literature on financialization, and its macroeconomic dimension in particular, is based on the analysis of networks (and clusters) given by the bibliography selected through the VOSViewer software[6]. Broadly speaking, the algorithms find correlations among the publications based on certain criteria, such as bibliographic references, nationality of authors and institutions, then visually display them according to the information found. VOSViewer is a software that adopts a distance-based approach, especially suited for visualizing big data sets. The nodes in the network (publications, authors, journals, etc.) are placed so that the distance between them indicates their degree of similarity (determined by the mentioned criteria) specifying a map[7].

The criteria are the following:

1) bibliographic coupling, which calculates the similarity between unities (nodes) as function of their shared references – therefore, the greater the amount of references in common between two given, the closer they will be located;
2) co-citation, which places the elements according to how frequent they are cited together;

In general, both criteria seek to express that certain publications and authors have semantically related references, deal with a similar topic and/or present co-occurrence of ideas.

[6] The software VOSViewer (Visualization of Similarities) is part of a set of free softwares whose objective is the analysis and bibliometric visualization. It has been developed by van Eck and Waltman. Available in: www.vosviewer.com.
[7] See van Eck & Waltman (2007, 2010, 2017), van Eck, Noyons & Waltman (2010) and Olczyk (2016) for the mathematical specifications of the used algorithms. Como ilustrações das diversas aplicações desse software nos mais variados ramos da ciência, ver Dong & Chen (2015), Flis & van Eck (2017), Youtie et al. (2016).

3. An overview of the literature on financialization

3.1. Clusters by bibliographic coupling analysis

Bibliographic coupling is one the relevant criteria utilized for finding related concepts and themes. In this map, as mentioned, publications are related according to their shared references.

Figure 1 shows four distinguishable clusters:

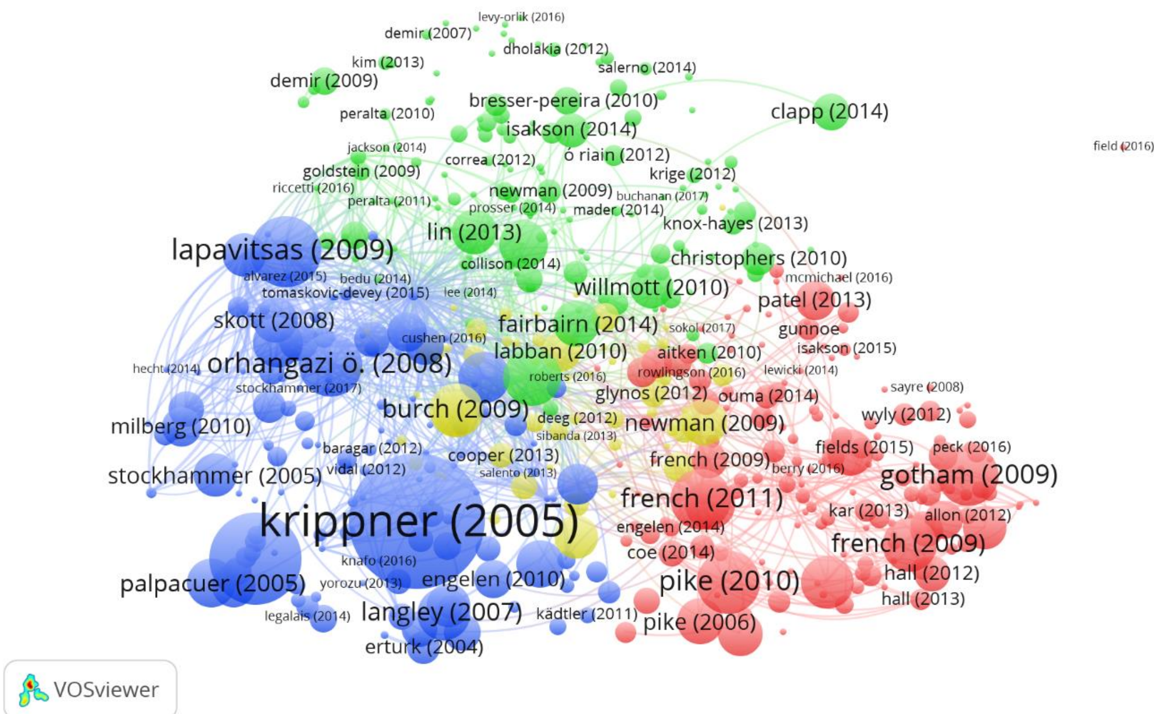
i) a blue cluster, which corresponds to works that deal with the impact of financialization on accumulation, distribution and growth. A relevant part of these authors is highly cited by the literature as whole, such as Krippner (2005), Lapavitsas (2009), Stockhammer (2004), Orhangazi (2008) and Skott (2008);

ii) a red cluster, whose dominant approaches and themes are given by authors in the fields of economic and political geography and corporate governance. This is clear due to the presence of authors such as French et al (2009a; 2009b), French et al. (2011), Aalbers (2009; 2015), and Lee et al. (2009);

iii) a green cluster, comprised by a relatively diverse set of publications related to themes like agriculture and development (e.g., Fairbairn, 2014; Isakson 2014), inequality and economic growth (Kus, 2012; Tomaskovic-Devey, 2011);

iv) a yellow cluster, composed of a smaller group of authors that also deal with themes related to geography, agriculture and development.

Figure 1
Clusters by bibliographic coupling of texts (1992-2017)



Source: Scopus and VOSViewer. Authors' own elaboration.

In this case, the cluster in blue seems to be one that better represents the set of publications related to macroeconomic issues and authors.

3.2 Clusters by co-citation analysis

The criterion of co-citation, in turn, utilizes the authors as the unity of analysis, instead of their specific publications (Figure 2). It is important noting that, under this criterion, different publications by the same author(s) are added together in order to find the correlations among author, thus composing the map of co-citation. Another caveat is also in order: it is not necessary, that the cited authors have texts in the data set. In other words, in this map, while the cited author may not have texts in the base, it is sufficient that they (two or more) are jointly cited by authors internal to it. The analysis, at this point, acquires a more general character and it is capable of suggesting seminal authors. The latter, not rarely, do not have indexed publications in Scopus data. Some examples are such as Keynes, Minsky, Marx, among others.

Figure 2 indicates five main clusters:

i) yellow cluster, rarely co-cited with authors from other groups. It is relatively cohesive and it is composed by a few authors. These are cited by authors within the data set for dealing, unlike most, with future markets, speculation and ‘financialization of commodities’;

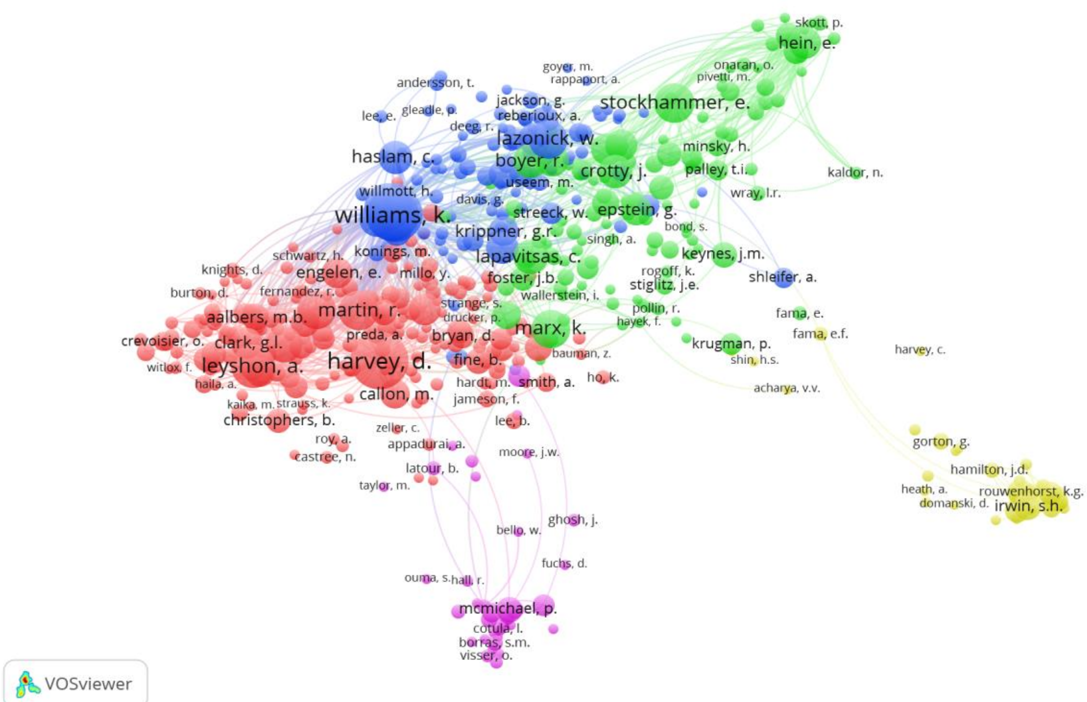
ii) green cluster, which adds together several authors considered classic in the areas of political economy and macroeconomics inspired by Marx, Keynes and Kalecki. Other authors are included in this group, such as Lapavitsas, Epstein, Stockhammer, Hein, Hayek, Eichengreen, Minsky, Hilferding, Godley, Lavoie and Dutt;

iii) red cluster, composed by authors that range between the cultural dimension of financialization, such as Langley and Randy Martin, and critical geography, like David Harvey, French and Leyshon;

iv) blue cluster, heavily characterized by authors of the Critical Social Accountancy School (CSA), such as Julie Froud, Karel Williams, Sukhdev Johal and others from Manchester;

v) purple cluster, where the central theme is the ‘financialization of food’ and its relation to the structure and regulation of international agricultural business (partially related to analyses on biofuels as well).

Figure 2
Clusters by co-citation of authors (1992-2017)*



Source: Scopus and VOSViewer. Authors' own elaboration.
*Authors with at least 20 citations.

Along these suggested lines of clustering, the cluster in green seems to be the one that mostly condenses authors whose works are considered important references in the macroeconomic literature.

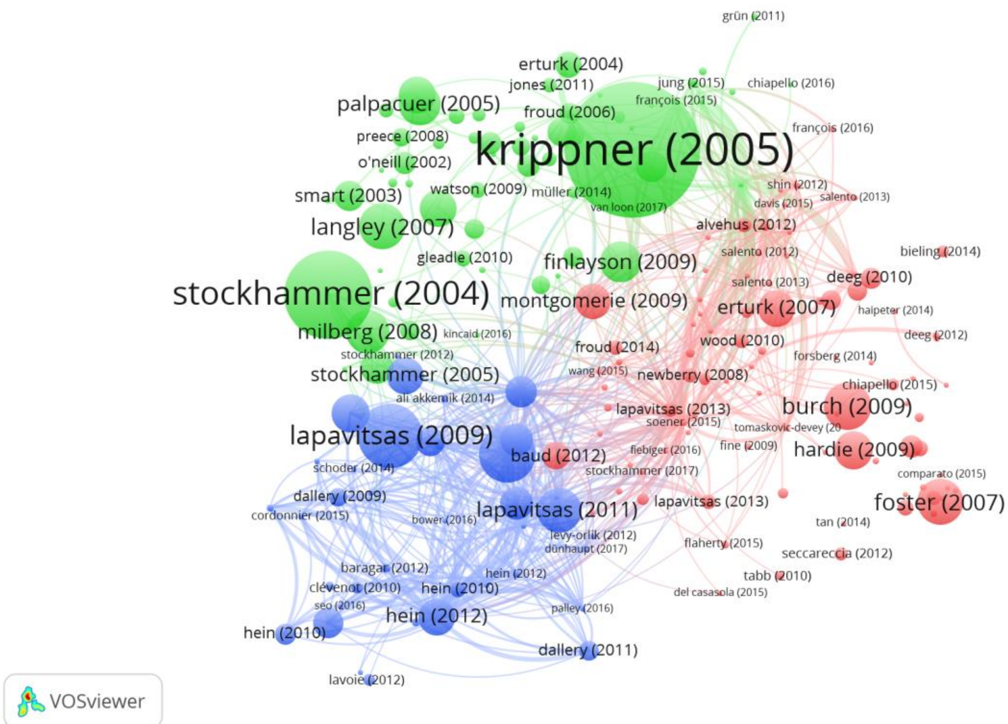
4. The macroeconomic approaches on financialization

Given the identification of what seems to be the core of the macroeconomic approaches to financialization – according to the criteria of bibliographic coupling and co-citation – the objective now is the subsequent recognition of smaller (and more specific) research agendas and discussions ‘located’ within this large comprehensive group. For this task, the method henceforth applied follows the one already presented, i.e., the bibliometric method of clustering this time restricted to the macroeconomic cluster contained in each map. In other words, the set of publications related to macroeconomic themes obtained in the bibliographic coupling map is taken as the new sample for the implementation of the same algorithm; likewise, this step is followed for the macroeconomic group found in the map of co-citations.

4.1. Clusters by bibliographic coupling analysis

Figure 3, below, is the result of the application of bibliographic coupling analysis of the blue cluster in Figure 1. The analysis follows the same path. It is also worth noting that the elements are grouped as a function of their shared references. Hence, some relatively cohesive clusters seem to arise, within which the authors – given by specified publications – are related.

Figure 3
Clusters by bibliographic coupling texts (1992-2017): Sub-groups within the macroeconomic approaches



Source: Scopus and VOSViewer (until April 2017). Authors' own elaboration.

As follows, we identify three groups:

i) a blue cluster, constituted by post-keynesian/kaleckian publications. In general, these works present macroeconomics models – or microeconomic ones, focused on their macro-overtones – in order to deal with the main transformations of recent capitalism as a result of financialization[8]. The main representatives are: Hein (2011, 2012), Hein & van Treeck (2010), van Treeck (2009), Onaran, Stockhammer & Grafl (2011), Stockhammer (2005, 2012) and Skott (2008). Also, worth noting, other authors such as Lapavitsas (2009, 2011) and Orhangazi (2008) are relatively close to them for engaging in the debate, although their approaches differ significantly;

ii) a green cluster, more diversified in terms of approach than the previous group. Its most cited publications are Krippner (2005) and Stockhammer (2004). In both works the guiding principle seems to be the widespread shareholder value logic and the market for corporate control (Widmer, 2010). Many of these authors are part of the CSA, such as Froud et al. (2006), Erturk et al. (2004), Andersson et al.

[8] On variables, such as investment, accumulation and functional distribution of income. This will be further explored in the next section.

(2008) and Faulconbridge & Muzio (2009)[9]. To a lesser extent, certain sociological approaches analyze the several institutional and cultural differences of national economies as result of financialization (Engelen 2003, 2010; Deutschmann 2011, Finlayson 2009)[10]. Nonetheless, this group is less interconnected among its unities (as well as to the others). This fact increases the specific relevance of its most cited authors for the literature as whole.

iii) a red cluster, more heterogeneous than the previous two, it is comprised of a greater quantity of themes and authors. Besides being less cited, they are also weakly related to each other[11]. Nonetheless, certain main themes emerge, such as issues related to the CSA (Erturk et al., 2007; Froud et al., 2014) and strategies of corporate control (Newberry, 2008; Wood, 2010; Alvehus & Spicer, 2012; Nolke & Perry, 2008); commercial/central banking activities and banking/financial regulation (Hardie, 2009; Seccareccia, 2012; Bieling, 2014)[12]; lastly, it is distinguishable the general theme of 'national differences' from different approaches (Lapavitsas & Powell, 2013; Stockhammer et al., 2017; Engelen, 2008; Deeg, 2010);

4.2. Clusters by co-citation analysis

Figure 4 (below), in turn, displays the application of the co-citation algorithm to the green cluster shown in Figure 2 (above). Hence, the authors listed below – not differentiating their publications – are frequently cited together[13]. We suggest three main subgroups:

i) a red cluster, that exhibits a clear marxist influence – expressed by authors such as Lapavitsas, Foster, Sweezy, Magdoff, Chesnais, Bellofiore, Ben Fine, Duménil and Lévy, aside from Marx himself – and authors in the "Régulation School", like Boyer, Aglietta, Reberioux and Plihon. The works of Krippner (following Arrighi) and Epstein are also important references in this group, although they don't necessarily share the same approach and/or conclusions;

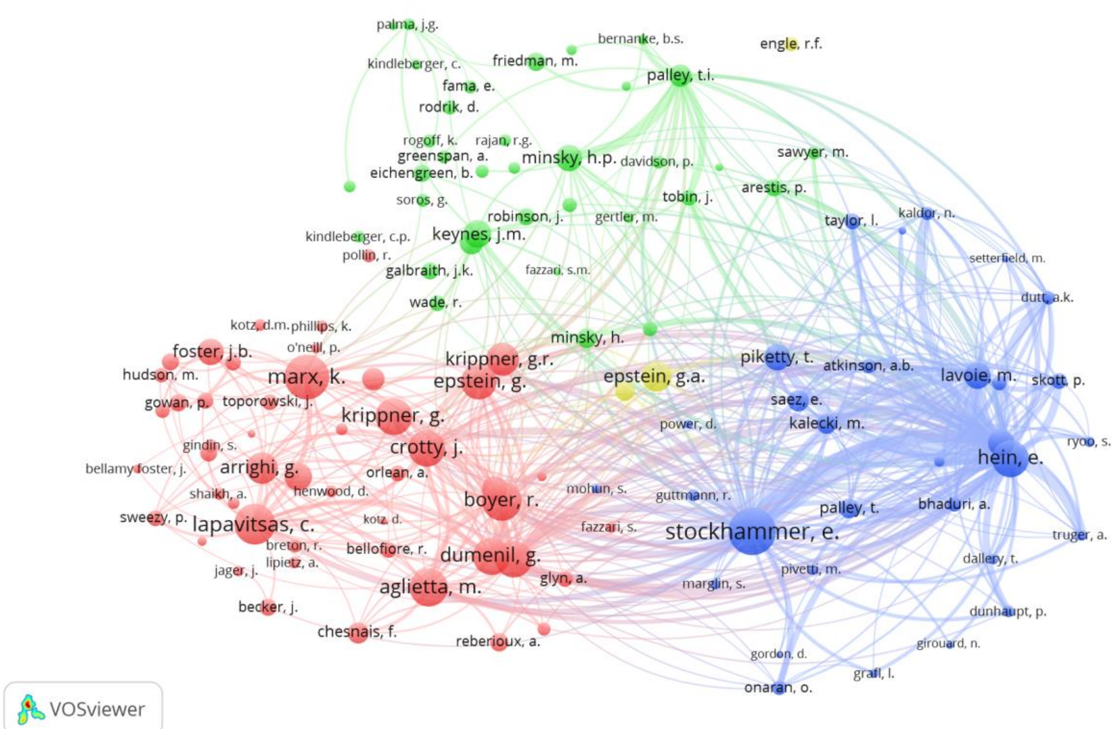
ii) a green cluster, where the underlying theme seems to be the monetary-financial dimension of capitalism and its consequences in terms of growth and economic instability. The main authors, along these lines, are John Maynard Keynes, Hyman Minsky, Joan Robinson and Milton Friedman, to which

[9] But not exclusively: the discussion on the 'shareholder value' is part of many different approaches within the overall literature.
[10] These authors are mostly based on the "varieties of capitalism" approach (Hall & Soskice, 2001).
[11] This suggests that in addition to their recent time of publications, they are more frequently referred to by clusters external to the 'macroeconomic' one.
[12] Erturk (2016), in this sense, proposes an approach that conjugates the CSA discussion with operations of monetary and banking market.
[13] It is worth restating that, in this criterion of aggregation, the referenced author may not be in the internal network of indexed publications. However, most of the mentioned authors indeed use the neologism and possess publications with it. This may be an indication of its newness and of shared seminal references.

are added Kindleberger, Eichengreen, Fazzari, Wray, Galbraith, Palma, Palley, Fama, Mishkin, Davidson, Akerlof, Arestis, Rodrik, Sawyer and Tobin. In this group, we notice the dominance of "post-keynesian" authors and, to a lesser degree, certain *mainstream* economists;

iii) a blue cluster, where authors like Stockhammer and Hein are strongly related[14], as well as van Treeck, Piketty, Lavoie, Setterfield, Skott e Ryoo and Onaran. Kaldor, Godley, Kalecki, Marglin & Bhaduri and Dutt are among the cited authors with seminal works. This is a group that confirms the cohesive and theoretically close character of such authors, as well as its centrality in the macroeconomic literature.

Figure 4
Clusters by co-citation of authors (1992-2017)*: Sub-groups within the macroeconomic approaches



Source: Scopus and VOSViewer. Authors' own elaboration.
*Authors with at least 20 citations.

[14] Aside from their great number of citations, both utilize directly the term *financialization*.

4.3. For a possible synthesis: the main branches in the macroeconomic literature on financialization

From the above examination of the two criteria of aggregation, it is possible to indicate certain guiding branches within the macroeconomic literature on financialization. This section, thus, aims to further examine the inner relations of the listed groups.

First, we identify a strand of post-keynesian authors – also strongly based on the works of Kalecki – that look into the phenomenon of financialization through the instrument of formal macroeconomic models. Among its main representatives, as mentioned, are Hein, Stockhammer, van Treeck, Skott and Ryoo. The prime objective of this group is determining the impact of financialization on the expenditure decisions (in particular, investment) and, on the aggregate level, the tendency of accumulation. To this end, they introduce the concept of financialization into their analyses via the logic of maximizing the shareholder value and the rising dependence of consumption on access to financial system (credit and a 'wealth-effect'. In broad terms, these authors argue that there's been a turning point in the structure of international corporate control – more prominently in the advanced economies starting in the 1980s – whose impact would be felt through key variables, such as capital accumulation, income distribution and commercial and political agreements. These systemic transformations were carried out in the context of an expanding financial intermediation by bigger institutions – such as the institutional investors – deregulation of international financial markets and intense innovation of information technology (Hein and van Treeck, 2010). Skott (2008) highlights the change in monetary policy objectives by central banks – price stability as their only goal – and the more widespread access of households to the credit system. In this context, the role of the shareholder stands out.

Thus, an "interesting puzzle" was yet to be explained: the global declining trend of investment since the decade of 1980 at the same time that profit rate showed an upward trend. From a keynesian perspective, this means enquiring about the reasons for a decreasing portion of profits being invested in fixed assets, and how could profits still grow even with low levels of investment (Stockhammer, 2005). A shared concern among them is that the post-keynesian theory of the firm alone cannot account for the recent structural changes that define financialization. Stockhammer (2005, p. 202) stresses that:

> As an institution, the firm is subject to changes according to the social structures and institutional arrangements that it is based on. The social structures include the relative power positions of labor (and other stake- holders), management, and shareholders.

Also, in Stockhammer (2012, p. 40):

> [...] that financialization has micro economic as well as macro aspects. In other words: financialization has transformed how economic actors (households, workers, firms and financial institutions) perceive of themselves, what goals they pursue and what constraints they face.

For these reasons, the theory cannot ignore the contemporary importance of certain actors, such as the shareholders, workers and managers for the functioning of the firm, where the 'financial priorities' rise. Hence, Dallery (2009) highlights previous attempts to incorporate this phenomenon into the post-keynesian theory of the firm, like in Lavoie (1992). His main goal is demonstrating the need and the possibility of integrating a series of theoretical and historical changes within this chandlerian firm apparatus.

Theses authors' starting point is the following stylized fact: the existence of a trade-off between the firm's long-term growth and short-term profitability, measured by their stock prices in financial markets (van Treeck, 2008). Resources would either be allocated according to shareholders preferences or, alternatively, to managers eyes on long term growth. Hein (2012, p. 37), on this matter, states that:

> Management's desire for growth is constrained through, in particular, higher dividend payouts demanded by shareholders, a weaker ability of firms to obtain new equity finance through stock issues (which tend to decrease share prices), a larger dependence on leverage, and an increased threat of hostile takeovers in a liberalized market for corporate control.

Therefore, from this standpoint the new logic of firm management is influenced by two main channels: 1) the declining availability of resources for firm self-financing; 2) the new "manager's strategic preferences" whose income is embedded into the financial performance of firm shares. Under the same overall logic, households face restrictions in terms of consumption – given the decreasing wage-share – and, at the same pace, they gain easier and cheaper access to credit[15].

The authors aim to examine the conditions under which the effect of these transformations affect capital accumulation[16]. On the one hand, fixed capital investment is limited by financial demands, lowering firms' own resources for the expansion of their activities. The aggravating factor is the worsening of consumption capability of wage earners. On the other hand, they argue that, at the same time, the financial-institutional apparatus facilitates, cheapens and stimulates household and firm access to credit, magnifying their leverage. In this sense, the idea of a "financial wealth-effect" (as in Stockhammer (2005)) is shared by the empirical and theoretical research of many authors. The relevant question, in this matter, is then: is this alleged effect capable of – and under which conditions – inducing a new type of growth regime? In other words: what is the net effect of financialization on the economy as a whole?

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[15] Although, as shown in van Treeck (2008) and Skott (2008), the larger share of households' financial income is dominated by a small group.

[16] At this point, it is worth noting that these authors, in general, accept the analysis of the Régulation School (Boyer, Aglietta, Reberioux, Plihon) on the possibility of a *finance-led* regime. For the post-keynesians/kaleckians, though, this is a scenario determined by specific combinations of parameters in their models.

Dallery (2009) argues for an effect necessarily negative on the dynamics of capital accumulation as a result of an “excessive sacrifice” – depressed salaries, rising debt and high financial fragility – as to ensure high rates of return on equity demanded by financial markets. Stockhammer (2005), accordingly, concludes that this “financial wealth-effect” is weak on consumption, so that the rising shareholder power must have a negative influence on income and growth – aside from negatively impacting investment/profit ratio as well. Hein & van Treeck (2010), in turn, examine the different regimes of accumulation (the “constellation of parameters”), such as 1) finance-led, 2) “profits-without-producing” and 3) “contractive”. The first scenario is the only one where financialization has a positive net effect on “real variables” [17].

Similarly, Orhangazi (2008), after listing a wealth of approaches on financialization, suggests two facets for this phenomenon. First, financialization should be understood as “[...] an increase in the size and significance of financial markets, transactions, and institutions in the modern macroeconomy” (Orhangazi, 2008, p. 81). This process, according to him, was initiated in the decade of 1980s with the new global corporate governance structures and with the “shareholder value revolution”, in the 1990s. The author analyses the historical process that culminated in a new arrangement between the financial markets and the NFCs in the decade of 1980, and then theoretically incorporate this into his economic model. As in Lapavitsas (2011), the author intends to assess the changing dynamics that diminish financial markets as traditional fund providers (especially banks) whereas, at the same time, these markets grow significantly in size. Second, Orhangazi (2008, p. 6) indicates a more specific (firm-level) version of the concept, according to which financialization “[...] designate[s] changes in the relationship between the nonfinancial corporate sector and financial markets”. In this sense, two theoretical matters must be stressed (and empirically confirmed by the author's estimates) for the US economy: 1) NFCs would opt to invest increasing portions of their capital in financial markets (hence, less in investments), elevating their financial profits; 2) the NFCs would also be restricted by pressures from their fund providers, so that short-term return on equity (ROE) should be met (reducing their retained profits for self-funding). In both levels of analysis, Orhangazi (2008) theoretically and empirically evaluates the impacts of financialization on investment, since “the growth of an economy ultimately depends on the accumulation of physical capital and the technology it embodies” (Orhangazi, 2008, p. 93).

In sum, the concept of financialization, in this group, is based on the shareholder power, as its main feature, and on weak performance of investment as the result of the close connection between

[17] However, Hein (2012, p. 43) reinforces, on this subject, that “we doubt that in an era of financialization an increase in Tobin’s q triggered by increasing shareholder power, share buybacks, increasing dividend payments and enforced changes in management’s preferences should be considered to cause rising real investment”.

consumption and access to financial markets. Financialization, in this case, should impact household consumption due to a "wealth-effect" and access to credit, the latter partially as a response to declining real wages. On the matter of income distribution, the authors argue that the phenomenon has negative effects on wage-share – aside from aggravating inequality among workers themselves, emphasizing white and blue collars.

A second group (although less cohesive than the latter) reflects, in turn, the discussion of financialization as phenomenon associated with household and NFCs indebtedness in an aggregate level[18]. Put differently, the figure and role of the shareholder are examined, in this group, from an institutional standpoint: what it means in terms of wealth of agents (or classes) and of institutional-formal arrangements. Along these lines, works of Krippner (2005) and Lapavitsas (2011) represent important references. Krippner (2005, p. 176), following Arrighi (1994), comprehends financialization as cyclical pattern of capitalist accumulation "[...] in which profits accrue primarily through financial channels rather than through trade and commodity production". She argues that firm-level analyses are severely limited. The 'shareholder power' theme, therefore, would introduce theoretical problems such as the direction of the causal relation. Would this orientation have come from "within" NFCs, through managers, or imposed by the financial sector, the "outsiders"? She states that:

> Yet neither an examination of the growing orientation of managers to financial variables nor of the changing nature of transacting in financial markets informs us as to the overall shape assumed by an economy dominated by such activities. (Krippner, 2005, p. 175)

According to her, the analysis of financialization requires a lens capable of dealing with systemic changes of the economy: the central issue is where the profits are generated, instead of changes of structure of employment or mix of goods and services. Thus, financialization should reflect, for example, expansion of banks, brokerage firms, financial sector firms and also financial behavior of non-financial firms. One of the main indexes for financialization is, she argues, the share of financial gains of NFCs which presents a long-term tendency of growth in the US starting in 1950.

Lapavitsas (2009, 2011, 2013), in turn, situates the concept of financialization within the tradition of marxist political economy. In his view, financialization must be understood as an epochal change of recent capitalism – comparable to the industrial revolution of the 19th century. This transformation, initiated with the end of the Bretton-Woods agreement and with new monetary arrangements, would have signaled the end of a long and affluent era and the inauguration of recurrent periods of crises (Lapavitsas, 2009). He argues that:

> The theoretical and empirical point of departure is the notion that financialization represents a structural transformation of advanced capitalist economies, and its roots must therefore be sought

[18] This matter is acknowledged by the previous group, although it is not their object of analysis.

> within the fundamental relations of non-financial enterprises, financial enterprises and workers. (Lapavitsas, 2013, p. 798)

He stresses the need for a theoretical-empirical analysis that accounts for the practices of such actors[19]. In broad terms, this approach requires the consideration of a new general functioning of the “non-financial sector”, but not exclusively: it is also necessary clarifying the financialized dynamics that concerns households and banks (including central banks). According to Lapavitsas (2009), the biggest international non-financial corporations have become less dependent on traditional bank loans. This meant their lesser allegiance to banks and greater to financial markets, both in terms of assets and liabilities, since their primary funding source became bond emissions (Lapavitsas, 2011).

Simultaneously, banks – with the end of the Bretton-Woods agreement and the development of complex financial instruments – began restructuring their operations on a systemic level. Their position as lenders was in the past. This transformation, thus, meant the worldwide conversion of banks into ‘financial outposts’, where the new and complex instruments were subject to a growing volume of negotiation (and speculation). In addition: the abundant liquidity of banks – result of new financial instruments and deregulation of capital markets – turned to households as their principal potential market. This process constituted a pervasive wholesale market of credit inflated by the securitization. The main theoretical justification for this was that, along with deregulation of financial markets, risk would be spread through the agents and that the systemic incentive for a more efficient allocation of resources would be ‘self-correcting’.

Households, according to the author, have seen the financialization of their income – strongly related to the general worsening of work conditions, lower purchase power of salaries and loss of social welfare. The households aim “[...] generally speaking, is to acquire use values, while financial institutions and industrial capitalists share a similar aim, i.e. profit extraction” (Lapavitsas, 2011, p.620). For that matter, the (socially determined) consumption goals persuades workers into recurring to loans as a means of fulfilling this necessity. This process constitutes, for the author, a “financial expropriation”.

In short, the phenomenon of financialization represents a structural transformation of mature capitalism based on behavior of all relevant agents (Lapavitsas, 2013, p.802). Although this is a historically dated process, it cannot be understood as the result of economic policies (Lapavitsas, 2013, p. 801). It is not either a ‘perversion’ of capitalism: “[...] confronting financialization does not mean supporting hard-working industry against idle finance” (Lapavitsas, 2009, p. 143), since financialization “[...] does not represent the escape of capital to the realm of finance in search of higher (and possibly

[19] On this matter, Lapavitsas (2013) argues that other marxists fail in doing so, such as Sweezy (1997).

speculative) profits" (Lapavitsas, 2013, p. 798). It is, from this perspective, a complex tendential phenomenon of capital itself – unsurpassable by conjunctural measures. In order to 'confront' it, we need a structural reform capable of creating relevant public institutions and values, such as banks and infrastructure.

In the same vein, a prolific series of recent articles have been inspired by the authors above mentioned in dealing with financialization and other related themes, such as globalization. Among the many, Baud & Durand (2012) suggest approaching financialization as a process composed by the internationalization of sales operations and by the development of financial operations controlled by leading international retailers – starting in 1990 and reaching its peak in 2004. Similarly, Milberg (2008, 2010) examines the financialization of north-american NFCs as a phenomenon underpinned by the offshoring of their production but that, at the same time, prevents the absorption of 'dynamic gains' with cost economy, since these firms needed to meet their financial commitments.

Davis (2016) analyses in detail the structure of US NFCs indebtedness and financial applications. According to her – and close to Krippner (2005) – the aggregate analysis cannot establish causal relations, though it can contain valuable insights. For this reason, she argues for the need to understand exactly how firms changed their financial behavior and, from there, suggest the possible implications. Three tendencies are highlighted: 1) the rise in the share of highly liquid assets as compared to the fixed capital in the portfolio of US NFCs; 2) the largest corporations elevated systematically their leverage in recent decades; 3) a widespread trend of buy-outs also among the largest companies. As a possible underlying cause, Davis (2016) indicates the increase in financial services provided by the NFCs and the shareholder value orientation.

Lastly, as a third possible group we consider a set of diverse approaches weakly connected among themselves despite being presented in the analysis here conducted. As mentioned, certain authors – such as Krippner (2005) and Orhangazi (2008) – and ideas – like the shareholder value maximization principle and the finance-led regime – are references in several different authors with diverse purposes[20]. Among these less prolific approaches – and whose focus is not strictly macroeconomic[21] – it is worth mentioning the so-called "Varieties of Capitalism" (VoC) approach and works on labour market and inequality. The first, in broad terms, intends to build a theoretical apparatus that emphasizes the similarities and differences among nacional forms of capitalism. The comparative character of this approach – heavily institutional – analyses them as specific manifestations that result from profound structural

[20] This elevates the importance of authors like Krippner, but it is not sufficient to constitute new and clear clusters.
[21] For this reason, authors in this group are mostly spread through green, and to a lesser extent, and blue in Figure 3.

transformations in capitalism (Engelen, 2003; Engelen & Konings, 2010; Deeg, 2009; Nölke & Perry, 2007; O'Sullivan, 2007). For them, furthermore, the analysis must shed light on qualitatively different systems, not merely as local economies with different parameters – within nations, sector or even between firms of different sizes. The second approach is referred to works that deal with the effects and dynamics of financialization on labour market and its rising inequality (Arestis et al. 2013; Tridico, 2012; Strauss, 2009). In general, they agree that this phenomenon has asymmetric effects over workers of different economies, professions or even among races and genres.

5. Concluding Remarks

This paper sought to present an outlook of the macroeconomic literature on financialization based on a bibliometric approach with the VOSViewer software. In particular, we used international bibliographic database in order to identify possible clusters among authors and publication focused on the macroeconomic dimension of financialization. Since the volume and diversity of publications debating this theme is increasing, a survey based on traditional bibliographical researches risks being biased and limited. Thus, the bibliometric method of analysis seems to be one efficient technique to minimize such problems.

In broad terms, the study followed two steps. First, based on the analyses of bibliographic coupling and co-citation, we identified the publications and authors that most represent the macroeconomic research in financialization. Second, the same procedures were applied to the clusters previously found.

The analysis of bibliographic coupling allowed for the identification of three clusters – the same number for the co-citation. Hence, in general, the examination of the two maps permits the suggestion that the literature on financialization is composed by three distinct groups (though related to each other). A first cluster is composed of publications largely inspired by the post-keynesian approach, including a kaleckian tradition, that seek to examine financialization via formal macroeconomic models. Authors such as Hein, Stockhammer, van Treeck, Skott and Ryoo can be considered representatives of this group. It is worth noting that this group of publications presents strong internal cohesion. A second group, in turn, is focused on the economic relations among its main macroeconomic agents highly emphasizing indebtedness. As compared to the first, this second group shows significant less cohesion and the usage of formal models is less frequent. Among its main representatives are the works of Krippner and Lapavitsas. Lastly, a third identified group corresponds to a very heterogeneous cluster, still less articulated than the others, and of lesser expression within the overall macroeconomic literature on financialization. Relevant representatives are works inspired by the Varieties of Capitalism approach and discussions on the impact of financialization on labour market and inequality.

Since the first step to a full understanding of a given phenomenon – as well as to formulating new hypotheses – consists in systematizing established propositions, the present effort seeks to advance in the comprehension of financialization through a characterization of widespread approaches in macroeconomic research on this subject.

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