MINSKY MEETS PORTER

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Abstract: *Hyman P. Minsky and Michael E. Porter have developed theories of economic development independently from each other, both being influenced by Joseph A. Schumpeter in different ways. In this contribution, the author focuses on understanding the similarities and differences between these two approaches based on their epistemological, ontological and ethical-political perspectives, also by identifying how they are related to each other in a particular type of economic development named as 'money-manager capitalism' in Minsky's framework and 'wealth-driven competitive stage' in Porter's. The approach starts by describing the Porterian and Minskyan perspectives, moves on to analyzing them from their epistemological, ontological and ethical-political perspectives, and it also questions how these two phenomena are related by pointing out to the common Schumpeterian perspectives as well as fundamental differences between the two. The contribution concludes by stating that even though differences are present, both approaches are Schumpeterian in their own way – and describe a similar end to competitive development, one that is based on managing accumulated wealth. This is related to two distinctive areas in economics and administrative sciences: Firstly, it shows how the two scholars' ideas are related with a possible source of influence, contributing to history of economic thought. Secondly, it shows the fate of economies once they innovate and become innovation driven; over time, income generated from innovation becomes a source of concern, and influences the risk-taking behavior of the economic system for the sake of protecting the income. In this way, the approach contributes to countries' competitive positions and how two important scholars of economics and administrative sciences observe the start of the decline.*

Keywords: *Minsky, Porter, Schumpeter, competitive advantage of nations, evolution of capitalism, Porter's diamond.*

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Introduction

Hyman P. Minsky focused on explaining investment by means of a financial theory; the financial instability hypothesis, put forward by Minsky, provides an explanation to the existence of business cycles by tracing their roots back to the transformation from robust financial markets to fragile financial markets (Minsky, 1992). During the final years of his life, his attempts were placed in a historical framework of analysis, with which he aimed to explain capitalist development based on the assumption of multiple forms of capitalism (Sau, 2019). His theory of capitalist development was published under the names "Schumpeter: Finance and Evolution" (Minsky, 1990) and "Schumpeter and Finance" (Minsky, 1993). His focus in the final era of his life was to give a new interpretation to the Schumpeterian theory of capitalist development by introducing Keynesian insights into it. With this research, he proposed four stages of capitalist development, which are labelled as commercial capitalism, financial capitalism, managerial capitalism and money-manager capitalism (Minsky, 1990, 1993).

Michael E. Porter, on the other hand, focused on how nations become competitive in the world economy, and how they can keep their competitiveness, for which he proposed innovations as a central factor of influence. He identified four stages of national competitive development. His theory of competitiveness of nations was published under the name "The Competitive Advantage of Nations" both as a book (Porter, 1990a) and a journal article (Porter, 1990b). Four stages of the national competitive development are factor-driven stage, investment-driven stage, innovation-driven stage and wealth-driven stage (Porter, 1990a). In this setup, the first three stages are those of economic growth, whereas the fourth one is that of an economic decline.

Even though the relations between the theories of Hyman P. Minsky and the theories of John Maynard Keynes as well as those of Joseph Alois Schumpeter were investigated in previous research (Knell, 2015; Sau, 2019), no attempt was done to show the relation between Minsky's theory of capitalist development and Michael Porter's model of competitive advantages of nations (Porter, 1990a, 1990b). In this article, the aim of the author is to explore the perspectives of Porter and Minsky in a comparative setup, based on their epistemological, ontological and ethical-political perspectives. Furthermore, their perspectives on the question of what happens after a successful innovation and the corresponding wealth accumulation will be analysed. Fundamental differences between the two will be highlighted.

The rest of the contribution is organized as follows. In part 1, Minsky's capitalist development model will be explained in detail, whereas in part 2, Porter's national competitive advantage model will be explored. Part 3 focuses on the comparison of the two models based on their epistemological, ontological and ethical-political dimensions. In this part, an emphasis will be given to the point where the two 'meet'. Part 4 follows with showing the relation between Porter's model and Schumpeter's theory of innovation, whereas part 5 focuses on Schumpeter's influence on Porter's model and Minsky's model. Regarding the fundamental differences between Porter and Minsky, part 6 provides an overview. A conclusion follows.

1. Minsky's Model

The starting point of Minsky's model of capitalist development comes from the Schumpeterian vision of observing economies as evolving systems – those which exist in real time, and those in which change is not introduced (or modelled) as an external shock, but rather as an endogenous factor (Minsky, 1993). According to Minsky (1990, 1993), there are four different stages of capitalist development, with which relations between businesses, households and finance can be expressed.

The first stage is commercial capitalism, with which goods in trade or in process are being financed. Merchant banking and commercial banking provide sources of financing for goods that need to be produced and transported as well as for inventories. Minsky mentions that raw material export economies or economies producing goods by labour and tools typically fulfil the properties of commercial capitalism.

The second stage is finance capitalism, which is identified by financial organizations mobilizing resources for infrastructural projects as well as for industrial consolidation (Sau, 2019). Investment bankers are very powerful in this setup. The third stage is managerial capitalism; this stage is associated with increasing governmental economic activities, welfare state's presence, a robust financial structure as well as intervention power of central banks to provide collapses. In this setup, corporate managers are very powerful and control large flows of cash; the fact that the management of enterprises is separated from ownership and financing leads to a contradiction in the perspective of Minsky (1993): A professionalism of the management of enterprises is associated with hierarchical structures of organization within firms, which turn into bureaucracies following traditions.

The final stage is the money-manager capitalism, which resulted from the accumulation of wealth in forms of pension funds, mutual funds, bank trust funds and other forms of endowments of private firms; large shares of visible corporations are owned by these so that not only do the financial assets grow in numbers, but they are also managed mutual funds and pension funds (Sau, 2019). As Sau (2019, p. 10) mentions, this stage is associated with the "fear of wealth losses promoted by inflation damaging upon bank deposits", with which holding wealth is realized in the form of owning liabilities of managed funds.

2. Porter's Model

Porter's theory of competitiveness of nations is based on four determinants (factor conditions, demand conditions, related and supporting industries, and firm structure, strategy and rivalry) which together constitute Porter's diamond (Porter, 1990a, 1990b). These determinants "individually and as a system constitute the diamond of national advantage, the playing field each nation establishes and operates for its industries" (Porter, 1990b, p. 78). With these four determinants, a ground is created for new ventures to be established and take place in competition. In case of the competitive advantage of nations, Porter states that even though each industry of a nation may possess different conditions, a pattern can be recognized which is visible in those industries and segments of a country, in which firms successfully compete. With this observation, Porter concludes that it is the state of the determinants of national advantage which is similar across industries; the issue that differs is the specific conditions of different industries.

Hence, a four-stage model emerges, of which the first three stages are associated with upgrading the conditions of national competitiveness, whereas the fourth stage is that of an ultimate decline of national competitiveness (Porter, 1990a). These four stages are factor-driven, investment-driven, innovation-driven and wealth-driven stages of national competitive development. For factor-driven economies, only the factor condition dimension of the diamond (labour, agriculture, natural resources) provides an advantage. Porter describes this stage as a stage of poor conditions for sustainable economic growth, especially since firms can only compete in terms of prices, the economy is vulnerable to external shocks, and nations can quickly lose their advantage in terms of factor conditions to other countries offering cheaper labour than the aforementioned nation, just to give an example. As the name also suggests, investment-driven economies are associated with aggressive investments of the nation together with its firms. At this stage, not only the factor conditions but also demand conditions as well as firm strategy, structure and rivalry are the relevant dimensions of the diamond that bring the nation an advantage. At this stage, the labour force is enriched by the presence of trained labour; in addition, factor-creating mechanisms such as research and development institutes as well as educational institutions are present. At the third stage, the innovation-driven stage, all the dimensions of the diamond are present; hence, firms are able to develop their own technologies instead of simply adopting and improving technology from other countries.

After these three stages of economic growth, a stage of decline follows, that is the stage of wealth-driven national competitive development. At this stage, competitiveness is driven by the presence of accumulated wealth from the past. Rivalry based on keeping their own firm's position, lack of corporate interest for investments, powerful firms trying to influence governmental policies are different factors contributing to this decline. Since financial intermediaries aim to preserve capital rather than to accumulate it, investments are mainly done for financial assets rather than for real assets. Without innovations, attractive investment opportunities in industries are absent. Porter identifies four categories, in which firms can sustain their competitive advantage: These are industries addressing sophisticated demand (financial services, entertainment), industries in which cumulative investments over long periods of time occurred (education, defence), industries which can keep their competitive positions due to early-mover advantages, and industries keeping factor advantages or those which inherited wealth.

3. Epitemological, Ontological, and Ethical-political Dimensions

In parts 1 and 2, Minsky's and Porter's models were introduced respectively. At this chapter, the two perspectives will be explored in a cross-comparative perspective based on their epistemological, ontological and ethical-political perspectives. The epistemological perspective helps to understand the nature of the world in these models, whereas the ontological perspective gives the nature of reality and existence in these models (Easterby-Smith et al., 2015). Easterby-Smith et al. (2015) provide the criteria of describing research either as following a positivist epistemology or a social constructionist epistemology: The role of the observer, human interests, explanations, research progress, concepts, units of analysis, generalization and sampling. They also provide the criteria of describing research as following the ontologies of realism, internal realism, relativism or nominalism: Aims, starting points, designs, data types, analysis and outcomes. The ethical-political perspective seems to be based on a both harmonious and tense unity of ethical and political perspectives (Evre, 2012a). In line with Evre (2012b, pp. 1–2), politics is seen as a notion defining “the conditions for existence and validity of ethical/moral practices” whereas ethics is seen as a notion that is concerned about “how we ought to live in the sense of ‘good’”. Therefore, in the framework (Evre, 2012b, p. 2), the ethical-political perspective of a theory or a model is about “the existence of society-oriented collective goals”. Altogether, these dimensions of observation can provide a tool for better understanding and comparing these two models.

3.1 Minsky’s Epistemological, Ontological and Ethical-political Perspectives

As much as Minsky’s research became popular after the recent financial crisis, also for his case one can find little evidence regarding his epistemological and ontological points of view. Of the few works comparing Minsky’s theoretical model with Schumpeter’s contributions, the one by Sau (2019) seems to be useful for understanding Minsky’s point of view. An initial look at the stages of capitalist evolution in the research of Minsky gives his motivation to provide a Keynesian-Schumpeterian analysis (who not only represent different schools of thought, but also represent different epistemologies and ontologies). What is more, is the fact that Minsky placed his analysis in a broad historical framework focusing on the historical evolution of capitalism in the United States of America (USA). As is the case with most post-Keynesians (Dow, 2002), Minsky is no exception in retaining a strong historical sense in his framework. Therefore, a clear epistemological and ontological point of view is not visible from the initial look. In this setup, Whalen’s (2012) contribution provides useful information about Minsky’s career and his point of view: According to the author, one can divide Minsky’s career into four eras. He started his careers with understanding the impact of financial institutions on economic performance, continued with a focus on business cycles, later on with instability. The final era in his careers was to focus on capitalist development. From his perspective, Minsky is a Keynesian-Schumpeterian economist.

The following points can be mentioned regarding the epistemology of Minsky’s approach: Minsky does not follow a personal observation (like Porter did); instead, he places himself away from the historical context of his observations which do not focus on human interests, but rather on the long-term historical evolution of the economy of USA, starting with the time of merchants. In his model, one can clearly notice the role of causations; for example, how the merchant era was proceeding, what was to be financed, what caused its collapse and what emerged as a result are clearly deduced causations from the historical context. Even though he does not provide any method of measurement, he defines clear eras so that if research proceeds to test his propositions, the context of measurement and testing is clearly defined. Minsky does not give a complex overview of the ‘big picture’, but instead, his unit of analysis is financing. This is an intentional choice, as he aims to show that “nowhere is evolution, change and Schumpeterian entrepreneurship more evident than in banking and finance and nowhere is the drive for profits more clearly the factor making for change” (Minsky, 1993, p. 106). Where Minsky diverges from the typical properties of a positivist approach is the issue of generalization. Even though he generalizes his model without any need for probabilities or statistical evidence, his observations of the sources of profit, what is financed, how it is financed and how the economy is driven by this structure as well as the sources of collapse are so clearly structured that one can easily test these with an empirical model and data. Even though Minsky does not provide an empirical strategy to test his model, a statistical analysis of these concepts requires a large sample and not just some specifically selected cases, as it should reflect the macroeconomic perspective Minsky takes.

On the other hand, regarding the ontological perspective of Minsky’s approach, the following issues can be highlighted: Minsky follows the aim of discovering “the structure of relations among business, households and finance (…) in market economies” (Minsky, 1993, p. 107) by proposing a Schumpeterian point of view, where history emerges as a field of experiment of different financing decisions and different set of relations that drive the economy of the particular era of observation. With his Schumpeterian point of view, he verifies the goods that are financed and the source of financing using the historical eras of observation. Through this way, instead of providing an exploratory point of view, he verifies what he proposes at the beginning: There is a Schumpeterian structure of entrepreneurship in banking and finance in the historical context of the USA. Thereby, he does not consider whether this historical evolution of capitalism might have followed a different path, such as the smoother Smithian-Hayekian division of knowledge, for which empirical evidence based on the USA is given by Daepp et al. (2015).

Summarizing the implications of Minsky's research based on the criteria provided by Easterby-Smith et al. (2015), it can be concluded that Minsky followed a strong positivist epistemology and a realist ontology. The fact that he did not provide a statistical analysis does not mean that, unlike Porter's approach, he did not provide statistically testable propositions. On the contrary, his analysis of a realist ontology implicitly assumes that there is a single reality and whichever country one observes, one can see one of the four stages of the evolution of capitalism that Minsky observes by taking a look at the economy of the USA. As Sau (2019, p. 7) also mentions, Minsky "became convinced that the structure of the U.S. economy and of developed capitalist economies have so fundamentally changed that an analysis of structural evolution was essential", implying that Minsky did not see any difference between the economic evolution of the United States and that of other developed capitalist economies, referring to a single reality. In Minsky's vision, it is banking and finance which drives for profits and induces changes in the economic structure. This is also reflected in Minsky's ethical-political perspective. He formulates his arguments based on Schumpeterian and Keynesian theories. Instead of a praise to banking and finance, there is critique to these. Even though Minsky (1993, p. 113) refers to an economy "as evolving under the stimulus of perceived profit possibilities", he mentions that this economic evolution does not have to be a progressive one, since money managers (in his own view) created destructive recessions and depressions, leading to a retrograde evolution. This implies that Minsky's ethical-political perspective, combined with his initial ideas of financial stability, is focusing on an ideological position of regulating financial activities, hence, market activities. In this way, the ethical-political perspective is that of an interventionist view of market economies, where the societal goal to be achieved is the stability of the economic and financial systems. This can be only achieved by public policy. According to Minsky (1990), the instability of capitalist development goes back to a two-sided innovative process: Product and process innovations on the one side, financial innovations on the other. This two-sided innovative process, in his perspective, is fundamentally unstable because of intermittent incoherence; therefore, governments need to 'correct' this by intervening, opening the floor for top-down approaches with which stability in an economic and financial system is believed to be achieved by government processes, and not market processes.

3.2 Porter's Epistemological, Ontological and Ethical-political Perspectives

One can notice that not much has been written on the epistemological and ontological foundations of "The Competitive Advantage of Nations" (Porter, 1990a). In his comparative perspective, Beaudreau (2016) takes a glance at the differences between comparative advantage and competitive advantage concepts in business and economics literature. According to Beaudreau (2016), the main difference between the two is an epistemological difference. He describes Porter's approach as a concept answering the 'how to' questions of international trade, in particular, by using an in-depth knowledge on the industrial dynamics of successful firms. He further concludes that comparative advantage theory of international trade only answers some 'what is' questions, and does not provide any working tools for policy making. On the contrary, competitive advantage concept gives working tools for policymakers to boost the competitive advantage of their countries

With the target of identifying what makes a nation competitive, Porter studied 10 leading nations of his time for 4 years regarding their competitiveness, with a particular focus on the competitive industries of the particular nations. As he describes, he conducted his research in sophisticated industries by asking how these gained and sustained their competitive advantages (Porter, 1990a). Pol (2020, p. 97) describes Porter's model as "neither formal nor purely deductive because the conclusion in the

Porter model is not deduced using the rules of logical inference" but rather as a narrative model because "we cannot logically deduce one (proposition of the model) from the other".

The following points can be mentioned regarding the epistemology of Porter's approach: With a narrative model which emerged out of his 4-year-long observations, Porter placed himself as a part of what he observed, and made use of the reliable inference technique to induce ideas from this rich data (Pol, 2020). His research process started by getting the help of local researchers and organizations for identifying those industries of the particular nations, which are internationally competitive. Following this initial screening and industry profiling, a historical perspective was developed to understand how history of competition in particular industries can explain the dynamism with which competitive advantage is created. Through that way, he identified strong industries of nations to develop his observations. His research process was not guided by the formulation of hypotheses; rather, it was an explorative one, through which stakeholder perspectives were included and the small number of industries were chosen for particular purposes. Porter conducted an industry-based analysis for a long period and across different countries – and one of the most striking and relevant results of it was the generalization of the stages of the competitive development of nations as described in part 2 of this article.

On the other hand, regarding the ontological perspective of Porter's approach, the following issues can be highlighted: As it is clear from the way he approached the problem, by taking a look at 10 nations for 4 years, Porter aimed to provide a convergence of results by means of triangulation, where his starting points were not hypothesis or propositions, but a mere curiosity of why some nations are more competitive than others and how certain industries are sources of the competitiveness of the nations they are established in. Hence, he followed a survey-based approach that was initially data-driven to select the cases, but regarding the outcome the reader can mainly observe conceptual cases in which triangulation, followed by a comparison, was performed. The final outcome is, in addition to the diamond, the classification scheme for countries' competitive development – which is an ideal-typical case, as the author also indicates that a country does not necessarily need to go through all four stages and may be stuck in a particular stage for a long time.

Summarizing the implications of Porter's research based on the criteria provided by Easterby-Smith et al. (2015), it can be concluded that Porter followed a social constructionist epistemology and a relativist ontology. This is identified mainly from his research aims, as he targets to give some answers to the 'how to' of international trade by means of identifying sources of competitive advantage for different countries in a comparative way, where countries have both similarities and differences. This 'how to' approach and the focus on making nations competitive in international trade is also reflected in Porter's ethical-political perspective. In the epilogue part of his book, Porter (1990a) mentions that his model offers a chance for both firms and nations to become prosperous. He says that differences between nations can be seen as a source of competitive advantage, and this competitive advantage comes out of those industries of a particular nation, which reflect the nation's unique history and characteristics. What is more, is that Porter also mentions that as a result of his own study, he was convinced that economic progress and prosperity depends on incentives, competition, and innovation – indicators of an ideological position based on economic freedom, innovation and competition, which – according to Porter – many do not share. Which societal goals bring ethical and political perspectives together, is answered more clearly in contributions by Erkut (2016a, 2016b), who highlights the connection between Porter's model (as well as the Global Competitiveness Index, which includes Porter's stages of competitive development) and economic freedom; hence, implying a free market-oriented perspective. Also Kuckertz et al. (2016) investigate the economic freedom-entrepreneurial activity nexus implied by Porter and conclude that free markets enhance entrepreneurial activities by putting a competitive pressure on them.

3.3 How Do They Meet?

It is highlighted that both from the epistemological, ontological and ethical-political perspectives, Minsky and Porter differ. Nevertheless, there is a phenomenon both observing and integrating into their findings, where the two 'meet' in terms of a particular stage of competitive development and capitalist evolution respectively. The phenomenon observed by both researchers is what happens once the country is successful with its innovations, and accumulated wealth. In other words, how do the countries which accumulated wealth (as a result of their innovative activities) behave? This is the final stage in the models of Minsky and Porter; the stage which is described by Minsky as money-manager capitalism and by Porter as wealth-driven competitive development. In the following, how these two models come to the corresponding concluding stages would be analysed.

Starting with Minsky's approach, the transformation is from managerial capitalism to money-manager capitalism. Managerial capitalism, in Minsky's view, is that of Schumpeter mark II (even though he does not state this explicitly), since giant corporations are the entities that need to be financed. One can assume that these are the sources of innovation as is in the Schumpeter mark II. However, just like in the business cycle model of (Schumpeter, 1939), this era goes through a transformation and evolves into money-manager capitalism. The reason for this transformation lies in the change of regulations in the USA to allow for private pensions in addition to the social security funds supported by the state. In the model of Minsky, these become an attractive source for personal accumulations of wealth, since "inflation plays havoc with the value of deposits" (Minsky, 1990, p. 69). Hence, pension funds, mutual funds, bank trust funds and endowments of private institutions are added to the money managed by money-managers, and money-managers use them to invest in big shares of major corporations. Since money-managers aim to maximize the value of these investments (Sau, 2019), the time horizon of decisions is rather a short one, which means that short-term profits gain importance over long-term decisions such as research and development (R&D), innovations, new sources of competitiveness and so on. Minsky (1993) concludes that financiers in this stage do not follow the pattern of screening, promoting and financing those projects which bring the most profits (Sau, 2019), but rather act in the sense of a casino capitalism due to Keynes (1936, p. 159): "Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done. The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield, cannot be claimed as one of the outstanding triumphs of laissez-faire capitalism."

Is it the same reason that an economy, in the model of Porter, lands in the stage of wealth-driven competitive development? Is it the speculations, the so-called casino capitalism, with which an economy goes into this particular stage of decline? Porter (1990a) states that the driving force behind the wealth-driven economic structure is the accumulated wealth itself. In this sense, he observes the same phenomenon as Minsky did. He identifies that this wealth cannot be maintained at the same level over time, because the motivations of individuals and firms may diverge from focusing on innovation and competitiveness. He puts a particular emphasis on the position of accumulated wealth, which is rather to be preserved than continued to be accumulated and enriched. Hence, innovations fail to attract investors and instead of real assets (including intangibles), the accumulated wealth is used as an investment tool for financial assets. Whereas rich companies or citizens enjoy a high standard of living, the average standard of living declines, companies get into trouble, problems occur in the labour market and in the financing of the welfare state. Even though Porter does not mention through which particular financial instruments this process occurs, it is the general position of the accumulated wealth that causes trouble. Because a nation aims to preserve its accumulated wealth, its focus switches from gaining long-term competitive advantage in innovativeness to short-term profit making, through which the financing of new ideas as pre-conditions to new products in industries fail. Once the country loses its innovative positions (with four exceptions, as highlighted in part 2), it is only a matter of time that another country with more innovative products takes over that position. As a result, an ultimate decline occurs.

How are these two related, if both models have different epistemological, ontological and ethical-political perspectives? In the bigger picture, it is the innovation-institution nexus of Schumpeter (Hospers, 2005) which connects the two approaches' final stages. In both models, it is the financial institutions that open new space for new products by financing them, through which companies become competitive in international markets; but at the same time, it is also the financial institutions that isolate new ideas and prevent them to become new products for future competition in international markets, by not financing them.

In both models, as in the Schumpeterian case, the economy's institutional structure (which includes financial institutions) is the one that "facilitates, influences, regulates and constrains economic activity" (Sau, 2019, p. 8) and is therefore associated with innovations. This institutional structure is subject to change, but what matters is in which ways this institutional structure is associated with innovations. The interaction between institutional structures and sources of innovation may create a progress for the whole economy, as the competitiveness of a nation depends on its competitive industries (Porter, 1990a). Nevertheless, once financial institutions are able to receive returns on their investments in R&D, these returns are reflected in the bank accounts of the investors (regardless of whether they are real persons, legal entities or institutional investors), who wish not to lose what they earned from successfully investing in a new product by investing it into another R&D project, which may just cause them a loss of the whole invested sum.

This is a challenging problem for the institutional structure. The fact that R&D projects have a hard time to find the necessary financing sources, is nothing new. However, in both cases, what is referred to is not this phenomenon, but what happens after a country becomes successful with its innovations and accumulates wealth as a result of these. In Minsky's evolutionary framework, it all starts with the financing of owner-managed enterprises, which are doomed by the growing population and industrial revolution, and ultimately replaced by industrial corporations to be financed. Industrial corporations emerge with the corresponding financial structures of investment banking, and the cutthroat competition in investment banking leads to the replacement of industrial corporations by cartels, trusts and mergers. These cartels, trusts and mergers collapse with the Great Depression and giant corporations emerge; debt financing brings also these away from the focus by opening up the space for funds to be financed globally. Therefore, institutions, in particular, financial institutions shift their focus and their expectations once their 'business model' collapses or becomes outdated. Innovations, in this case, are not an exception. Since the fundamental difference between an invention and an innovation is the economic meaning of the latter, an R&D project with a potential of commercialization provides a profit-seeking motive when a country is still in the transition phase to become innovative, aiming to generate profits with innovations.

However, when the country already has a number of innovative products embedded in competitive industries, keeping the country's position as an innovation-driven economy becomes harder and harder, as the framework of Porter states. Once wealth gained from innovative activities is accumulated, it is understandable that investors may lose their risk-taking behaviour for the sake of going to a safe haven. This is the behaviour that leads to the accumulation of wealth in managed funds when inflation is a problem, as stated by Minsky in his framework. Once the financial institutions have a vast amount of money to be preserved in the form of managed funds, the shift is made from capital development of the economy to trading profits. The short-term planning horizon of financial institutions does not end their relation with innovations; rather, innovations tend to occur in banking and finance rather than in other sectors of economy. What Minsky describes as the two-sided innovative process goes through an imbalance, as financial innovations gain speed and product innovations remain out of the scope of financing.

To sum up, money-manager capitalism and wealth-driven economy tend to show the same phenomenon: The fact that at one point over the course of economic evolution, the institution-innovation nexus changes character and, in case of financial institutions, is redefined to focus on innovations associated with banking and finance. This is, in a way, a consequence of successful innovative activities occurring in the country. Innovation brings success and contributes to wealth accumulation, but this does not guarantee that things are going to continue the same way as they did until the emergence of an innovation-driven economy. People may become too sensitive with preserving their wealth, financial institutions may be too unwilling to lose the accumulated wealth by investing these in risky R&D projects, and in addition, they may also seek ways to generate further profits other than financing innovative activities.

4. Porter and Schumpeter

Porter did his PhD in Harvard University under the guidance of Richard E. Caves. Following the line of supervision, one can connect Porter with Friedrich von Wieser and Ludwig von Mises, two of the prominent founders of the Austrian school of thought: Porter's PhD supervisor Caves did his PhD under the supervision of Gottfried Haberler, who, in return, did his PhD under the supervision of Friedrich von Wieser (Samuelson, 1995) and Ludwig von Mises (Powell et al., 2010). Does this make Porter an 'Austrian' economist? In particular, is he intellectually related to Schumpeter, who dealt with similar topics during the golden era of the Austrian school of thought? In a private conversation with Powell et al. (2010), Porter states that Austrian economics did not influence his work of competitive advantage (Porter, 1985), but De Man (1994) reminds that Porter's initial works (1980, 1985) are not the ones where one should look for the Schumpeterian traces: In an analysis of Porter's three contributions (1980, 1985, 1990a), De Man (1994) shows that the former two contributions by Porter indicate a static industrial organization approach, whereas the latter one indicates a dynamic, evolutionary economic point of view that De Man associates with the Austrian school of thought. Among many other prominent scholars, also Schumpeter is attributed to belong to this school of thought, even though this attribution is controversial (Vanberg, 2015).

Regardless of whether Schumpeter is considered as an economist belonging to the Austrian school of thought (De Man, 1994) or an economist from Austria who was himself an intellectually controversial figure (Vanberg, 2015), he influenced the theoretical development of the Austrian school of thought. Hence, De Man's analysis shows some of the intellectual connections between Porter and Schumpeter that goes beyond the line of PhD supervision from von Wieser to Porter. In Porter's framework, sources of competitiveness shift as rivalry between firms takes place. According to De Man (1994), this can be seen as a similar process to the Schumpeterian creative destruction (Schumpeter, 1950). The process of creative destruction is described by Schumpeter (1950, p. 83) as follows: "The opening up of new markets, foreign or domestic, and the organizational development from the craft shop and factory to such concerns as U.S. Steel illustrate the same process of industrial mutation – if I may use that biological term – that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in."

In the same book, Schumpeter (1950) describes capitalism's nature as economic change, and refers to his observation that it is never stationary. Even though Porter's model seems to be rooted in the mainstream tradition with its more than 100,000 citations as of 2022, Porter's approach is not a neoclassical one, but rather a Schumpeterian one. When exploring Schumpeter's influence on economic and business research, Hospers (2005) mentions that it is Schumpeter's observations on institutions and innovation which got the attention of business economists such as Porter. Porter (1990a, p. 20) acknowledges Schumpeter's role in his model as follows: "As Joseph Schumpeter recognized many decades ago, however, there is no 'equilibrium' in competition. Competition is a constantly changing landscape in which new products, new ways of marketing, new production processes, and whole new market segments emerge. Static efficiency at a point in time is rapidly overcome by a faster rate of progress. But Schumpeter, like the other researchers I have noted, stopped short of answering the central question that concerns us here. Why do some firms, based in some nations, innovate more than others?"

Porter's model is therefore a model of creative destruction (De Man, 1994). He observes the sustaining competitive advantage of nations going back to the competitive advantage of industries – in order to sustain its competitiveness, he expects an industry to "destroy its old advantages by creating new ones. If not, some competitor will do so" (Porter, 1990a, p. 583). De Man (1994) continues to summarize Porter's book based on four propositions. These are: (1) Firms are seeking competitive advantage; (2) Innovation is central for gaining competitive advantage;

(3) Competition destroys competitive advantage; (4) Firm and environment should be observed in an integrated way. Based on these four propositions, De Man (1994) associates the second proposition with the observations of Hayek, and the third one with that of Schumpeter. His observation is that Porter follows Schumpeter in placing creative destruction at the centre of his analysis, but largely neglecting the notion of entrepreneurship. Last, but not least, De Man (1994) also mentions that Porter follows Schumpeter also by means of using the notion of path-dependency. In Porter's framework, a nation should build on its existing capabilities, and by doing so, it upgrades the existing capabilities of the nation's competitive industries, which tend to be those which reflect the nation's history and its characteristics.

Nevertheless, if one wishes to understand whether the concept of the wealth-driven economy was also influenced by Schumpeter, one finds little evidence. Even the Global Competitiveness Reports initiated by the World Bank and consulted by Porter do not mention the wealth-driven stage of national competitiveness. One possible reason for this is that these reports provide an analysis of how to upgrade the national conditions to become more competitive; wealth-driven stage, on the other hand, is actually a downgrade.

It is known that in the Schumpeterian framework of analysis credit given by banks is necessary for the introduction of novelties to the economy (Knell, 2015), but what happens in the Schumpeterian framework when wealth is already accumulated? What is identified in Porter's framework is that an economy may as well be driven by wealth instead of innovations, but aiming to keep wealth does not generate any novelties, so over the long run, a wealth-driven economy leads to a decline.

Of course, the aim of asking this question is not to find a one-to-one match between the two theories, but rather to understand whether the neglected dimension of Porter's framework was, in part, influenced by Schumpeter. Based on this background, the contribution by Leathers and Raines (2004) refers to a different contribution of Schumpeter, in which a similar phenomenon is observed, namely the book "Business Cycles" published in 1939 (Schumpeter, 1939). In this book, Schumpeter describes a three-cycle schema of economic development. These are long waves (Kondratieffs), intermediate waves (Juglars) and short waves (Kitchins) (Schumpeter, 1939). In the Schumpeterian business cycle model, there is a distinction between what kind of debt is created. Schumpeter (1939) distinguishes between productive and unproductive debt. Productive debt is the debt arising from debt-financing of innovation activities in the primary wave, whereas unproductive debt is the debt arising from credit created for consumption and speculation purposes (Leathers & Raines, 2004) in the secondary wave. Once this secondary wave takes place driven by unproductive debt, 'over-indebtedness' (Schumpeter, 1939, p. 147) occurs which results in great speculations and financial distress (Leathers & Raines, 2004). Innovations are at the core of this model, and related to the question asked in this part, financial institutions' role differ in what Schumpeter calls the primary wave and the secondary wave. The primary wave is identified with financial institutions financing the introduction of new products, whereas the secondary wave is the successful spread of the innovation effect to the economy as a whole. However, and that is the crucial point for answering the aforementioned question, the secondary wave "is carried forward by speculative spending, made possible by the spread of easy credit to all parts of the economy" (Leathers & Raines, 2004, p. 668), hence, unlike Porter's framework, in the Schumpeterian business cycle model, the wealth is further given away as credit.

In comparison, Porter's innovation-driven and wealth-driven economies may be loosely translated as primary and secondary waves, but Porter does not describe a speculative behaviour taking over the economy. Instead, he mentions that the concern of financial institutions is capital preservation. As a result of this, innovative activities slow down and ultimately, investments are mainly made for financial assets instead of real assets (Porter, 1990a). Whether these investments into financial assets are speculative in nature, is not discussed. To conclude, Schumpeter's influence on Porter's framework lies mainly in creative destruction; however, regarding what happens to accumulated wealth, Schumpeter's observation of what happens to accumulated wealth in his Business Cycles did not influence the wealth-driven stage in this framework. As Jacobson (1992, p. 784) also states, Porter "advocated a number of views that move away from the static concepts of traditional IO to those that more closely resemble Austrian thinking", but a close look at his arguments shows that these are not in the sense of building direct analogies based on the theories of Schumpeter.

5. Schumpeter's Influence

In which ways did Schumpeter influence Minsky and Porter? The question that needs to be answered is whether Minsky was influenced by Schumpeter in the same way Porter was influenced by Schumpeter. In one of the few interviews made with Minsky, more about his interpretation of history of economic thought can be seen (Minsky, 1988, p. 24): "Everything starts with Adam Smith, who asked two major questions. First, he asked why is it that a market system brings order when we might expect that highly decentralized markets with many participants ought to bring about chaos. The second question he asked was about economic accumulation, which is a major focus of the post-Keynesians. Smith asked: Why is England richer than Poland? Or why is one country richer or poorer in 1953 than in 1929?"

Based on these questions, Minsky identifies two streams of research aiming to answer questions 1 and 2 respectively. Regarding answering the first question, the stream of research starts with Adam Smith, goes to David Ricardo and to J. S. Mill, Marshall, Walras, and Arrow-Debreu. In his view, this group of researchers provided an answer to the first question by stating the importance of decentralized competitive markets. Regarding answering the second question, the stream of research again starts with Adam Smith and David Ricardo, but goes instead to the direction of Marx, Schumpeter, Keynes and to the Post-Keynesians. According to Minsky (1988), the answer given is that economic instability is caused by internal processes of capitalism.

The analysis by Knell (2015) is an important source for understanding Schumpeter's influence on Minsky. According to the author, Schumpeter influenced Minsky in the sense of considering the capitalist system as an unstable system which can be subject to collapse if nothing is done about it. The vital difference between the two regarding the instability of capitalism is their vision regarding the role of novelties in this system. Knell (2015) says that in the Schumpeterian perspective, novelties would reduce the instability of the capitalist system, whereas in the Minskyan perspective, it is the public policy and the regulation of the financial system which would reduce the instability of the capitalist system.

Furthermore, Schumpeter's theoretical perspective going back to the Walrasian thought was criticized by Minsky (Knell, 2015). According to Knell (2012), Schumpeter was a Walrasian economist, aiming to provide a dynamic perspective to the value and distribution theory of Walras by focusing on the entrepreneurial dynamics. In Minsky's view, the stock market collapse of 1930s influenced the perspective of Schumpeter in a different way than his arguments in the Theory of Economic Development (Schumpeter, 1912). According to Minsky (1986, p. 114), Schumpeter's early vision is "more compatible with a view of money that leads to an understanding of financial crisis" than his response to the 1933 crisis (Schumpeter, 1939). For Minsky, "Schumpeter's response (to the crisis of capitalism) was banal" (Minsky, 1986, p. 112). To answer one part of the question, for Minsky, Schumpeter's early vision is more compatible because it places finance in a central position for enabling the emergence and the introduction of novelties (Schumpeter, 1912). Hence, Schumpeter influenced Minsky mainly with his early perspective. When taking a look at Porter's source of influence, one can find the following paragraph as a footnote in Porter (1990a, p. 778): "My fundamental perspective is more Schumpeterian (1934, 1942) than neoclassical. Entrepreneurship and innovation prove central to national advantage. Why some firms and individuals innovate in particular industries, and why they are based in particular nations, will be the focus of much of what follows."

Hence, Porter's main sources of influence from Schumpeter remain to be the 1934 English translation of Schumpeter (1912) and Schumpeter's late vision in Schumpeter (1950). In this sense, Porter, unlike Minsky, does not differentiate between the early vision and the late vision of Schumpeter. In further footnotes, Porter (1990a) specifies that he accepts the view of Schumpeter (1950) characterizing innovative activities as a result of pressures and challenges. From Schumpeter (1912), Porter (1990a) mainly identifies the description of the entrepreneur and of the leadership as sources of influence. He also says that the risk of new firms taking over the positions of leading firms in Schumpeter (1950) is still present, but nevertheless, there are ways of sustaining leadership.

To give the answer to the question asked at the beginning of this part, a common source of influence for both Minsky and Porter remains to be the Theory of Economic Development (Schumpeter, 1912). Whereas Minsky (1986, 1990, 1993) is widely critical of Schumpeter's late vision, particularly with regard to his business cycle model, he praises Schumpeter's early vision mainly because of its compatibility with Keynes' General Theory (Minsky, 1986). A particular issue that is decisive for Minsky's rejection of the late Schumpeterian vision is that in the former 'money mattered' (Minsky, 1986, p. 121) whereas in the latter, it did not. On the other hand, Porter (1990a) does not differentiate between the early and the late visions of Schumpeter. A possible explanation of Porter's admiration on both perspectives is that in the Schumpeterian theory, an entrepreneur is "an agent of change that can also earn extra profits for bringing novelty to the market" (Knell, 2012, p. 7). Hence, this boils down to the view of Knell that as long as an entrepreneur remains as an agent of change, it does not matter whether it is an individual or a giant corporation (Knell, 2012). However, one should keep in mind that Porter does not integrate the two theories of Schumpeter in an uncritical way; rather, he gives empirical evidence against some points raised by Schumpeter, and also goes beyond it by continuing from where he stopped (Porter, 1990a).

6. Fundamental Differences between Minsky and Porter

It is clear both from Minsky's (1990, 1993) own contributions and from recent literature (Knell, 2015; Sau, 2019) that Minsky also followed a Schumpeterian tradition. In part 5, it was found out that Schumpeter influenced Minsky with the same contribution as Porter, however, the two took different aspects of it and went to other directions. The question that remains to be answered is what kind of fundamental differences can be identified in Minsky (1990, 1993) and Porter (1990a).

The first issue that is visible from Porter's diamond is that the diamond does not give an emphasis to banking and finance. Factor conditions, demand conditions, related and supporting industries, and firm structure, strategy and rivalry are the four dimensions of the diamond, which together constitute the determinants of national competitive advantage. On the contrary, in Minsky's model, financing is the central factor that determines the emergence of novelties in the economy. Minsky notices that "new combinations in production and in products could not appear without being financed" (Minsky, 1990, p. 61), hence, criticizing the fact that the Schumpeterian theory is restricted to technological innovations and does not observe financial innovations. In this sense, Porter is not different from the rest of the scholars who, from the perspective of Minsky, do not emphasize the fact that "new types of financing possibilities can trigger process and product innovation, even as the evolution of financial relations and structures can erect barriers to development" (Minsky, 1990, p. 61). This is the first fundamental difference between Minsky and Porter.

Based on this first fundamental difference, a second one can be identified. Porter's model is essentially a microeconomic model without much emphasis given to macroeconomic issues. In an interview, when he is being asked for his views about the role of macroeconomic policies in national competitive advantages, Porter replies by stating that "Macroeconomic issues are important, but they do not tell the whole story. The problem (of competition) is deep seated, and rooted in microeconomic inefficiencies linked to distortions to the competitive process" (Snowdon & Stonehouse, 2006, p. 168).

An issue that is mentioned by Knell (2015) is regarding the role of financial institutions, and how Minsky diverges from Schumpeter in this perspective. According to the author, Schumpeter did not see innovations in banking and finance as a direct cause of financial instability; Minsky, on the other hand, followed the opposite approach and moved close to John Maynard Keynes (1936), in which he observed financial institutions as having a tendency to excess and "believed that the only way to break the pattern of boom and bust was through public policy, regulation of the financial system, and central bank action" (Knell, 2015, p. 307). In addition, Knell (2015) mentions that the previously described business cycle model of Schumpeter (1939) was rejected by Minsky in his doctoral dissertation (Minsky, 1954). The author concludes that Minsky was close to the post-Keynesian tradition in this sense, but he described himself as a financial-Keynesian. Based on Minsky's (1995) later observations, Sau (2019) introduces a new stage to the original model of Minsky, which is the global financial money-manager capitalism. In this setup, out of the money-manager capitalism, a new stage emerges that is based on a deep financial integration, given with the example of national and international entities coping with the effects of the sub-prime crisis that emerged in the USA.

In comparison, Porter (1990a) also provides room for public policy, but he does not do this with a motivation or a reference to financial institutions in particular. Neither does he believe that interventions can change the economic structure for good. When describing the diamond, Porter questions whether government should be added as a fifth determinant of national competitive advantage. He rejects this, and states that the government is there to influence and be influenced by the four determinants of national competitive advantage, and he specifically gives the example of capital market regulations – but not in the sense of praising or criticizing capital market regulations. In Porter's framework of national competitive advantage, there is room for public policy, but not to the same extent and with the same motivation as Minsky's. After the wealth-driven stage, the economy can return back to any of the previous stages; it is even possible that it can go all the way down to the factor-driven stage. Hence, Porter's theory does not have implications on whether financial integration will deepen. The different observations of the financial institutions in the final stages of the corresponding models gives the third fundamental difference between Minsky and Porter.

Fourth fundamental difference between the two is the role of macroeconomic variables, in particular, inflation. In Minsky's (1990, 1993) framework, accumulated wealth turns into managed-money funds primarily because people do not want to leave their wealth in their savings accounts. One can identify a clear cause-consequence relation between inflation and managed-money funds. This fear of people is accompanied by institutional investors' pressure on business and finance. This group, in the framework of Minsky, is the one who owns "the largest repositories of savings in developed countries" (Sau, 2019, p. 10). In the framework of Porter (1990a), the whole inflation phenomenon is not mentioned and does not have an effect on the wealth-driven economy. Porter gives the example of the United Kingdom when he describes the wealth-driven stage of national competitiveness. A quick look at the inflation rates of the United Kingdom between 1980–1990 indicate that the inflation rate was 17.97% in 1980 and fell to 8.06% in 1990, which indicates a strong fall in inflation (The World Bank, 2020). Hence, one cannot build a pure analogy between money-manager capitalism and wealth-driven economy. Even though the observed phenomena are the same, Minsky and Porter assign different conditions to the emergence and outcomes of the final stages of their corresponding models. This is the fourth fundamental difference between Minsky and Porter.

Conclusions

The aim of the author was to compare two models of economic evolution given by Minsky and Porter. After describing these two models in detail, a comparison was made by analysing the epistemological, ontological and ethical-political perspectives of the two models. The findings highlight differences in all three perspectives. Nevertheless, a similar phenomenon was observed both by Minsky and Porter in the final stage of their corresponding models. This was the phenomenon of an economy which already accumulated wealth but does not generate any novelties. Minsky described this as money-manager capitalism, Porter as a wealth-driven economy. Hence, how the two 'meet' was through the observation of this phenomenon. Nevertheless, some fundamental differences between how Minsky and Porter observed the same phenomenon were also identified. These were presented together with showing how Schumpeter influenced Porter, and how Minsky diverged from Schumpeter when it comes to the role of financial institutions after wealth accumulation. The diversity and different perspectives of both approaches lie in the nature of observing the economy as a dynamic, evolving phenomenon. In this sense, both approaches are Schumpeterian in their own way. Following the research of Powell et al. (2010), future research should focus on identifying the stream of influence running from von Wieser and von Mises to Porter on the one hand, and from Böhm-Bawerk to Minsky on the other. In addition, following the research of Knell (2015) and De Grandi & Tutin (2020), comparative overviews of Minsky's theories with other economists contributing to the same field should be continued in future research. Placing the ideas of these two economists in a broader framework of history of economic thought can also help us understand their positions better.

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