

# Methodological Redirections for an Evolutionary Approach of the External Business Environment

Charis Vlados<sup>1</sup> & Dimos Chatzinikolaou<sup>1</sup>

<sup>1</sup> Department of Economics, Democritus University of Thrace, Komotini, Greece

Correspondence: Dimos Chatzinikolaou, Department of Economics, Democritus University of Thrace, Komotini, Panepistimioupoli, 69100, Greece. E-mail: dimos.chatzinikolaou@gmail.com

Received: July 25, 2019      Accepted: August 14, 2019      Online Published: August 29, 2019

doi:10.5539/jms.v9n2p25      URL: <https://doi.org/10.5539/jms.v9n2p25>

## Abstract

The usual strategic analysis perceives the external business environment fragmentarily and without a coherent and unifying way. The three levels that a typical analysis of the external business environment involves are a) the macroenvironment and PEST analysis, b) mesoenvironment and “Porter’s diamond”, and c) industrial environment and “Porter’s five forces”. Contrary to the fragmentary analysis of the three levels, this article aims to counter-propose a restructured method of a unified and evolutionary analysis of the external business environment. After presenting the usual analytical handling of the external business environment in the three levels, we suggest that these are rather co-evolving than separate and autonomous spheres of analysis. Therefore, after introducing some elements of the evolutionary socioeconomic theory, we propose a systemic web that perceives the external environment of the socioeconomic organisations in dynamically unified and evolutionary terms. The systemic web conceptualises the approach of the external socioeconomic environment as an open and interactive system comprising three co-evolving spheres in the context of global dynamics: the institutional character of each spatially structured socioeconomic formation; the firm’s functions within the system; and the public-state intervention that contributes to the establishment and reproduction of the system. This conceptual redirection of the methodology of the external business environment can be useful for building an integrated strategic analysis that studies all “micro-meso-macro” components of the entire socioeconomic system.

**Keywords:** external business environment, evolutionary approach, strategic analysis, micro-meso-macro analysis, business environment systemic web

## 1. Positioning the Problem: The Fragmentary and Sporadic Perception of the External Business Environment

The discipline of business strategy accepts increasingly that the external environment includes all the dynamic, evolving in time, dimensions that lie externally and influence the organisation to a greater or lesser extent (Banham, 2010; Calantone, Kim, Schmidt, & Cavusgil, 2006; Kumar & Subramanian, 2000; Kuznetsova & Markova, 2017; Loasby, Pfeffer, & Salancik, 1979; Mason, 2007; Reino, Kask, & Vadi, 2007; Terreberry, 1968). This approach examines all the external variable components of social and economic symbiosis and accepts that these external factors can affect the organisational evolution, but cannot be changed and controlled directly by the organisation.

Concerning the external business environment, specifically, there is a variety of definitions:

- i. According to Kotter (1979), all organisations are dependent on some elements in their external environments. The control of the external resources that the organisation needs defines the degree of dependence. Land, labour, capital, information, or a specific product or service, can be such external resources.
- ii. According to Blair and Hitchcock (2004), while seeking to fulfil their goals, businesses face a series of external influences and pressures; these include market trends, government legislation, and the action of their competitors.
- iii. According to Sloman (2008), the external business environment of many firms is increasingly becoming a global one. International trade has grown much faster than the output of countries, while cross-border investment has grown much faster than investment by companies within their home

market. Many companies now perceive the world as their market and source their supplies from wherever in the world they can buy most cheaply.

Moreover, a scanning mechanism to understand the external organisational/business environment can help the firm keep away from unexpected situations and, at the same time, find out future paths of success and growth. Concerning the mechanisms of environmental scanning, there are definitions such as:

- a) *“Environmental scanning is the activity of gaining information about events and relationships in the organisation’s environment, the knowledge of which would assist management in planning future courses of action.”* (Auster & Choo, 1993, p. 194)
- b) *“Scanning provides a framework with which a company can regularly and systematically marshal the pattern-recognition capabilities of a group of professionals to identify important changes in the business environment and evaluate them in the context of the company’s strategy, competencies, and mission.”* (Patton, 2005, p. 1084)

This mechanism can include the operations of monitoring, recording, analysis, evaluation, and transfer of relevant information to the members of the organisation that shape its strategy and decision-making (Schwenker & Wulf, 2013). The final goal of this process is to comprehend what changes are underway that can lay the ground for opportunities and for threats to develop. The “guiding principles of change” are environmental factors that are catalytic for the success or failure of the organisational strategy. These drivers of change are the forces in particular that can influence and rearrange the structure of a market or industry (Rounsevell, Dawson, & Harrison, 2010; Studer, Welford, & Hills, 2006).

Most often nowadays, a lot of companies—usually the largest and better-equipped ones in systems of strategic business intelligence (Maccoby, 2007; Pirttimäki, 2007; Seufert & Schiefer, 2005)—make use of strategic scenarios (Bradfield, Wright, Burt, Cairns, & Van Der Heijden, 2005) that analyse possible future outcomes of the external business environment. The scenarios examine the main drivers of environmental change, which are characterised by a high degree of uncertainty. The goal of these scenarios is, in particular, to prepare the organisation against possible exceptional and unpredictable developments.

Despite the great importance of understanding the dynamics of the contemporary external business environment thoroughly—and especially in the current conditions of globalization restructuring (Laudicina & Peterson, 2016; Vlado, Deniozos, Chatzinikolaou, & Demertzis, 2018)—a significant number of theoretical and practical approaches seem to sustain and reproduce a relative inefficiency: A perception, that is, mostly simplistic, fragmented, and sporadic.

Many organisations nowadays seem to keep themselves content with collecting sporadically “emergency information” for their strategic planning (Agarwal, Grassl, & Pahl, 2012; Lynch, Mason, Beresford, & Found, 2012). They tend to use mainly their “intuition” to attribute gravity and importance to the information they draw; therefore, their perspective seldom exceeds the random collection of information that allegedly affects the organisation. They draw superficial strategic planning that sustains and intensifies their strategic myopia (Johnston, 2009; Levinthal & March, 1993), since they do not receive nor accept non-familiar information (Hunger & Wheelen, 1997).

In practice, the usual accepted professional methodology in business consulting internationally, in the vast majority of case studies, appears to have the following characteristics when analysing the external business environment:

- a) Usually, different consultants look at the partial levels of the external business environment as independent domains.
- b) They then aggregate and “staple together” mechanistically these analyses of the partial levels into a single text that presents the conclusions of their investigation.
- c) This overall “image” is most often characterised by either gaps or overlaps, as it does not initially address the object being studied in a unified and continuous way.
- d) Within this type of “diagnosis” for the state of the external business environment, most often, the structural perception of the tight dynamic interconnection of the different levels of analysis is missing.
- e) Consequently, the essential scanning of the structural co-evolutionary tendency—both by level and overall—does not appear to be achieved in many cases, but remains shadowy and in many respects obscure, confused, and superficial.
- f) Overall, the usefulness of analysing the external business environment, based on this widely followed

methodology, remains usually diagnostically inadequate—and indeed, in times of crisis and restructuring of the global environment, it often proves even profoundly detrimental—in the drawing of actively adaptive and innovative business strategy.

Many examples from our experience as business consultants in Greece in times of crisis come to justify our observations of the potential risks and analytical imperfections of the conventional method of analysing of the external business environment. Besides, there are numerous cases of investment in Greece during the 2000s—well before the crisis broke out—that failed significantly. They decided to engage strategically in the country by overestimating the emerging attractiveness of some sectors of economic activity and without analysing the looming threats from the imbalances of the country's macroeconomic environment. Moreover, many firms today underestimate incorrectly, we think, the emerging opportunities in various sectors and regions in Greece, as the vagueness in the development of the socioeconomic environment mostly appears to prevail. All of these mistargetings, we think, are caused by a relatively “myopic” way of analysing the external business environment that seems to be applied in the vast majority of cases.

In this context, the evolutionary approach of socioeconomic development seems increasingly useful to approach the external business environment, as some evolutionary approaches imply (Metcalf, 1994; Murmann, Aldrich, Levinthal, & Winter, 2003). The evolutionary theory, in particular, attempts to study the specific space-time framework of the interactions between the internal and external environment of the socioeconomic organisations (Nelson & Winter, 2002). Therefore, our study aims to propose a method of viewing the external environment at dynamically unified terms, towards an evolutionary comprehension.

## 2. Methodology

This conceptual paper will try to propose a repositioning of the practice and theory of approaching the external business environment, especially in evolutionary terms. Concerning the sources of our literature review and research, we have to clarify the secondary research method we will follow. As Largan and Morris (2019) define, qualitative secondary research is a robust form of enquiry that is systematic and analytical in its approach to the use of existing data, where the author does not instigate the data; the data already exist in some form in a multitude of locations. Our article based its secondary research in the Google Scholar database to cite other researchers. In this context, we reviewed the literature on the topic critically. According to Carnwell and Daly (2001), the overall purpose of a literature review is to critically appraise and synthesise the current state of knowledge relating to the topic under investigation, as a means of identifying gaps in the knowledge that a new study would seek to address.

As far as the structure of this article is concerned, we will build upon the following consecutive steps:

- I. The following section distinguishes three main approaches of the external business environment based on our experience in the field of corporate strategic analysis. Multiannual field research and experience has led us to the conclusion that three separate analyses of the external environment of the business are attempted usually. Especially in multinational strategic consulting services (Andersen & Andersson, 2017; Roy & Srivastava, 2017), (a) the macroenvironment and PEST analysis, (b) the mesoenvironment and “Porter’s diamond” and (c) the industrial environment and “Porter’s five forces” are the most common approaches of analysing the external business environment strategically. However, each of them seems to have some relatively weak points, and their full analytical unification is by no means a common ground of observation.
- II. Then we explore specifically the theoretical constituents of these three perspectives:
  - For the macroenvironment and PEST-type analyses, we tried to find past definitions of the macroenvironment combined with PEST analysis, and end up in recent contributions criticising the “conventional” use of PEST analysis in strategic planning.
  - For the mesoenvironment, we tried to find recent articles mostly (over the past ten years approximately) that provide specific definitions. We used these definitions as an introduction that can lead us to the fundamental contribution in the strategic analysis of the mesoenvironment made by Michael Porter (the “diamond”). We used mostly Porter’s wording to explain this “diamond” scheme.
  - Our experience in the field has shown that “Porter’s five forces” theory constitutes the third usual analysis of the external business environment. For this exploration, we also used the author’s wordings.
- III. The subsequent section presents a unified evolutionary perspective of the external business environment

based on contributions from the evolutionary economic and business theory (Boulding, 1991; Dopfer & Potts, 2004; Dosi & Nelson, 1994; Foster, 1997). After suggesting that these three approaches of the usual analysis of the external business environment are not, from an evolutionary perspective, separate and autonomous spheres of analysis, we move on to explore the subject of evolutionary economics and its relation to the external business environment. We made first a general introduction of evolutionary theory by analysing some significant articles that explore the origins and developments of evolutionary thinking in social and economic sciences. We then conducted a general literature review by searching for the “evolutionary external business environment” keywords in Google Scholar (and other smaller combinations of keywords, such as “external evolutionary environment”). We searched in both the title and the body of the article for the corresponding phrases or the keywords scattered within the articles, and irrespectively of the publication date, to find articles that understand the business environments evolutionarily.

- IV. Following this evolutionary analysis, the next section counter-proposes a restructured method of perceiving the external environment as a system where the “micro-meso-macro” analytical levels co-evolve.
- V. The final section draws conclusions, limitations, and future directions of this approach of the “evolutionary external business environment.”

### 3. The Usual Analysis of the External Business Environment

Usually, the study of the external business environment is structured and carried out in three distinct levels and steps:

- (1) The macro-environment research, where the “PEST” analysis is the prevailing framework;
- (2) Meso-environment study, where “Porter’s diamond” is the prevalent analytical method;
- (3) Competitive/industrial environment study, where the structural analysis of “Porter’s five forces” is the standard framework.

The subsequent sub-sections will explore how the theory and practice in these three levels evolve by presenting some of the main contributions on the subjects and making specific repositions.

#### 3.1 The Macroenvironment and “PEST-Type” Analyses

It is usually accepted that the organisation’s macro-environment includes the sum of general macro-factors that compose the socioeconomic system hosting the activities of firms. The examination of the socioeconomic system in terms of strategic analysis is usually carried out with the conventional PEST approach, which is the acronym for the following dimensions: political factors, economic factors, social factors, and technological factors (Aguilar, 1967; Brown & Weiner, 1984). The traditional PEST-type analyses constitute nowadays the most commonly used method of analysing the broad external socioeconomic environment of the organisation.

According to Ginter and Jack Duncan (1990), a macro-environmental analysis is helpful both conceptually and functionally, because to consider the social, economic, technological, and political/regulatory environments is crucial for most firms. The authors also argue that management experience and judgment must be able to determine the extent to which environments are to be scanned, monitored, forecasted, and assessed. Žvirblis and Zinkevičiūtė (2008) notice that the macroenvironment constitutes the united exterior forces and factors that influence the company’s marketing system. They argue that the analyst must assess the macroenvironment from the perspective of how it provides favourable conditions for business as well as taking into account threats it causes for business development.

Gupta (2013) suggests that the underlying thinking of PEST analysis is that the enterprise has to react to changes in its external environment, something that reflects the idea that strategy requires a fit between capabilities and the external environment and so it is necessary for an organisation to react to changes. According to Sammut-Bonnici, Galea, and Cooper (2015), PEST analysis works best when it studies the environmental factors from the perspective of the firm’s resources, capabilities, and core competencies. The authors conclude that in the process of exploring a firm’s external macro-environment, five main stages exist: identifying PEST factors, analysing possible effects on the firm, categorising into opportunities and threats, prioritising factors, and developing corrective or pre-emptive strategic action.

However, according to Peng and Nunes (2009), PEST analysis is useful because it favours the assumption that the success of a particular organisation or management solution depends on the information relevant to the specific business environment. In a more critical perspective, Barkauskas, Barkauskienė, and Jasinskas (2015, p.

169) argue that the prevalent PEST qualitative analysis usually excludes the essential influence of macroenvironmental factors on a branch of industry, sector, or company's strategy.

In terms of "conventional" PEST analysis, Figure 1 illustrates the macroenvironment by placing the firm's activity at the centre.

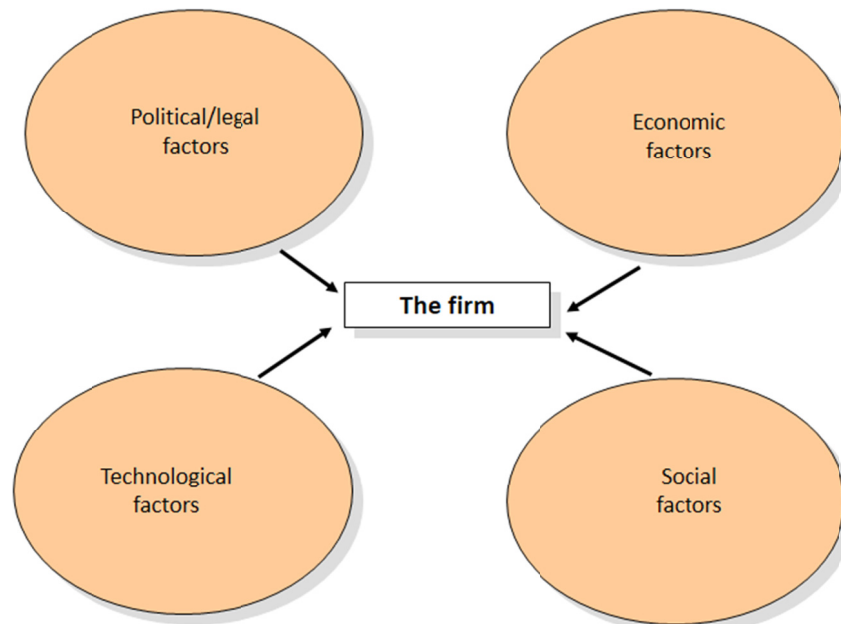


Figure 1. The "conventional" PEST analysis refers to the political, economic, social, and technological factors/dynamics that have an impact on the firm

*Note.* Based on Βλάχος ("Strategy for small and medium-sized enterprises in conditions of crisis: The Stra.Tech.Man approach," 2016).

These dimensions include the following:

- The political factors constitute the legal framework that defines and controls the operation of every entrepreneurial, productive, and investment factor.
- The economic factors include all the productive and consumptive structures, their variant dynamics, and the interconnected evolution of markets and businesses.
- The social factors incorporate all the essential elements of social and demographic structure, the dynamics of knowledge and the workforce's productive capacity, the entrepreneurship, and innovation that every socioeconomic formation has as well as its general consumption patterns. The social factors also include all the ideological and ethical components articulated at the institutional, symbolic, and contractual level of social symbiosis. We can also argue that here lies the general "mind-set" of society.
- Finally, the technological factors incorporate every technical element or science by which a socioeconomic system can become productive and sustain its productivity.

This framework of analysis is sometimes analysed in the literature as PESTEL, where the environmental and legal factors are independent. It also takes other variant forms such as SLEPT, which adds legal elements, STEEPLE and STEEPLED, which add ethics and demographic factors, DESTEP, which adds demographic and ecological factors, PEST-GD, which adds demographic and global factors (Halík, 2012; Nandonde, 2019; Saracoglu et al., 2018; Song, Sun, & Jin, 2017; Zikos, Zaires, & Karadimas, 2017).

These expansions of the conventional PEST analysis do not add any fundamentally important element to an integrated PEST analysis since the ecological environment factor (and its social management) is examined by the social factors, while the legal subsystem has to be studied by the political/legal subsystem. Furthermore, the demographic factor is usually analysed as internal by the social factors, while the element of globalisation cross-links all the factors diagonally and, therefore, an independent examination does not seem beneficial. A significant disadvantage of that type of analyses is that they tend to explore each factor in a fragmented and

relatively simplistic way.

The conventional PEST-type analyses, as generally practised, do not perceive the tight co-evolution and co-determination (Breslin, 2016; Morrison et al., 2007) between the socioeconomic factors of the external environment. In this direction, it seems that PEST analysis has not avoided criticisms. Burt, Wright, Bradfield, Cairns, and van der Heijden (2006) argue that a conventional PEST analysis results in the generation of visible and well-known factors and events, which represent only the 10 per cent of the iceberg that is above the waterline. The invisible 90 per cent below the waterline needs to be examined to understand the nature and structure of the iceberg. Grundy (2018, p. 5) also argues against a static perception of PEST analysis: *“this technique as generally practised is no more than a listing of the factors that people see around them. This is a bit like the experience of flying when you look out of the window sideways from the plane and see some brightness and clouds. But this sideways out picture could be horrendously misleading. For all you know you might be hurtling towards a terrible storm, a mountain or into a new dimension!”*

Since every firm lies within an evolving, broader socioeconomic environment, it practically faces a dialectic sum of interacting factors (Putnam, Fairhurst, & Banghart, 2016; Robey, Ross, & Boudreau, 2002; Van De Ven & Poole, 1995). In terms of conventional PEST analysis, a strategic analysis of the broader external environment tends to perceive its surroundings relatively simplistically, as merely a sum of independent and autonomous factors: it ends up, often, with a “myopic” perception of reality. On the contrary, a comprehensive strategic analysis we think that must assimilate necessarily a more in-depth and systemic understanding (Ritala, Pynnönen, & Hallikas, 2011; Seidl, 2007). In the evolving broader socioeconomic environment, all structural factors co-determine each other dialectically (Sanchez-Palencia, 2012; Williams, 1989) (Figure 2).

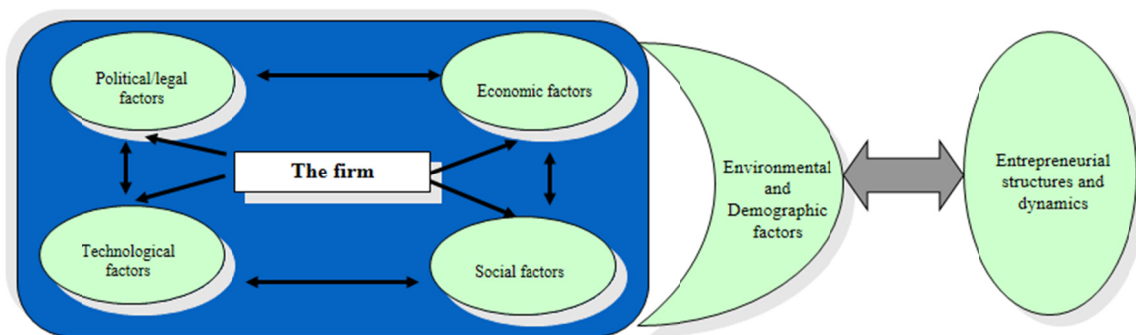


Figure 2. Towards a critique of the traditional PEST analysis

Note. Based on Βλάχος (2016).

Specifically, we think that we have to include the following analytical aspects:

- a) The systemic grid of political, economic, technological, and social dimensions in a framework that recognises the continuous interaction of the partial factors;
- b) The perception of the firm as an actor that also operates actively in the configuration of this framework;
- c) The perception of the natural environment and demography factors as substantial systemic components of this framework; and
- d) The examination of the entrepreneurial structures and dynamics. These are characterised often in our times by an intense connection with the evolution of the global environment.

### 3.2 The Mesoenvironment and “Porter’s Diamond”

For what is generally called mesoenvironment, there is a growing body of literature that offers converging definitions.

- i. In an evolutionary perspective, Dopfer, Foster, and Potts (2004) argue that there are many sorts of change that coincide in the process of economic evolution, which the micro, meso, and macro domains can explain adequately. In particular, the meso perspective deals with system dynamics in terms of structural change and open system process, while micro and macro do not.
- ii. Ricart, Enright, Ghemawat, Hart, and Khanna (2004) argue that the meso or cluster-level drivers

include inputs such as infrastructure, materials, components, and capital goods; the linkages between suppliers and buyers; the nature of local demand; spill-overs from related industries; and policies designed to enhance cluster development.

- iii. For Schenk, Moll, and Schoot Uiterkamp (2007), the mesoenvironment involves the dynamic behaviour of the partial system elements and the coupling of different technologies, resulting in interdependencies and regimes.
- iv. Pitelis and Vasilaros (2010) suggest that the meso-level considers the industry-wide structure, performance and the regional milieu (Porter, 1998), while the macro-level concerns the national context that includes the macroeconomic policy mix and the nature and structure of demand.
- v. From an institutional perspective, Castro, Khavul, and Bruton (2014) conceptualise as mesoenvironment the space in which “taken-for-granted” local norms toward informality emerge. They suggest that “meso-institutions” serve as the connective tissue that connects diverse levels of the environment and shapes the context in which entrepreneurs make decisions.
- vi. Mohamed (2015) perceives the mesoenvironment as comprising at least two sub-layers, the competitive/market and industry contexts of international business.
- vii. McAdam, Miller, and McAdam (2016) argue that whilst the mesoenvironment has its origins in economics, the complex network of relationships and interactions of actors within “regional incubation mechanisms” which help bridge “macro” and “micro” systems is a neglected area of research despite its effect on innovation systems within regions (Doloreux & Parto, 2005; Svensson, Klofsten, & Etzkowitz, 2012).

Precisely, from Porter’s (1990) point of view, the mesoenvironment corresponds to what he introduced several years earlier as “diamond.” The approach of “Porter’s diamond” analyses the advantages that specific industries and firms create for a nation: the intermediate structural space that Porter proposes links the broader macro-socioeconomic dynamics with the industrial situation that every firm is facing (Figure 3).

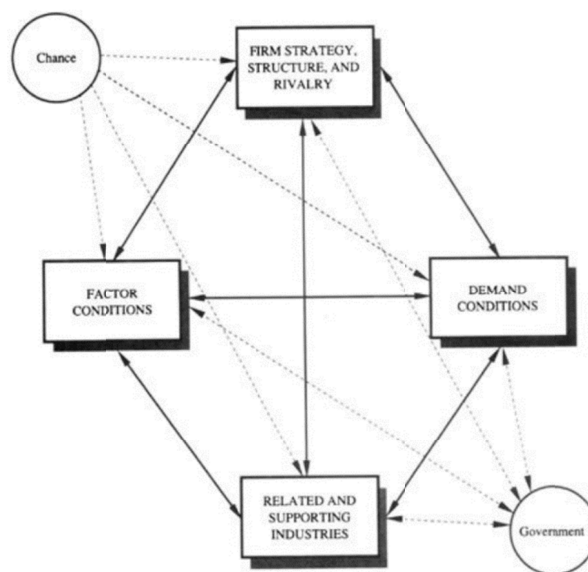


Figure 3. The complete system

Note. Adapted from Porter (1990).

Porter’s “diamond” presents and analyses the ultimate reason why some nations and industries within nations are more competitive than others. According to Porter’s (1990, pp. 127–195) perspective, there are four categories of factors that shape the environment that defines the competitiveness of firms:

- 1) Factor conditions: The nation’s position in factors of production, such as skilled labour or infrastructure, necessary to compete in a given industry. The factors are human, physical, knowledge, capital resources,

and infrastructure.

- 2) Demand conditions: The nature of home-market demand for the industry's product or service. Home demand shapes the rate and character of improvement and innovation by a nation's firms. There are three significant broad attributes of home demand: (a) the composition of home demand, which shapes how firms perceive, interpret, and respond to buyer needs; (b) the size and pattern of growth of home demand; (c) the mechanisms by which a nation's domestic preferences are transmitted to foreign markets.
- 3) Related and supporting industries: The presence or absence in the nation of supplier industries and other related industries that are internationally competitive. The presence of internationally competitive supplier industries in a nation creates advantages in downstream industries via mostly efficient, early, rapid, and sometimes preferential access to the most cost-effective inputs. Concerning related industries, the presence in a nation of competitive sectors that are related often leads to new competitive industries.
- 4) Firm strategy, structure, and rivalry: The conditions in the nation governing how companies are created, organised, and managed, as well as the nature of the domestic rivalry. The pattern of rivalry at home also has a profound role to play in the process of innovation and the ultimate prospects for international success. The strategy and structure of domestic firms, which analyse how firms are managed and choose to compete, are affected by national circumstances.
- 5) To these determinants, Porter also adds the factors of chance and government.

Overall, the analysis of Porter's diamond understands industrial competitiveness in evolutionary and structural terms, although perceived in "fixed" national contexts (Rugman & D'Cruz, 1993). To this end, the fundamental element of Porter's approach is that national competitive advantages are not static, not endowed, and not arising automatically (Smit, 2010). Contrary to the traditional economic analysis, Porter suggests that national advantages are dynamic and historical. "Idiosyncratic" processes, which vary from nation to nation and industry to industry, construct them and, therefore, every country goes through its unique development process. To this end, national development history plays an important role, since it carves a nation's unique base of competencies, general principles, values and norms, needs, tastes and preferences that determine the patterns of demand, and challenges that have been raised or dealt with in the past (Huggins & Izushi, 2015).

### *3.3 The Industrial Environment and "Five Forces Plus Two" Analysis*

The industrial environment (or industry, or sectoral environment) includes all the enterprises and actors lying at the production space of similar products and services (Pasch, Rybski, & Jochem, 2016). We can usually get a full picture of the industrial environment by examining aspects such as the structure of factors of production/industry inputs, including labour, capital, technology/information management, and entrepreneurship (Tang, Thürer, Hu, Zhang, & Petti, 2017).

The most well-known and used technique to analyse this firm's industrial environment is the one also introduced by Porter usually called the "five forces analysis" (Porter, 1979, 1980) (Figure 4).



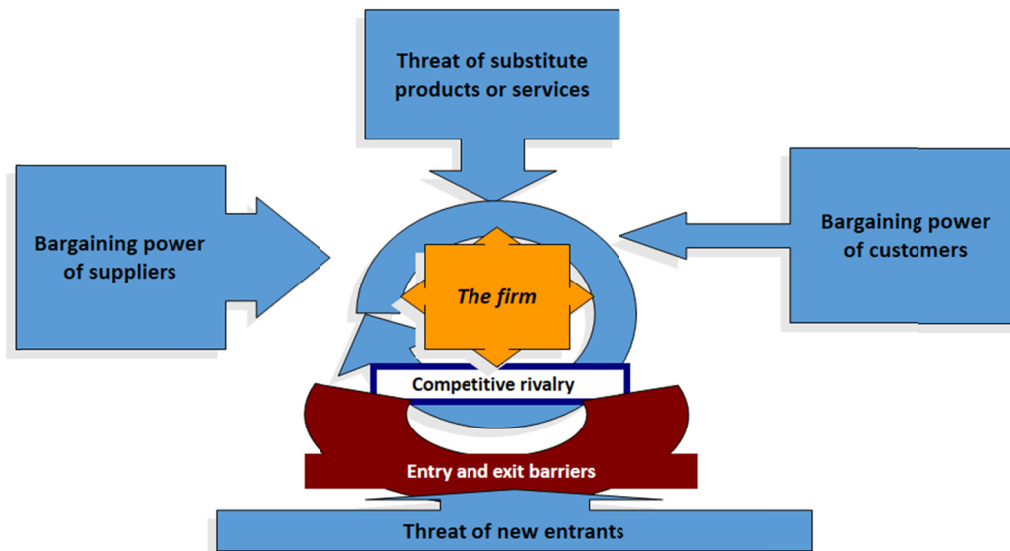


Figure 4. Five forces analysis

Note. Based on Porter, 1980.

This framework distinguishes the following five categories of forces:

- 1) The suppliers' bargaining power expresses how dominant is the suppliers' position against the firm, which depends on the number of alternative suppliers in the market and from their relative influence.
- 2) The customers' bargaining power indicates how dominant the position of buyers against the firm is, and to what extent customers can claim the best possible quality to price ratio.
- 3) The dynamics of substitute products and services shows how easily substitutable is a product, mainly due to its lower price.
- 4) Competitive rivalry refers to competition's intensity against the existing players in the market.
- 5) Finally, the threat of new entrants indicates how easy it is for a new player to enter the market, and refers to the entry/exit barriers for newcomers.

According to Porter, the combined dynamics of these forces determines the ultimate potential profits an industry can offer to the firm within the industry. The more powerful one of these forces is, the harder it is for the firm to claim profits. When the firm is surrounded and delimited by strong bargaining forces and is incapable of formulating a proper strategy, then these restrict the profit margin, the return on capital and, ultimately, "condemn" the firm in extremely tough to survive conditions and, therefore, limited growth.

Here, we propose the addition of two other forces/analytical categories in Porter's scheme, which are analytically discrete and of particular importance: towards a systematic method of "five plus two forces analysis" (Figure 5).

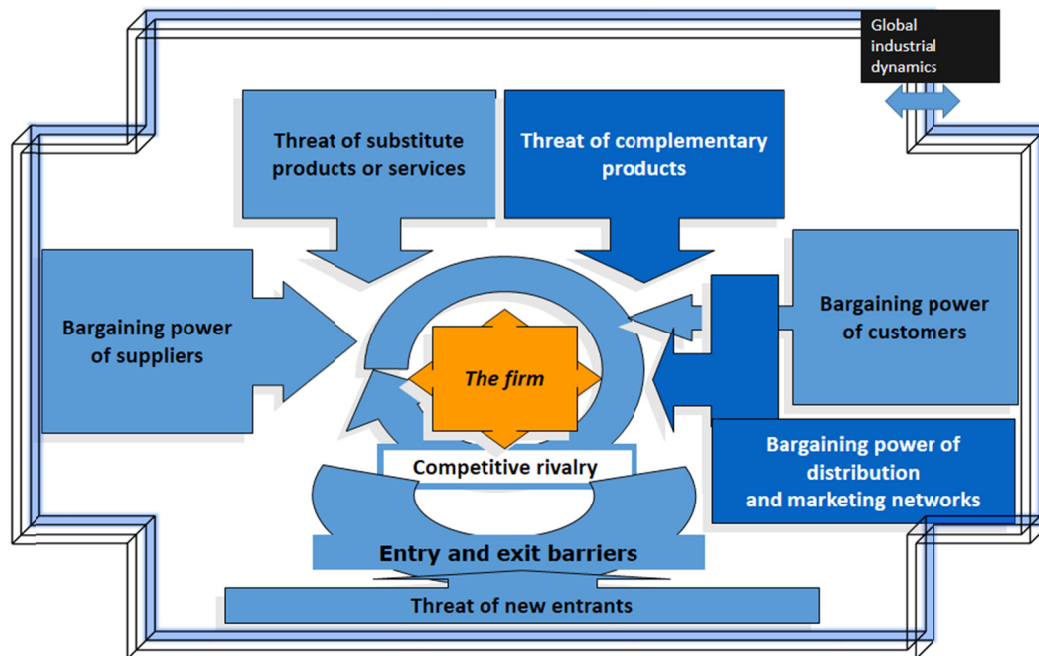


Figure 5. Five forces analysis plus two

Note. Based on Βλάχος, “The dynamics of globalisation and the Greek enterprises,” 2006.

The two other forces that this paper introduces are the following:

- 6) Dynamics of complementary products: expresses how complements, including complement services, influence a product market.
- 7) Bargaining power of distribution and marketing networks: expresses to what extent the distribution network of products and services exerts influence the end-customer of the product or firm.

Moreover, the “industrial context” or meso-environment includes inter-sectoral relationships influencing and influenced by the dynamics of globalisation (Boas, Biermann, & Kanie, 2016). The partial sectors of economic activity bear an international and global content; no local or national structure and dynamics can entrench an industry in absolute terms (Giannopoulos & Munro, 2019). Therefore, the partial sectors of economic activity link and unify in globalisation the foundational structures of all socioeconomic systems (Figure 6).

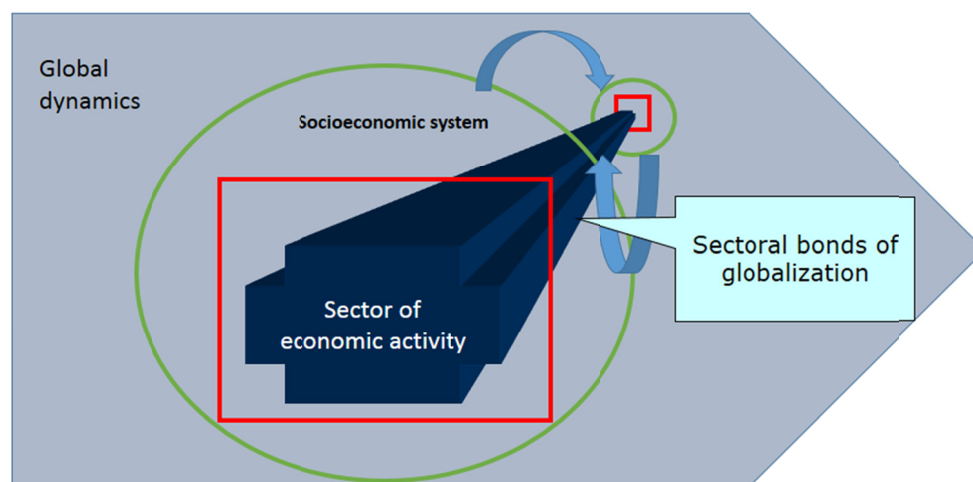


Figure 6. Sectors of economic activity and the partial socioeconomic systems in globalisation

Note. Based on Βλάχος, 2006.

All socioeconomic systems incorporate sectors of economic activity, which at the current age of globalisation are involving both local and global elements. Globalisation constitutes an era when the socioeconomic systems are combining heterogeneous and homogenization forces in a dialectic relationship. The different socioeconomic systems take sectoral inputs and produce sectoral outputs, while these global sectoral bonds are crossing every socioeconomic agent on the planet (Cecilia de Burgh-Woodman, 2014; Scherer, Palazzo, & Seidl, 2013).

In conclusion, after presenting these three “different” levels of analysing the external environment—macroenvironment and PEST analysis, mesoenvironment and “Porter’s diamond”, and industrial environment and “Porter’s five forces”—we can now suggest that an evolutionary co-structuration and interconnection between them exists, in their practice. These three levels of analysis are not mutually exclusive, although the usual strategic analysis seems to perceive them as autonomous and independent from one another. However, from an evolutionary point of view, these three levels are structurally tied and co-evolving (Figure 7).

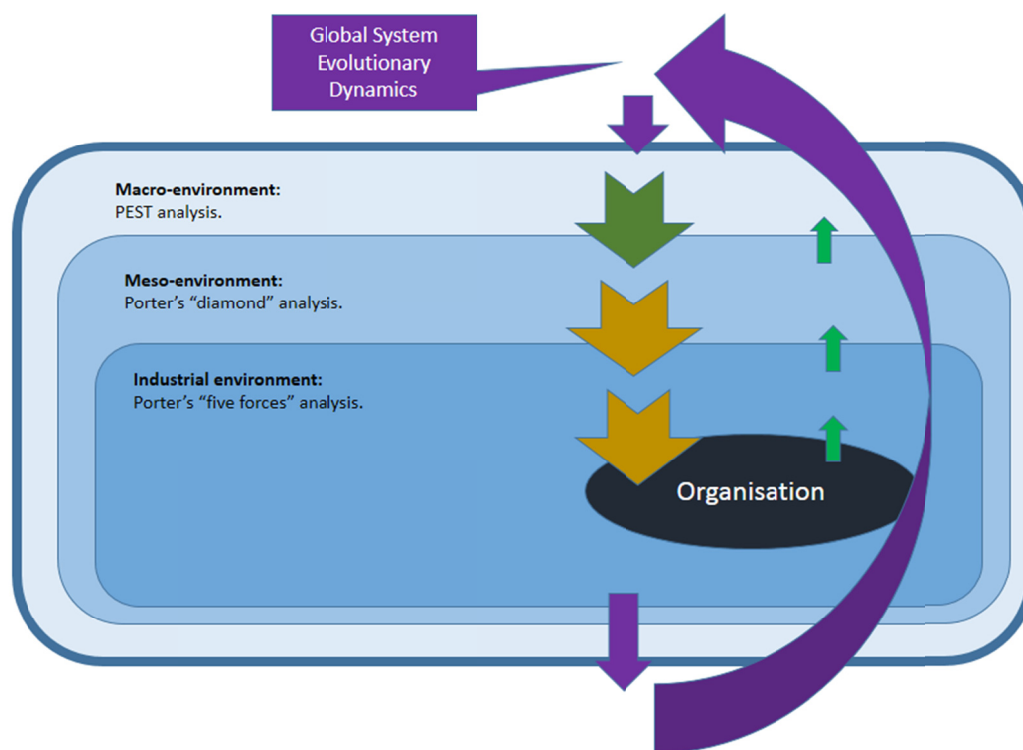


Figure 7. Macro-environment, meso-environment, and industrial environment analysis of the organisation

*Note.* Based on Βλάχος, 2016.

The different levels “correlate” with each other and produce interdependent relationships within their specific spatial and temporal framework:

- First, the macro-environmental changes affect the structure and dynamics of the meso-environment, and then these effects are absorbed by the evolutionary shaping of the partial industrial environments and, finally, expand to the organisation.
- Second, the strategic reactions of the organisation are recorded upon and change its industrial environment; the industrial change has an impact upon the meso-environment’s dynamic homeostasis and, finally, the whole macro-environment level incorporates the reaction to change.
- Overall, the evolutionary dynamics of globalisation is the framework that always unifies the different environments by absorbing their dynamic actions. Globalisation produces—and is reproduced by—the “micro-meso-macro” synthesis of environments.

Therefore, there are dialectic interactions that leverage the analytical levels evolutionarily (top-down and bottom-up and vice versa), which must not be omitted and ignored methodologically in the conception of the external business environment. In this direction, the next section will explore some of the contributions in the

evolutionary theory of socioeconomic systems.

#### 4. The Evolutionary Approach to the External Business Environment

Concerning the concept of evolution per se, according to Witt's (1996) work entitled "a 'Darwinian Revolution' in economics" evolution on an abstract level may be taken to mean the self-transformation of a system through the generation and dissemination of novelty. Once a novel genetic variant has occurred, its further success or failure in terms of dissemination depends on the current state of its environment. Hodgson (2002) argues that evolution is a multi-level process, while critical features of the natural and the socioeconomic levels are different. He asserts that not all mechanisms relevant to biology will apply to the socioeconomic level as well. However, some general features of a Darwinian explanation can be common to all levels, wherever the features of variation, selection, and inheritance are present. Foster (1997), who searches for "the analytical foundations of evolutionary economics", argues that most evolutionary economists do not choose the neo-Darwinian theory of natural selection as their biological analogy. Instead, they tend to favour a "Lamarckian analogy". This analogy allows for the inheritance of behavioural characteristics acquired from experience in particular environments. The author concludes that economic organisations, such as firms, do not need to rely entirely upon natural selection to adapt.

Concerning the evolutionary economic analysis, there are also many appealing analytical directions and contributions relative to the external environment subject:

- i. According to Veblen (1898, p. 393): *"it appears that an evolutionary economics must be the theory of a process of cultural growth as determined by the economic interest, a theory of a cumulative sequence of economic institutions stated in terms of the process itself."*
- ii. Boulding (1991, p. 1) has also argued that: *"In its largest sense, evolutionary economics is simply an attempt to look at an economic system, whether of the whole world or of its parts, as a continuing process in space and time. Each economy is then seen as a segment of the larger evolutionary process of the universe in space and time ... or if we want to be very Einsteinian, in four-dimensional space-time, though in economics I don't think we have to worry about that very much."*
- iii. For Dopfer and Potts (2004), evolutionary economics is a nascent analytical framework for the analysis of the economic system as an open, complex and evolving system. It is a theoretical hybrid of evolutionary theory, complex systems theory, self-organisation theory, and agent-based computational theory, and a methodological fusion of different streams of thought in economics. Unlike neoclassical economics where, in a dull but reassuring way, each model looks pretty much like all the rest, evolutionary economics is becoming more and more a menagerie of models and studies sui generis. The authors conclude that "ontology" offers help and that a "micro-meso-macro" structure to analysis is best for integrating and developing evolutionary economic theory.
- iv. Nelson and Winter (1974) argue that the first significant commitment of the evolutionary theory is the behavioural approach of specific firms. A firm at any time operates mostly according to a set of decision rules that link a domain of "environmental stimuli" to a range of responses on the part of firms. They conclude that while neoclassical theory would attempt to deduce these decision rules from maximisation on the part of the firm, the behavioural theory takes them as given and observable.
- v. For Cafferata (2016), according to Darwin, the external environment is waiting for someone to adopt. The organism confronts itself with that offer and does its best to adapt to it. On the contrary, the author argues that the supporters of the theory of co-evolution have underlined that not everything occurring in the natural world is to be categorised as a passive adaptation because the struggle for survival is not a mere matter of compliance and search of the minimal for staying alive. The dialectical study of evolution emphasises that the Darwinian concept includes a set of complex and contradictory moves, countermoves, conscious actions, trials, and errors, because of which organisms/organisations try to differentiate themselves, change the environment, and control it.
- vi. Finally, by borrowing a biological analysis (published in "The Journal of Physiology"), we can say that the following findings are also of interest to the reality of firms/organisations. Laland, Odling-Smee, and Turner (2014) argue in particular that their study draws out the parallels between constructive physiological processes expressed internally and in the external environment (niche construction), showing how in each case they play important and not fully recognised evolutionary roles by modifying and biasing natural selection. This construction of internal and external environments need not be separate phenomena because, for instance, "symbionts" play critical roles by constructing

internal environments of their hosts and external environments for themselves.

The concept of evolution owes, of course, to a great extent, its establishment as a distinct system of study to Darwin's work. At the highest level of abstraction, evolution means the self-transformation of a system through the generation and dissemination of novelty—more precisely, innovation. Once a novel genetic variant takes place, then the environment—in a multi-level ontological meaning of micro-meso-macro environment—is what determines the subsequent successful assimilation or failure of any novelty. Critical to the study of evolutionary change in economic analysis is the specific historical content. We cannot claim with certainty that the socioeconomic sciences are going to enter a “Darwinian revolution” similar to what occurred in natural sciences. It seems that not all biology-related mechanisms can be applied to socioeconomic thinking and action, although the analytical contributions of variation, selection, and inheritance are present. It appears that socioeconomic organisations shape their evolutionary course also based on other systemic specifications, such as the specific experience and behaviour they develop in the environments that host them.

Is, in fact, economic science an evolutionary science (Dosi & Nelson, 1994; Friedman, 1998; Schabas, 2015; Valentinov, 2015)? To the extent that it is a cumulative sequence of economic institutions, it must include “evolutionary roots” in its theoretical core. Whether dealing with the socioeconomic system in whole or in part, this does not cease to be a continuous process with a particular spatiotemporal content. The conventional neoclassical analysis—in which models are mostly similar and simplistic, just pursuing maximisation on the part of economic actors—seems unable to grasp the complex “physiology” of socioeconomic systems completely. However, the increasing introduction of *sui generis* models and studies makes evolutionary economics challenging to handle and sometimes obscure. Undoubtedly, multi-level analyses of “micro-meso-macro type” are useful for an enhanced interpretive and predictive ability of evolutionary economic science. However, finally, when it comes to an evolutionary business environment, what can an analyst understand, and why does it matter?

Initially, a critical pivot of evolutionary economics is the introduction of the behavioural approach of different firms. In this direction, each firm operates in response to internal and external environmental impacts. In a biological analysis (Geus, 2002; Hodgson, 1993; Penrose, 1952), the physiological processes expressed internally and in the external environment (niche construction) can indeed show that the development of internal and external environments need not be separate phenomena since socioeconomic organisations are both co-evolving and adapting to their environments. The multi-level dialectics of environments ultimately makes the external business environment an evolving space in which organisms/organisations try to differentiate themselves: this continuous process simultaneously changes the socioeconomic organisations themselves as well as the surrounding socioeconomic systems.

### **5. Counter-Proposal: Structuring an Evolutionary Perspective of the External Business Environment Analysis**

An analytical approach that incorporates all these evolutionary dimensions of the socioeconomic framework can probably be beneficial. This article proposes an integrated system where each change of a subsystem necessarily causes changes on all other subsystems, thus creating multiplicative phenomena and feedback. Therefore, we argue first that a tight interaction between the economic dynamics and the broader social system exists within the evolution of the global system (Figure 8).

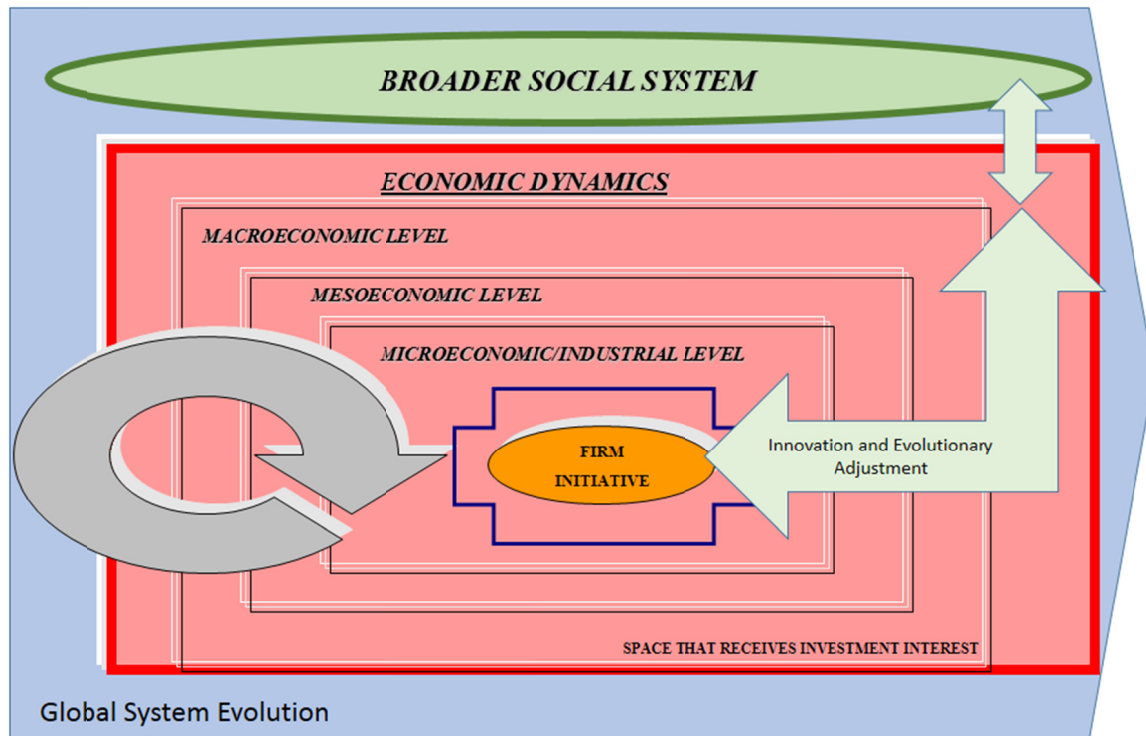


Figure 8. Economic dynamics and the broader social system; towards a multi-level perception of the socioeconomic system

On this analytical basis, we can perceive the sum of socioeconomic factors according to a “systemic web”. Each dynamic dimension acts as a carrier of “systemic disruption and adaptation” of this web. The movement and action of each actor affect the movement of others, while each change of a factor reshapes the dynamics of the rest. Thus, very often, for example, a political transition has specific economic consequences which in turn have specific social impacts which affect technological development and so on, in a continuous systemic cycle that continuously remodels the external business environment. The following diagram expresses this analytical framework (Figure 9).

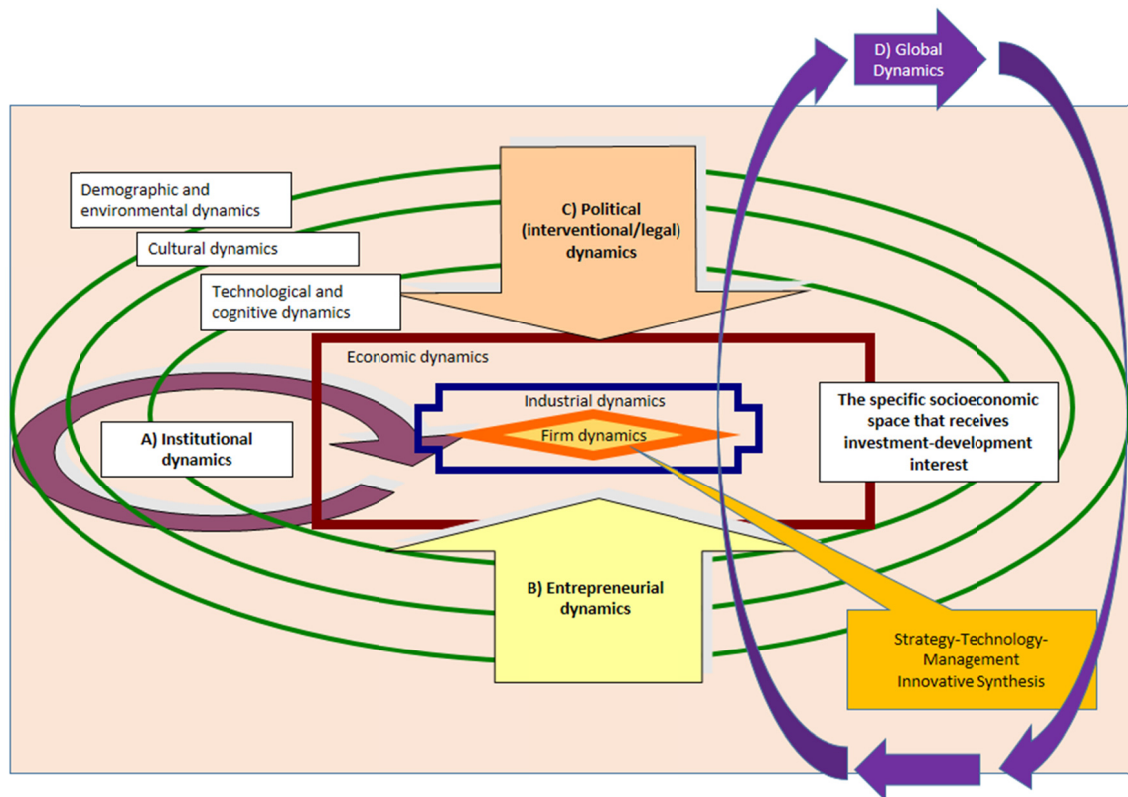


Figure 9. An analytical counter-proposal. The external socioeconomic environment as an open systemic web

Note. Based on Βλάχος, 2006.

In this view, three analytical spheres are constructing the overall system of the external environment of the organisation:

- A) The particular institutional character of each spatially structured socioeconomic formation that assimilates all actions;
- B) The firm's functions within the system;
- C) The public-state intervention that contributes to the establishment and reproduction of the system;
- D) The three spheres of the socioeconomic formation produce—and are reproduced by—the global dynamics.

On the one hand, the actions of private entrepreneurship and, on the other hand, the effects of the collective intervention are the two structural spheres that continuously leverage the system of reproduction of the socioeconomic formations that host the economic activity. At the same time, within any firm/organisation, which is at the centre of the system, a dialectical synthesis is always attempted: in combined terms of strategy, technology and management (Stra.Tech.Man approach; Vlado, 2004, 2005). Each firm/socioeconomic organisation by responding explicitly or indirectly to a triple set of dialectical questions may build the mechanisms of adaptation to the external environment and achieve an innovative synthesis. More specifically, strategy poses the question “*where am I, where am I going, how do I go there, and why?*” technology raises the question “*how do I draw, create, synthesize, diffuse and reproduce the means of my work and know-how, and why?*” while management poses the question “*how do I use my available resources, and why?*” The evolutionary unfolding of these internal questions ultimately determines the potential of innovation in the overall interactive system.

Within the recurrent mutation of the external environment, all structural actors (both private and public) acquire specific form and define the transformation trajectories of the socioeconomic system. In this context, a strategic analysis of the business environment must be able to extend from the more general to the more specific, from the broader super-system to the partial subsystem that encompasses the dynamics of the specific firm.

Specifically, the dimensions of the analysis are:

- 1) First, the particular socioeconomic area that receives investment/development interest: Within this sphere of analysis, it is possible to understand the crucial importance of the partial spatially structured socioeconomic systems as “pools of advantages” for the entrepreneurial action they embrace. This sphere includes in the form of successive and dialectically interdependent subsystems, from the upper to lowest level:
  - a) Demographic and environmental dynamics, related to aspects such as the size of population and the demographic changes; the density of population and the geographical distribution evolution; the state and development of social infrastructure (such as roads, water supply, and electricity) and their relationship with the natural environment; the change in critical environmental pressure/degradation points.
  - b) Social dynamics, that is, the structures and dynamics related to aspects such as social mobility; labour ethics; occupational mobility and working arrangements; lifestyle structure (for example leisure time management); consumption structures and patterns; awareness of environmental issues; insurance, health, and education institutions.
  - c) Technological/cognitive dynamics, that involves dynamics such as the level of education and its evolution; public and private R&D expenditure; the environment of innovation; the pattern of appearance and assimilation (products and production processes) of changes; the reproduction of technical specialisations; research and knowledge production structures; structures to promote entrepreneurship.
  - d) Economic dynamics, that is, aspects such as the changes over the production structures; the consumption patterns; the distribution of income structures; the structures of national and international trade and competition.
- 2) The sphere of firm dynamics: Here is the overall structure of the system of firm initiatives within the evolving context of competition.
- 3) The political (intervention/legal) dynamics sphere: This level approaches the evolution of dimensions such as macroeconomic policy (fiscal and monetary); labour law; tax legislation; environmental protection legislation; industrial policy; technology policy; export and international trade policy; regional policy; education policy; social policy; structural and competition policy (such as antitrust law).

With this kind of understanding, the analysis of the broader external environment can ultimately lead to an evolutionary perspective and clarify the continuous dynamic synthesis between the actions of firms, the state (public intervention at large) and each spatially structured socioeconomic formation. We argue that this synthesis lies at the source of developmental trajectories of socioeconomic systems and organisations.

This repositioning of the method of analysing the external business environment unifies the different “micro-meso-macro” levels into an open and interactive system. This counter-proposed systematic view of the external business environment manages to:

- ❖ Introduce into the analysis the evolution of the macroeconomic environment, which in practice continuously shapes the nature and dynamics of the organisation that lives in the centre of the system;
- ❖ Place at the centre of analysis the evolutionary dynamics of the capitalist firm (microenvironment), which, through its strategic, technological, and managerial choices, synthesis and actions, defines the specific morphology of the open system (Vlados, Katimertzopoulos, & Blatsos, 2019);
- ❖ Include in the analysis the importance of the institutional dynamics that perceive in a dialectic manner all the socioeconomic system’s components;
- ❖ Incorporate into the analysis the political dynamics in its total socioeconomic interventional content as a central dialectical axis that shapes the external business environment;
- ❖ Assess the structural impact of entrepreneurial dynamics at a cross-sectoral level as an axis of the evolutionary course of the whole system;
- ❖ Integrate the analysis of the evolutionary business environment into the context of global dynamics, where the different socioeconomic systems are constructing increasingly dense systemic interactions.

At the same time, this evolutionary methodological framework of strategic analysis of the external business



environment, can lead to a systematic perception of the relative opportunities and help the organisation to construct robust strategic niches. In this context, an organisational system never possesses absolute strong and weak points, while the threats and opportunities of the external environment are not the same to all—as the “conventional” PEST analysis implies. Comparative and correlative strengths and advantages are always present, which are giving birth and nurture specific future opportunities. Analogously, there are comparative and correlative weaknesses and deficiencies that are giving birth and nurture particular future threats (Hill & Westbrook, 1997; Koch, 2000; Nixon & Helms, 2010; Vladoš, 2019).

## 6. Conclusions, Limitations, and Future Direction

This article aimed to study the practice and theorisation of the external environment, as exercised by the usual strategic analyses. After presenting the three levels of a typical analysis of the external business environment, the macroenvironment and PEST analysis, the mesoenvironment and “Porter’s diamond”, and the industrial environment and “Porter’s five forces”, we suggested that these levels are structurally interconnected and co-evolve. As a result, we analysed some contributions of the evolutionary theory and “biological” approach to the analysis of the socioeconomic system and ended up in a counter-proposed methodological framework of studying the external business environment. We counter-proposed an extended systemic interpretation under the framework of the “systemic web”.

Concerning the limitations of our research, we did not extract primary data from implemented strategic analyses of the external environment in a representative sample of firms; our analysis was based on secondary sources in qualitative terms. That is, we have not studied whether our empirical image of the usual strategic analyses of the external business environment is validated by the everyday practice of firms. We have not provided integrated justification that derives from primary or secondary research that explores whether the usual corporate strategic analysis is conducted in these three “fragmented” levels: a) the macroenvironment and PEST analysis, b) the mesoenvironment and “Porter’s diamond,” and c) the industrial environment and “Porter’s five forces.”

Besides, one major limitation of the analysis is that it is neither space- nor time-specific since it cannot equally apply to all business environments of “then to now,” or among south developing and north developed economies, industries, and firms. This research limitation makes it urgent to determine the time- and spatial-contexts of the analysis in the future developments of the research in the field. Therefore, future research could study specific examples and cases of corporate strategic analyses of the external business environment by also identifying the implemented practice and test this methodological counter-proposal in terms of action research (Coghlan & Brannick, 2014; Ranjan Kumar, 2013): both in qualitative and quantitative terms and by extracting primary and secondary data. It could also explore possible facilitation and difficulties deriving from the implementation of the counter-proposed “systemic web” model.

Moreover, the proposed model of examination of the external business environment as a systemic web in this original form requires further processing to obtain a full operational expression that will provide usability and controllability for the organisational actors. Namely, the proposed “evolutionary external business environment” approach has not yet embedded an integrated morphology that could incorporate and use simultaneously quantitative and qualitative imprints of the strategic analysis and performance of an organisation.

However, this contribution we estimate that can be a useful introductive conceptual contribution to reposition the study of the external business environment in systemic evolutionary terms.

## Acknowledgements

We want to show our gratitude to Dr Andreas Andrikopoulos, Associate Professor at the Department of Business Administration of the University of the Aegean, for his useful comments during the writing of this manuscript and to Michail Demertzis, Postgraduate student at the Department of Law of the Democritus University of Thrace, for his editing assistance.

## References

- Agarwal, R., Grassl, W., & Pahl, J. (2012). Meta - SWOT: Introducing a new strategic planning tool. *Journal of Business Strategy*, 33(2), 12–21. <https://doi.org/10.1108/02756661211206708>
- Aguilar, F. J. (1967). *Scanning the business environment*. Johannesburg: Macmillan.
- Andersen, T. J., & Andersson, U. (2017). Multinational corporate strategy-making: Integrating international business and strategic management. In T. J. Andersen (Ed.), *The Responsive Global Organization* (pp. 13–34). Bingley, UK: Emerald Publishing Limited. <https://doi.org/10.1108/978-1-78714-831-420171001>
- Auster, E., & Choo, C. W. (1993). Environmental scanning by CEOs in two Canadian industries. *Journal of the*

- American Society for Information Science*, 44(4), 194–203. [https://doi.org/10.1002/\(SICI\)1097-4571\(199305\)44:4<194::AID-ASI2>3.0.CO;2-1](https://doi.org/10.1002/(SICI)1097-4571(199305)44:4<194::AID-ASI2>3.0.CO;2-1)
- Banham, H. C. (2010). External environmental analysis for small and medium enterprises (SMEs). *Journal of Business & Economics Research (JBER)*, 8(10), 19–26. <https://doi.org/10.19030/jber.v8i10.770>
- Barkauskas, V., Barkauskienė, K., & Jasinskas, E. (2015). Analysis of macro environmental factors influencing the development of rural tourism: Lithuanian case. *Procedia - Social and Behavioral Sciences*, 213, 167–172. <https://doi.org/10.1016/j.sbspro.2015.11.421>
- Blair, A., & Hitchcock, D. (2004). *Environment and business*. London: Routledge. <https://doi.org/10.4324/9780203005330>
- Boas, I., Biermann, F., & Kanie, N. (2016). Cross-sectoral strategies in global sustainability governance: Towards a nexus approach. *International Environmental Agreements: Politics, Law and Economics*, 16(3), 449–464. <https://doi.org/10.1007/s10784-016-9321-1>
- Boulding, K. E. (1991). What is evolutionary economics? *Journal of Evolutionary Economics*, 1(1), 9–17. <https://doi.org/10.1007/BF01202334>
- Bradfield, R., Wright, G., Burt, G., Cairns, G., & Van Der Heijden, K. (2005). The origins and evolution of scenario techniques in long range business planning. *Futures*, 37(8), 795–812. <https://doi.org/10.1016/j.futures.2005.01.003>
- Breslin, D. (2016). What evolves in organizational co-evolution? *Journal of Management & Governance*, 20(1), 45–67. <https://doi.org/10.1007/s10997-014-9302-0>
- Brown, A., & Weiner, E. (1984). *Supermanaging: How to harness change for personal and organizational success*. New York: McGraw-Hill.
- Burt, G., Wright, G., Bradfield, R., Cairns, G., & van der Heijden, K. (2006). The role of scenario planning in exploring the environment in view of the limitations of PEST and its derivatives. *International Studies of Management & Organization*, 36(3), 50–76. <https://doi.org/10.2753/IMO0020-8825360303>
- Βλάχος, X. M. (2006). *Η δυναμική της παγκοσμιοποίησης και οι επιχειρήσεις στην Ελλάδα* (English translation of the title: “The dynamics of globalisation and the Greek enterprises”). Αθήνα: Εκδόσεις Κριτική.
- Βλάχος, X. M. (2016). *Στρατηγική μικρομεσαίων επιχειρήσεων σε συνθήκες κρίσης: Η προσέγγιση STRA.TECH.MAN* (English translation of the title: “Strategy for small and medium-sized enterprises in conditions of crisis: The Stra.Tech.Man approach”). Αθήνα: Εκδόσεις Κριτική.
- Cafferata, R. (2016). Darwinist connections between the systemness of social organizations and their evolution. *Journal of Management & Governance*, 20(1), 19–44. <https://doi.org/10.1007/s10997-014-9303-z>
- Calantone, R. J., Kim, D., Schmidt, J. B., & Cavusgil, S. T. (2006). The influence of internal and external firm factors on international product adaptation strategy and export performance: A three-country comparison. *Journal of Business Research*, 59(2), 176–185. <https://doi.org/10.1016/j.jbusres.2005.05.001>
- Carnwell, R., & Daly, W. (2001). Strategies for the construction of a critical review of the literature. *Nurse Education in Practice*, 1(2), 57–63. <https://doi.org/10.1054/nepr.2001.0008>
- Castro, J. O. D., Khavul, S., & Bruton, G. D. (2014). Shades of grey: How do informal firms navigate between macro and meso institutional environments? *Strategic Entrepreneurship Journal*, 8(1), 75–94. <https://doi.org/10.1002/sej.1172>
- Cecilia de Burgh-Woodman, H. (2014). Homogeneity, “glocalism” or somewhere in between? A literary interpretation of identity in the era of globalization. *European Journal of Marketing*, 48(1/2), 288–313. <https://doi.org/10.1108/EJM-03-2011-0132>
- Coghlan, D., & Brannick, T. (2014). *Doing action research in your own organization* (4th ed.). Los Angeles; London; New Delhi; Singapore; Washington DC: SAGE.
- Doloreux, D., & Parto, S. (2005). Regional innovation systems: Current discourse and unresolved issues. *Technology in Society*, 27(2), 133–153. <https://doi.org/10.1016/j.techsoc.2005.01.002>
- Dopfer, K., Foster, J., & Potts, J. (2004). Micro-meso-macro. *Journal of Evolutionary Economics*, 14(3), 263–279. <https://doi.org/10.1007/s00191-004-0193-0>
- Dopfer, K., & Potts, J. (2004). Evolutionary realism: A new ontology for economics. *Journal of Economic Methodology*, 11(2), 195–212. <https://doi.org/10.1080/13501780410001694127>

- Dosi, G., & Nelson, R. R. (1994). An introduction to evolutionary theories in economics. *Journal of Evolutionary Economics*, 4(3), 153–172. <https://doi.org/10.1007/BF01236366>
- Foster, J. (1997). The analytical foundations of evolutionary economics: From biological analogy to economic self-organization. *Structural Change and Economic Dynamics*, 8(4), 427–451. [https://doi.org/10.1016/S0954-349X\(97\)00002-7](https://doi.org/10.1016/S0954-349X(97)00002-7)
- Friedman, D. (1998). Evolutionary economics goes mainstream: A review of the theory of learning in games. *Journal of Evolutionary Economics*, 8(4), 423–432. <https://doi.org/10.1007/s001910050071>
- Geus, A. de. (2002). *The living company*. Boston, Mass: Harvard Business School Press.
- Giannopoulos, G., & Munro, J. F. (2019). *The accelerating transport innovation revolution: A global, case study-based assessment of current experience, cross-sectorial effects, and socioeconomic transformations*. Amsterdam, Netherlands; Oxford, UK; Cambridge, US: Elsevier.
- Ginter, P. M., & Jack Duncan, W. (1990). Macroenvironmental analysis for strategic management. *Long Range Planning*, 23(6), 91–100. [https://doi.org/10.1016/0024-6301\(90\)90106-E](https://doi.org/10.1016/0024-6301(90)90106-E)
- Grundy, T. (2018). *Dynamic competitive strategy: Turning strategy upside down*. London; New York: Routledge. <https://doi.org/10.4324/9781315113036>
- Gupta, A. (2013). Environment & PEST analysis: An approach to external business environment. *Nternational Journal of Modern SocialSciences*, 2(1), 34–43.
- Halík, J. (2012). The application of PEST analysis based on EBRD and IBRD methodology. *Central European Business Review*, 1(3), 14–21. <https://doi.org/10.18267/j.cebr.26>
- Hill, T., & Westbrook, R. (1997). SWOT analysis: It's time for a product recall. *Long Range Planning*, 30(1), 46–52. [https://doi.org/10.1016/S0024-6301\(96\)00095-7](https://doi.org/10.1016/S0024-6301(96)00095-7)
- Hodgson, G. M. (1993). The Mecca of Alfred Marshall. *The Economic Journal*, 103(417), 406–415. <https://doi.org/10.2307/2234779>
- Hodgson, G. M. (2002). Darwinism in economics: From analogy to ontology. *Journal of Evolutionary Economics*, 12(3), 259–281. <https://doi.org/10.1007/s00191-002-0118-8>
- Huggins, R., & Izushi, H. (2015). The competitive advantage of nations: Origins and journey. *Competitiveness Review*, 25(5), 458–470. <https://doi.org/10.1108/CR-06-2015-0044>
- Hunger, J. D., & Wheelen, T. L. (1997). *Essentials of strategic management*. Reading, MA: Addison-Wesley.
- Johnston, K. (2009). Extending the marketing myopia concept to promote strategic agility. *Journal of Strategic Marketing*, 17(2), 139–148. <https://doi.org/10.1080/09652540902879292>
- Koch, A. J. (2000). SWOT does not need to be recalled: It needs to be enhanced. *B Quest*, 1(1), 1–14.
- Kotter, J. P. (1979). Managing external dependence. *The Academy of Management Review*, 4(1), 87–92. <https://doi.org/10.5465/amr.1979.4289188>
- Kumar, K., & Subramanian, R. (2000). Navigating the external environment through a market orientation. *S.A.M. Advanced Management Journal; Corpus Christi*, 65(1), 16–30.
- Kuznetsova, S., & Markova, V. (2017). New challenges in external environment and business strategy: The case of Siberian companies. In M. H. Bilgin, H. Danis, E. Demir & U. Can (Eds.), *Financial Environment and Business Development* (pp. 449–461). Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-319-39919-5\\_33](https://doi.org/10.1007/978-3-319-39919-5_33)
- Laland, K., Odling - Smee, J., & Turner, S. (2014). The role of internal and external constructive processes in evolution. *The Journal of Physiology*, 592(11), 2413–2422. <https://doi.org/10.1113/jphysiol.2014.272070>
- Largan, C., & Morris, T. (2019). *Qualitative secondary research: A step-by-step guide*. Los Angeles; London; New Delhi; Singapore; Washington DC; Melbourne: SAGE Publications Ltd.
- Laudicina, P. A., & Peterson, E. R. (2016). From globalization to islandization. Retrieved April 30, 2019 from ATKearney website <https://www.atkearney.com/web/global-business-policy-council/article?/a/from-globalization-to-islandization>
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95–112. <https://doi.org/10.1002/smj.4250141009>

- Loasby, B. J., Pfeffer, J., & Salancik, G. R. (1979). The external control of organizations. A resource dependence perspective. *The Economic Journal*, 89(356), 969–970. <https://doi.org/10.2307/2231527>
- Lynch, J., Mason, R. J., Beresford, A. K. C., & Found, P. A. (2012). An examination of the role for Business Orientation in an uncertain business environment. *International Journal of Production Economics*, 137(1), 145–156. <https://doi.org/10.1016/j.ijpe.2011.11.004>
- Maccoby, M. (2007). *The leaders we need: And what makes us follow*. Boston, MA: Harvard Business School Press.
- Mason, R. B. (2007). The external environment's effect on management and strategy: A complexity theory approach. *Management Decision*, 45(1), 10–28. <https://doi.org/10.1108/00251740710718935>
- McAdam, M., Miller, K., & McAdam, R. (2016). Situated regional university incubation: A multi-level stakeholder perspective. *Technovation*, 50–51, 69–78. <https://doi.org/10.1016/j.technovation.2015.09.002>
- Metcalf, J. S. (1994). Evolutionary economics and technology policy. *The Economic Journal*, 104(425), 931–944. <https://doi.org/10.2307/2234988>
- Mohamed, A. (2015). The international business environment: A proposed analytical framework. *International Journal of Business Environment*, 7(2), 168–199. <https://doi.org/10.1504/IJBE.2015.069013>
- Morrison, R., Balasubramaniam, D., Kirby, G., Mickan, K., Warboys, B., Greenwood, R. M., ... Snowden, B. (2007). A framework for supporting dynamic systems co-evolution. *Automated Software Engineering*, 14(3), 261–292. <https://doi.org/10.1007/s10515-007-0011-7>
- Murmann, J. P., Aldrich, H. E., Levinthal, D., & Winter, S. G. (2003). Evolutionary thought in management and organization theory at the beginning of the new millennium: A symposium on the state of the art and opportunities for future research. *Journal of Management Inquiry*, 12(1), 22–40. <https://doi.org/10.1177/1056492602250516>
- Nandonde, F. A. (2019). A PESTLE analysis of international retailing in the East African Community. *Global Business and Organizational Excellence*, 38(4), 54–61. <https://doi.org/10.1002/joe.21935>
- Nelson, R. R., & Winter, S. G. (1974). Neoclassical vs. evolutionary theories of economic growth: Critique and prospectus. *The Economic Journal*, 84(336), 886–905. <https://doi.org/10.2307/2230572>
- Nelson, R. R., & Winter, S. G. (2002). Evolutionary theorizing in economics. *Journal of Economic Perspectives*, 16(2), 23–46. <https://doi.org/10.1257/0895330027247>
- Nixon, J., & Helms, M. M. (2010). Exploring SWOT analysis—where are we now? A review of academic research from the last decade. *Journal of Strategy and Management*, 3(3), 215–251. <https://doi.org/10.1108/17554251011064837>
- Pasch, F., Rybski, C., & Jochem, R. (2016). Empirical study on quality management for product-service systems in industrial environment. *Business Process Management Journal*, 22(5), 969–978. <https://doi.org/10.1108/BPMJ-01-2016-0023>
- Patton, K. M. (2005). The role of scanning in open intelligence systems. *Technological Forecasting and Social Change*, 72(9), 1082–1093. <https://doi.org/10.1016/j.techfore.2004.10.001>
- Peng, G. C., & Nunes, J. M. B. (2009). *Using PEST analysis as a tool for refining and focusing contexts for information systems research* (pp. 229–236). In 6th European Conference on Research Methodology for Business and Management Studies. Lisbon, Portugal: Academics Conference International.
- Penrose, E. T. (1952). Biological analogies in the theory of the firm. *The American Economic Review*, 42(5), 804–819.
- Pirttimäki, V. H. (2007). Conceptual analysis of business intelligence. *South African Journal of Information Management*, 9(2), 1–14. <https://doi.org/10.4102/sajim.v9i2.24>
- Pitelis, C. N., & Vasilaros, V. (2010). The determinants of value and wealth creation at the firm, industry, and national levels: A conceptual framework and evidence. *Contributions to Political Economy*, 29(1), 33–58. <https://doi.org/10.1093/cpe/bzq003>
- Porter, M. (1979). How competitive forces shape strategy. *Harvard Business Review*, 57(2), 137–145.
- Porter, M. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. New York: Free Press.

- Porter, M. (1990). *The competitive advantage of nations*. New York: Free Press. <https://doi.org/10.1007/978-1-349-11336-1>
- Porter, M. (1998). Clusters and the new economics of competition. *Harvard Business Review*, 76(6), 77–90.
- Putnam, L. L., Fairhurst, G. T., & Banghart, S. (2016). Contradictions, dialectics, and paradoxes in organizations: A constitutive approach. *The Academy of Management Annals*, 10(1), 65–171. <https://doi.org/10.1080/19416520.2016.1162421>
- Ranjan Kumar, M. (2013). Insider action research: Premises and promises. *Journal of Organizational Change Management*, 26(1), 169–189. <https://doi.org/10.1108/09534811311307969>
- Reino, A., Kask, T., & Vadi, M. (2007). Organizational culture and environment: Dynamics in dynamics. Case of Ordi. *TRAMES: A Journal of the Humanities & Social Sciences*, 11(2), 124–138.
- Ricart, J. E., Enright, M. J., Ghemawat, P., Hart, S. L., & Khanna, T. (2004). New frontiers in international strategy. *Journal of International Business Studies*, 35(3), 175–200. <https://doi.org/10.1057/palgrave.jibs.8400080>
- Ritala, P., Pynnönen, M., & Hallikas, J. (2011). The new meaning of customer value: A systemic perspective. *Journal of Business Strategy*, 32(1), 51–57. <https://doi.org/10.1108/02756661111100328>
- Robey, D., Ross, J. W., & Boudreau, M.-C. (2002). Learning to implement enterprise systems: An exploratory study of the dialectics of change. *Journal of Management Information Systems*, 19(1), 17–46. <https://doi.org/10.1080/07421222.2002.11045713>
- Rounsevell, M. D. A., Dawson, T. P., & Harrison, P. A. (2010). A conceptual framework to assess the effects of environmental change on ecosystem services. *Biodiversity and Conservation*, 19(10), 2823–2842. <https://doi.org/10.1007/s10531-010-9838-5>
- Roy, S. N., & Srivastava, S. K. (2017). Global business strategy: Multinational corporations venturing into emerging markets. *Vikalpa*, 42(2), 125–127. <https://doi.org/10.1177/0256090917702857>
- Rugman, A. M., & D'Cruz, J. R. (1993). The “Double Diamond” model of international competitiveness: The Canadian experience. *MIR: Management International Review*, 33(2), 17–39.
- Sammot-Bonnici, T., Galea, D., & Cooper, C. L. (2015). PEST analysis. In *Wiley Encyclopedia of Management* (vol. 12, p. 1). Chichester, West Sussex: Wiley. <https://doi.org/10.1002/9781118785317.weom120113>
- Sanchez-Palencia, É. (2012). *Promenade dialectique dans les sciences*. Paris: Hermann.
- Saracoglu, B. O., Ohunakin, O. S., Adelekan, D. S., Gill, J., Atiba, O. E., Okokpujie, I. P., & Atayero, A. A. (2018). A framework for selecting the location of very large photovoltaic solar power plants on a global/supergrid. *Energy Reports*, 4, 586–602. <https://doi.org/10.1016/j.egy.2018.09.002>
- Schabas, M. (2015). John Stuart Mill: Evolutionary economics and liberalism. *Journal of Bioeconomics*, 17(1), 97–111. <https://doi.org/10.1007/s10818-015-9196-1>
- Schenk, N. J., Moll, H. C., & Schoot Uiterkamp, A. J. M. (2007). Meso-level analysis, the missing link in energy strategies. *Energy Policy*, 35(3), 1505–1516. <https://doi.org/10.1016/j.enpol.2006.04.013>
- Scherer, A. G., Palazzo, G., & Seidl, D. (2013). Managing legitimacy in complex and heterogeneous environments: Sustainable development in a globalized world. *Journal of Management Studies*, 50(2), 259–284. <https://doi.org/10.1111/joms.12014>
- Schwenker, B., & Wulf, T. (Eds.). (2013). *Scenario-based strategic planning*. Wiesbaden: Springer Fachmedien Wiesbaden. <https://doi.org/10.1007/978-3-658-02875-6>
- Seidl, D. (2007). General strategy concepts and the ecology of strategy discourses: A systemic-discursive perspective. *Organization Studies*, 28(2), 197–218. <https://doi.org/10.1177/0170840606067994>
- Seufert, A., & Schiefer, J. (2005, August). Enhanced business intelligence - supporting business processes with real-time business analytics. In *16th International Workshop on Database and Expert Systems Applications (DEXA'05)*, 919–925.
- Sloman, J. (2008). *Economics and the business environment* (2nd ed.). Harlow, UK: Prentice Hall/Pearson education.
- Smit, A. J. (2010). The competitive advantage of nations: Is Porter's diamond framework a new theory that explains the international competitiveness of countries? *Southern African Business Review*, 14(1), 105–130.
- Song, J., Sun, Y., & Jin, L. (2017). PESTEL analysis of the development of the waste-to-energy incineration

- industry in China. *Renewable and Sustainable Energy Reviews*, 80, 276–289. <https://doi.org/10.1016/j.rser.2017.05.066>
- Studer, S., Welford, R., & Hills, P. (2006). Engaging Hong Kong businesses in environmental change: Drivers and barriers. *Business Strategy and the Environment*, 15(6), 416–431. <https://doi.org/10.1002/bse.516>
- Svensson, P., Klofsten, M., & Etzkowitz, H. (2012). An entrepreneurial university strategy for renewing a declining industrial city: The Norrköping way. *European Planning Studies*, 20(4), 505–525. <https://doi.org/10.1080/09654313.2012.665616>
- Tang, Y., Thürer, M., Hu, X., Zhang, H., & Petti, C. (2017). Institution driven innovation under industrial environment turbulence. *Academy of Management Proceedings*, 2017(1), 10870. <https://doi.org/10.5465/AMBPP.2017.10870abstract>
- Terreberry, S. (1968). The evolution of organizational environments. *Administrative Science Quarterly*, 12(4), 590–613. <https://doi.org/10.2307/2391535>
- Valentinov, V. (2015). Kenneth Boulding's theories of evolutionary economics and organizational change: A reconstruction. *Journal of Economic Issues*, 49(1), 71–88. <https://doi.org/10.1080/00213624.2015.1013880>
- Van De Ven, A. H., & Poole, M. S. (1995). Explaining development and change in organizations. *Academy of Management Review*, 20(3), 510–540. <https://doi.org/10.5465/amr.1995.9508080329>
- Veblen, T. (1898). Why is economics not an evolutionary science? *The Quarterly Journal of Economics*, 12(4), 373–397. <https://doi.org/10.2307/1882952>
- Vlados, Ch. (2004). *La dynamique du triangle strategie, technologie et management: L'insertion des entreprises Grecques dans la globalisation*. Thèse de doctorat de Sciences Économiques, Université de Paris X-Nanterre. Retrieved from <http://www.theses.fr/2004PA100022>
- Vlados, Ch. (2005). The insertion of Greek firms into globalization: The dynamics of the triangle of strategy, technology and management. In *Managing Global Trends and Challenges in a Turbulent Economy*. University of the Aegean, Department of Business Administration. <https://doi.org/10.2139/ssrn.3218009>
- Vlados, Ch. (2019). On a correlative and evolutionary SWOT analysis. *Journal of Strategy and Management*. <https://doi.org/10.1108/JSMA-02-2019-0026>
- Vlados, Ch., Deniozos, N., Chatzinikolaou, D., & Demertzis, M. (2018). Towards an evolutionary understanding of the current global socio-economic crisis and restructuring: From a conjunctural to a structural and evolutionary perspective. *Research in World Economy*, 9(1), 15–33. <https://doi.org/10.5430/rwe.v9n1p15>
- Vlados, Ch., Katimertzopoulos, F., & Blatsos, I. (2019). Innovation in Stra.Tech.Man (strategy-technology-management) terms. *Journal of Entrepreneurship and Business Innovation*, 5(2), 1–26. <https://doi.org/10.5296/jebi.v5i2.13477>
- Williams, H. (1989). *Hegel, Heraclitus, and Marx's dialectic*. New York: St. Martin's Press.
- Witt, U. (1996). A “Darwinian Revolution” in economics? *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift Für Die Gesamte Staatswissenschaft*, 152(4), 707–715.
- Zikos, T., Zaires, D., & Karadimas, N. V. (2017). Research optimization for the utilization-exploitation of Hellenic Army vacant warehouses. *ITM Web of Conferences*, 9(03013), 1–5. <https://doi.org/10.1051/itmconf/20170903013>
- Žvirblis, A., & Zinkevičiūtė, V. (2008). The integrated evaluation of the macro environment of companies providing transport services. *Transport*, 23(3), 266–272. <https://doi.org/10.3846/1648-4142.2008.23.266-272>

## Copyrights

Copyright for this article is retained by the author, with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).