



Charis Vlados
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Global Crisis and Restructuring

Theory, analysis,
and the case of Greece

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Global Crisis and Restructuring: Theory, analysis, and the case of Greece

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Introduction

This book examines the global restructuring since its appearance from the late 2000s to the present. It tries to describe and explore the fundamental dimensions of the phenomenon of the current crisis and repositioning of the global socioeconomic system by following an analytical perspective that exceeds a “conjunctural” perspective. It counter-proposes a view of examining the contemporary historical configurations of globalization dynamics in structural and evolutionary terms. Finally, it considers that a valid perception of the current global restructuring requires the simultaneous co-examination of adaptation, innovation, and change management of the partial socioeconomic organizations, sectors of economic activity, and overall socioeconomic systems, at all the “organically linked” levels of space: local, national, international, and global.

This book includes the following chapters that approach the phenomenon of global restructuring from converging perspectives:

I. An evolutionary approach to the global crisis

This chapter focuses on the structural and evolutionary examination of the current global crisis and restructuring of the global socioeconomic system. It supports in terms of methodology that every global crisis analysis must perceive the historical and evolutionary character of the dynamics of global socio-economic

space from a unifying perspective. It suggests that all the dynamic dimensions in the world's configuration—economic, technological, social, and geopolitical—should be examined together, in their dense dialectic co-adaptation and co-evolution. The multi-faceted crises and adjustments inside every socioeconomic system are both the products and the producers of globalization's overall trajectory in a co-evolutionary course; while contemporary capitalism, respectively, intensifies the dialectic reproduction of the global interdependence unceasingly. This crisis condition, therefore, is sustained, nourished and reproduced by the absence of a “new wave” of innovations, throughout all the levels of socioeconomic activity, and it requires the installation and assimilation of new effective change management mechanisms in order for any socioeconomic system to escape from it. Arguably, the challenge of building a new global developmental trajectory engages with all the levels of analysis and intervention: the individual and the collective, the material and the symbolic, the national and the local, the social and the economic, the microeconomic, the meso-economic and the macroeconomic, the cultural and the political. The only sustainable way out of the global crisis, as a result, needs a progressive adaptation to new evolutionary thinking to perceive the global crisis dynamics.

II. The current global socio-economic crisis and restructuring: from a conjunctural to a structural and evolutionary perspective

The current global socio-economic crisis and restructuring reshape the terms of the study of the global dynamics as a whole. A new generation of interdisciplinary socio-economic research on the matter in question seems to be progressively emerging in international literature. Against this background, any attempt to interpret the partial socio-economic phenomena, which relate to the crisis and the attempt to restructure globalization, can only be inadequate and ineffective since it fails to adequately approach the current dynamics of globalization in synthetic and holistic terms. In this direction, new interpretative approaches seem to intensify the need for conceptual syntheses between the different fields of socio-economic sciences, in an increasingly unifying perspective by extensively “borrowing”—directly and indirectly—methods and

theoretical “lenses” derived from systems science, chaos theory, and evolutionary economics. In the depth of this methodological rearrangement, according to the position put forward in this article, it is crucial that an effort is made to move from a conjunctural to a structural perception of the crisis. Ultimately, the great challenge for the field of study of global dynamics nowadays is the transition from the methodological principles of the traditional mechanistic interpretative method to a coherent and integrated evolutionary socio-economic perspective.

III. Global crisis, innovation, and change management

The “crisis of capitalism” is not, of course, an unprecedented discourse in the evolution of economics and the investigation of economic realities. In the Neo-Schumpeterian approach, crises constitute necessary evolutionary steps, intrinsically linked with breaking “moments” and change. However, what makes the current crisis different, and subversive, is its ever-increasing structural complexity and evolutionary-dialectic substance. The mixing of cooperation and competition, on an organizational and macro-economic level, reproduces on a global scale the need for a reconsideration of underlying economic regulation mechanisms. The crisis tends to undermine and rapidly destroy the mechanistic relations and structures of all kinds and dimensions that have managed to provide profitability and effectiveness over recent years. In this context, the search for strategic innovation, constant organizational renewal and the diffusion of production oriented at high technological expertise, seem to progressively become the critical synthetic components for building a new development model. This chapter focuses on the introduction of a three-tier question which could be put forward as follows. First, it asks what the current global restructuring crisis is and what would be a new growth model that would lead to the exit of it on a global scale. Second, it addresses the issue of the required innovation mechanisms for a new model of inter-spatial restructuring and development. Finally, it analyzes why this new innovative direction is a prerequisite for building new types of effective change management mechanisms. The starting point of this approach is the position that any fragmented approach in the

partial aspects of the triangle of global crisis, innovation, and change management, is now analytically misguided and practically powerless. Only an effort to systemically and evolutionarily understand the phenomenon, in its continuous dialectic structure, is now a sufficient condition for outlining the future development path of globalization at all levels of action.

IV. Structuring an anti-crisis economic policy: The Greek experience

The objective of this study is to clarify the prevailing vague and sometimes misguided understanding regarding the articulation of economic policy, especially in the context of socioeconomic systems in structural crisis. The distortions of the economic policy keep reproducing and usually spreading because of three disorientating conceptual sources: a) the view of economic policy supposedly as a “de-ideologized” construction, or as a “de-technicalized” voluntarism, b) the view of economic policy supposedly as a “de-strategized” synthesis, c) the view of economic policy as a supposedly automatic, ungraded and timeless procedure. For a socioeconomic system to exit from its crisis, the interruption of this vicious circle of misconceptions is a prerequisite, towards the trajectory of a virtuous circle of understanding the meaning of the economic policy validly.

V. A new approach of local development in crisis conditions: Adopting a new local development policy to foster the local business ecosystems in Greece

The competitiveness of the Greek economy evolves, both in the present crisis and later on, according to the dynamic micro-level specific environments and transformations. This evolution depends on the SME’s abilities to claim a sustainable role in the new, competitive global environment, which is characterized by a continuous reshaping dynamic. Respectively, the goal of achieving development in the local scale becomes vital. This chapter attempts to define a new framework by proposing a new business ecosystems approach and policy, focusing on the implementation of a method for strengthening the SME’s “physiology.” This method proposes the construction of systematic knowledge and innovation creation and diffusion mechanisms, on a local scale; the

Local Development and Innovation Institutes (LDI's). Subsequently, this chapter analyzes regional data in Greece in order to highlight the most affected by the crisis region and to experimentally establish the Local Development and Innovation Institutes.

In conclusion, this book proposes a new perspective of understanding the global dynamics and moves towards a repositioned perception of the phenomenon of global crisis and restructuring in structural and evolutionary terms. Nowadays, according to this analytical proposition, "organic" and transversal innovations and the prerequisite change management mechanisms pose the central development question for the sustainable exit of the global crisis. Moreover, it seems that for socioeconomic systems in a structural crisis, such as the Greek system, a "conjunctural" perspective to confront the crisis prevails with insufficient results. The structuration of economic policy in Greece until now reflects this methodological and interventional inefficiency in constructing anti-crisis paths. To rupture the vicious cycle of misunderstandings in economic policy formation and implementation and moving towards a new, virtuous cycle of viable and long-term development, an evolutionary and historical understanding seems a prerequisite not only for Greece but also for other socioeconomic systems at a similar level of development. Finally, this continuous reshaping process of the global environment requires from all the agents of action new adaptation mechanisms. The manner that local and national systems manage to achieve innovation and change management is critical and, therefore, policy initiatives such as the Local Development and Innovation Institutes that focus on fostering local innovation seem essential for constructing sustainable developmental trajectories.

Vlados, Deniozos, & Chatzinikolaou

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1 **An evolutionary approach to the global crisis***

Introduction

The present globalization crisis has an impact on every fundamental level of socioeconomic development and every space and action on the planet (Aglietta, 2010; Amable, 2005; Andrews, 2008; Crouhy, Jarrow, & Turnbull, 2008; Greenspan, 2004; Greenspan, 2008; Papademos, 2007). It crosses the boundaries, always and evolutionarily, of all individuals, groups, and entire organizations. There is no action—of every kind and category—outside the context of globalization.

Nobody is independent and autonomous in this interdependent context. The socioeconomic systems are tied together with strong systemic links, sensitive to every turbulence, leading to highly divergent results. Moreover, this ongoing evolutionary trajectory of the global crisis cannot be described merely by some individual monetary shocks. It is something much deeper that transcends any superficial obstacles that are supposedly forced by the international financial flows or the deregulation of markets. The world is entering into an extremely complex trajectory of the globalized socioeconomic system.

The new development dynamics, born from the past thirty years of globalization, represent an entirely new phase for the history of capitalism. This new phase is all about the understanding that mixed “co-opetitive” relationships spawn the

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dense systemic interconnections. This new “global game” involves simultaneous forces of collaboration and competition, and this kind of thinking is the safest compass to realize all the necessary prerequisites for articulating integrated economic policies in the brink of this new phase of globalization.

The global development dynamics of the past thirty years, actually, have directed toward a qualitatively new phase in the capitalistic historical evolution. Moreover, the only well-grounded way to understand the mixed cooperation/competition dynamics is by trying to comprehend the even denser evolutionary systemic terms (Aglietta, Orléan, 2002; Aglietta, & Rebérioux, 2004; Boyer, 2004a; Boyer, 2004b; Boyer, & Saillard, 2002; Benassy, Boyer, Gelpi, & Lipietz, 1977; Chavance, 2012; Coriat, 1994; Dulong, 2012; Lahire, 2005; Lipietz, 1983; Lordon, 2002; Orléan, 1999; Petit, 2005).

The evolutionary character of global dynamics is, therefore, imprinted on every kind of institution and “player” of this new globalizing “chessboard.” A capitalistic chessboard that is of planetary reach and scale and requires all decision-makers to be smart and flexible. Moreover, this comes true only by investigating the historical content of every action concerning globalization.

The global interdependence

At the root of all socioeconomic reversals nowadays, a new capitalistic model emerges. The previous phase of capitalism has irreversibly ceased to exist by bringing forth a new and unshakable global interdependence. (Cox, 2009; Cox, & Schechter, 2002; Gilpin, 1984; Gilpin, 2016). This qualitative transition represents a force that reforms the global geography and architecture drastically and fades away every narrow-thinking analysis about the issue of development. An increasing number of socioeconomic analysts realize progressively that the economy is a force of cyclical nature that reproduces the inherent in all socioeconomic systems evolutionary crisis. The neoclassical thinking—as this developed over the post-war years of economic theory—can no longer dominate. The insufficiency of any “mechanistic” and passive assumption regarding the content of development/crisis is only able to proliferate some ineffective traditional tools (Graz, 1999; Graz, 2000) that, apart from being modeled around some

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hypothetical equilibriums, have a little or infinitesimal impact on the real economy.

The global process is ahead of some previous “endings,” which a portion of notable theorists have argued for (Ohmae, 1990). The borders of nations do remain significant, however facing the need for re-oriented policies in the face of this new phase of globalization, while the Western values of liberal democracies that dominated after the post-cold-war era seem increasingly less sufficient to provide a complete explanatory ideological scheme. Thus, nothing in this global map of development and crisis is invariably irreversible or determined forever. The “Aristotelian whole and parts” in this restructuring phase of globalization change unstoppably and acquire even more systemic links.

Moreover, the “global chessboard” is indeed full of different strategies and tactics that every big or small player design and implement; if there is a strategic success, then we have innovation and the creation of new wealth (Davies, Lluberas, & Shorrocks, 2016; Sachs, 2008). That cycle of innovation is ultimately the never-ending process of the interdependent global game.

All actors in the global evolutionary process are reproducing their unique opportunities and threats as a result of different comparative and contradictive forces. In other words, to figure out the process of development of every socioeconomic organization, an analyst must interpret the external and internal organizational environment. Without mapping all the specific comparative opportunities and threats, the development diagnosis and the best possible treatment can only be insufficient. Within globalization, there are no static relations, comparatively insignificant. Thus, to comprehend the true meaning of the evolutionary unfolding of the crisis, this interdependent context is a necessary condition.

In the effort of grasping the evolutionary content of the global crisis

An exit of the ongoing global crisis cannot take place without the nourishment of the forces of socioeconomic development. Moreover, evolutionarily speaking, the complex, competitive background is continually changing the structures of the socioeconomic systems and, hence, their development dynamics

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(Defarges, & Hermet, 2003; Murphy, & Tooze, 1991; Palan, Murphy, & Chavagneux, 2013; Phillips, & Weaver, 2010).

However, what do the mixed forces of socioeconomic development in the context of crisis involve? The opinion of this article is that they involve innovations and their new managerial structure, namely their change management techniques. These are the necessary building blocks for analyzing the development prospects of every socioeconomic organization (Abélès, 2008; Adda, 2012; Aghion, Bloom, Blundell, Griffith, & Howitt, 2005; Amable, Barré, & Boyer, 1997; Cohen, 2011; Cohen, 2003; Corm, 2010; Fontaine, & Goulard, 2012; Graz, 2013; Lorenzi, 1995; Sapir, 2011).

The global economy will not exit its crisis unless the “new” is born and settles. If would grow sustainably and dominate, then a new era of relative balance and prosperity would manage to flourish. However, as long as the crisis is being reproduced and spread on every level because of the absence of innovation waves, the long-term exit of the global structural crisis is doomed to last for an unknown time.

Consequently, innovation and managing the change more effectively than the past are interlinked, forming a structural connection that is a prerequisite to survive and exit the crisis. This structural crisis by itself determines the appropriate boundaries of managing the change and, therefore, the potential to innovate. The globalized world, being an evolving socioeconomic organization, will exit its crisis only when the forces of innovation and change management succeed and spread in every economic activity (Βλάχος, 2017).

The past growth of globalization and the crisis

The world has witnessed significant economic growth between 1980 and 2008—both in the “center” and the “periphery” of the capitalist economy. The usability of national borders, both in theory and practice, lost its past explanatory dominance, following the increased liberalization of markets and the spread of the Washington Consensus (Krueger, 2004; Sachs, Warner, Åslund, & Fischer, 1995; Williamson, 2009). Not to mention the profound and constant changes in global economic leadership. Moreover, even

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though the US has retained the role of the leader, it is far from certain that this trend will be the same when the new phase of globalization gets wholly established.

The previous phase of globalization also proved—as Karl Marx (1867) pointed out several years ago—that capital has no country. The financial flows overgrew and are still dominating the economy all over the world. The financial flows and their inherent volatility dominated the past forty years of capitalism, resulting in the establishment of some severe and periodically appearing regional financial crises that were the precursor of the tremendous financial shock initiated in 2008. So this helps to realize that the outbreak of the global crisis was far from being unexpected (De Soto, 2010; Kose, Prasad, Rogoff, & Wei, 2006; Χριστοδουλάκης, 2012).

The business environment of the past phase of globalization also caused tremendous structural changes. The industrial morphology (Porter, 1981) followed a radical pace of change that was a result of a mixture of global strategy and local agglomeration effects (glocalization). The omnipresent competition intensified, giving no other option to some enterprises than to become more flexible and to innovate drastically. In this context, they attributed the most valuable strategic importance to their customers, to know and improve their competitive advantages. Accordingly, the standard of living increased globally because of the multi-nationalization of business activities and their foreign direct investments. Products of high-technology spread all over the world, while the specialized know-how created the need for the improved domestic institutional background (Acemoglu, Johnson, & Robinson, 2005).

The development of the post-cold-war era

The past evolution of globalization marks the end of the Cold War. In this period, the liberal democratic values prevail (Fukuyama, 1992) and the Western allies demonstrate their power with their incredible growth and wealth. Margaret Thatcher in Great Britain and Ronald Reagan in the US seal with their policies the ideological and geopolitical dominance of the Western allies over the Eastern Bloc. The past geopolitical division of Cold War, although, gets replaced by new tensions and uncertainty that

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The monetary exchange system that established in Bretton Woods is no longer sufficient. The current world monetary system is “regulated by the deregulation.” Around the ‘90s, the financial globalization is a reality, while the national economic administrations prove less and less able to cope with the ever-expanding financial integration and capital markets (Cohn, 2015; Gilpin, & Gilpin, 2001).

The globalized post-Fordism expansion

The end of Fordism also marked globalization. New “post-Fordistic” examples derive from national socioeconomic developments and get distinguished as new capitalistic varieties. There is no single capitalism but a variety of different systems of capitalism (Boyer, 2015; Boyer, & Freyssenet, 2000). Moreover, these evolutionary trajectories differ significantly from one national system to the other, and characterized by distinguishing features regarding their productive, consumptive, and regulatory model, and are entering the phase of globalization with different prospects and involvement in the development of the world economy.

Some post-Fordistic examples observed that period are the following (Rodrik, 2011):

- The transition of the US happened with a nostalgia of the previous Fordist model. The US, which used to hold a few global industrial trademarks of the past inside the country, seems to have struggled to build a new development path. A significant amount of industrial relocations abroad happens, while the institutional background faces obstacles to fit in the new business environment.
- In Germany, a unique outward-looking variant of capitalism gets built. A stable regulatory system and an efficient state mechanism support the production of competitive goods of high quality.
- In Japan, a form of mass production, supported by the total quality management, spawned a so-called “Toyotism” (Toyota) and “Sonyism” (Sony) that focuses primarily on the

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exports. However, there is a weak domestic demand that forces the economy to slow growth rates.

□ In France, the difficult competitive adaptation in the phase of globalization comes true with significant political and economic reforms that give rise to an upward economic trajectory, despite a significant institutional and cultural containment.

□ Lastly, in Sweden, a production of diversified, high-added value, goods of global reach develops rapidly and focuses on specific niches of the global market. A remarkable post-Fordistic welfare state that covers the majority of the citizenship accompanies these changes.

Concurrently, in many regions of the world appears a new productive logic: a “New Taylorism” spreads over the globalized world (Coriat, 1979; Coriat, Petit, & Schmeder, 2006; Vlados, 1996). This new form of Taylorism—or digital Taylorism—is the modern version of classical Taylorism that became known as scientific management. This form of management favors the maximization of efficiency, advanced standardization, sophisticated routine techniques, and utilization of the most advanced technology. However, it strictly segments the labor into small pieces and keeps seeing the worker as an inflexible mechanical part.

The integrated innovation

In this previous phase of globalization, the process of innovation changes profoundly. New and dynamic ways of production continually appear while innovation becomes an integrated concept inside the multinational or flexible enterprises (Carlino, & Kerr, 2015; Gordon, 2017; Hall, Mairesse, & Mohnen, 2010; Βλάχος, 2016). These enterprises are exploring their innovative potential and dominate. Innovation acquires a character of distinct and highly sophisticated features that are breeding new forms of economic organization and cause the quick “decease” of old, inefficient economic models.

These developments are, inter alia, the rapid increase of technological know-how, the strategic importance of developing new technologies, the decreasing life-cycle of products, the importance of fast entry in the market, the search for flexibility and

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adaptability, the quest for building competitive advantages via quality and performance, the extensive networking strategy beyond the enterprise boundaries etc. These rapid developments of the past forty years of globalization, despite the productive environment they are creating for the majority of people all over the world, will inevitably lead to the next global economic crisis. The regulatory mechanisms, both domestically and globally, proved inefficient.

The crisis begins

In the early 2000s, the global economy for most of the Washington Consensus analysts and decision-makers was inspiring an apparent optimism. Despite the previous experience with overheating economies hitting the crisis and by leaving the recent regional crises out of the equation, the verdict was almost unanimous: enhance economic growth, advance the liberalization of markets and deregulate when possible. On the background, a silent economic crisis and recession were breeding from this old and gradually ineffective economic model (Aglietta, 2008; Βλάχος, 2006). In 2008, seventy-nine years after the great economic depression of 1929 and the two oil crises of 1973 and 1979, a massive domino effect gets initiated (Calomiris, 2008; Donnelly, & Embrechts, 2010; Stulz, 2010; Temin, 2010).

At the beginning of the year 2007, skepticism about the viability of the US housing market system appears and expands. The market was displaying clear signs of fatigue, and the regulatory mechanisms were unable to deflate the huge bubble they imprudently let inflate. The unreasonable use of many housing investment derivatives had no collateral other than the “trust” of some very unreliable borrowers. The effort to ward off the credit and interest rate risk from the banking system, the conversion of stagnant capital into marketable securities and the move of multiple investment titles in specialized entities provoked an unprecedented chain reaction on the American and European banking and real estate sector.

This situation spawns speculations about the collapse of systemic banks, the sale of others at meager prices and the exercise of monetary policy by the Central Banks in order to rescue the

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financial system—and not to safeguard the prices. All the exposed to the toxic bonds states are quickly drawing up resolution plans to prevent the economic crisis spreading equally to the broader socioeconomic system.

In a dramatic meeting on September 2008, the US Treasury Secretary Henry Paulson and the Fed chairman Ben Bernanke met with key legislators to propose a \$700 billion emergency bailout. The Emergency Economic Stabilization Act gets signed into law in October 2008. Subsequently, this emergency crosses the Atlantic, and a lot of European banks get also bailed out.

The global economic crisis is prevented, finally, from destroying the largest economies on the planet. However, it brings forth a unique restructuring content within all spheres of economic reality. It marks a new phase of global development that many analysts argue is a “New Globalization” (Vlados, Deniozos, & Chatzinikolaou, 2018a; Vlados, Deniozos, Chatzinikolaou, & Demertzis, 2018b).

The new development dynamics in the restructuring context of globalization

In this new context, the study of development—on every scale and reach and within globalization—does not follow any easy simplification or unhistorical generalizations or any mechanistic/fragmentary way of explaining things. In the long run, the theory of development can no longer remain a domain of selective accumulation of scientific specializations. A valid view of the development process in the ongoing context of globalization rules out the easiness of the ethnocentric analysis. As it seems, the time is over—and is not turning back—for every state-based developmental recipe. These recipes proved themselves inefficient, bearing no viable, long-term developmental results (Bookchin, 1979; Bremmer, 2014; Cercle des économistes, 2000; Dickinson, 2012; Durand, 1993; Gorz, 1988; Grinin, & Korotayev, 2010; Hirschman, 1958; Hugon, 1997; Humphreys, Sachs, & Stiglitz, 2007; Kotler, & Caslione, 2009; Mayo, 1933; Perroux, 1981; Polanyi, 1944; Sachs, 1997; Sachs, Musa, & Moghavvemi, 2013; Steger, 2013; Vlados, 2007).

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Any one-dimensional theoretical and practical perspective is unavoidably incomplete. Accordingly, the understanding that every socioeconomic system develops evolutionarily within globalization is maturing and, as a result, in order to prove valid, it requires a view that is dialectic and evolutionary (in this sense, it is a controversial, confrontational, and composite view). The integration of each socioeconomic system within globalization is a knowledge that understands:

- i) both the unity and controversy of the specific, conflicting in nature, and composite socioeconomic dynamics;
- ii) the transformation of accumulated quantities into new qualitative changes, for every interconnected action and space within the socioeconomic system; and
- iii) the constant restructuring of the parts within the whole socioeconomic system.

As a result, a crystal clear view of the socioeconomic development within globalization can only be of an evolutionary/historic character. History is omnipresent and alive inside every future development: for every firm, every space and every sector of economic activity.

This kind of evolutionary thought transcends every static development perspective because it realizes that every local, national, or regional system co-evolves with one another. A naive understanding sees in the socioeconomic systems that take part in globalization something neutral and linear, something that supposedly reproduces the same old developmental balances. It supports the mistaken idea that globalization is a force of conservation.

Every development theory has to transcend any inflexible focus on the development quantities and mechanistic perceptions to be valid. It has to move toward the development structures and qualities and to the understanding that growth is something organic and systemic. It has finally to transcend formalism in favor of dialectics¹.

¹ The exact opposite direction of this kind of thinking helps to realize that the inner logic of globalization accelerates the creative destruction and reformation of balances. The evolution of globalization defines a

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This new model of developmental thinking understands that the globalized production and reproduction, the conservation and constant empowerment of competitiveness, has to do with every sustainable socioeconomic action. If no consistently efficient production and reproduction of competitiveness made, then no systemic socioeconomic action can evolve and develop within globalization².

The prospects and challenges of “new globalization.”

This economic crisis, like all the previous crises, has acquired its specific pattern and content due to the previous steps of the historical and evolutionary restructuring. The way the evolutionary trajectory of the current crisis emerged provides the necessary analytical basis for the effort to better understand, interpret, and predict its progress. Only a clear and coherent mapping of that route can validly approach its specific in space and time content, understand its unique dynamic in history and, therefore, perceive the required particular type of innovative architecture for every sustainable effort to exit the crisis.

This phase is arguably not the historical end of capitalism. Despite the inherent instability of the economic system, the status of capitalism remains unchanged. Moreover, already from the age of Joseph Schumpeter (1928) contributions, capitalism was

systemic field of dynamics which create opportunities and threats—always, and for every composite part.

² And with respect to the lack of competitiveness of the Greek socioeconomic system (the authors’ country of origin), there is an extensive literature which is worth mentioning (Αγαπητός, 1991; Αγαπητός, 1997; Βαβούρας, 1993; Βαβούρας, Καραβίτης, Τσούχλου, 1990; Βαϊτσος, Seers, 1986; Βαλντέν, 1988; Βαμβούκας, 1989; Βαμβούκας, 2005; Βεργόπουλος, 1985; Βεργόπουλος, 1986; Βερναρδάκης, 1988; Γιαννίτης, 1988, Γιαννίτης, 1992; Γιαννίτης, 2005; Γιαννίτης, 2016; Γιαννίτης, Μαυρή, 1993; Γκαργκάνας, Θωμόπουλος, Σημίτης, Σπράος, 1989; Γρηγορογιάννης, 1986; Ζαχαρέας, 1978; Ιωακείμογλου, 1993; Καζάκος, 1990; Καπετανάκη-Σηφάκη, 1985; Κιντής, 1982; Μάλιος, 1986; Μηλιός, 1986; Μηλιός, 2000; Μηλιός, Ιωακείμογλου, 1990; Μπαμπανάσης, 1985; Παπαγεωργίου, 1994; Πυθαγόρας, Δελδήμου, 2004; Σημίτης, 1992; Σημίτης, 2005; Σταματόπουλος, 1989; Φωτόπουλος; Χασσίδ, 1994).

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acknowledged as an evolving force that reforms and redefines the system structurally, according to the capitalistic processes that give birth and reproduce the capitalistic crises, for approximately the last 250 years.

This study tried to show that, nowadays, the dynamics of development are breeding increasing complexity and a more and more sensitive to turbulences global system. The new globalization that struggles to emerge within this multi-level context of crisis will not arrive and establish peacefully across the socioeconomic systems. The restrictive forces of the past, as the socioeconomic experience proves, will manage to have a crucial role. The world is facing an increasing resurgence of a closed, ethnocentrically based, logic which opposes—silently and, most of the times, directly—the more in-depth process of economic development. This restrictive logic comprehends the globalizing process statically and, to a great extent, finished. On the contrary, the globalized socioeconomic evolution is far from finished. The development dynamics of the contemporary economic reality transcend national borders and settle wherever the soil is “fertile.”

In this sense, new globalization, in addition to challenges, brings forth convincing growth prospects for those socioeconomic systems that manage to attract a strategic potential of widespread perception, a technological background of advanced know-how and managerial ability of modern and flexible scientific methods. The challenge of rapid adaptation for every participant in the global “game” will be decisive. The way socioeconomic systems succeed in managing change in all levels—local, regional, national, supranational—is ultimately the most crucial prerequisite. It is only by effective change management that innovation gets created from the participants in new globalization. Moreover, if the world as a whole can arguably hope for an exit of the ongoing crisis, this will come only from new innovative mechanisms structured around the individual, enterprise, and institutional level.

Also, the innovative dynamics by themselves have a cyclical nature—like all socioeconomic phenomena—of a dialectical and evolutionary character. The past phase of innovative applications and methods seems to belong irreversibly to the past, leaving behind an unprecedented socio-economic development for the

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majority of global citizens. Nowadays, though, in order for the new phase of the global economy—which this article calls new globalization—to emerge and consolidate it is necessary to create and establish new, wide-ranging innovations at all levels.

This phase arguably can mobilize forces of socioeconomic development that individual freedom will get further strengthened, and the democratic ideals will get deepened. However, there will be no advent of a supposed absolute economic freedom or “abundance”; such abundance never existed nor will ever probably exist.

The responsibility for building this new developmental phase goes through civil society—at all levels of action. The ideological/political context of the “new order of things,” contrary to popular belief, is empowered. More and more, and in real-time, ideas are being communicated, and new challenges always emerge. Ultimately, the world is witnessing a struggle of a closed, inflexible, spirit against an open, versatile and genuinely progressive way of doing things. If a spirit receptive to new knowledge and capable to rapidly and effectively adapt prevail, then a “new globalization” of immense benefits will come to the surface. Otherwise, the crisis is expected to deepen and the exit from it to last for an indefinite time.

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2 The current global socio-economic crisis and restructuring: from a conjunctural to a structural and evolutionary perspective*

Introduction

Despite a disappointingly slow pace, in the past few years and to this day, a new generation of fertile interdisciplinary research appears to emerge on the issues of the crisis and the restructuring of globalization (Abélès, 2008; Adda, 2012; Avant, Finnemore, & Sell, 2010; Bayart, 2004; Bourg & Papaux, 2010; Cerny, 2010; Cohen B. J., 2008; Cooper, Hughes, & De Lombaerde, 2007; Dembinski, 2008; Golub, 2011; Jaffrelot, 2008; Kunz, 2011; Lordon, 2009; Mattli & Woods, 2009; Orléan, 2009; Palan, 2000; Rainelli, 2011; Reinert, 2008; Sinclair, 2012). It seems to be increasingly absorbed in the consciousness of the international scientific community –and in a growing part of decision makers at all levels– the understanding that the study of the crisis and the restructuring of globalization itself (Aglietta, 2010; Aglietta, 2008; Amooore, 2002; Cohen D., 2011; Overbeek & van Apeldoorn, 2012; Servet, 2010) can and should be a fertile and synthetic interdisciplinary research area (Augsburg, 2006; Klein J.T., 1991; Nissani, 1997; Bagchi, 1982; Chubin, 1976; Granovetter, 1985; Hariss, 2002; Stuart, 2005; Jacobs & Frickel, 2009; Kanbur, 2002; Klein J.T., 1996; Klein J.T., 2006; Kleinberg, 2008; Schuurman, 2000; Sen, 2011; Sumner & Tribe, 2008; Stehr & Weingart, 2000; Weingart & Padberg, 2014; White, 2002); an area that, under certain conditions, can lead to substantial cognitive progress in the wider

(2) The current global socio-economic crisis and restructuring ... field of socio-economic sciences and to create the necessary conditions for the articulation of new policies (Marchal, 1956).

The reflection of the crisis to the reconstruction of globalization

The interrelation between the global crisis and the reconstruction of the world economy takes an important place for the further development of all modern social sciences. Under the new globalization tensions, the old socio-economic knowledge barriers fall back while novel formations emerge: from the new economics to political science (Ancel, 1936; Carroué, 2004; Chauprade, 2007; Fukuyama, 1992; Huntington, 2005; Kagan, 2003; Lacoste, 2006; Lacoste, 2014; Lévy, Poncet, *et al.*, 2008; Luttwak, 1990; Strange, 1996), and from sociology (Abdelal, 2009; Anheier, 2007; Anheier, Glasius, & Kaldor, 2001; Chase-Dunn & Babones, 2006; Beaujard, Berger, & Norel, 2009; Beck & Duthoo, 2006; Bertrand, 2011; Bisley, 2007; Burawoy *et al.*, 2000; Carroll, 2010; Chanda, 2008; Colic-Peisker, 2010; Douki & Minard, 2007; Dufoix, 2012; Giddens, 2002; Grataloup, 2010; Graz, 2013; Grewal, 2009; Heilbron, Guilhot, & Jeanpierre, 2009; Holton, 2008; Selchow, Kaldor, & Moore, 2012; Keck, 2010; Lechner & Boli, 2011; King & Le Galès, 2011; Martel, 2010; Mattelart, 2007; Moore, 1966; Palmade *et al.*, 1967; Robertson & Scholte, 2006; Rosenberg J., 2005) to the social psychology and cultural studies (Bayart, 2010; Cardon & Granjon, 2013; Cohoy, 1999; Cuche, 2004; Deroin, 2011; Dupin, 2017; Duterme, 2014; Florida & Boyett, 2002; Hannerz, 1991; Koch & Mattelart, 2016; Mattelart, 2009; Mattelart & Neveu, 2008; Noiriél, 2007; UNESCO, 2015; UNESCO, 2013; Sassen, 2007; Simmons, Dobbin, & Garrett, 2008; Warnier, 2008).

Therefore, without a clear insight of everything that the global dynamics and the crisis system include and integrate, every attempt which strives to explain the separate and the layered socio-economic phenomena –as well the innovation and change management (Βλάχος, 2017) as consequences of globalization– it gives the impression that it cannot shake the explanatory inefficacy off. Indeed, without such a broad theoretical account, any of the separate scientific “developments” maintain a shadiness and an explanatory weakness.

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In the long run, the innovation dynamics and the ongoing reconstruction of globalization define a complex, critical and uncertain research field which, by these means, reproduces its magnetism and, most notably, its fertility rate on the scientific knowledge.

New analytical directions in the study of the dynamics of globalization

In the direction of renewing the study of the dynamics of globalization, the current crisis, and its reorganization, a few converging scientific fields/ research cradles/ schools of thought provide new analytical directions. Overall, these new analytical directions are attempts to enrich and renew the economics and management discipline.

This study will examine elliptically three of these. In particular, the systemic theory, chaos theory, and modern evolutionary and institutional economics (Figure 1).

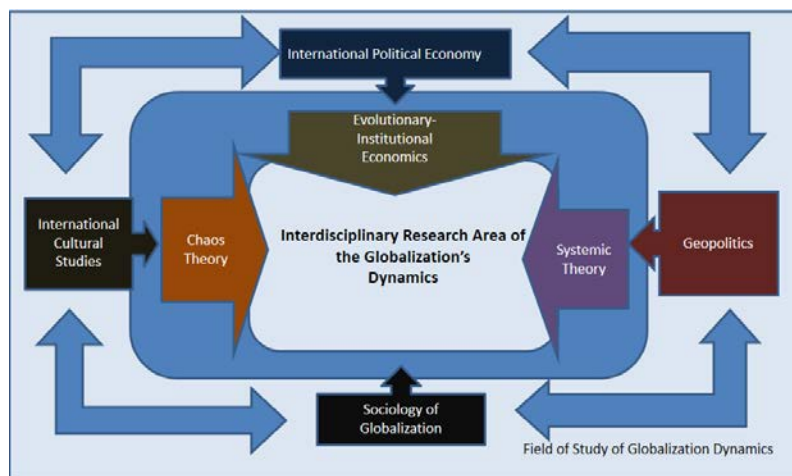


Figure 1. *New directions at the globalization interdisciplinary research area*

The systems science and the cybernetics

The alleged systems science (or systemic theory) is the interdisciplinary scientific field which involves a shared way of thinking and a typical analysis, to develop a hypothesis for every kind of system: Social, biological, electronic, cognitive or

(2) The current global socio-economic crisis and restructuring ... metaphysical systems (Arbib & Lecci, 1972; Ashby, 2015; de Rosnay, 2014; Forrester, 1980; George, 1976; Harlé & Jouanneault, 1984; Pekelis, 1974; von Bertalanffy, 2012). The systemic theory follows a holistic approach when considering a situation, unlike the prevailing conventional logic which divides the problems to sub-sections and analyzes them separately. While the standard scientific tradition promotes an analytic, divisive, subtractive and linear problem solving, systems science renders a dynamic and a unifying explanation.

This reasoning, despite the late reheated interest, it has emerged since the interwar period. The most important note for thought came up later, when Norbert Wiener publishes the book "Cybernetics: Or the Control and Communication in the Animal and the Machine," in 1948 (Weiner, 1961). This fact alone demonstrates the troublesome and challenging nature of the systemic theory to prevail in the scientific dialogue.

More specifically, cybernetics is a subset of the systems science, and it is developing along with the systems theory. Of course, the conceptual roots of this approach lie deep in the past of human intellect. As Aristotle put it first, "the whole is greater than the sum of its parts," that is why every system has unique properties, as a whole, which the analyst cannot see in any of its parts: The system identifies these parts only as parts of the whole. Therefore, a system defines an original and unified set of elements (objects), a relationship between the elements and a relationship with their environment.

Under this approach, this paper refers to the "system" when a structured field of specific "players" (agents of action) features interactions between them. According to Peter Senge, a system is an all-embracing entity, whose elements are assembled and co-evolve as they always exert mutual forces and act together for a final cause (Senge, 1994; Senge, 2006). The system consists, precisely, of multiple structured autonomous parts, each of them by some separate identity and behaviors, as well as with side by side co-determination interactions. Thus, a straightforward definition of the system comes forth by the idea of some interacting variables in an active network. That implies that every change of state in any of the links will, inevitably, bring changes to some

(2) The current global socio-economic crisis and restructuring ... other links of the system. The system, as a whole, as well through its parts, will always interact with the external environment. It will continuously contain subsystems of lower complexity, as essential ingredients that work independently, but at the same time, they interact with each other (Senge, 1999, p. 137).

In particular, a complex system is a non-linear structure, set by multiple interacting parts. That kind of systems features a strongly dependent and diverse character concerning their parts, while less complex systems prove to be more symmetrical and bear more clarity concerning their complete establishments. The complex systems are self-organization hierarchies that show off emergent behaviors: novel behaviors deduced by their inter-relatedness and not by merely their separate parts' attributes.

❖ The complex systems paradigm assists in understanding the global crisis –and the ongoing reassemble of globalization forces– as a complex system: it is a dense network of endlessly affiliated variables that mutate themselves and the system through the various spaces, the sectors and the functional subsystems of the global system. (See figure)

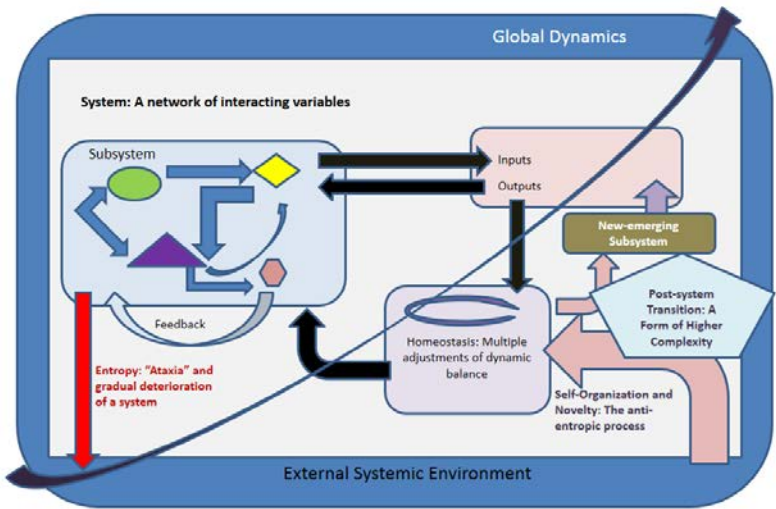


Figure 2. *The systemic perspective of global dynamics*

Concerning the cybernetics, the fundamental elements of this approach are both control and communication. If to admit some

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deviations from the target and to do some corrective actions, the system requires some information feedback to carry out a planned goal. The above actions represent “negative feedback,” which is a prerequisite for the control of the system. So there are four essential steering conditions towards the desired target:

- A. The desired target set externally on a system.
- B. There is a sensor that records the current state of a system.
- C. A mechanism that compares the current situation with the desired one.
- D. An “activator.”

There is negative feedback, in particular, when the re-feeding of output leads to proper self-regulation of the system in order to eliminate the related output and to carry on with stability, despite external changes. The positive feedback, on the other hand, follows when the re-feeding of output leads to proper self-regulation of the system in order to maximize the output in the future; something that enhances the possibility of divergence, diversity, and change, so that the system reaches a new state of stability. In practice, without such feedback mechanisms, a system cannot maintain its status within its external environment and is unlikely to survive as a species in the face of environmental changes: it must adapt to, by setting new goals.

❖ Therefore, the cybernetics perspective enables us to better understand the width of innovation –in all varieties– within the current global restructuring, as a process of structural change of the continuous inputs and outputs of the partial subsystems of the global system, aiming to the dynamic stabilization, the self-regulation, and the adaptation to the new and emerging conditions.

Systems theory provides a unifying framework to compare integrated systems, regardless of breaking the complex elements down to their structure, when taking into account the interactions of these vital ingredients. This “out of the box” thinking is holistic and represents a different method to test a system by reducing it to its structural parts (Battram, 2000).

❖ This approach marks as ineffective any simple and without a holistic view breakdown of the global crisis into some smaller pieces; the dynamics of gradual deterioration –the entropy of the

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world system itself– never stop to act upon the overall evolutionary course of the historically successive models of growth.

On the opposite direction of the entropy, based on the systemic theory, there lies the self-organization. It is an anti-entropic mechanism which arises –either spontaneously due to natural laws or on purpose during self-generated phenomena– and works remedially, as negative entropy, by causing the evolutionary reproduction of the systems, and by following a complex internal structure. This way, the transition of a system from a stage of low structural complexity to a stage of higher complexity, through the process of self-organization, is called post-systemic transition.

❖ This analytic aspect of the systems theory proves to be very useful in terms of understanding the current global dynamics, because it enables to regard the effort of escaping the current global crisis as an attempt of self-organization of the global system, through a post-systemic transition, to a state of higher complexity. Besides, it makes the innovative action, in every aspect of globalization, absolutely justified in systemic terms: As a power of negative entropy and as the necessary effort of positive readjustment of the global system at all its interdependent levels.

Another critical dimension in systems theory is that of the autopoietic system. An autopoietic system is, in simple terms, a self-organized system, the parts of which are created by themselves (self-creation) and destroyed (self-destruction) in a continuous cycle, so the system maintains its active state, despite the possible environmental changes. This process is called autopoiesis, and autopoietic systems are defined as opposed to the allopoietic ones; that is, systems that produce and output components of other systems. Autopoiesis emerged as an application of the systems theory in biology, intending to define life itself (Maturana & Varela, 1980). Closely related to that is also the notion of homeostasis, which reflects the ability of an open system to regulate its internal environment to maintain a relatively stable state through multiple and mechanistically controlled adjustments of dynamic equilibrium (Katz & Kahn, 1978).

❖ In this direction, in particular, the dimension of the persistent reproduction of the structures of the global crisis itself

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can be understood as an expression of the homeostasis of the already evolutionarily mature system of the current globalization. From this point of view, the concept of “reacting to change,” at each level of analysis, can be studied in greater depth and with greater completeness.

Theory of chaos

Notwithstanding the initial related ideas dating back to the beginning of the last century, the theory of chaos was formalized only after the mid-20th century, when for the first time it became apparent to some scientists that linear theory, the general theory of that time, could not explain the observed behavior of some experimental phenomena. What “linear theories” consider as a measurement inaccuracy –or as a mere “noise”– chaos theory considered as a complete constituent of the systems under study (Gleick, 1997; Kuhn, 1996).

In practice, Chaos Theory is an area that has its methodological roots in superior mathematics. Nowadays, however, it finds particularly fertile applications in various scientific disciplines, such as Physics, Biology and, of course, modern Economics and Organizational Science. Chaos Theory was created, in particular, to study the behavior of some non-linear dynamic systems. Although chaotic systems are deterministic (or, in the most usual form, deterministic), which means that their future behavior is entirely determined by their original conditions, without involving random parameters, small differences in the original conditions of these systems yield very different final results, making the long-term prediction very difficult to impossible in general. The deterministic nature of these systems, however, does not make them predictable; this behavior is known as chaos (See figure).

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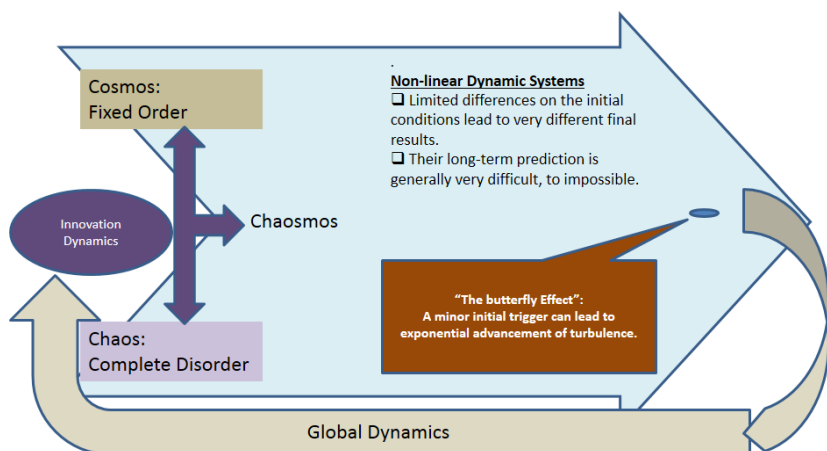


Figure 3. Elements of chaos theory and the innovation process, within the global dynamics

Conventional approaches to economics and management, perceive the “cosmos” as a stable linear system. Chaotics, on the contrary, perceives an organized activity as “Chaosmos,” that is, as a composition of chaos (complete disorder) and cosmos (fixed order). According to Cornelius Castoriadis’ view, the chaotic recovers and reconnects with the ancient Greek meaning of chaos as a void, abyss, infinite, from which the world emerges (Castoriadis, 1997). To the mathematical meteorologist Edward Lorenz, founder of this “theoretical platform,” when the present determines the future, but the approximate present does not approximately determine the future, then chaos is revealed.

Also, in socio-economic systems, in the phase of their crisis, one can observe chaotic behavior. More generally, systems with mathematical chaos are deterministic and therefore have a sort of order. This technical use of the term “chaos” disagrees with the spoken word, in which chaos denotes the complete lack of order.

❖ This particular theoretical perspective helps to understand the global crisis in terms of an inherently chaotic system, as a situation open to unpredictable developments and without a prescribed end.

In its general use, the term “chaos” means a state of disorder (Hasselblatt & Katok, 2003). However, in the theory of chaos, this

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term is defined more precisely. Although there is no universally accepted mathematical definition of chaos, a relatively commonly accepted definition (Devaney, 2003) says that in order to characterize the behavior of a system as chaotic it must have the following properties:

- It must have a significant sensitivity to the original conditions.
- It must be topologically transient.
- It must construct dense sets of interactions consisting of all the constituent system trajectories.

In particular, the scientists who developed the Theory of Chaos, to study how events unfold based on an initial state and certain deterministic assumptions, have succeeded in showing in particular that a small initial trigger can lead to the exponential development of turbulence. Sensitivity to the original conditions is also known as the source of the “butterfly effect”, which is named after the work that Edward L. Lorenz delivered in 1972 to the American Association for the Advancement of Science, entitled “Predictability: Does the Flap of a Butterfly's Wings in Brazil Set Off a Tornado in Texas?.” The flap of the wings represents, in particular, the realization that a small change in the initial state of the system can cause a chain of events leading to large-scale phenomena. If the butterfly had not hit its wings, then the trajectory of the system could have been very different. According to this view, a little change in the flow of events leads, over some time, to development of the system's history dramatically different from what would have taken place had that change not occurred. As Philip Kotler and John A. Caslione (2009) put it, the analyst observes the butterfly effect because the world in which we live in is an increasingly interconnected, interdependent globalizing world that accelerates its “globalization.” Here, all peoples, all governments, all businesses, all the actors of actions ultimately are intertwined to some extent, and the impact of turbulence on each of them will be felt to some extent by others within the globally connected environment.

❖ Finally, this chaos theory helps to understand that in a system such as that of new world dynamics, small changes can bring enormous structural changes within it, leading to an

(2) The current global socio-economic crisis and restructuring ... increasingly complex horizon of developments. Besides, it is possible for innovation –a simple “butterfly flight”– to have drastic structural consequences on the whole of the global system.

The perspective of evolutionary and institutional economics

The previous theoretical guidelines help to move from a narrow, mechanistic perception of the world, to an “ecosystemic”, “open” and a holistic perception that highlights interdependence, self-organization of systems, time, history, probability, the possibility of the emergence of the new, as essential traits of our world (Toulmin, 1985; Toulmin, 1992).

In the background, they help to approach the perspective of the evolutionary model of understanding the surrounding socio-economic phenomena. In particular, the evolutionary model in the social sciences is the scientific methodological framework which attempts to apply in the study of socio-economic phenomena the principles of the study governing the appearance and reproduction of the biological types in the earth’s ecosystem through the principles of genetic diversification and natural selection. In the 1980s, mainly, most of the attention was drawn by the evolutionary models that were influenced by the systemic theory and cybernetics. These developments gave rise to a tendency to interpret the self-organization systematically as the application of the principles of evolution to all kinds of systems and not only biological ones.

In particular, evolutionary economics is now part of the central backbone of modern economic science (Friedman, 1998; Friedman, 1998), yet retaining several elements of a fertile “heterodoxy” that are inspired, in particular, by evolutionary biology. The evolutionary economics –and in particular the institutional economics sector– study the complex socio-economic interdependencies (Rosenberg & Birdzell, 1987): Competition, growth, structural changes, in an environment of a permanent lack of resources, by adopting a “living,” “organic” methodological perspective, we might say. Evolutionary economics is concerned with the study of processes that transform the economy and society, concerning both business and industry, employment, production, commerce and distribution, social stratification and

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social mobility, through the actions of the various actors/players within the structures where they are activated.

❖ This theory serves as a reason of seeing the real dynamics of globalization by the “modus operandi” of biology because the focus on the natural selection, the survival, the development and the reproduction of both the players and the structures (of globalization) becomes the inherent basis of the system. In this context, the structural change process and the innovation understand the “organic” within the enduring evolution.

The Evolutionary Economy holds the necessary emergence of technological and institutional innovation inside its hypothesis, by the creation, the experiment, the rejection or succession of various ideas and practical applications, which give more powerful natural selection (value) in comparison to the sacrifice (cost) and the competitive alternatives. Consequently, the focus shifts to the endogenous off-balance processes which change the economy. The choices of the different actors (players) force these structural changes to the outer structure of the system.

❖ That logical thinking clears two restrictions: the first “how things hold their present sense” and the second “a thing is going to keep its intolerant fate tomorrow”: All things change profoundly and evolve, constructing a path that includes consecutive and irreversible critical points of choice (Βλάχος, 2006) (See figure).

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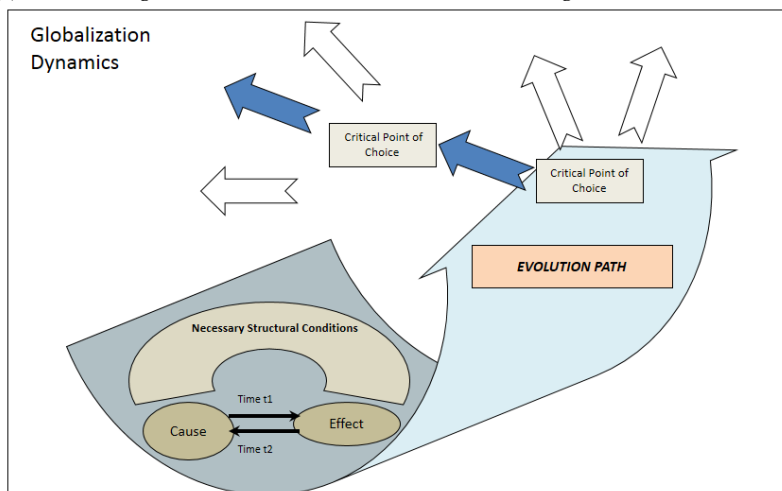


Figure 4. *The evolution path of a socio-economic system, within the globalization dynamics (Βλάχος, 2006).*

Is there anything static or eternal within the constant change of capitalism and the dynamics of the global economy?

Under the light of the vast historical experience, it is clear that the only given regarding the dynamics of capitalism is its continuous expansion, the constant re-synthesis of its potential and the continuous application of innovations at every level of action. The structural changes take place within every spatial, institutional, regulatory, strategic, technological, organizational, and functional level. Capitalism cannot exist without invariably expanding, as well as changing, reconstructing, and transforming the structure, without, ultimately, the disruptive innovations. In conditions of “containment” and “restraining” of this restructuring dynamics, its profitability is shrinking, and its central engine –the competitive capitalist firm– weakens and loses its evolutionary dynamism. For this, it is crucial to understand that the capitalistic profitability itself –and the innovative action that is always behind it– can only be perceived as an evolving dialectical socio-economic reality (Βλάχος, 2006).

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Towards a systemic and evolutionary understanding of the dynamics of globalization

Based on the above, this article can distinguish some key findings of the systemic and evolutionary understanding of globalization dynamics, of the current crisis and its sought fundamental restructuring (Βλάχος, 2017):

➤ There have been, there are, and there always be profound upheavals in the evolution of the global capitalist “game”: This is the most profound nature of capitalism.

➤ The globalization game can only be transformed, progressively and unceasingly, in terms of dense systemic rules.

➤ The only thing that remains constant about the global dynamics is the uninterrupted evolutionary logic that governs it entirely.

➤ No analyst should, in any case, isolate the analysis from a historical perspective while trying to understand the evolutionary movement of world capitalism.

➤ The study of globalization dynamics based on the historical, geographical, and institutional specificity of the partial socio-economic phenomena is essential.

➤ There can be no predetermined and supposedly repetitive “small cycles” for global capitalism, without the profoundly structural and qualitative transitions and reversals.

➤ Multi-faceted innovation, at each level of action –and the required management of the change– define the most critical points for the overall evolutionary dynamics of the global economy.

Therefore, only by using the latest methodological guidelines – which this paper attempted to present elliptically so far– the study of globalization dynamics, in the phase of its current crisis, could be analyzed in detail. On the contrary, by insisting on using the older, linear, simplistic and one-dimensional analytical models, the analysis is led to a loss of critical response time about the current configuration and the broader prospect of exiting this crisis.

In the long run, if the analysis fails to approach the dynamics of globalization evolutionarily, then it will continue to get tangled up in the general interpretative terms while paying an ever higher cost of adaptation, as individuals, as social groups, as whole socio-

(2) The current global socio-economic crisis and restructuring ... economic formations. This paper estimates that, in general, the transition from a “conjunctural” to a structural-evolutionary perception of the global crisis is now becoming necessary on the field of the crisis study.

The conjunctural and structural perception of the crisis

The first major obstacle for any attempt to fruitfully approach the current crisis of globalization, on behalf of many contemporary superficial approaches, is the self-trapping in fragmented, overly narrowly defined and ultimately interpretive deadlock analytical platforms ([Business News, 2017](#); [Rowlatt, 2012](#)).

□ The partial comes, completely arbitrarily and in a wrong way, to substitute the total.

□ “Globalization” becomes superficially perceived as a mechanical sum by, in no small extent, loose pieces and not as a historically evolving and organic whole.

□ Mechanistic logic, the conceptual legacy of the “neoclassical” theoretical tradition, weakens any attempt for the evolutionary perception of the phenomena that lie in the root of the global dynamics ([Lowe, 1951](#)).

Behind all these, lies the incomplete and superficial perception of the very concept of crisis.

What does crisis mean? The “fire in the forest”...

However, what does crisis mean, above all, beyond its specific content in terms of globalization? The notion of crisis, though strange to some, cannot be taken for granted: it is ambiguous, complex, and multi-faceted. It can mean, at the same time, a wide variety of different things and situations. Indeed, by going even deeper to the broader cultural background of socio-economic reality, the concept of the crisis manages to receive a differentiated connotation and direction.

In total terms, however, every crisis is the acute manifestation of a set of problems that results in the drastic overthrow of the “ordinary” evolution of things. Besides, of course, most often, the

(2) The current global socio-economic crisis and restructuring ... crisis is manifested through “chain explosions,” as each problem creates the conditions for other problems to emerge around it.

More specifically, in economic science, although the concept of the crisis is fundamental –at least since the time of Marx and his “descendants”– it does not cease to be shadowy and contradictory (Aydalot, 1984). A critical issue is when the analyst thinks that there is indeed a crisis. Is it when there is a big blow to the economy (cause-crisis) or when the unpleasant consequences of an event become widespread (result-crisis)? The first case requires a clear definition of a specific quantitative “crisis threshold,” which varies according to the seasons and the nature of each problem (such as debt, unemployment, inflation, external deficit). In the latter case, the analyst needs to assess the impact and duration in critical areas such as production, unemployment, reduction, and redistribution of income. (Χριστοδουλάκης, 2012).

How could the analyst conceive such a wide variety of complex evolutionary phenomena of crisis by setting certain and non-historical quantitative thresholds for determining the crisis? How could analyze in detail the phenomena of any socio-economic crisis which, first of all, are constituted by profound qualitative transitions that are often quantitatively “silent” before their eruption? As Dani Rodrik (2011) rightly points out, economists tend to focus too much on solutions regarding the “last crisis.” On the contrary, they do not adequately study existing tensions that may lead to the next crisis. Their interest, of course, should not focus solely on quantitative data on market prices or profitability.

For the sake of convenience, imagine a relatively simple, and easy-to-understand form of crisis: for example, a forest on fire. Does everyone understand, act, and react the same way against such a crisis? The answer is no, no matter how strange it sounds. There are radically different ways to understand even a fire. In a more profound sense, even in this simple case, the two main “views” of perceiving and defining the concept of any crisis appear. The “conjunctural” and the “structural.”

The crisis under the conjunctural view

In this perspective, the crisis is something extraordinary, and unfortunately superficial: it is an occasional overthrow of the

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balance of things, something “unnatural” but assimilable by the current system of things and, finally, passable. The crisis comes, is treated by “firefighting” and, ultimately, is “overcome.” Then, everything continues their predetermined course, within the framework of the “previous status” of things and relationships.

In this perspective, the crisis is considered to have an “exceptional” and “unexpected” character structured by specific, unspecified events –or a series of events– that create high levels of uncertainty and threat (or viewed as a threat...) regarding the high priority goals of an organization, of every level and kind. Through this way of understanding, the event of the crisis is always:

- Unpredictable
- Creates a temporary shock and uncertainty
- Considered as a threat and leads to a drastic reduction in performance regarding the important goals previously set (Seeger, Sellnow, & Ulmer, 1998).

Within the range of this view of the crisis, they fall, moreover, all the partial disturbances, in the greater context of perceiving any socio-economic “stable equilibrium.” In these cases, something, usually exogenous (created “outside” the system), is incidentally destabilizing the balance. However, the balance is restored finally, and everything continues to work with the “old logic,” as with the case of the natural market-equilibrium (according to the usual slopes of the demand and supply curves) as described in any microeconomics manual of a first-year student.

It is clear, however, that in terms of the so-called crisis management, “crisis” is perceived entirely differently than against an economic crisis. At the forefront of this field, the Harvard Business School (Harvard Business Review, 2008), in a relative handy version, notes: “Crisis is a change –a sudden or ongoing– that causes a pressing problem that needs to be addressed immediately.” Moreover, it identifies the following stages in crisis management, according to the following sequence:

1. Preventing the crisis
2. Preparing for crisis management
3. Recognition of the crisis
4. Restraining the crisis
5. Tackling the crisis

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6. Lessons learned from the crisis

Especially in the last step, concerning the lessons learned from the crisis, this method proposes in particular:

- Reviewing crisis management mode: the participants of the management must program the review time soon enough to remember the details –but also long enough after the event for the emotional calmness to be restored.
- Planning future crisis management: build a new plan to learn from experience.
- Monitoring the results: observe the results of the changes made after the crisis.

Although this is a reasonable approach, there is nothing structurally coherent, anything historical and evolutionary in interpretative and predictive terms in this “practical” perspective. The more in-depth exploration of the crisis pattern remains untouched; neither the deeper “why” nor the specific “how” of the crisis are illuminated in this way. Of course, in such a serial and superficial perceptual orientation, it is difficult to end up with anything more than a narrowly repetitive understanding of reality and, by extension, without realizing its more in-depth structural content. Thus, a strong possibility of a new similar crisis remains.

To this end, how is the fire treated by applying the conjunctural perception of the crisis to the burning forest example? In the conjunctural rationale, the firefighting vehicles will, of course, rush and the fire will eventually go out. The fire will probably have burned the forest, which is going to re-grow (“like in the past”) and everything will go back as it used to be. In a few years, everything will be forgotten.

Therefore, what were the causes of the fire in this conjunctural perspective? Just a lit cigarette or a worn power cable or some overheating by the strong sunshine of the day. “Bad luck,” in two words.

The structural perception of the crisis

In this second perception and interpretation, the crisis is something more profound, something evolutionary necessary, something organic that brings specific structural changes to each

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system that leans. Thus, in this way, the crisis is captured as something endogenous, inevitable, and ultimately, “healthy.”

The crisis comes, is overcome and is once more overcome, but always taking with it the “old status” of things. Nothing then goes on like before, under the previous “regime.” Always, the “old regime” of things necessarily collapses and is replaced by a new one. In this second approach, the crisis refers to something that resembles the irreversible death but also the inevitable birth: the birth of the new and the death of the old, at the same time.

Here is the mutation involving irreversible reversals placed in the logic of evolution. Here comes the situation where the rule is gets transformed, one class fades, and another is formed (Passet, 1996).

In the example of the burning forest, the firefighters will rush again the fire will go out at some point. However, in this approach, there is the awareness that the burnt forest will never grow back “the same way” like in the past. Many of its old flora and fauna species will fail to survive and will become extinct, new species will migrate, new populations will develop, new ecosystem balances will emerge, and in a few years, the new forest will necessarily be significantly different from the one that got burnt.

Even the approach to the causes of the fire differs in this structural “standpoint.” Here is not just the lit cigarette, the worn cable or the dry grass that overheated, but more deep-rooted, maybe the mentality of the passerby who smoke or even the outdated technology of the local electric wires, or perhaps the sparse cleaning of woods from the dry branches and greens. There was no bad weather; the fire was no misfortune. On the contrary, it was an event that would have happened sooner or later and, in these circumstances, just a matter of time.

The basic differences between the conjunctural and structural aspects of the crisis

The difference between the two “optics” becomes clear:

❖ The conjunctural view of the crisis is partial, fragmented and “over-optimistic”; everybody hopes for a quick exit and return to old regularity.

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❖ The structural view of the crisis is complete, coherent and, say, “stoic”; everyone here knows how to expect the maturity of evolution. (See figure)

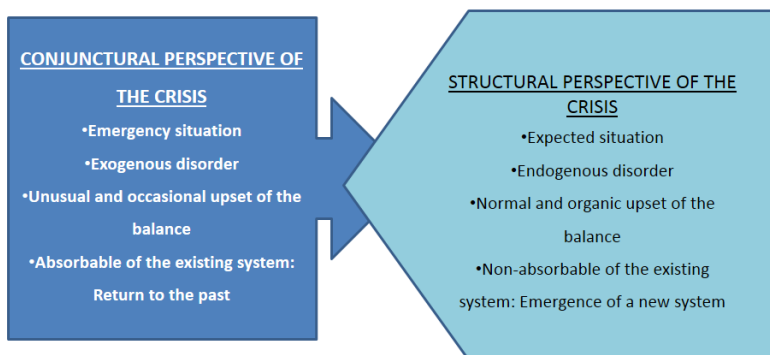


Figure 5. The conjunctural and structural view of the crisis (Βλάχος, 2017).

Surprisingly, in today’s rapid and total upheaval, the “over-optimistic,” conjunctural way of perceiving the crisis continues to dominate in the vast majority of scholars and business executives. However, why one will ask?

Maybe because all humans have an innate psychological/behavioral inclination towards the reassurance and sense of security provided by the familiar, or perhaps because a valid understanding of the structural aspect of the crisis requires a variety of ideological overturns that the vast majority of people – scholars and managers– does not know, does not want and cannot stand it.

The opinion of the writers is that only in the second direction of understanding the concept of crisis –that is, the structural, historical and evolutionary view of the crisis– can be recognized its structural and subversive content (Aoki, 2001; Billaudot, 1996; Boyer & Durand, 1998; Boyer, 2004; Coriat, Petit, & Schmeder, 2006; Esping-Andersen, 1999; Gadrey & Jany-Catrice, 2012; Lorenz & Valeyre, 2004; Perez, 2003; Théret, 1992). Moreover, precisely because this direction of understanding is much less “in fashion” nowadays, it is advisable to detect and try to clarify soon some of its less widely understood points.

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The conceptual prerequisites for a structural understanding of the crisis

The concept of a structural crisis in socio-economic terms must always be based, as a minimum, on the following conceptual assumptions (Βλάδος, 2016):

- The crisis always involves complex, organic-type systems.

A simple system, a simple “machine,” never comes into crisis: It merely presents a “corrective damage” (Venette, 2008).

- The crisis has always been a matter of urgency.

It must be dealt with as quickly as possible because the overall systemic stability and viability of the system are at imminent risk.

- A crisis rarely destroys the affected system directly.

However, it reduces drastically –and often in a worsening way– its operational effectiveness in achieving its previously defined goals (Mitroff & Silvers, 2009).

- The crisis always has, necessarily, a restructuring content.

The previous “regime” cannot assimilate the post-crisis situation.

- The crisis always has an evolving character.

It is not limited to only some functions. It extends, obviously or implicitly, via “metastases” on all sides of the system-organism.

Moreover, deep down:

- The crisis is, in the end, a “normal phase” in the evolution of each organism/system

It can lead to death or create the necessary conditions for its renewal, eliminating its inadequate, diseased, or dead “cells.” It is not a pleasant phase, but it is an evolutionary phase. In any case, the tools of the former physiological state cannot explain the crisis adequately. Addressing it always requires a radically renewed understanding and an entirely new way of adapting to its dynamics.

Concluding remarks: For a new way of reading the global crisis and restructuring

In the emerging new world reality, the old economic vocabulary, the past dominating interpretative platforms, the dominant theoretical “lenses,” are often disappointing. How to

(2) The current global socio-economic crisis and restructuring ... describe, understand, and build the new by using the theoretical “tools” of the old? It is not, in fact, possible.

The necessity of renewing the socio-economic interpretative perspectives is not a surprise. All socio-economic sciences cannot remain unaffected by the crisis. Historically, the phase of crisis “irritates” and renews the socio-economic thinking and science at all times. The central issue is now the more profound renewal of the conceptual and analytical arsenal of the socio-economic science so that it can describe, interpret, and predict the new emerging world.

Is that easy? We do not think so. The vast majority of today's economy, society, and people of management are often unconsciously “trained” for a long time in a static –or, at best, comparatively static– way of perceiving reality (Χατζηκωνσταντίνου, 1985; Χατζηκωνσταντίνου, 2009). This way of perceiving reality, however, hides severe explanatory dangers. In practice, a shift towards a historical, systemic, and structural understanding of the phenomena concerning the world seems necessary. In the background, the socioeconomic analysis needs to move from a mechanistic perspective to a structural and evolutionary view of global dynamics and its components. In this direction, the necessary methodological redirections are based and can be summarized by the following fundamental realizations:

- ❖ Nothing in a socio-economic system “falls out of nowhere.”

- ❖ Everything, always, is the result of the pre-existing conditions.

- ❖ Everything is born by its structural past and the systemic interactions that incubated it.

- ❖ Even the seemingly extreme events behind the crisis hide the natural forces and processes that have hatched them.

- ❖ The historical understanding of economic phenomena, within their specific socio-economic context, is always necessary.

The realizations mentioned above guide socioeconomic analysis away from the methodological principles of the mechanistic interpretative method, in practice and effectively, and push the socio-economic thinking into an evolutionary perspective (See figure).

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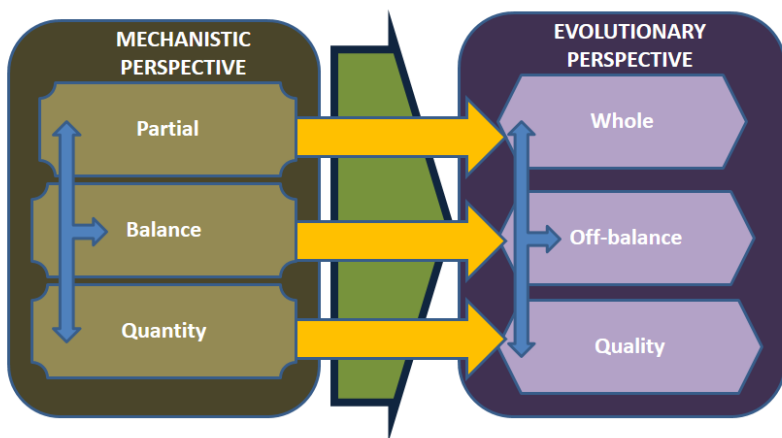


Figure 6. *The need for a new approach to the global crisis and its reconstruction: moving from a mechanistic to an evolutionary perspective (Βλάδος, 2017).*

In particular, it seems that there is now an immediate need for an open interdisciplinary evolutionary perspective that will replace:

- ❖ The fragmentation in the analysis of partial socio-economic dynamics with a unifying spirit.
- ❖ The focus on balance with a spirit that will give substantial interpretive weight to the continuous reproduction of the imbalance.
- ❖ The over-consideration in the accumulation of quantities with a spirit that explores more in-depth the qualitative transformations that occur silently beneath the surface of the phenomena.

By choosing an evolutionary perspective, the meaning of the global crisis and the exit from it ceases to be “by nature” an unanswered “incoherent question.” In this analytical orientation, the attempt for a coherent answer is not “by definition impossible,” and not useless at all.

From this point of view, this article finds legitimate the relocation and the deepening of the relevant questions, both theoretical and practical, into a new, holistic, interdisciplinary, and systemic basis for a new generation of field research.

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3 Global crisis, innovation, and change management*

Introduction

The central task of this research is to focus on studying the closely related evolutionary interconnection of three fundamental dimensions/pillars of the current world reality, namely the global economic crisis, innovation and change management, as these unfold at every level of action (Amable, 2000; Amable, 2002; Aglietta, 2008; Aoki, 2001; Artus, 2001; Boyer, 1986; Boyer, 2002; Coriat, Petit, & Schmeder 2006; Esping-Andersen, 1990; Esping-Andersen, 1999; Gadrey & Jany-Catrice, 2012; Stiglitz 2003a). This paper delves into the structural core of every organization, strategy, technology, and management (Stra.Tech.Man) which, in a more profound sense, shapes and mobilizes them (Vlados, 1996; Vlados, 2005; Vlados, 2007; Vlados, 2012; Βλάχος, 2006; Βλάχος, 2016; Βλάχος, 2017). In particular, this chapter analyzes the interconnection between global crisis, innovation, and change management, which are required to overcome the first, in a process of global restructuring, towards a “new globalization” (Aglietta & Reberieux, 2004; Aglietta, 1998; Artus & Virard, 2015; Boltansky & Chiapello, 1999; Braudel, 2014; Brender & Pisani, 2009; Chavagneux, 2011; Curien, 2000; Dobbs, 2015; Reich, 1993; Rifkin, 2002).

In particular, these three critical dimensions in the last years have been erroneously seen as unrelated, independent, and self-

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explanatory, thus favoring a conceptual autonomy. A practical consideration, on the contrary, is precisely one that opposes this fragmentary and analytically disruptive logic (Aglietta & Orléan, 1982; Aglietta & Orléan, 2002; Aglietta & Brender, 1984; Benassy, Boyer, Gelpi, & Lipietz, 1977; Billaudot, 1996; Billaudot, 2001; Boyer, 2004; Boyer & Freyssenet, 2000; Chavance, 2012; Coriat, 1979; Coriat, 1994; Delorme & André, 1983; Dulong, 2012; Lahire, 2005; Lipietz, 1979; Lipietz, 1983; Lordon, 2002; Orléan, 1999; Petit, 2005) (Figure 1).

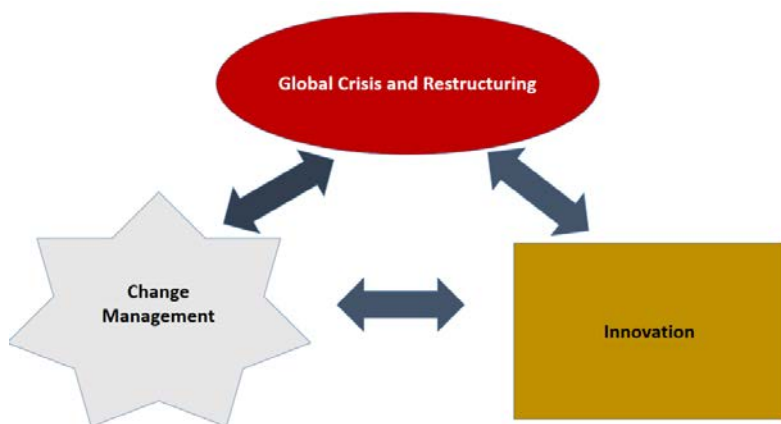


Figure 1. *Global crisis and restructuring, innovation, and change management*

It is analytically misplaced and fruitless to try to approach any of these dimensions in the absence of the other two. As Tsoukas (2017) argues, by bringing forward a complexification of concepts and by investigating social relations, scholars can produce theoretical models that can link with real life and societal challenges. Consequently, the only way to conceive them all, in their analytical depth, is to explore them in their narrow evolutionary systemic interplay.

Elements of literature review on the global crisis

What the global economy has been experiencing since the end of the first decade of the 21st century is historically unique and profoundly subversive to the “regime of things.” Of all the places

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that have the power to shape the dominant political perception and act in the global economy, today, the findings seem to be almost unanimous: Nothing in the world appears to balance, now, as it used to in the past ([National Intelligence Council, 2008](#)).

It becomes apparent that the world has entered a complex context of crisis, increasing liquidity, and uncertainty. A variety of complex dynamic dimensions (economic, social, developmental, political, institutional, demographic, cultural, religious, energy-related, climatic, geopolitical, and geostrategic) are interwoven and redefined inside the “crisis” to an impressive extent and by now to a planetary level ([Avant, Finnemore & Sell, 2010](#); [Breslin, 2016](#); [Carroué, 2004](#); [Chauprade, 2007](#); [Chavagneux, 2010](#); [Cohen, 2008](#); [Huntington, 2005](#); [Kitchin, 1998](#); [Lacoste, 2006](#); [Lévy & Poncet, 2008](#); [Luttwak, 1990](#); [Mackinder, 1904](#)). In this fluid environment of the global crisis, nothing can be the same, now, with respect to the reality experienced over the past years ([Adrian & Shin, 2008](#); [Greenspan, 2004, 2008](#); [Kotler & Caslione, 2009](#); [Laudicina & Peterson, 2016](#); [Prasad, Terrones, & Kose, 2008](#); [Stiglitz, 2003b](#)).

The emerging new globalization can be conceived to be born and reproduced by the diverse social and economic interconnections and flows that it creates and exploits (Figure 2).

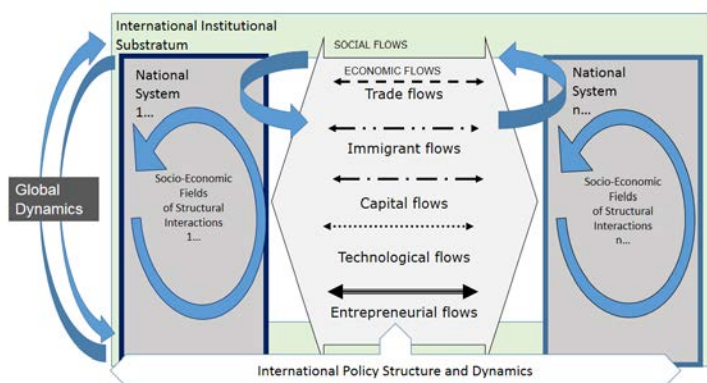


Figure 2. *Global dynamics, international economic and social flows, international political structure and dynamics, and national fields of structural interactions³*

³ Think of this diagram as the phenomenon of electricity. As it is known, the electric current is the oriented movement of electrical loads or

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In this complex systemic framework, all sorts of globalizing flows and dynamics are integrated and operating. In the long run, if there were no exceptional opportunities for the various factors of action to exploit—as well as differentiated threats—deriving from different values, fields, and structures of any kind, then even the very process of globalization would not exist.

The concept of crisis in economic and business science and the basic theoretical perspectives

In economics, although the concept of crisis is fundamental, at least since the time of Classical Political Economy, it does not cease to delimit a subject that is particularly shadowy and ambiguous (Amoore, 2002; Aydalot, 1984; Cohen, 2011; Overbeek & van Apeldoorn, 2012; Reinhart & Rogoff, 2009; Servet, 2010; Χριστοδουλάκης, 2012). In a more profound sense, there are two primary perceptions and definitions of the notion of crisis: The “conjunctural” and the structural.

As a conjuncture, the crisis is perceived as something extraordinary, situational, as an occasional overthrow of the balance of facts/matters and ultimately as something “unnatural” but assimilable by the current system of things. The crisis is a temporary social and economic construction that constitutes a breaking moment within undisrupted normalities (Bourdieu, 1999). The crisis arrives like a “fire,” which will eventually get extinguished, and everything will go on like they used to. In this perspective, the crisis is considered to have an exceptional and unexpected character, structured upon specific unspecified events—or a series of events—that lead to high levels of uncertainty and threat—or viewed as a threat—in relation to some high priority goals of an organization, of every level and kind.

Over the second category of perception and interpretation, in the structural, the crisis is considered a more in-depth situation, like something evolutionary necessary, something organic,

electricity carriers along a duct. The potential difference between two points (from high-potential points to low-potential points) generates the electrical current. If there were no such differences, then there would be no flow of electricity; this is also the case with globalization.

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historically irreversible, and as something that brings unavoidable changes to the system that it leans (Anderson, Arrow & Pines, 1988; Boulding, 1970; Brian, 1989; Kuhn, 1962; LeMoigne, 1990; Lefebvre, 1968; Lugan, 2010; Prigogine & Stengers, 1984; Prigogine & Stengers, 1986). Hence, in this way, the crisis is captured as something endogenous, inevitable, expected, and ultimately, normal. The crisis comes, is overcome and is once more overcome, but always by taking with it the “old status” of things. Nothing then goes on like before, under the previous “regime.” In this approach, the “old regime” of things necessarily collapses and is replaced by a new one (Biel & Kho, 2009; McKeon, 1954; Popper, 2014; Postan, 1962; Spranzi, 2011). This conceptual consideration of the crisis refers to something that resembles not only the irreversible death of a system but also the inevitable birth of a new one: “the birth of the new and the death of the old” (Schumpeter, 1942). Here is the mutation which involves the irreversible changes placed within the logic of evolution. Here comes that situation where the rule gets transformed, one class fades, and another is formed (Passet, 1996).

Only in the second direction of understanding the concept of crisis, in its structural, historical and evolutionary perspective, the structural and deeply subversive content that the crisis always conveys in every socio-economic system can be recognized (Boyer & Durand, 1998; Boyer & Saillard, 1998; Mitroff & Silvers, 2009; Venette, 2003). This structural perception of crisis is also the main reason behind the growing interest in the reconstruction of economic science by some recent and old trends (Georgescu-Roegen, 2011; Rodrik, 2011; Tofler, 1970; Tofler, 1980; Tofler, 1990).

Approaches to the current global crisis and the “New Globalization”

The global system has entered into a structural crisis and a somehow emergent remodeling, where over the next twenty to forty years, according to Wallerstein (2012), will result in a completely new system (or systems), which will either be worse than the existing ones or much better (Ahmad, 2013).

In a possible “new globalization” (El Namaki, 2017), many approaches tend to consider that the barriers are redeployed and

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become even more complicated, while a lot more countries are dynamically involved and guide global growth. In this multipolar world (Pieterse, 2011), the trade growth is likely to decline, especially in commodities as well as in cross-border investments due to the protectionist forces. These rapid restructurings decentralize global supply chains, as the “computerization,” which is absorbed by the new business ecosystems structurally, gets intensified. Economic policy is becoming increasingly sensitive to sudden and “conjunctural” changes by moving, most of the time, towards a direction in favor of nationalism and against shared global goals. In this context, there are also emerging opportunities for inter-state cooperation to institutionally change and to resolve rising threats such as cybercrime, international terrorism, and to deal with tax havens across the globe (Bhattacharya, Khanna, Schweizer, & Bijapurka 2017).

The impact of globalization and free trade encompasses much diversity; there are always different prospects per spatial level and business sector. So, it makes sense for the partial industrial and organizational policies to have a different focus on the incentives they give for development and modernization, as long as there are differences in terms of democratic stability, of management in public and local government and of their levels of corruption (Peters, Pierre & Randma-Liiv, 2011).

This phase of new globalization, since 2008 and about a decade earlier, represents the most expansive and technologically advanced form of globalization, concerning all the previous phases. The usual analysis, however, is very often limited to mono-thematic theories of “neo-colonization” and exploitation (Milanovic, 2016), by referring mainly to the poor regions of the world (KlayKieh, 2008), and by omitting the systemic regulatory issues and the need for structural reforms. Hettne *et al.* (1999) claim that this is not a purely “new globalization” but a “new regionalization” where the complex interaction of these two phenomena is in the direction of both mutual exclusion and convergence. Hirst & Thompson (1999) argue that globalization and global economic integration get organized in historical cycles that lead to decades of expansion, followed by periods of contraction and regional centralization.

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According to Margulesku (2015), the new globalization is predicted to be a new regime of increasingly integrated production, while the former regime, the “old globalization,” has been a phenomenon of rapid interconnection between the global and local markets. The diffusion of services makes the system a lot more complicated and, therefore, it is not possible to distinguish the boundaries between globalization and regionalization (Caselli, 2012; Vujakovic, 2010). The repeated appeal of the European Union’s institutions—a union which represents the most significant regional cooperation on the planet—is a typical example of the effort to manage globalization, already by globalization’s early stages, by trying to explore and integrate relevant regulatory mechanisms (Siles-Brügge, 2012).

So, how is the global crisis going to influence the shaping of new power relations? What does it mean for the new globalization the decrease of the economic role that the US has had until recently? How is the lack of genuinely global governance expected to shape the new national sovereignty (Grinin & Korotayev, 2010)? In this context, even in the field of international relations, there is no absolute shift from the national to the global level (Chandler, 2009). Instead, it seems like the very ideologies of globalization get re-codified (Steger, 2013) and even more elements of complexation get introduced into the system.

There are also appearing some “new rules” for sustainable development in globalization that tend to over-protect national interests and lead to a form of “guarded globalization” (Bremmer, 2014). Also, in the new globalization, there will be no rapid financial expansion (financialization) like in the previous phase (Philip, 2012). It seems that the power and privileges of knowledge and expertise will acquire a significant strategic role (Bresser-Pereira, 2010): The cognitive capital seems increasingly as the primary structural block for the new global economic construction.

Structures, behaviors, returns, and crisis, inside the global system

In the systemic concept of global dynamics, the following co-determined dimensions, under a dialectical point of view, can be recognized:

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❖ The structures that define the behavioral boundaries of the “players” and the behaviors that, in turn, determine the returns of each player, hence their survival and developmental potential.

❖ The players’ returns during the crisis seem to decline drastically for a relatively significant number of players, by endangering at the same time their survival and development and also the respective potential of the whole system on a global scale. In this way, the global system reproduces its crisis.

❖ The global system, under certain conditions, can compose the necessary innovation as a way out of its crisis which, in turn, leads necessarily to the restructuring of the system’s “structures” based on successful change management, and which opens, consequently, a new cycle of development.

❖ Throughout this continuous process, every link of the chain determines and at the same time is determined by the underlying dynamics of the global system (Figure 3).

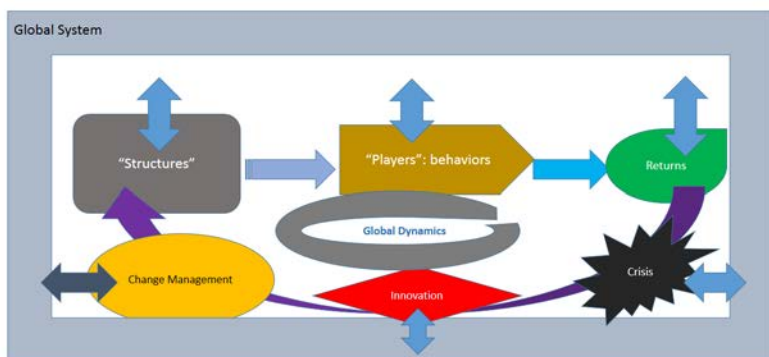


Figure 3. Structures, behaviors, returns, and restructuring, inside the global system

However, besides these methodological clarifications, an effort toward a meaningful and valid understanding of globalization requires a clear view of some certain vital aspects and thematic challenges that the approaching new globalization carries within.

The challenges of globalization restructuring

The public engagement concerning globalization has almost exploded over the past thirty years internationally. The concept of

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globalization has been accompanied by passionate statements—usually against—which often lead to multiple political, social, ideological, and theoretical conflicts. And, most often, in those conflicts there is an entirely paradoxical structure of “opposing camps” that is perpetuated (Abélès, 2008; Adda, 2012; Bayart, 2004; Bourg & Papaux, 2010; Cerny, 2010; Cooper, Hughes & De Lombaerde, 2007; Dembinski, 2008; Golub, 2011; Jaffrelot, 2008; Kunz, 2011; Lordon, 2009; Mattli & Woods, 2009; Orléan, 2009; Palan, 2000; Rainelli, 2011; Reinert, 2008; Sinclair, 2012).

The global crisis the world currently experience is, in its essence, the birth of a continuous structural process of maturity and incubation. Like in every evolutionary phase of capitalism (Michalet, 1998), the ongoing global crisis has come as a structural destabilization result of the older development regime, on a global scale. This structural destabilization became a reality through a long chain of events that initiated, superficially, when the sub-prime loan markets collapsed, and this turbulence spread everywhere, at all levels of socioeconomic relations. It is therefore clear that and this crisis has not “fallen from the sky,” it is not something exogenous. On the contrary, it “established its roots and stepped over” the maturity of the previous globalization development model: a maturity, that is, which was accomplished in the last three decades, since the mid-1980s up to the mid-2000s (Figure 4).

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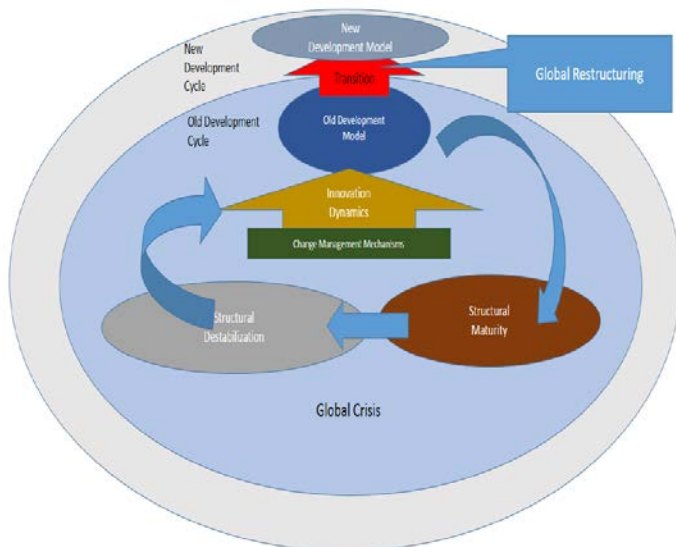


Figure 4. *Global crisis and restructuring*

Overall, the formation of “new globalization” is now called upon to answer the ever-intriguing questions of the evolutionary course of the global economy. This article distinguishes the present and future challenges into the following fundamental conflicting features of current reality:

- i. Poverty versus wealth
- ii. Equality versus inequality
- iii. Real versus financial economy
- iv. Economy versus society, nature, and humanity
- v. Freedom versus control
- vi. Uniformity versus diversity

In this basis, these new and sharp contradictions and challenges determine the shaping process of the new globalization systematically. In this dialectical process of globalization restructuring, there are many “diseases” and respective particular “treatments” dealing with them (Βλάχος, 2017: 127-176). To sum up, therefore, some critical “disease-treatment” pairs could be briefly presented as follows:

❖ The best treatment for poverty in any socioeconomic system, more or less developed, is away from a superficial and

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temporary growth and towards a structural socioeconomic transformation focused on a long-term developmental perspective.

❖ The best treatment for inequality is not some “exogenous aid” but the systematic empowering of equal opportunities to development, for all people and in every society.

❖ The best treatment for stopping the financial exaggerations and speculation is to create a new regulatory framework on a global scale.

❖ The best treatment to combat the narrow “economism” is to understand that there can be no lasting economic success over a degraded and declining social and environmental background.

❖ The best treatment to strengthen human freedom is to reevaluate and restructure the role of state intervention, by focusing primarily on increasing the development potential of every socioeconomic system.

❖ The best treatment for preserving diversity and heterogeneity on the planet is the constant effort of every society to protect the values of tolerance and pluralism.

As far as this view is concerned, undoubtedly, the “post-crisis of globalization” world—which struggles to emerge nowadays—requires drastic reorientations and profound structural changes in order to get consolidated and prevail in evolutionary terms. All of those require, of course, a vast variety of innovations, and across every corner on the planet. Diagonally, through every hierarchical level, and cross-functionally, leaning on every institution and organism, either private or public, whether large and small.

It is, therefore, found that behind every significant restructuring effort, there is a demand for new institutional knowledge, by having the innovation as the source, and followed by the context of change management which produces that innovation: Here, ultimately, lies the essence, according to the view of this article.

The contemporary global dynamics of innovation and change management: Toward a new research model

A structural prerequisite of overtaking the global crisis is the production of innovation which is always connected to the

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procedures of change management that take place in every socioeconomic structure (Aghion, Bloom, Blundell, Griffith & Howitt, 2005; Amable, Barré & Boyer, 1997; Boyer & Didier, 1998; Brynjolfsson & McAfee, 2015; Carlino & Kerr, 2015; Freeman & Soete, 1997; Guo, 2017; Rifkin, 1997; Schumpeter, 1911; Schumpeter, 1939). However, innovation never enters any system undisturbed and entirely peacefully; it demands, most often, multiple structural sections and breaches. Innovation gets created through constant dialectical cross-fertilization between creativity, the potential of adjustment and the composition of strategy, technology, and management capabilities (Stra.Tech.Man) of human resources, groups, and organizations, within the systematic framework in which they operate (Figure 5).

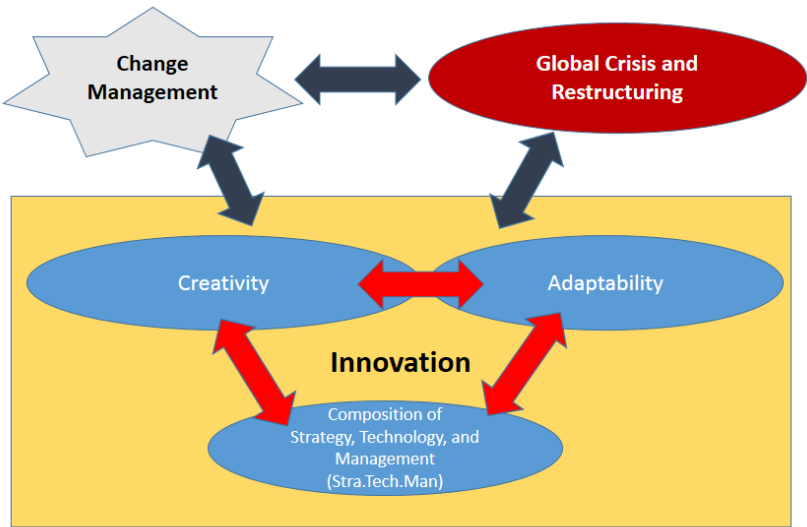


Figure 5. *Innovation dynamics*

In this sense, it becomes clear that the world will not easily overcome in a lasting and stable way the current crisis of globalization unless it can embrace, absorb, and integrate a broad scale of innovations. The restructuring of the global economy seems to necessarily go through the way of systematic innovation, in every level of activity, both private and public, both economic

(3) Global crisis, innovation, and change management and social, both productive and consumptive, both material and intangible. However, this sought after “victorious progress” of innovative potential on the planet, will not be achieved automatically.

It requires, and it will always require, as a critical precondition, the consolidation of a complete and adequate mechanism of change management in every level of structure of the contemporary world (Levin, 2012; Marquis & Tilcsik, 2013; Marshak, 2005; Phillips, 1983; Vora, 2013). It will demand, eventually, a renewed understanding of the inner dimensions of change, a gradual consolidation of a dialectical point of view in the effort of understanding the contemporary, ever-evolving reality, as well as new, coherent change management in terms Stra.Tech.Man, in every level of thinking and action. (Figure 6)

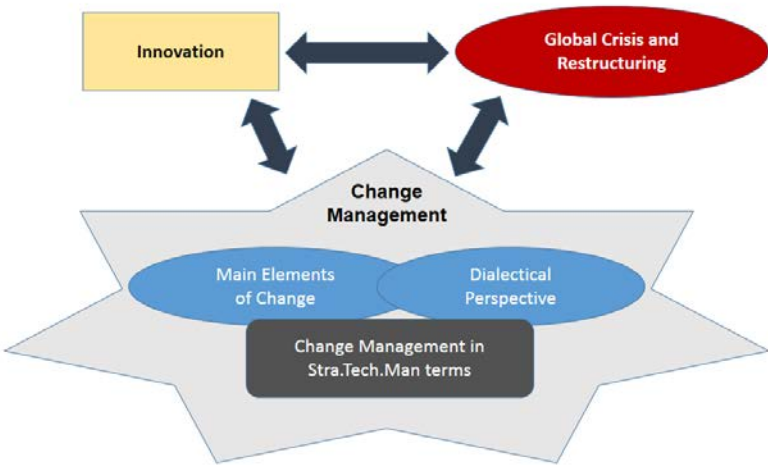


Figure 6. *The challenge of change management*

Multiplicity in the perception of innovation

A significant number of theorists has tried to convey, in the last few decades, the content of the different point of views for innovation. These perspectives summarise a significant number of various theoretical concepts deriving from different disciplines and ideological origins. Table 1 summarises some of these views.

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Table 1. *Conceptual approaches to innovation*

Author	Conceptual Approach to Innovation
Peter Drucker	Innovation as a specific process of the business culture, expressed primarily at a personal level: Innovation is the specific function of entrepreneurship, whether in an existing organization, a public service institution, or a new venture started by a lone individual in the family kitchen. It is how the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth (Drucker, 2002).
Porter	Innovation as the crucial factor of defining and altering the industrial structures, as the ultimate strategic priority and as a one-way street for the acquisition of competitive advantage. More specifically, Porter presents innovation as a result of an outstanding effort. The firm that successfully implements new or improved ways of competing is the one that doggedly pursues its approach, often in the face of obstacles. The strategy is the personal crusade of an individual or group. As a consequence, innovation often results from pressure, necessity, or even adversity. The fear of loss often proves more powerful than the hope of gain (Porter, 1990).
Nonaka & Kenney	Innovation is the process by which new information emerges and gets concretized in a product that meets human needs. The “healthy” firm is a negative-entropy system which continually creates new order and structure in its struggle to survive and grow. To remain competitive, any firm must always be creating new strategies, new products, and new ways of manufacturing, distributing, and selling (Nonaka & Kenney, 1991).
Rogers	Innovation is an idea, practice, or object that is perceived as new by an individual or another unit of adoption. It matters little, so far as human behavior is concerned, whether or not an idea is “objectively” new as measured by the lapse of time since its first use or discovery. The perceived newness of the idea for the individual determines his or her reaction to it. If the idea seems new to the individual, it is an

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	innovation (Rogers, 1982).
Rosenfeld	Innovation involves more than turning out high-tech gadgets, and innovators are complex human beings of different backgrounds and all types. Unfortunately, innovation has “hit a wall” in the workplace because the human component gets frequently neglected. Organizations focus too much on the mechanics of innovation and not enough on the underlying people-based principles. To promote innovation, leaders must first understand what drives it: people (Rosenfeld, 2008).
Gets & Robinson	A firm is creative when its workers produce something new and probably useful without having been taught or guided by anyone else. For them, the material evidence of creativity are the upgrades—changes to what has already accomplished while innovations represent something entirely new for the enterprise. Many good companies have fallen prey to “Innovate or Die” mantra, skipped over the foundations of progress—customer-focused processes and managing their employees’ spontaneous ideas—and jumped straight into building the penthouse—the layer of innovation capability. They have paid the price of not taking care of the foundation first. It is always fun in the penthouse, but the fun will not last long if it is built on moving sand (Getz & Robinson, 2003).
Narayanan	“Innovation refers both to the output and the process of arriving at a technologically feasible solution to a problem triggered by a technological opportunity or customer need” (Narayanan, 2001).

This concise summary of definitions on innovation is enough to realize the multiplicity of the term. Although the same notion of innovation gets perceived in many ways, it is clear that innovation can derive only from creativity and business development that, in turn, is the result of strategy and organizational sustainability. However, the organic character of innovation gets omitted by the traditional economic and administrative approaches and, as a result, the systemic and strategic response of organizations to external crises and environmental changes lacks analytical and

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practical efficiency. Businesses ought to continually adjust within complex, almost chaotic, conditions and innovation by itself is the response—and also the catalyst—to all the crises.

Contemporary approaches to innovation and change management within the crisis

The social changes, chaotic and unpredictable as they may be, always involve a systematic personality. Without the understanding of this systematic personality, nothing can interpret the structural continuance and change to the human and organizational behaviors (Burns, 2007).

Although the gradually more in-depth specialization of the economic science in matters of organization, few approaches can shed light in the correlation between the three forces: the crisis, the innovation, and the change management. In the direction of a “neo-Schumpeterian” approach (Kleinknecht, 1987), one could claim that the crisis is not so much a result of a “dry” and intangible financialization (Beck, Chen, Lin & Song, 2016), but it is about a phenomenon born from business evolution and innovative potential. It is a dialectical readjustment of the old order of things that guides the system (the global economy in this instance) towards a new, different from the past, evolution.

In many recent scientific studies, however, the approach of the global crisis is simplistically identified through the consequences of the financial globalization (Hausman & Johnston 2014; Sánchez, 2010; Sveiby, 2012), sometimes carrying a positive sign, and most times, a negative one. However, any narrow financial mechanism for facing the crisis is not sufficient to provide practical solutions. On the other hand, the exclusive focus on the relational and human resources (Melé, Argandoña & Sanchez-Runde, 2011; Sultanova & Chechina, 2016) shifts away from the ultimate target of a complete developmental agenda in economic policy, as it leaves out crucial characteristics of the system that led to the need for an advanced human capital.

Entering, therefore, into the deeper characteristics that consist the economic activity, it seems essential to report a relationship between the global crisis and the innovative results of businesses and their consequent developmental courses. Paunov (2012) proves

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that for the years 2008-2009 in eight countries of South America, the crisis led several companies to pause their innovative projects. Businesses that had access to public funding were less likely to give up, while newer companies and businesses-suppliers towards multinational foreign counterparts presented halting of their activities at a more usual rate.

This fact indicates not only the lack of targeting in economic policy by the majority of the emerging and medium-level-of-development nations towards the methods of fostering local development (Vlados, Deniozos, & Chatzinikolaou, 2018) but also the struggle in establishing mechanisms of change management within organizations. To achieve local innovation and establish new change management mechanisms it is essential to penetrate those forces that determine the operation of the organization and, as a result, the diffused dynamics within the global economic system: that is, the structural “triptych” of strategy, technology, and management.

The innovative environment and the dynamics of strategy, technology, and management (Stra.Tech.Man)

This paper proposes a conceptual model that brings together the conditions of macro-economic and systemic crisis with the internal, organizational, and strategic responses. It has argued so far that crises constitute moments of “cosmological” collapses (Weick, 1999), but they also constitute moments of deep thinking about business models and should be linked with intensive innovation.

The main point of this article consists of the finding that although many innovations seem to be pushed authoritatively towards the organizational cell of the procedure, by one of the three forces Stra.Tech.Man—either by strategy, or technology, or management—there can never be any innovation completed in the inside of any organization without going through and transform all of its three main structural spheres synthetically (Vlados & Katimertzopoulos, 2017) (Figure 7).

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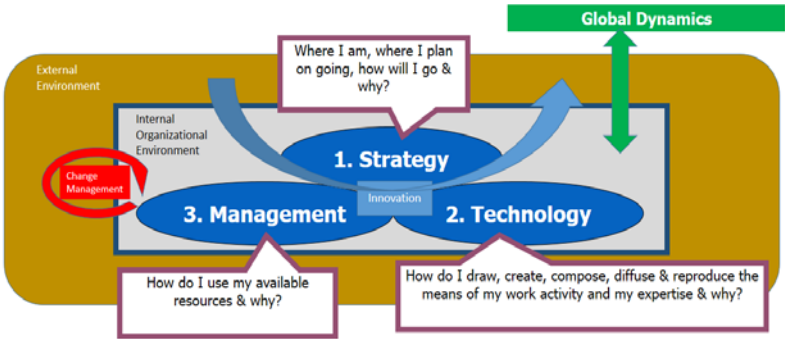


Figure 7. *The evolving “core” of the capitalist firm, innovation, change management, and global dynamics*

All these three dimensions of the organizational “Stra.Tech.Man” always converge and evolve. All the dimensions together get reorganized and coordinated necessarily in the dynamics of the global environment and are evolutionarily reinserted in the innovative game. All these together lead to constant organizational evolution in terms of Stra.Tech.Man and of the external structural environment of the organization as well (Figure 8).

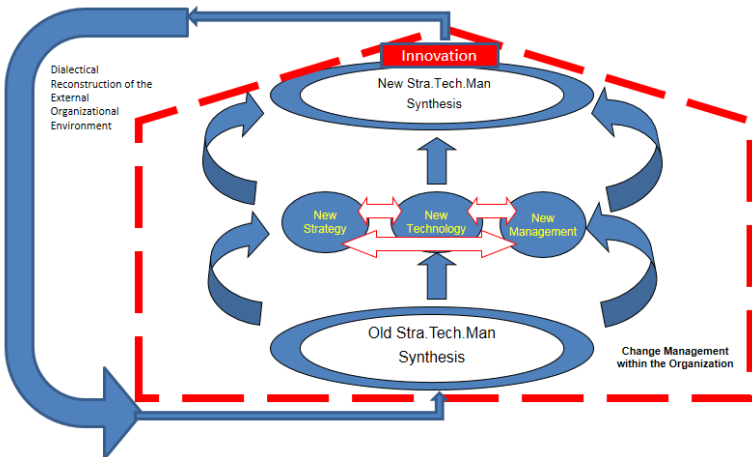


Figure 8. *The reproduction of the innovative dynamic of the organization in terms of Stra.Tech.Man and the constant restructuring of its external environment*

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Within a world that tends to be more “open” and interactive, the borders of organizations, of any type and level, become more and more porous and vague. In this contemporary reality the notion of “innovative environment” (milieu innovateur) (Aydalot, 1986), in every level of space—national, international, regional and local—seems to be getting progressively critical importance. The innovative environment as a spatially-established socioeconomic composition of multiple knowledge, decision, and action, opens externally in a dialectical manner, towards its environment. It “gives and takes,” incorporates and diffuses ideas, expertise, practice, values, and methods of operation, rules, and “relational capital.” It is about an environment “tied,” always, with a community of carriers/perpetrators and their available resources, human, cognitive, informative and material. It is not a “closed box” but, instead, it is a complicated system in constant interaction and intellectual evolution with its broader external environment.

Essentially, every organization in its core is a receiver and, at the same time, a transmitter of elements, data, and actions within its operational ecosystem. Therefore, the “Stra.Tech.Man” synthesis achieved by any organization depends directly upon its structure and the dynamics of the ecosystem in which the organization gets established and which, in turn, participates and contributes, more or less in the articulation of the global dynamics (Figure 9).

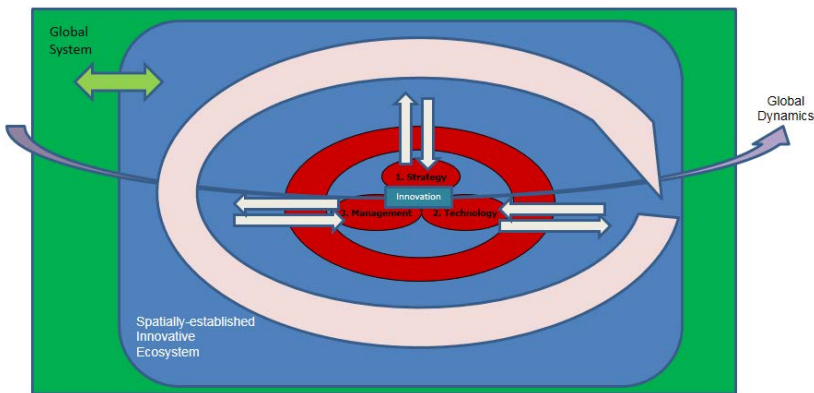


Figure 9. *Spatially-established innovation environment, Stra.Tech.Man synthesis and global dynamics*

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Every organization draws data with which it develops the strategic, technological, and managerial “arsenal” and, at the same time, channels towards its environment strategic, technological, and managerial components and resources. It “inhales” strategic, technological and managerial resources, it synthesizes it, internally, in its way, trying then to “exhale” it as innovation. It cohabits and develops its necessary structural relations that extend beyond its everyday market transactions. In this context, every organization is the byproduct of the innovative wealth—or poverty—of the same “space” that hatches and hosts the organization. At the same time, it contributes ceaselessly with its presence and action in the structure of the innovative wealth or the poverty of that space (the “space” in every level of activity: national, international, regional or local).

The innovative resources in terms of Stra.Tech.Man of every organization “do not just fall off the sky.” The fauna (organizations) of the “ecosystem” directly depend upon the flora that surrounds it and “breeds” it (institutions, regularities, total socioeconomic framework). Likewise, of course, the “flora” of every innovative ecosystem is influenced directly by the various “living organisms” that develop within its evolving interior.

The renewal of the mechanisms of change management, in every level of action

The problems in change management do not constitute an establishment, something settled and a reassured scientific field so there can be clear and predefined theoretical limits and explicit methodological preconditions in its approach. There is no “general theory” on the subject, and there is no agreement over a paramount example. On the other hand, not only the theory but also the practice of the change management seems to result from the convergence and interference of a significant number of branches of the social studies and various notional interdisciplinary traditions. Even if that is where the power and the charm may lie, the investigation of its theoretical foundation and potential does not cease to make up for a challenging case (Burnes, 2009: 258-261).

Change is a procedure that materializes ceaselessly for the

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entire life and operation of the organization, whether it desires so or not. With the most straightforward definition possible, change is the procedure of modification of how an individual, a team or an organization act as a group by going through a set of ways of action and behavior to another one, transforming the performance and effectiveness.

The forces that influence the change are always both external and internal in an organization simultaneously. The external forces are about the direct organizational micro-environment (market, competition, suppliers, franchises and supplementary products, distribution networks) as well as the macro-environment (legislation, society, technology, environment, economy). The internal forces come from the internal strategic mechanisms, the technological structure, and the unique nature of authority and administration at the organization's interior and human resources.

In the international literature of the subject, what prevails is the distinction of change in the base of three distinct models:

- The incremental model of change (Burnes, 2009: 254), in which change becomes perceived as a procedure through which the unique pieces of an organization arrange incrementally and uniquely a problem, facing one target at a time. With managers meeting the needs of the changing internal and external environments. One step at a time, through the progress of time, organizations transform and evolve (Miller, 1984).
- The model of interrupted balance of the organizational transformation (punctuated equilibrium) (Burnes, 2009: 255) which perceives organizations to be evolving through relatively significant periods of time of stability (stability periods) in the main models of their activity and which get interrupted by relatively small "outbreaks" of fundamental change (revolutionary periods). Those revolutionary periods, the "times of explosion," fundamentally, disrupt the installed motives of activity and re-establish the foundations for the new periods of balance (Tussman & Romanelli, 1994).
- The model of constant transforming of change (continuous) (Burnes, 2009: 255-258) claims that in order to survive, organizations must develop their ability to continually

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change themselves, at a stable and continuous rate, every moment and ceaselessly (Brown & Eisenhardt, 1997).

Under these conditions, therefore, is born inevitably the reaction to change. It is about that force which appears in individuals, groups, or even entire organizations and which tends to refuse, obstruct, limit or even altogether cancel the magnitude of the necessary changes. In practice, conflicts always bring about unique content in terms of personal, team, departmental, and total organizational and intra-organizational dimensions.

The five steps of the Stra.Tech.Man viewpoint in change management

The contemporary change manager, in every type of organization, according to the viewpoint of this article, owes to clarify the main “physiological” targets of change, before any action, in terms of Stra.Tech.Man. Every organization owes to conceive and understand the unique “physiological” advantages and disadvantages, based on the composed Stra.Tech.Man viewpoint and which opens up at the same time, space for unique opportunities and threats that the organization faces in the contemporary, uniquely demanding and labyrinthian, global economy. The critical problems that the organization faces and those that put a barrier in effective change management are finally at its physiological core. That is, they are born and reproduced through the total evolving dimensions.

- In its complete strategy
- Its complete technology
- Its complete management

This is the reason why this perception of change management moves away firmly from the analytic theory which perceives social organizations of every kind linearly and as static mechanisms, towards an understanding that perceives the organizations dialectically (Cassin, 2004; Corbett & Connors, 1998; Fox, 2005; Kaufman, 1966; Lenin, 1976; Popper, 2015; Sartre, 1984), like living and evolving organisms. As a result, every effort of managing change, inside any organization, must primarily take under consideration its “living” nature, inside its ever-evolving “living,” external environment.

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In this way and on these conceptual foundations, this article proposes five phases (Figure 10) of change management under the Stra.Tech.Man viewpoint, as an endeavor of composing the approaches concerning the discipline of change management. Specifically, it suggests those five steps of change management under the Stra.Tech.Man viewpoint as a constant cycle of five perpetually repeated steps, which are destined to ensure: (i) the successful strategic transformation, (ii) the successful technological transformation, (iii) the successful managerial transformation, (iv) the successful innovative synthesis and (v) the successful assimilation of change and the constant, adaptive variation of the organization.

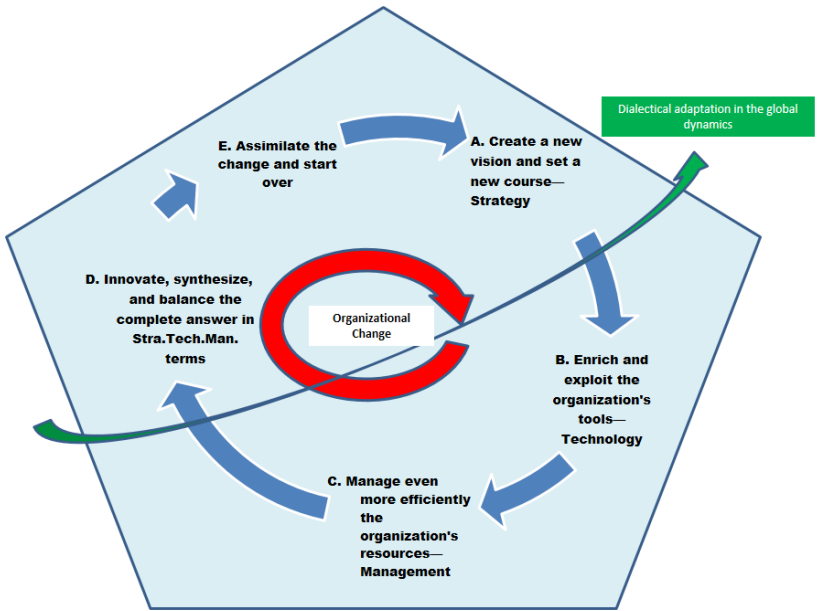


Figure 10. *The five steps of change management through the Stra.Tech.Man approach and the dialectical adjustment of organizations in the global dynamic*

The authors of this article assess that all these previous steps, in each link, always get materialized by an open, evolving, and dialectical spirit. Otherwise, they cannot fulfill the potential of change management that every organization holds.

Conclusive comments and limitations: Towards a new economic-political synthesis for the overcoming of the crisis at a global level. The direction of a realistic innovative liberalism

The idiosyncratic track of the current crisis of globalization seems to be imprinted by now, directly, in the deepest level of the socioeconomic evolution of every region and every agent of action on the planet. It penetrates and dissects the real life of every individual, group, and the entire organization, their plans, and actions of every kind.

The successful innovation on behalf of the various social organizations, as well as the structure and operation of their change management mechanisms, do not happen in any “institutional void.” Entirely differently, the total institutional substratum, in every level of structure and operation constitutes, simultaneously, both the engine and the institutional receiver of the global dynamics of the sought-after restructuring.

In conclusion, the global restructuring process will end up in benefiting the socioeconomic development only when a new global structural “triptych” will get effectively combined and established: toward a new model of ideological and political understanding of the contemporary global developments (Figure 11).

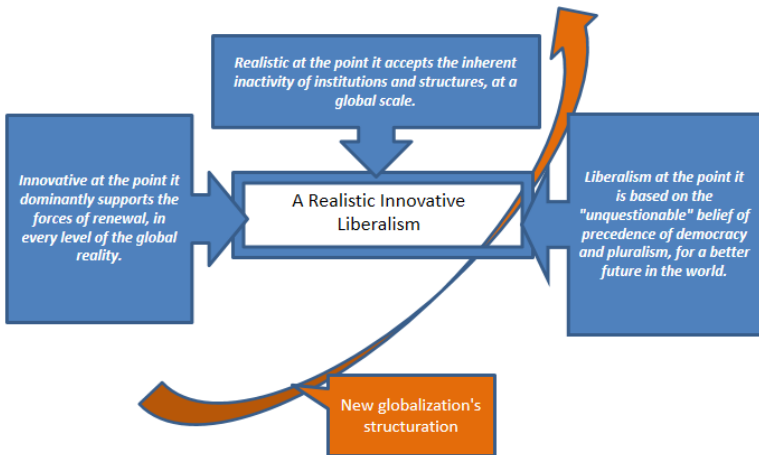


Figure 11. *The realistic and innovative liberalism and the structure of the new globalization*

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Thus, for building a structural “triptych” of realistic and innovative liberalism, a renewed way of viewing global dynamics is necessary. This view must achieve to give the appropriate emphasis to all three components and fertilize them in practice.

- Realistic at the point it accepts the inherent inactivity of institutions and structures, at the global level.
- Innovative at the point it supports the forces of renewal dominantly, in every operating level of the global reality.
- Liberalism at the point it is based on the confident belief of the precedence of freedom, democracy, and pluralism, for a better future in the world.

Within a world which creates conditions of uncertainty continually, an ideological-political thought characterized by a structural link between realism, innovation and the creation of favorable conditions for liberal action can be the decisive criterion for integrating all those actors that are called upon to shape a sustainable new model of development; that is the new globalization. The limitations of that perspective are, of course, of theoretical and practical reach. This perspective will require both ideological and methodological repositions and policy restructurings to flourish; and over multiple levels of understanding and, of course, on a global scale.

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4 Structuring an anti-crisis economic policy: The Greek experience*

Introduction

All the partial phenomena of the crisis that marked the last decade, the stock market shocks of 2008, the governmental bailouts of big financial organizations, the recovery of some national GDP growth rates, the persistent and constant high rates of unemployment within a lot of national economies, they all seem to lead nowadays to an emerging, global status quo of a “new globalization” (Adda, 2006; Aglietta, 2010; Boyer, 2015; Chavagneux, 2016; Cohen, 2004; Greenspan, 2008; Grove, 1999; Kotler & Caslione, 2009; Laudicina & Peterson, 2016; Naisbitt, 2006; Naisbitt & Naisbitt, 2010; National Intelligence Council (U.S.), 2008; Rodrik, 2011; Sapir, 2011; Vlado, Deniozos, & Chatzinikolaou, 2018b, 2018a; Βλάχος, 2006, 2017).

Under these difficult circumstances, the Greek crisis seems far from over, moving apparently towards a long-term state of societal and economic entrapment to feeble growth rates (International Monetary Fund. European Dept., 2017). On a deeper level of analysis, one of the reasons for the painful conservation of the Greek crisis is also the existence/reproduction of some misconceptions on what an effective anti-crisis economic policy means. Moreover, these misconceptions do not cease to influence the shaping of the public opinion and the public discourse among

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a significant part of the Greek political elites (Κατσάμπας, 2017;
Κύρτσος, 2017; Φιλίππου, 2012).

The current dynamics of the restructuring of globalization

Because of the emerging discipline of the globalization's restructuring crisis, there is now a new, pivotal theoretical field that reinvigorates all social sciences. In particular, the notion of crisis seems progressively as a new conceptual boundary of methodological reposition of all social sciences and inside a globalized perspective; and this change is simultaneously and cross-disciplinary reflected, from modern political science and geopolitics (Ancel, 1936; Carroué, 2007; Chauprade, 2007; Huntington, 2017; Lacoste, 2006, 2014; Lévy, 2008; Luttwak, 1990; Strange, 1996), to the new "thematic branches" of economics (Acemoglu, Johnson, & Robinson, 2004, 2000; Acemoglu & Robinson, 2009, 2012; Amable, 2005; Berger & Dore, 1996; Chang, 2006; Crouch, 2005; D. North, 2005; O.E. Williamson, 2000) and from sociology (Abélès, 2008; Beaujard, Berger, & Norel, 2009; Carroll, 2010; Colic-Peisker, 2010; Dufoix, 2011; Giddens, 1990; Heilbron, Guilhot, & Jeanpierre, 2009; Keck, 2010; King & Le Galès, 2011; Martel, 2010; Moore, 1966; Robertson, 1992) and social psychology to cultural studies (Cuche, 2013; Gorz, 2003; Hannerz, 1992; Koch & Mattelart, 2016; Mattelart, 2009; Mattelart & Neveu, 2010; Noiriel, 2007)⁴.

This synthesis of these new approaches shows that, progressively, the global restructuring is the byproduct of the long process (of approximately 30 years) of the structural maturation of globalization. After all, as in every phase of the evolution of global capitalism (Michalet, 1985; Salmon, 2000; St-Onge, 2000; Veltz, 2008), the current one regarding the crisis was born as a result of a structural destabilization of the old model of development, on a global scale—a destabilization that drastically

⁴ Because, apparently, without a valid understanding of the all-inclusive/ever-competing global dynamics and crisis, any interpretative attempt of the particular contemporary socioeconomic phenomena, regardless of the analytical level, can be nothing but insufficient.

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So, what we call a crisis of globalization (Abraham-Frois, 2002; Aglietta, 1997; Boyer, 1986; Chevalier & Pastré, 2002; Dockès & Rosier, 1983, 2002; Kleinknecht, 1986; Lorenzi, Pastré, & Toledano, 1980; Mandel, 1995; Perez, 2010; Rosier, 1985; Schumpeter, 1939) has naturally overturned almost everything that we used to take as granted, on every level, both nationally and internationally.

And especially today, the structural overcoming of the crisis and the restructuring of the global system seem to require, as an absolutely necessary condition, the structuration of economic policies that belong to a new logic, in order for our world to enter the path of a new, steady model of global development (Aghion, Algan, Cahuc, & Shleifer, 2009; Alesina, Favero, & Giavazzi, 2012; Balcerowicz, 1994; Baum, Checherita-Westphal, & Rother, 2013; Buti, Turrini, & Noord, 2014; Eichengreen & Panizza, 2014). Moreover, this realization acquires an even greater meaning in the cases of countries with a vulnerable socio-economic structure, especially under internal crisis conditions, like the case of Greece nowadays.

The main interpretative approaches to the Greek crisis

The Greek crisis was expressed and still reproduces its results, while continuously being transformed, within an ever-intensifying competitive framework and uncertainty that characterizes the current global restructuring. Many scholars have attempted the analysis and interpretation of the Greek crisis in the last few years. Most of these analyses focus on the conditions of the partial

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internal causes of the crisis and also on the external co-evolving conditions of the changing global environment (Boufounou & Avdi, 2016; Chalikias, 2017; Cholezas, Kanellopoulos, Mitrakos, & Tsakoglou, 2013; Georgievski & Mostert, 2016; Giannitsis & Zografakis, 2015; Haliassos, 2015; Kapitsinis, 2018; Kentikelenis, 2018; Manasse, 2015; Matsaganis, 2013; Mitsakis, 2014; Mitsopoulos & Pelagidis, 2009; Petmesidou & Polyzoidis, 2015; Pitelis, 2012). In these approaches, there is indeed a great variety of overlapping interpretative factors and dimensions regarding the Greek crisis.

More specifically, a significant part of these analyses projects mainly the economic dimension, observing the Greek crisis as a byproduct of the 2007-2009 international financial crisis. Under these circumstances, the natural conclusion is that the steep rise of the national debt and the unsustainable size of the deficit are the crisis' epicenter and primary source (Christodoulakis, 2010; Kuforiji, 2016).

Some observe the particularly weak "regional" position of the Greek economy within the global system as the interpretative center and, accordingly, they suggest that the Greek crisis is one of the "symptoms" of the struggling peripheral economies of Europe (Kazemi & Sohrabji, 2012; Magoulis & Chouliaras, 2014; Marangos, 2017; Mavroudeas, 2014; Mavroudeas, 2016). Some others, with similar reasoning, highlight the poor political management of successive Greek governments with their lenders (Hardouvelis & Gkionis, 2016; Zettelmeyer, Trebesch, & Gulati, 2013).

In other approaches, it is the structural inadequacies of the Greek economic system both in terms of supply and in terms of demand—including the particularly sizable black economy and tax evasion—that hold the interpretative primacy (Andreou, Andrikopoulos, & Nastopoulos, 2017; Bitzenis, Vlachos, & Schneider, 2016; Ioannides & Pissarides, 2015; Triantopoulos & Staikouras, 2017).

There are also those focused on the overall problematic structure of the politico-economic environment, which, after having hatched the crisis, was proven to be incapable of dealing with it, mainly due to the preservation and the systematic reproduction of clientelism within the Greek public sector

(4) Structuring an anti-crisis economic policy: The Greek experience (Christopoulou & Monastiriotis, 2016; Gkintidis, 2018; Juko, 2010; Konioridos, 2011; Rapanos & Kaplanoglou, 2014). Some scholars, in turn, regard this overall socio-political inadequacy as the cause for the constant resistance against the proposed reforms (Skalkos, 2018).

Altogether, the above approaches cover, in a complementary manner, the examination and interpretation of the Greek crisis satisfyingly enough. However, one can detect, in a relatively significant part of them, an insufficient examination of the structural and evolutionary dimension of this crisis (Vlados, Deniozos, Chatzinikolaou, & Demertzis, 2018) as well as the examination of the existence and perpetuation of certain conceptual misunderstandings, in relation specifically to the endogenous restrictions on the structuration of an effective anti-crisis economic policy.

This chapter focuses in particular on this last dimension and specifically on the combined reproduction and spread of three kinds of conceptual distortion, regarding the structuration of an anti-crisis economic policy:

- The economic policy either as, supposedly, a “de-ideologized” construction or a “de-technicalized” voluntarism;
- The economic policy as, supposedly, a “de-strategized” synthesis
- The economic policy as, supposedly, an automatic, ungraded, and instant and without “friction” process.

The problem of the structuration of a modern economic policy in conditions of crisis

According to the classic definition by J. Tinbergen (1956), economic policy is the conscious control of some instruments to achieve a certain number of targets. Also, by following the classic line of thought of E.S. Kirschen (1964), economic policy is the economic view on the general governmental policy, i.e., the intentional intervention of the state in the economic affairs, in order for it to accomplish each time specific goals. So, the first and essential dimension of the analysis of economic policy must always be the clarification and the understanding of its specific

(4) Structuring an anti-crisis economic policy: The Greek experience intentions—its aims. Without clear aims, there cannot be, ever, real economic policy.

It is, however, precisely on the issue of the planning and the implementation of the aims of economic policy that the following crucial matters emerge; matters that seem to have been relatively neglected on an interpretative level regarding the negotiation of the Greek crisis particularly, but not exclusively.

The ideological-technical constituents of the structuration of modern economic policy

Overall, economic policy is always composed by decisions (of intervention or deliberate abstention from intervention) of the state and the organizations depending on it, which have as a principal purpose the regulation of the conditions of production, distribution or use of the resources, as Boissieu (1980) specifies. Accordingly, there are always specific questions arising before the structuration of any economic policy:

- What is the specific economic problem? This question sets the basis for the formulation of the policy framework of objectives and targets.
- Why is this a problem? This question determines the political expediency to deal with the problem.
- Which are the most important causes of the problem? This question sets the boundaries of the problem's theoretical examination.
- What is socially desirable and achievable? This question formulates the content of the means and measures of the economic policy.

Nevertheless, many analyses on the Greek crisis, academic or not, seem to have the wrong impression that the structuration of an effective economic policy is just a “technical” matter. In other words, they express the belief—usually in an indirect way—that there can always be “only one right solution” against the crisis, regardless of the political environment, the social priorities and any ideological parameters (Åslund, 2011; Buiter & Rahbari, 2011; Carfi & Schiliro, 2012; European Commission, 2010; Featherstone, 2011; Glynos & Voutyras, 2016; Hughes, 2011; Katsimi & Moutos, 2010; Kouretas & Vlamis, 2010; Koutsoukis & Roukanas, 2011;

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Mourmouras, Ivvanova, Anayotos, & Mayer, 2003; Terzi, 2015; Tsoulfidis, Alexiou, & Tsaliki, 2016).

This narrow-thinking technical analysis cannot be accurate since the economic policy, on every level of analysis, is always a byproduct of both the “positive” and the “normative” dimensions of Economics (Jelveh, Kogut, & Naidu, 2015; Pelikán & Wegner, 2003)⁵. In reality, the agents of economic policy, no matter how much they refer to their “objective view,” always set specific objectives that occur from their normative judgments and incorporate their ideological and political preferences and priorities. This way, economic policy is always a complex and difficultly divisible mixture of both “normative” and “positive” constituents:

- On the one hand, there is the part of economic policy that refers to the economic-quantitative mapping of the objectives, to the predictions of their effects and their measurements; the “positive” economics.
- On the other, there is the part of economic policy that refers to what are the desired objectives, targets, and means of the policy; the “normative” economics.

What always emerges in practice as an anti-crisis economic policy can only be a technical-ideological mixture, in the specific conditions posed by the dynamic evolution of the global system (Krishna, 1988; Nelson & Sheffrin, 1991; Stilwell, 2011; Thompson & Hickson, 2001) (Figure 1).

⁵As it is already known, economic theory is characterized as “positive” when it investigates a situation approaching the “is,” the “was” or the “would be, if”; i.e., when it explores, discovers and describes the relationships among certain economic phenomena and figures, a relation checked empirically. That is the “technical” analysis, the “objective” part of it. On the contrary, economic theory is “normative” when it approaches a situation under the light of the “ought to be” or “what we ought to do”; i.e., in this part, the theory depends on and is affected by values and by the ideological beliefs on what is desirable and what is not. Moreover, by considering only the empirical data, the analyst cannot solve the differences regarding different moral propositions, as they are never a matter of “pure data” but a matter of interpreting them.

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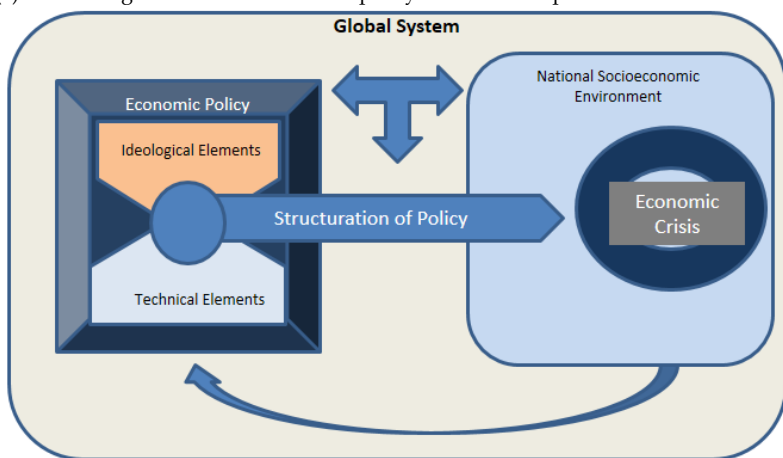


Figure 1. *Economic policy as a technical-ideological mixture*

Therefore, the anti-crisis economic policy in Greece could only have an indivisible mixed technical-ideological character (Βαβούρας, 2005)⁶. It is unsound and ineffective either the absolute “positivizing” or the absolute “normatizing” of any economic policy⁷. On the contrary, one must accept the constantly “mixed character” of economic policy without, however, neglecting the partial components: both technical and ideological. Economic policy must be perceived, without illusions, as a “scientific” and a “moral” entity at the same time; in other words, as a “strategic” view and action.

Meanwhile, there is a superficial approach to the formulation of economic policy. This approach assumes that the primary aim of those that exercise economic policy (as if those people are a completely homogeneous group) is the maximization of a given

⁶ The discrimination between positive and normative economics is useful regarding the origins of differences in matters of economic policy, even today. It is essential to understand on what degree are the occurred differences a result of different normative judgments, thus of different evaluations on the objectives or the means to be adopted, or a result of different evaluations on the measurements or the effects of the objectives or the means of the economic policy.

⁷ Moreover, according to J.K. Galbraith (1987), economics is not useful when it exists separated from politics. Separating economics from politics and political motives is something sterile.

(4) Structuring an anti-crisis economic policy: The Greek experience and indubitable social welfare function, within the limitations set by the structures of the related economic system. However, in reality, those who exercise economic policy usually avoid the strict determination of specific desired figures of the targets and means they possess (Simon, 1947).

Furthermore, those who exercise economic policy, more often, do not aim so much for the simultaneous achievement of all their targets, as they focus mostly on achieving only one (or a small number of similar and complementary targets) regarded as more important and of which the “present figure” is considered unsatisfying. Then, they channel towards that target the most significant part of the available resources and means and right after, since achieving this central target to a “satisfying degree,” they turn their attention and available means to the next targets of their political agenda.

In this way, the general aims of economic policy, regarding also the structuration of anti-crisis policy, can only be characterized by their mixed—technical and ideological—content:

- They take into account the “generally desirable” economic and social directions, towards which the specific followed governmental policy is each time oriented.
- They incorporate, directly or indirectly, the central ideological as well as the managerial priorities followed by the government.
- They have, to a certain degree and according to each case, a totalizing and visionary content, and they do not express initially specific quantitative terms.
- They are based on and make use of, to a degree, the data provided by empirical reality and they use, also to a degree, methods of their scientific analysis.
- They express, directly or indirectly, the moral status quo of society and the “dominant pole” of the political system as well as the ideological directions of political elites.
- They compose the economic and social variables, thus creating the welfare function which the—always specific in space and time—economic policy tries to maximize.

Unfortunately, the above assertions remain unclear and incomprehensible for the Greek public opinion and for many

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agents that express and exercise politics in Greece. Specifically, many simplistic “illusions” do not cease to spread. To be effective, the structuration of anti-crisis economic policy should be neither “de-politicized”⁸ nor “de-technicalized”⁹; and these are conceptual misunderstandings that go on and keep spreading by various media that shape the public opinion, and with particularly adverse political effects in the case of Greek crisis (Alcidi & Gros, 2012; Σαβούρη, 2018; Τσιπλάκος, 2016).

Economic policy as a confrontational strategy in the context of the politico-economic cycle

As an immediate derivative of the previous relatively widespread misunderstandings, very often emerges the attempt of a conceptual “de-strategizing” of economic policy. In the sense that some try to present it as potentially independent and “autonomized” from the specific structures and dynamics of the internal and external environment, inside of which the policy is structured, implemented and controlled (Monastiriotes & Antoniadis, 2009; Pappas, 2013; Triandafyllidou, 2009).

On the contrary, the structuration of economic policy is always the byproduct of a confrontational strategic process. It sets, directly or indirectly, a vision, it has objectives, it has agents and actors, it has an external environment, it has different alternatives, and it also has “customers”—the citizens that validate it, or not, by voting.

In this interpretative perspective, after all, belongs also the classic model of the politico-economic cycle by B.S. Frey (1978), which is very useful for perceiving the structuration of anti-crisis economic policy as a confrontational strategic process. The specific politico-economic model of analysis studies the mutual influence between the political and the economic sector of society, by focusing on the relation between the consumer-voter and the government. In particular, the basic concept of the model

⁸ A program of “sheer” technocrats with the simultaneous halt of any kind of political claiming is never a case.

⁹ On the direction of extreme political voluntarism: The logic of “people before the numbers.”

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recognizes two factors of action, voters and government, and two cycles of action, economic and political. It is based, at the same time, on two unique mechanisms:

- The voters evaluate the performance of the government;
- The government seeks ways to manage the economy in order to remain in power and to maximize its usefulness.

So, the influence of the economy on the political institutions is expressed by an evaluation function, while the influence of the state on the economic institutions by a politics function. By examining Frey's model, there are four main structural elements:

i. Voters: they act "logically"; they take into account the government's past and the expected governmental performance regarding the state of the economy. Of course, there are widely divergent views on how fast voters anticipate the government's performance based on its past and whether they "remember."

ii. Government: it acts as a whole and rationally; it maximizes its usefulness by identifying its ideological targets and under limitations: ideological, managerial, and economical.

iii. Political sector: the interest is upon parliamentary democracies and examines a two-way question; "is the economy led by the elections or the course of the economy determines the elections?"

iv. Economic sector: Many models cover a specific part of the economy and mostly inflation and unemployment, but very few reflect the link between the evolution of the economy and the political process.

In this theoretical orientation, one can perceive with greater clarity the economic policy as a strategic-political process (Figure 2).

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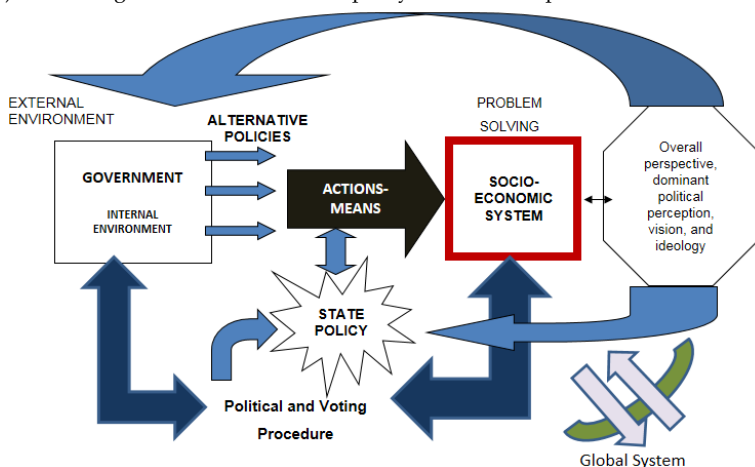


Figure 2. *The political process in the structuration of economic policy*

In this interpretative perspective, it becomes clear that state policy in general—and, more specifically, economic policy as one of its main ingredients—is always a product of strategic procedures. Also, of course, there is no “objectively perfect” policy, regardless of its particular socioeconomic content, the specific space and timeframe, and its specific strategic aiming. Although the underlying goal of economic policy is the so-called neutral aim of “public interest” or “common welfare,” every state/economic policy has its particular politico-confrontational content: thus, it is itself a strategic creation (Clausewitz, 1832; Kaplan & Norton, 2004; Kim & Mauborgne, 2015; Machiavelli, 1532).

In this way, the challenge for the structuration of economic policy becomes purely of strategic-political nature, and the following question summarizes that: “Which alternative policy shall the government follow under the specific socio-political conditions and at what political benefits and costs?” Therefore, in the structuration of a systematic economic policy, the agent of planning and action ought to study the evolution of the related external environment (socioeconomic system) as well as the potential of the related internal environment (government-state system). To calculate the possible opportunities and threats—born of the change of the agent’s overall external, national, international and global environment—and to make use of the agent’s

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In this conceptual direction, an anti-crisis economic policy can be “demystified” in the eyes of a significant number of citizens and politicians in Greece today. The anti-crisis economic policy is not an “axiom,” it is not an “all-weather” solution. On the contrary, it must always be a “down to earth” strategy with clear boundaries, as an exercise of realism and dynamic balance.

Objectives, targets, kinds, means, and time-lags in the structuration of economic policy

A third misconception on the anti-crisis economic policy regards the widespread wrong belief that economic policy can be supposedly produced and implemented “automatically,” without hierarchies and priorities, within an environment of no “attritions” and delays (Edsall, 2012; Martins, 2011; Mehta, 2013).

Economic policy gets full meaning only as long as it manages to give specific answers to the “what,” “how,” and “in what time frame” questions. Therefore, any ungraded and timeless perception of economic policy is deeply misleading. In particular, to understand the meaning of the economic policy, the specific concept of its objectives and targets is what matters primarily. According to the traditional definition by E.S. Kirschen (1964), the objectives of economic policy can be nothing but “economic translations” of the general political aims into concepts that can be quantified. More specifically and also according to K.E. Boulding (1958), an objective in economic policy is always one of the variables describing the economic system, and it is considered an “important” variable in the sense that the increase or decrease of its quantity defines whether the system will improve or get worse.

So, each objective of the economic policy refers to a specific and measurable aim of the agents of economic policy and defines a quantitative criterion of the policy’s success. An objective can contribute to the cover of more than one general aims of economic policy. On the other hand, the targets are, in particular, the partial, quantified, timed, sectorally, and geographically focused results for the objective of economic policy (Figure 3).

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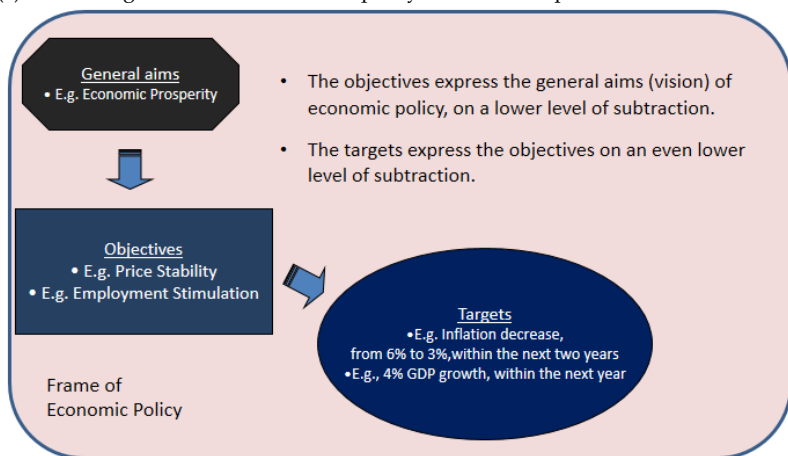


Figure 3. General aims, objectives, and targets of economic policy

So, any confusion among the political vision, the objectives and the targets of the policy becomes particularly detrimental, on the degree that the agent who plans and exercises economic policy seeks more clarity in the underlying strategic plan. Also, there is a particularly clarifying distinction among the means of economic policy, based on their nature. There are three primary kinds:

- Economic figures-quantities: Their changes, as independent variables, do not affect the structure and the bases of the economic system¹⁰.

- Institutions: These means have a qualitative character; they change some structural elements of the socioeconomic system, but without changing its basic structure and fundamental elements radically¹¹.

- Reforms: These means lead to radical qualitative restructurings, affect drastically the structure of the socioeconomic system and influence its structural foundations and its basic developmental orientations, in the context of global dynamics (Bates & Krueger, 1993; Bluhm, Crombrughe, & Szirmai, 2014;

¹⁰ E.g., taxes, government expenditure, the quantity of money, social security contributions, interest rates, fractional-reserve banking.

¹¹ E.g., regulations regarding occupational closure, conditions of employment, license granting, investments.

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Bouis, Causa, Demmou, Duval, & Zdzienicka, 2012; Drazen & Grilli, 1993; Hill, 2013)¹² (Figure 4).

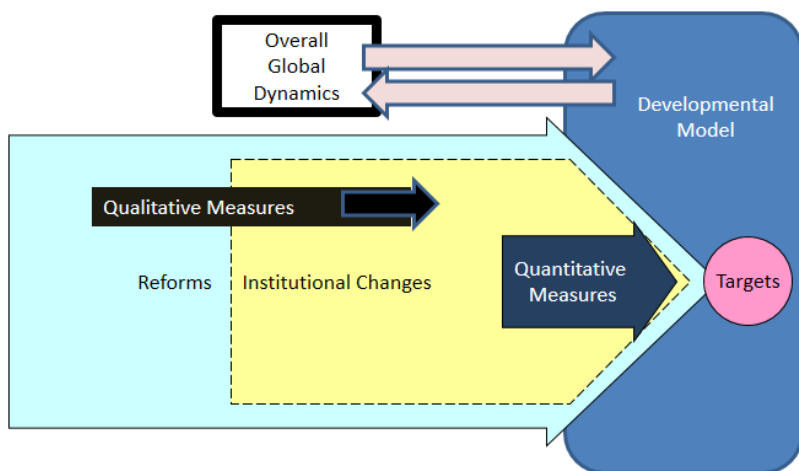


Figure 4. *Qualitative and quantitative measures in economic policy*

In this sense, the impression that all “medicines” proposed by the economic policy have the same effect on the “patient” economic system is wrong. Consequently, simple quantitative-“conjunctural” measures cannot redeploy the deeper developmental model of the socioeconomic system in qualitative terms; as unfortunately the Greek public opinion often seems to accept (Moschonas, 2016).

In particular, for the development of an effective economic policy, there are essential differences between a “conjunctural” and “structural” economic policy (Clark, 1940; Kuczynski & Williamson, 2003; Leon, 1967; Williamson, 2005).

- The “conjunctural” economic policy includes short-term targets relating to the current economic situation (conjuncture); it regards a short-term period, the present and near future.
- On the contrary, long-term targets of politics compose the “structural” economic policy; these targets regard the

¹² E.g., profound structural changes in taxation, monetary system, social security, sectors of economic activity.

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structural/institutional aims of economic policy and long-term periods, of at least ten years.

Of course, there must always be a clarification concerning the connection between a conjunctural and structural economic policy. Although there is a tight connection between these two perceptions, one must not confuse them. The conjunctural, aiming for temporary conditions of stability, creates the basis needed for the successful exercising of “structural” policy. However, a conjunctural policy cannot secure on its long-term success of any economic policy, as several analysts continue to claim in the case of the Greek crisis. The corrective-structural modernization of a socioeconomic system can occur only through a consistent, cohesive, and stable structural policy.

Furthermore, there should always be interest in the examination of time-lags (Alt & Woolley, 1982; Golder, 2010; Masciandaro & Suardi, 2014; Singh, 2010; Tepe & Vanhuyse, 2010) characterizing every economic policy. Economic policy is, of course, never implemented in conditions of “zero attrition” nor does it take place timelessly and automatically. On the contrary, it always faces two distinct time-lags: the internal and external time-lag.

Specifically, internal time-lag can be directly affected by the agents of policy, on the measure of their managerial abilities. This time-lag refers to the time elapsing between the moment the need for measures is perceived—in order for the gap between the actual and the desired figures and targets of the economic policy to be covered—and the moment the agents of the policy take the allegedly necessary corrective measures. The internal time-lag can refer to:

- The lag of recognition. For example, the required time for the agents of policy to recognize the need for measures, which will correct the current policy.
- The lag of decision. For example, the required time for necessary decisions for corrective measures by the agents of economic policy.
- The lag of management. For example, the required time for decisions to change the currently implemented policy.

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The external time-lag, on the contrary, cannot be directly affected by the agents of policy. This time-lag refers to the time elapsing between the moment of implementing the corrective measures and the moment they exhaust their effects on the figures of the targets of economic policy entirely. The external time-lag can refer to:

- The lag of intermediate variables of policy. For example, the time elapsing between a change in income tax rate and the influence on aggregate demand.
- The lag of final targets. For example, the time elapsing between a change in aggregate demand and the change in the level of aggregate employment, assuming that the latter is the target of the implemented policy.

Therefore, the effectiveness of every economic policy depends, first, on the effort of its agent to reduce the internal time-lags that concern the agent's strategic implementation by rearranging and enhancing the internal strategic and managerial forces. Second, it depends on the agent's ability to predict relatively accurately the external lags in order to have no illusions regarding the time needed for the strategy to pay off. As far as Greece is concerned, dealing with time-lags is a "traditional" weakness of the Greek economic policy-making.

Overall, these theoretical clarifications can be useful to the effort of "demystifying" the anti-crisis economic policy needed for Greece. Especially when a large part of fellow citizens and those in power continue to seek some "perfect" policies in fragmentary, occasional and "spineless" measures and to anticipate in vain the immediate implementation and fruition of these measures (Schmidt, 2015; Λιάκος, 2010; Παπαδόπουλος, 2017).

Conclusion: Breaking the vicious circle of misconceptions

To sum up, an essential restraining factor to Greece's effort of overcoming the crisis is the constant activation of a "vicious circle" of misunderstandings on the very concept of the anti-crisis economic policy; by a significant part of both the citizens and the political leaders of the country. Moreover, each link on this circle prescribes the production and strengthening of the next circle, after

(4) Structuring an anti-crisis economic policy: The Greek experience having been produced and strengthened by the misunderstandings of the previous one (Figure 5).

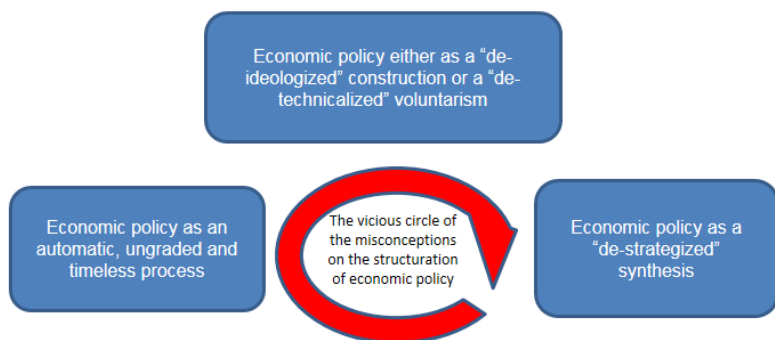


Figure 5. *The vicious circle of the wrong perception of economic policy in conditions of crisis*

The perception of economic policy either as a “de-ideologized” construction or as a figment of a supposedly completely “de-technicalized” voluntarism has fed and continues to feed political illusions; illusions of the type “everything is numbered and has one single interpretation” or “numbers are unnecessary, and everything is a matter of decision.”

Next, the perception of economic policy articulation as a “de-strategized” synthesis—supposedly “autonomized” and independent from the requirements and limits of the internal and external conditions—reproduces a spirit of imbalance that, through its lacking of realism, undermines any substantial effort towards creating and implementing a viable anti-crisis strategy.

Lastly, the erroneous perception of economic policy as a supposedly automatic, ungraded and timeless process does not cease to feed the illusions that seek the way out of the crisis in fragmentary, superficial and short-term measures.

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5 A new approach of local development in crisis conditions: Adopting a new local development policy to foster the local business ecosystems in Greece*

Introduction

Over recent years, there has been an extended economic crisis which has hit the small and medium-sized enterprises (SME) in Greece significantly. It has created an underlying negative environment for all the new and existing companies due to a liquidity shortage, high taxation, a decrease in consumer demand, high operating costs, an intensified competition of low-priced imported goods and larger companies and, mostly, because of the volatile and uncertain political and economic macro-conditions. This crisis in Greece goes way beyond the analytical perspective of insufficient demand. It is, in fact, necessary to help modernize the supply mechanisms of the local ecosystems in order for them to build efficient, competitive advantages.

Based on the 2015 research outcome of the “IOBE” (Greek Foundation for Economic and Industrial Research; [Ίδρυμα Οικονομικών & Βιομηχανικών Ερευνών, 2015](#)) under the Global Entrepreneurship Monitor program (GEM), the business environment on the ground remains one of the least innovation-friendly throughout the European Union. The process of conducting entrepreneurial activity is held back by the absence of a broader national policy -a framework that would favor

(5) A new approach of local development in crisis conditions entrepreneurship. Significant entrepreneurial obstacles apart from funding, consist of high market entry barriers as well as the dominant -somewhat ambiguous- business culture. As far as the organic nature of the competitiveness problem (Βλάχος, 2016) concerned, the Greek SME's and their domestic business environment are now facing intertemporal weaknesses and a lack of competitive advantages (Vlados, 1996). Therefore, the successful adaptation of the locally established SME's will be a significant factor in defining the international competitiveness of the Greek economy (Vlados, 2005; Vlados, 2012).

A brief overview of entrepreneurship in Greece

From the above Pillars of Performance graph (Figure 1) relating to the entrepreneurship in Greece, “start-up skills” is the most active area (0.73), while “high growth” constitutes the weakest (0.13).

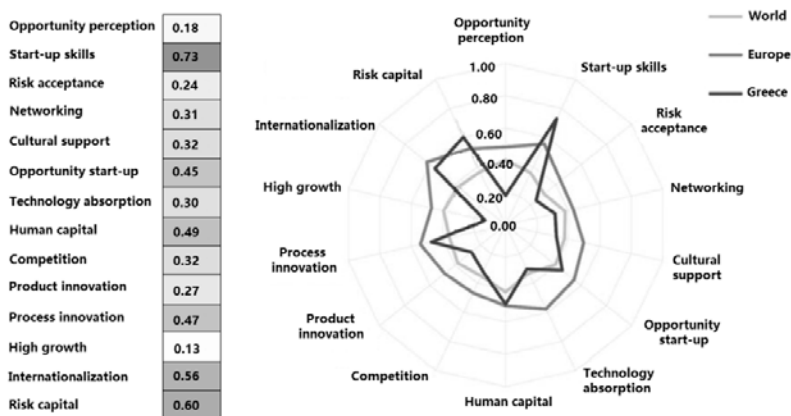


Figure 1. Pillars of Performance for the entrepreneurship in Greece (Ács et al., 2017).

Furthermore, the Global Entrepreneurial Index (Ács et al., 2017, p. 56), of the European countries, shows that Greece is close to the bottom, in the 49th position (GEI, 34.6), while the European index is 46.3. Regarding the sub-indices comparison, Entrepreneurial Attitudes sub-index (ATT), Entrepreneurial Abilities sub-index (ABT) and Entrepreneurial Aspirations sub-index (ASP), Greece

(5) A new approach of local development in crisis conditions performs 32.1, 35.8, and 36, while the European totals are 44, 47.3, and 47.6, respectively.

At the same time, conducted research by the Ministry of Economy and Development in order to “map the business needs of Greek startups” (Γενική Γραμματεία Βιομηχανίας, 2016) identified two major trends; their primary source of financing is “own capital” (amazingly, 83.5%) while 60.2% of them focus on the foreign market (in contrast, only 47.7% has an exclusive domestic orientation). Further analysis of the data shows that family and relatives finance the 23.5% of the Greek startups, 9.4% utilizes grants and awards, 7.1% benefits from subsidies, and only 4.7% borrows from banking and financial institutions.

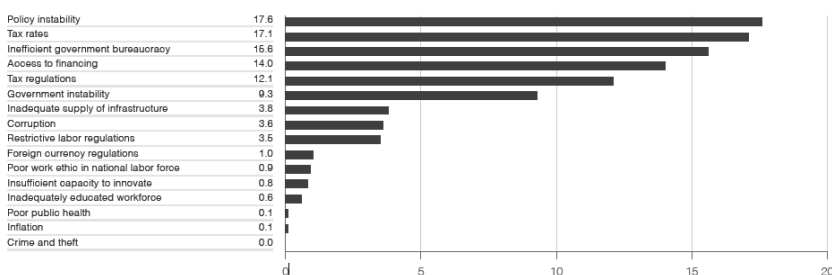


Figure 2. Most problematic factors for conducting business in Greece (Schwab et al., 2016).

Finally, the above chart (Figure 2) demonstrates the order of factors that impede entrepreneurship; the instability of policy measures is the number one problem to deal with, followed by high taxes, bureaucracy, access to financing and tax regulations. Other significant deterrents are the political instability, the inadequate infrastructure as well as restrictive labor regulations.

Business ecosystems and local development

The biological term “ecosystem,” first coined by the British botanist Arthur Tansley (Tansley, 1935), supports the idea that the basic units of nature can be understood as ecosystems; physical spaces with resources, such as oxygen and other gases, soil, minerals, and water; and lots of species, from trees, mammals, reptiles, insects, bacteria, that are sharing resources, creating

(5) A new approach of local development in crisis conditions resources from one another, competing for resources, co-evolving and continually adapting.

Nowadays —and after the initial contribution by James Moore (Moore, 1993)— the general concept of “business ecosystems” has paved the way for further study in the “ecology of businesses.” The business ecosystem approach (Table 1) is, primarily, a way to think in terms of strategy and of the effort needed to accelerate progress. The field of study and scope of business ecosystems is the behavior and development of a population of businesses —living organisms— that co-evolve and act in very complex ways (Peltoniemi, 2005).

Table 1. *A brief overview of the business ecosystem definitions*

No	Author & Year	How they describe the business ecosystem
1.	(Moore, 1993)	Like its biological counterpart, gradually moves from a random collection of elements to a more structured community.
2.	(Moore, 1996)	An economic community supported by a foundation of interacting organizations and individuals —the organisms of the business world. This economic community produces goods and services of value to customers, who are themselves members of the ecosystem. The member organizations also include suppliers, lead producers, competitors, and other stakeholders. Over time, they co-evolve their capabilities and roles and tend to align themselves with the directions set by one or more central companies. Those companies holding leadership roles may change over time, but the community values the function of ecosystem leader because it enables members to move toward shared visions to align their investments and to find mutually supportive roles.
3.	(Iansiti & Levien, 2004)	A business ecosystem is a business network, which is formed by large and loosely connected networks of entities that interact with each other in complex ways, while the health and performance of a firm are dependent on the health and performance of the whole.

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4.	(Peltoniemi & Vuori, 2004)	A dynamic structure which consists of an interconnected population of organizations. These organizations can be small firms, large corporations, universities, research centers, public sector organizations, and other parties which influence the system.
5.	(Fragidis <i>et al.</i> , 2007)	Business ecosystems concentrate on large populations of different kinds of business entities. They transcend industry and supply chain boundaries and assemble a variety of organizations that can complement each other and synergistically produce composite products. Interdependence and symbiotic relationships are essential attributes in business ecosystems; as a result, the participants counter a mutual fate and co-evolve with each other. However, in parallel, members compete with each other for the acquirement of resources and the attraction of customers.
6.	(Marín <i>et al.</i> , 2007)	Businesses must continually adapt and evolve to flourish in such environments. This adaptation requires that an organization engages in an ongoing dialogue with its environment and with others with which it shares this environment.
7.	(Desai <i>et al.</i> , 2007)	Dynamic, customizable groups of services provided and used by membership-based social or business networks of varying scale and lifetime.
8.	(Anggraeni <i>et al.</i> , 2007)	The business ecosystem perspective offers a new way to obtain a holistic view of the business network and the relationships and mechanisms that are shaping it while including the roles and strategies of the individual actors that are a part of these networks.
9.	(Chang & Uden, 2008)	A business ecosystem is a network of buyers, suppliers, and makers of related products or services and their socio-economic environment that includes institutional and regulatory framework.
10	(Li, 2009)	A business ecosystem provides a new perspective for repositioning a company's strategy in order to aggressively further its interests and to promote its overall ecosystem health.
11.	(Williamson & De Meyer,	A network of organizations and individuals that co-evolve their capabilities and roles and align their

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	2012)	investments to create additional value and improve efficiency.
12.	(Rong & Shi, 2015)	A business ecosystem is a community consisting of different levels of interdependent organizations which generate co-evolution between partners and their business environment.

Note: Adapted from Rong & Shi (2015).

Every business ecosystem (Figure 3, below) springs out of the original swirl of capital and knowledge, customer interest and markets, new value and talent generated by innovation, just as successful species spring from the natural resources of sunlight, water, and soil nutrients. The goal is to get many people to bring their creativity together and accomplish something more important than they can do on their own. In general, a business ecosystem tries to be wildly inclusive, and in its extreme tries to harness the productivity of a swarm (Moore, 2014).

There are four distinct stages of a business ecosystem development: birth, expansion, leadership, and self-renewal —or, if not self-renewal, death (Table 2). In reality, of course, the evolutionary stages blur, and the managerial challenges of one stage often crop up in another. What remains the same from business to business is the process of co-evolution; the complex interplay between competitive and cooperative business strategies. (Moore, 1993, p. 76)

Table 2. *The evolutionary stages of a business ecosystem*

	Cooperative Challenges	Competitive Challenges
Phase 1: Birth	Work with customers and suppliers to define the new value proposition around a seed innovation.	Protect ideas from others who might be working toward defining similar offers. Tie up critical lead customers, key suppliers, and essential channels.
Phase 2: Expansion	Bring the new offer to a broad market by working with suppliers and partners to scale up supply and to achieve maximum market coverage.	Defeat alternative implementations of similar ideas. Ensure that the organization’s approach is the market standard in its class by dominating key

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		market segments.
Phase 3: Leadership	Provide a compelling vision for the future that encourages suppliers and customers to work together to continue improving the complete offer.	Maintain durable bargaining power about other players in the ecosystem, including key customers and valued suppliers.
Phase 4: Self-Renewal	Work with innovators to bring new ideas to the existing ecosystem.	Maintain high barriers in entry to prevent innovators from building alternative ecosystems. Maintain high customer switching costs in order to buy time to incorporate new ideas into the organization's products and services.

Note: Reproduced from Moore ([Moore, 1993](#), p. 77).

During *Stage 1* of a business ecosystem, entrepreneurs focus on defining what customers want, that is, the value of a proposed new product or service and the best form for delivering it.

In *Stage 2*, business ecosystems expand to conquer broad new territories. Just as grasses and weeds rapidly cover the bare, scorched ground left after a forest fire, some business expansions meet little resistance. However, in other cases, rival ecosystems may be closely matched and choose to attack the same territory.

Similarly, in business ecosystems, two conditions contribute to the onset of leadership struggles that are the hallmark of *Stage 3*. First, the ecosystem must have strong enough growth and profitability to be considered worth fighting over. Second, the structure of the value-adding components and processes that are central to the business ecosystem must become reasonably stable.

This stability allows suppliers to target particular elements of value and to compete in contributing them. It encourages members of the ecosystem to consider expanding by taking over activities from those closest to them in the value chain. Most of all, it diminishes the dependence of the whole ecosystem on the original leader. It is in *Stage 3* that companies become preoccupied with standards, interfaces, “the modular organization,” and customer-supplier relations.

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Stage 4 of a business ecosystem occurs when rising new ecosystems and innovations threaten mature business communities. Alternatively, a community might undergo the equivalent of an earthquake; the sudden rise of new environmental conditions that include changes in government regulations, customer buying patterns, or macroeconomic conditions (Moore, 1993, pp. 76-81).

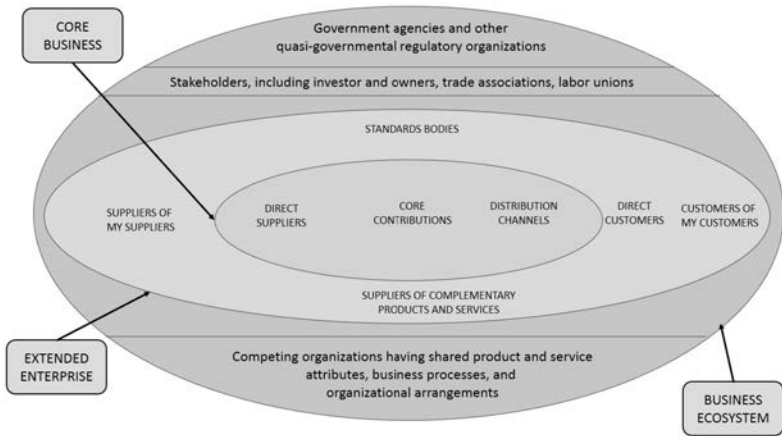


Figure 3. *A typical business ecosystem (Moore, 1996).*

Iansiti & Lenvien (2004), point out that despite the immense interdependence between businesses, a company ought to determine its place in the business ecosystem. Thus, it can follow three strategic roles: a Keystone, a Dominator, or a Niche Player. In order to develop a strategy, the first and foremost action a manager has to take is to measure the health of the underlying business ecosystem —how productive, robust, and niche creative is. The power to do so depends on the role —current and potential— within the network (the three roles).

The company's choice of ecosystem strategy is governed primarily by what kind of a company it is or aims to be. This choice can also be affected by the business context in which it operates —the general level of turbulence and complexity of its relationships with others in the ecosystem.

The strategic scenarios, therefore, follow specific paths (Iansiti & Levien, 2004, pp. 7-8):

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a) Niche strategy: if the business faces rapid and constant change and —by leveraging the assets of other firms— can focus on a narrowly and clearly defined business segment;

b) Keystone strategy: if it is at the center of a complex network of asset-sharing relationships and operates in a turbulent environment;

c) Physical Dominator strategy: if it relies on a complex network of external assets but operates in a mature industry;

d) Value Dominator strategy: if it chooses to extract maximum value from a network of assets that the firm does not control; and, finally,

e) if it is a commodity business that operates in a stable and mature environment and operates relatively independently of other organizations, the Ecosystem strategy is irrelevant (although that may change soon).

The implications from the business ecosystem thinking are, more or less, the ripple effects throughout the entire network of organizations. One might no longer design or conceive of a product in isolation. This process, also, creates opportunities for innovation and product development and, therefore, a healthy ecosystem —new products that can leverage the capabilities provided by existing products.

Institutes for local development and innovation

The vast majority of businesses internationally —as well as in Greece and the rest of Europe— are small and medium-sized enterprises (Eurostat, 2011). There is, indeed, a clear distinction between big and small businesses. Nevertheless, some SME's are significantly better than others; behind similar quantities, there are substantial qualitative variations, and the comparable sizes are, sometimes, inefficient in the process of defining different qualities and “kinds” (Βλάχος, 2016).

Therefore, a sustainable way out of the persistent Greek economic crisis lies at the inclusive policies that could help the development of the SME's environment —the majority, that is, of the economic actors in Greece. One such policy is the proposed Local Development & Innovation Institutions (LDI's) (Vlados, 2017). The Local Development Institutes are specific mechanisms

(5) A new approach of local development in crisis conditions to promote, coordinate, and spread information and business know-how. As for their core value, they are capable of creating and disseminating socio-economic interest by harnessing the innovation process, on a local scale, and by helping businesses to develop their extroversion skills and physiology.

This LDI's mechanism is, basically, an effort —an intervention— to directly support the businesses that exist and grow in a specific business ecosystem on a local level. To achieve that, the LDI requires sufficient resources, both tangible and intangible, adequate infrastructure —as well as specialized scientists— all of which remain uncoordinated in various state bodies and institutions. So, the idea is to re-organize and build a chain of value creation around them, locally (Figure 4).

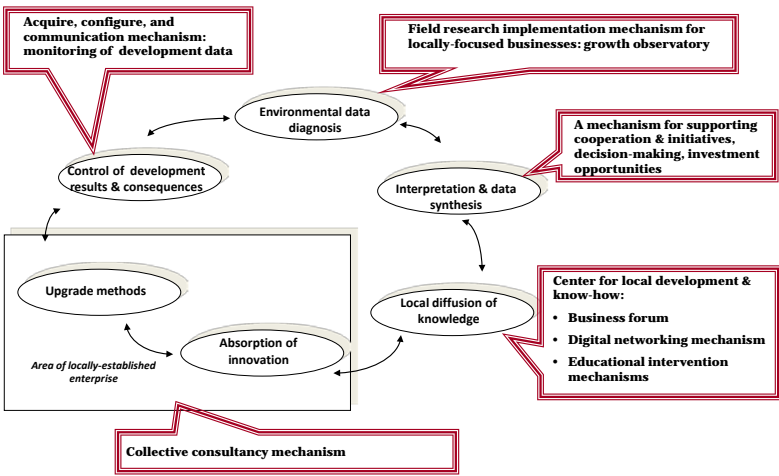


Figure 4. *The six-loop value-chain of the Local Development & Innovation Institutions.*

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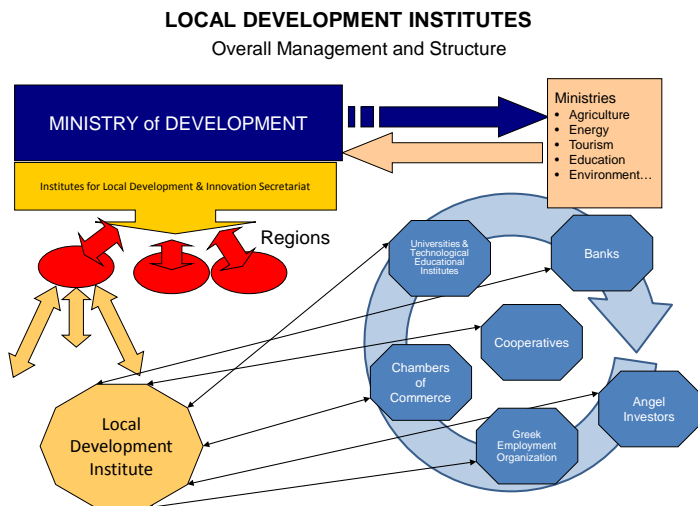


Figure 5. *The structure of the Local Development & Innovation Institutions.*

In other words, the LDIs serve as offices responsible for business support, development and growth, throughout the regions, prefectures, and municipalities in Greece. They are, in fact, a point of contact for all the government agencies and organizations, related to innovation and the regional productive powers (Figure 5).

That said, in order for the LDIs to succeed “on the battlefield,” they need a flexible and proactive approach. Intelligent design as well as a regulatory framework that will ensure the stability and the core competencies of the mechanism: Speed and reliability, synergistic approach, value-added structural measures, and the enhancement of the local business ecosystems (Βλάδος, 2006).

Quantitative analysis, based on regional data

The next step in this proposed method is to clarify which business ecosystem has some form of priority in establishing and implementing a pilot LDI policy. So, the target-region in this regional development research (Εθνικό Κέντρο Τεκμηρίωσης, 2015; Κόνσολας, 1984; Λαμπριανίδης, 2002; Παπαδασκαλόπουλος, 1990; Πολύζος, 2011; Blakely, 1989) is

(5) A new approach of local development in crisis conditions characterized by relative losses and difficulties to adjust throughout the crisis period (from 2008 to this day). As such, this paper extracts the weakest out of the regions of the Greek productive system, the particular, that is, and problematic regional area that could experimentally host a Local Development & Innovation Institute. This region appears to be the Eastern Macedonia & Thrace.

It is a featured border area since all its prefectures, except Kavala, are adjacent to the borders of Greece. Border areas demonstrate the extreme syndrome of “regionality,” which serves to explain the economic, social, demographic and other problems which appear in some geographical entities that cannot follow the pace of development like other —more central— regions and cities (Βλάχος, 2007). As a consequence, when a region is isolated and “regionalized” there are some significant costs to deal with:

A. Financing: high operating costs for businesses as well as living costs due to high distances.

B. Infrastructure: there are low or absent economies of scale due to the fragmentation of market activities.

C. Opportunities: there is a weak economy with diminished expectations, both for social and economic benefits.

D. Information: relatively late in remote regions coupled with higher costs to obtain specific information.

In particular, the following analysis begins with the calculations of some central figures of the Greek economy (Tables 3-11), as well as of the target-region, for the 2008-2014 period. Consequently, the shift-share analysis (Tables 12-21), based on the previous calculated data, will end up in which industries of the Eastern Macedonia & Thrace there are advantages or disadvantages and, as a conclusion, with the help of the regional classification method, we take the best out of each region’s industry by proposing the most adequate strategy to follow.

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Table 3. GDP per capita

By Region, 2008 & 2014* (EUR, current prices)			
	2008	2014	CHANGE %
GREECE	21845	16336	-25.2%
ATTICA	29215	23377	-23.4%
NORTH AEGEAN	17647	12919	-26.8%
SOUTH AEGEAN	24747	17899	-27.7%
CRETE	19176	13773	-28.2%
EASTERN	15568	11366	-27%
MACEDONIA, THRACE			
CENTRAL MACEDONIA	17437	12500	-28.3%
WESTERN MACEDONIA	16748	15624	-6.7%
EPIRUS	14960	11606	-22.4%
THESSALY	16363	12237	-25.21%
IONIAN ISLANDS	21759	14826	-31.8%
WESTERN GREECE	16393	12214	-25.5%
CENTRAL GREECE	19552	13917	-28.8%
PELOPONNESE	17224	13134	-23.8%
COEFFICIENT OF VARIATION (CV)	21.5	45.81646	

Source: Hellenic Statistical Authority¹³ – Calculated data. *Temporary data. Update 17/01/2017

Table 4. GDP per capita

Eastern Macedonia and Thrace prefectures, 2008 & 2014* (EUR, current prices)			
	2008	2014	CHANGE %
EASTERN MACEDONIA, THRACE TOTAL	15568	11366	-27%
EVROS	15438	12019	-22%
XANTHI	14537	9805	-32.55%
RODOPE	15148	9954	-34.3%
DRAMA	13377	10601	-20.75%
KAVALA	18388	13651	-25.8%

Source: Hellenic Statistical Authority – Calculated data. *Temporary data. Update 17/01/2017

¹³ All the data were retrieved and calculated from the Hellenic Statistical Authority [Ελληνική Στατιστική Υπηρεσία (ΕΛΣΤΑΤ), 2017].

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Table 5. Gross Fixed Capital Formation

By region, 2008 & 2014* (EUR, current prices)			
	2008	2014	CHANGE %
GREECE	57627	20625	-64.2%
ATTICA	22505	7984	-64.5%
NORTH AEGEAN	934	342	-63.4%
SOUTH AEGEAN	2130	647	-69.6%
CRETE	3695	1184	-68%
EASTERN	2746	938	-65.8%
MACEDONIA, THRACE			
CENTRAL MACEDONIA	8064	3555	-56%
WESTERN MACEDONIA	2248	918	-59%
EPIRUS	1725	500	-71%
THESSALY	3199	1162	-63.7%
IONIAN ISLANDS	1069	312	-70.8%
WESTERN GREECE	3010	983	-67.3%
CENTRAL GREECE	3345	1349	-59.7%
PELOPONNESE	2956	951	-67.8%

Source: Hellenic Statistical Authority – Calculated data. *Temporary data. Update 17/01/2017

Table 6. Employment

By region, 2008 & 2014*			
	2008	2014	CHANGE %
GREECE	4856333	3999296	-17.6%
ATTICA	1876689	1527414	-18.6%
NORTH AEGEAN	76732	68643	-10.5%
SOUTH AEGEAN	150811	133612	-11.4%
CRETE	283873	237780	-16.2%
EASTERN	243252	210804	-13.3%
MACEDONIA, THRACE			
CENTRAL MACEDONIA	802478	635846	-20.8%
WESTERN MACEDONIA	108445	89845	-17.1%
EPIRUS	139872	116567	-16.7%
THESSALY	317032	262754	-17.1%
IONIAN ISLANDS	96728	81725	-15.5%
WESTERN GREECE	283627	227232	-19.9%
CENTRAL GREECE	232488	193936	-16.6%
PELOPONNESE	244325	213139	-12.8%

Source: Hellenic Statistical Authority – Calculated data. *Temporary data. Update 17/01/2017

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Table 3 above shows a sharp decline in Eastern Macedonia and Thrace's GDP per capita between 2008 and 2014 (27%). This decrease is significant compared to the 25.2% country's total, whereas the region's prefectures (Table 4) show a substantial drop, especially in Xanthi and Rodope (35.2% and 34.3% respectively). In turn, Table 5 shows a steep decline in investments in the region (65.8% for 2008-2014) while the employed persons decreased by 13.3% (Table 6). The calculated coefficient of variation —21.5 for 2008, and 45.81 in 2014 (Table 3)— indicates a markable rise of the uneven distribution of GDP per capita across the Greek regions.

Table 7. Gross Value Added

By industry, 2008 & 2014* (EUR, current prices, in millions)								
Selected Industries: AFF: Agriculture-Forestry-Fishing, MEG: Mining-Electricity-Gas, M: Manufacturing, C: Construction, TTAFS: Trade-Transportation-Accommodation-Food Services, FIA: Financial and Insurance Activities, PSTA: Professional, Scientific and Technical Activities								
2008								
	AFF	MEG	M	C	TTAFS	FIA	PSTA	SUM
EVROS	121	39	145	86	462	47	52	993
XANTHI	79	32	195	96	246	31	72	751
RODOPE	91	102	190	78	258	35	69	823
DRAMA	98	51	167	44	256	33	66	715
KAVALA	110	74	250	134	872	59	64	1563
SUM	499	298	947	439	2094	205	323	4805
2014								
EVROS	103	38	114	17	245	39	26	581
XANTHI	69	18	126	28	163	25	25	453
RODOPE	85	54	117	19	157	22	22	475
DRAMA	87	64	120	45	155	30	11	513
KAVALA	89	74	212	71	542	47	41	1075
SUM	433	248	689	180	1261	162	125	3098

Source: Hellenic Statistical Authority – Calculated data. *Temporary data. Update 17/01/2017

The above table (Table 7) indicates that, for selected industries, the Gross Added Value between 2008-2014 recorded a decline of 35.5 percent in region totals while for specific prefecture the changes were: Evros: -39%, Xanthi: -39.7%, Rodope: -73.26%, Drama: -28.25%, Kavala: -31.22%. Rodope registered the most significant decrease.

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Table 8. *Gross Value Added*

By region and sector, 2014* (EUR, current prices, in millions)				
I= Primary, II= Secondary, III= Tertiary				
	I	II	III	TOTAL
GREECE	5843	25047	126297	157187
ATTICA	307	9155	66509	75971
NORTH AEGEAN	110	233	1918	2261
SOUTH AEGEAN	132	584	4578	5294
CRETE	461	957	6261	7679
EASTERN MACEDONIA, THRACE	433	1117	4548	6098
CENTRAL MACEDONIA	1163	3681	16120	20964
WESTERN MACEDONIA	238	1908	1685	3831
EPIRUS	281	573	2633	3487
THESSALY	825	1514	5614	7953
IONIAN ISLANDS	95	204	2417	2716
WESTERN GREECE	660	1058	5570	7288
CENTRAL GREECE	566	2450	3850	6866
PELOPONNESE	572	1613	4594	6779

Source: Hellenic Statistical Authority – Calculated data. *Temporary data. Update 17/01/2017

Table 9. *Location Quotient (LQ), Coefficient of Specialization (CS)*

By region and sector, 2014 (Based on Table 8)				
I= Primary, II= Secondary, III= Tertiary				
	LQ (I)	LQ (II)	LQ (III)	CS
ATTICA	0.10759	0.75623	1.08952	0.06
NORTH AEGEAN	1.25139	0.64676	1.07143	0.053
SOUTH AEGEAN	0.65321	0.69228	1.07601	0.058
CRETE	0.15966	0.7821	1.01476	0.031
EASTERN MACEDONIA, THRACE	1.90746	1.14953	0.92821	0.06
CENTRAL MACEDONIA	1.48841	1.10193	0.95701	0.037
WESTERN MACEDONIA	0.16414	3.12559	0.54743	0.36
EPIRUS	2.16372	1.03124	0.93978	0.05
THESSALY	2.78678	1.19468	0.87855	0.1
IONIAN ISLANDS	0.92598	0.47138	1.10753	0.08
WESTERN GREECE	2.41562	0.91105	0.95119	0.047
CENTRAL GREECE	2.1978	2.23938	0.69789	0.24
PELOPONNESE	2.24917	1.48399	0.84344	0.12

Source: Hellenic Statistical Authority – Calculated data. *Temporary data. Update 17/01/2017

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The literature of regional development indicates that, if $LQ > 1$, the considered activity is standard and exporting; if $LQ < 1$ then it is non-standard; and if $LQ = 1$ it is a balanced activity. According to Table 9, the Eastern Macedonia and Thrace's primary and secondary productive sectors are standard or specialized in their productive activities while the tertiary is a non-standard. The specialization coefficient of the region (0.06) signalizes absence of specialization concerning the distribution of the national activities; the country's industrial structure corresponds to the respective structure of the region.

Table 10. *Employment*

By region and sector, 2014*				
	I= Primary, II= Secondary, III= Tertiary			
	I	II	III	TOTAL
GREECE	488413	579473	2931410	3999296
ATTICA	13705	210338	1303370	1527413
NORTH AEGEAN	8546	7809	52288	68643
SOUTH AEGEAN	10460	19111	104041	133612
CRETE	41097	32908	163775	237780
EASTERN MACEDONIA, THRACE	60086	26631	124086	210803
CENTRAL MACEDONIA	87749	94586	453511	635846
WESTERN MACEDONIA	15693	21706	52446	89845
EPIRUS	23081	17503	75983	116567
THESSALY	62642	40684	159428	262754
IONIAN ISLANDS	12471	9608	59646	81725
WESTERN GREECE	50926	27927	148379	227232
CENTRAL GREECE	39826	42907	111202	193935
PELOPONNESE	62130	27754	123255	213139

Source: Hellenic Statistical Authority – Calculated data. *Temporary data. Update 17/01/2017

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Table 11. *Regional Multiplier & Total Multiplier*

By region and sector, 2014 (Based on Table 10)				
I= Primary, II= Secondary, III= Tertiary				
	I	II	III	TOTAL
ATTICA			7.09	8.31
NORTH AEGEAN	52.32		26.5	32.13
SOUTH AEGEAN			17	3.45
CRETE	3.4			19.71
EASTERN	1.75			6.14
MACEDONIA, THRACE				
CENTRAL MACEDONIA	79.8	38.6		179
WESTERN MACEDONIA	3.32	2.5		6.7
EPIRUS	2.6	28.6		12.32
THESSALY	2.05	15.58		46.36
IONIAN ISLANDS	5			32.81
WESTERN GREECE	2.2			9.8
CENTRAL GREECE	2.47	2.9		6.26
PELOPONNESE	1.72			5.9

Regional multiplier:

$$Kir = \frac{Air}{\left[Air - \left(\frac{Ain}{An} \right) Ar \right]}$$

Air = Employment in sector i and region r

Ar = Total employment in the region r

Ain = Employment of sector i in country's total

An = Total country's employment

The calculated regional multiplier of the target-region in Table 11 (1.75) signifies a multiplying effect and exporting activity only in the primary sector (value higher than 1). The regional multiplier measures the region's total raise of employment by taking into account the increase in the number of employed in exports. In other words, it weighs the influence of each export unit in the total activity of the region.

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Shift-Share analysis

Based on the Gross Value Added by industry (Table 7), we calculate the Shift-Share analysis' components (Barff & Knight, 1988) according to the following types (Table 12):

Table 12. *Shift-Share Analysis*

O = Starting year; 2008

t = Final year; 2014

$$\frac{Ant}{Ano} = \frac{3098}{4805} = 0.644$$

$$\frac{AAFFnt}{AFFno} = \frac{433}{499} = 0.86 \quad \left(\frac{AAFFnt}{AFFno} \right) - \left(\frac{Ant}{Ano} \right) = 0.86 - 0.644 = -0.223$$

$$\frac{AMEGnt}{AMEGno} = \frac{248}{298} = 0.83 \quad \left(\frac{AMEGnt}{AMEGno} \right) - \left(\frac{Ant}{Ano} \right) = 0.83 - 0.644 = 0.19$$

$$\frac{AMnt}{AMno} = \frac{689}{947} = 0.73 \quad \left(\frac{AMnt}{AMno} \right) - \left(\frac{Ant}{Ano} \right) = 0.73 - 0.644 = 0.09$$

$$\frac{Acnt}{ACno} = \frac{180}{439} = 0.41 \quad \left(\frac{Acnt}{ACno} \right) - \left(\frac{Ant}{Ano} \right) = 0.41 - 0.644 = -0.23$$

$$\frac{ATTAfSnt}{ATTAfSno} = \frac{1261}{2094} = 0.6 \quad \left(\frac{ATTAfSnt}{ATTAfSno} \right) - \left(\frac{Ant}{Ano} \right) = 0.6 - 0.644 = -0.04$$

$$\frac{AFIant}{AFIano} = 0.79 \quad \left(\frac{AFIant}{AFIano} \right) - \left(\frac{Ant}{Ano} \right) = 0.79 - 0.644 = 0.15$$

$$\frac{APSTAnt}{APSTAno} = 0.39 \quad \left(\frac{APSTAnt}{APSTAno} \right) - \left(\frac{Ant}{Ano} \right) = 0.39 - 0.644 = -0.25$$

National Growth Effect

$$E\Sigma r = Aro \left(\frac{Ant}{Ano} \right) - Aro$$

Industrial Mix Effect

$$O\Sigma r = \sum \left[\left\{ \left(\frac{Aint}{Aino} \right) - \left(\frac{Ant}{Ano} \right) \right\} Airo \right]$$

Local Share Effect

$$\Delta\Sigma r = \sum \left[Airt - Airo \left(\frac{Aint}{Aino} \right) \right]$$

Actual Growth

$$Mr = Er + Or + \Delta r$$

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The shift and share variables of Eastern Macedonia and Thrace's prefectures by industry

Table 13. AFF: Agriculture-Forestry-Fishing

	NATIONAL GROWTH EFFECT	INDUSTRIAL MIX EFFECT	LOCAL SHARE EFFECT	ACTUAL GROWTH
EVROS	$121 * 0.644 - 121 = -43.$	$0.223 * 121 = 26.98$	$103 - 121 * 0.5 =$	18
XANTHI	$79 * 0.644 - 79 = 28.12$	$0.223 * 79 = 17.61$	$69 - 70 * 0.5 = 3.$	-5.49
RODOPE	$91 * 0.644 - 121 = -62.4$	$0.223 * 91 = 20.3$	$85 - 91 * 0.5 = 35$	-36
DRAMA	$98 * 0.644 - 98 = -34.9$	$0.223 * 98 = 21.85$	$87 - 98 * 0.5 = 31$	-11.01
KAVALA	$110 * 0.644 - 110 = -39$	$0.223 * 110 = 24.53$	$89 - 110 * 0.5 = 3$	-21
SUM	-207.66	-111.27	188	-91.5

With regard to the AFF industry, Table 13 indicates that all prefectures of Eastern Macedonia and Thrace, in terms of Boudeville regional classification (Boudeville, 1966), are of “regional type 4”, since $Or < 0$, $\Delta r > 0$ and $|Or| < |\Delta r|$ (according to the regional analysis literature, in the inequality between Or and Δr their absolute value is taken into account). The region in total is classified as “type 2” for the AFF industry.

This correlation translates into a favorable industrial structure (concentration to low growth rate industrial activities, compared to nation's averages) whereas, regarding the AFF industry, positive local effects take place. Thus, the proposed measure is an industrial structure improvement.

Table 14. MEG: Mining-Electricity-Gas

	NATIONAL GROWTH EFFECT	INDUSTRIAL MIX EFFECT	LOCAL SHARE EFFECT	ACTUAL GROWTH
EVROS	-13.9	7.41	5.63	-0.86
XANTHI	-11.4	6.08	-8.56	-13.88
RODOPE	-36.31	19.38	-30.66	-47.59
DRAMA	-18.56	9.69	21.67	12.8
KAVALA	-26.34	14.06	12.58	0.3
SUM	-106.51	56.62	0.66	-49.23

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About the MEG industry (Table 14), for the prefectures and region:

A. Evros: $Or > 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, “regional type 1”, according to which there is a favorable industrial structure with positive local effects.

B. Xanthi: $Or > 0$, $\Delta r < 0$ and $|Or| < |\Delta r|$, therefore, “regional type 6”, according to which there is a favorable industrial structure with positive local effects. The proposed measure is infrastructure improvement.

C. Rodope: $Or > 0$, $\Delta r < 0$ and $|Or| < |\Delta r|$, therefore, “regional type 6”, according to which there is a favorable industrial structure with adverse local effects. The proposed measure is infrastructure improvement.

D. Drama and Kavala are of “regional types 1 and 2” respectively, therefore favorable industrial structure and positive local effects.

E. The region in total is of “regional type 1”: $Or > 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, favorable industrial structure and positive local effects.

Table 15. *M: Manufacturing*

	NATIONAL GROWTH EFFECT	INDUSTRIA L MIX EFFECT	LOCAL SHARE EFFECT	ACTUAL GROWTH
EVROS	-51.62	13.05	8.15	-30.42
XANTHI	-69.42	17.55	16.35	-35.52
RODOPE	-67.64	17.1	-21.7	-72.24
DRAMA	-59.45	15.03	-1.91	-46.33
KAVALA	-89	22.5	29.5	-37
SUM	-337.13	85.23	30.39	-221.51

Concerning the M industry (Table 15), for the prefectures and region:

A. Evros: $Or > 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, “regional type 1”, according to which there is a favorable industrial structure with positive local effects.

B. Xanthi and Drama: $Or > 0$, $\Delta r < 0$ and $|Or| > |\Delta r|$, therefore, “regional type 3”, according to which there is favorable

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C. Rodope: $Or > 0$, $\Delta r < 0$ and $|Or| < |\Delta r|$, therefore, “regional type 6”, according to which there is a favorable industrial structure but adverse local effects. The proposed measure is infrastructure improvement.

D. Kavala: $Or > 0$, $\Delta r > 0$ and $|Or| < |\Delta r|$, therefore, “regional type 2”. Favorable industrial structure and positive local effects.

E. The region in total is of “regional type 1”: $Or > 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, favorable industrial structure and positive local effects.

Table 16. C: Construction

	NATIONAL GROWTH EFFECT	INDUSTRIA L MIX EFFECT	LOCAL SHARE EFFECT	ACTUAL GROWTH
EVROS	-30.61	-17.2	-18.26	-66.07
XANTHI	-34.18	-19.2	-11.36	-64.74
RODOPE	-27.77	-17.94	-12.98	-58.69
DRAMA	-15.67	-10.12	25.2	-0.59
KAVALA	-47.7	-30.82	16.06	-62.46
SUM	-155.93	-95.28	-1.34	-252.55

Concerning the C industry (Table 16), for the prefectures and region:

A. Evros: $Or < 0$, $\Delta r < 0$ and $|Or| < |\Delta r|$, therefore, “regional type 8”, according to which an unfavorable industrial structure exists along with adverse local effects. The proposed strategic measure is an industrial structure improvement.

B. Xanthi and Rodope: $Or < 0$, $\Delta r < 0$ and $|Or| > |\Delta r|$, therefore, “regional type 7”, according to an unfavorable industrial structure exists along with adverse local effects. The proposed strategic measure is infrastructure improvement.

C. Drama: $Or < 0$, $\Delta r > 0$ and $|Or| < |\Delta r|$, therefore, “regional type 4”. There are positive local effects but unfavorable industrial structure. The proposed measure is an industrial structure improvement.

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D. Kavala: $Or < 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, “regional type 5”, according to which there is an unfavorable industrial structure but positive local effects. The proposed measure is an industrial structure improvement.

E. The region in total is of “regional type 7”: $Or < 0$, $\Delta r < 0$ and $|Or| > |\Delta r|$, therefore, unfavorable industrial structure and adverse local effects. The proposed strategic measure is infrastructure improvement.

Table 17. TTAFS: Trade-Transportation-Accommodation-Food Services

	NATIONAL GROWTH EFFECT	INDUSTRIA L MIX EFFECT	LOCAL SHARE EFFECT	ACTUAL GROWTH
EVROS	-164.5	-18.48	-32.2	-215.18
XANTHI	-87.6	-9.84	15.4	-82.04
RODOPE	-91.85	-10.32	2.2	-99.97
DRAMA	-91.14	-10.24	1.4	-99.98
KAVALA	-310.43	-34.88	18.8	-326.51
SUM	-745.52	-83.76	5.6	-823.68

Concerning the TTAFS industry (Table 17), for the prefectures and region:

A. Evros: $Or < 0$, $\Delta r < 0$ and $|Or| < |\Delta r|$, therefore, “regional type 8”, according to which there are adverse local effects and unfavorable industrial structure. The proposed measure is an industrial structure improvement.

B. Xanthi: $Or < 0$, $\Delta r > 0$ and $|Or| < |\Delta r|$, therefore, “regional type 4”, according to which there are positive local effects but unfavorable industrial structure. The proposed strategic measure is an industrial structure improvement.

C. Rodope, Drama and Kavala: $Or < 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, “regional type 5”. Some positive local effects take place, but there is also an unfavorable industrial structure. The proposed strategic measure is an industrial structure improvement.

D. The region in total is of “regional type 5”: $Or < 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$. There are positive local effects but unfavorable industrial structure. The proposed strategic measure is an industrial structure improvement.

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Table 18. *FIA: Financial and Insurance Activities*

	NATIONAL GROWTH EFFECT	INDUSTRIA L MIX EFFECT	LOCAL SHARE EFFECT	ACTUAL GROWTH
EVROS	-16.73	7.05	1.87	-7.81
XANTHI	-11.03	4.65	0.51	-5.87
RODOPE	-12.46	5.25	-5.65	-12.86
DRAMA	-11.75	4.95	3.93	-2.87
KAVALA	-21	8.85	0.39	-11.76
SUM	-72.97	30.75	1.05	-41.17

Concerning the FIA industry (Table 18), for the prefectures and region:

A. Evros, Xanthi, Drama and Kavala: $Or > 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, “regional type 1”, which is a favorable industrial structure with positive local effects.

B. Rodope: $Or > 0$, $\Delta r < 0$ and $|Or| < |\Delta r|$. Therefore, “regional type 6”, which implies favorable industrial structure but adverse local effects. The proposed measure is an industrial structure improvement.

C. The region in total is of “regional type 1”: $Or > 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, favorable industrial structure and positive local effects.

Table 19. *PSTA: Professional, Scientific and Technical Activities*

	NATIONAL GROWTH EFFECT	INDUSTRIA L MIX EFFECT	LOCAL SHARE EFFECT	ACTUAL GROWTH
EVROS	-18.52	-13	5.72	-25.8
XANTHI	-25.63	-18	4.72	-38.91
RODOPE	-24.56	-17.25	-4.91	-46.72
DRAMA	-23.5	-16.5	-14.74	-54.74
KAVALA	-22.8	-16	16.04	-22.76
SUM	-115.01	-80.75	6.83	-188.93

Concerning the PSTA industry (Table 19), for the prefectures and region:

A. Evros and Xanthi: $Or < 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, therefore, “regional type 5”. That is positive local effects but unfavorable industrial structure. The proposed measure is an industrial structure improvement

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B. Rodope: $Or < 0$, $\Delta r < 0$ and $|Or| > |\Delta r|$, therefore, “regional type 7”, which is adverse local effects and unfavorable industrial structure. This correlation implies strategic measures at infrastructure improvement.

C. Drama: $Or < 0$, $\Delta r < 0$ and $|Or| < |\Delta r|$, therefore, “regional type 8”, according to which there are adverse local effects and unfavorable industrial structure. The proposed measure is an industrial structure improvement.

D. Kavala: $Or < 0$, $\Delta r > 0$ and $|Or| < |\Delta r|$. Therefore, “regional type 4”, which implies positive local effects but unfavorable industrial structure. The proposed strategic measure is an industrial structure improvement.

E. The region in total is of “regional type 5”: $Or < 0$, $\Delta r > 0$ and $|Or| > |\Delta r|$, which implies positive local effects but unfavorable industrial structure. The proposed strategic measure is an industrial structure improvement.

Conclusion

In conclusion, the analysis of the data leads to a specific proposal for the creation of the first LDI, as a mechanism for strengthening the local business ecosystems, in the Eastern Macedonia and Thrace region. The logic behind this is to provide a privileged developmental “cure” to the weakest localities of Greece today.

This target-region this article picked appears to fit in the qualitative and quantitative criteria, compared to the rest of the Greek regions, and, therefore, the proposed policy approach could be a priority in this particular area.

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End Notes

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