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STEERING INNOVATION AND CHANGE IN COMPLEX SOCIETIES

Borut Rončević[1], Nadja Damij[2]

Abstract
What can a nation, region, locality or organisation do to adjust successfully to global challenges? There are indeed no clear-cut prescriptions for adjustment, as it is a highly demanding and complex process. Namely, successful adaptation to these challenges is taking place at different levels, which have to achieve sync in a process of 'social becoming'. The outcome is a society which allows continuous innovations and strategic changes. In this paper we are analysing innovations and social change as a multidimensional process, in which we need to establish sync between macro, meso and micro levels. We offer social fields theory as a useful explanatory tool.

Keywords: societal change, innovations, complexity, steering, social fields

Introduction

Innovations are nowadays the magic key to favourable position on the global stage, be it for nation states, regions, localities or even the smallest of organisations. With increasing importance of innovation and the confirmed link between innovation and well-functioning governance system (Fagerberg and Srholec 2008), it is almost impossible in this context to imagine a successful entity without a well-functioning system of innovation, with a substantial level of strategic competencies (Rončević 2007). This poses important challenges for policy-makers and scholars alike.

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The extent and speed of globalisation introduced a new dimension to societal dynamics. Boundaries between local and global are becoming blurred. As the global economic crisis, which started in 2007, clearly demonstrated, global conditions influence localities all over the world with very short delay. On the other hand, however, even relatively minor local innovations become "more and more part and parcel of global ones" (Genov 1997). This has very important consequences for management of innovative processes. Sociological research, equipped with tools for understanding the role of societal processes and the impact of cultural patterns, can offer an important contribution to understanding the innovative processes.

We are dealing with a quite contradictory situation, in which nobody can escape the challenges posed by the global environment. Everybody has the possibility to adapt and thrive, or fail. Social settings like nation states, regions, localities and even the smallest organisations have the possibility to influence their economic and social situation in the long run and emerge as global leaders in their niche. Although the competition is global and the tasks are demanding, it is nevertheless crucial that internal social, economic, and political institutions, networks and cognitive frames become vital factors in development, and can adapt the effects of the global trends to their own benefit (van Rossem 1996: 524). The basic preconditions for this adaptation process are both endogenous and intangible in their nature (Adam et al 2005). The reality shows that the best way to adapt to global trends is by enhancing those intangibles that support innovative performances in all areas of social life.

These trends are indeed multifold. We therefore find useful conceptual framework developed by Genov (1997), which we can use to analyse the relevant adaptations of social settings to global trends. First, increasing societal complexity implies rational activities for reduction of complexity. Hence the trend of spreading of instrumental activism with its perpetuating attempts to coordinate of goals and means of action, which also includes animating culture of entrepreneurship and innovation. Ironically, attempts to reduce complexity only contribute to 'hypercomplexity' (Luhmann, 1995: 471), making the task even harder. As a consequence, societies attempt to develop various increasingly sophisticated and complex systems of societal steering and systems of

innovations, with all its material, social and cognitive consequences. Second, we are witnessing the trend of individualisation, a major evolutionary achievement, but also a highly controversial trend with in-built tendency to lead towards conflicts. It contributes substantially to societal complexity, as it leads to increasing demand and resources for coordination due to contributing to a large pool of options, possibilities and paths, as institutional individualisation progresses. Interestingly enough, as a result of increasing inability to efficiently control communications and actors, there is a controversial increase in need for communitarian counterbalance, evidenced by research on social capital on different levels (see Adam and Rončević, 2003; Adam and Westlund, 2010). This should not be interpreted as a societal regression, though. Introduction of communitarian factors (e.g. trust) is a correction of flawed rationalistic and incrementalist approaches to societal steering and represent development in complexity management via increasing strategic competencies of actors (Rončević, 2007). Third, as a result of increasing complexity there is a trend towards upgrading of organisational rationality. This trend has been present since the dawn of scientific management through global proliferation of large industrial organisations. This was an attempt to reduce complexity. However, complexity management became much more complex and diversified in itself, as it progressed towards 'second industrial divide' between mass production and flexible specialisation (Piore and Sabel, 1984). Economy of scale was either replaced or upgraded with economy of scope. Finally, as challenges are global in their nature – albeit there are important local geographical, economic, social and cultural specificities – there is also a growing need to respond positively to the trend of value-normative universalization. Efficiency in adaptation processes strongly depends on cultural tool-kit (Hannerz, 1969) at disposal that collective and individual actors utilise to construct chain of actions (Swidler, 1986) in their response to global challenges. It is therefore not surprising that cognitive frames are already being recognised as a crucial factor in development and a tool of development policy (see e.g. Wee, 2001; Etounga-Manguelle, 2000; Adam et al, 2005).

The real question is what can a nation, region, locality or organisation do to adjust successfully to global challenges? There are indeed no clear-cut prescriptions for adjustment processes, as it is a highly demanding process. Namely, successful adaptation is a multidimensional process,

where different levels have to achieve sync in a process of 'social becoming' (Sztompka, 1991). First, at macro level, societies have to develop adaptive mechanisms for steering in conditions of increasing complexity. By and large, this context renders obsolete old debates on the most appropriate modes of societal steering (markets vs. states vs. networks) and encourages us to search for new concepts which explain contries' ability to carefully combine traditional modes of governance in direction of contex-specific forms of 'meta-governance' (Jessop, 2002; 2007).Secondly, at meso level it is a question of ability of a social setting to continuously (re)produce technological and social innovations. Hence, this is fundamentally the issue of managing systems of innovation, which are essentially social fields and can be, just like markets, studied as 'arenas of social interaction for the exchange of goods and services' (Beckert, 2010: 609). Finally, at micro level the society has to find the way to adjust relevant social forces which are influencing social fields, i.e. relevant institutions, networks and cognitive frames. This implies analysis of this 'invisible set of forces' (Fourcade, 2007: 1022) contributing to emergence of a local order conducive to effective adaptation to global trends.

Macro-level: societal steering in conditions of high complexity

Theoretical debate on any relevant aspect of steering of societal development does not fall within exclusive domain of economics, sociology or any other social science discipline. It is an interdisciplinary research subject, tackled already by the fathers of different social sciences. For example, important segments of Adam Smith's seminal work An Inquiry into the Nature and Causes of the Wealth of Nations were dedicated to these issues. On the other hand, important sociologists like Karl Marx, Emile Durkheim, Herbert Spencer, Max Weber, Talcott Parsons, Niklas Luhmann etc. also dealt with the question whether societal development should be subject to planned activity or to self-regulatory mechanisms. While this basic simple question is by and large rendered obsolete by immense changes in both societal environment – processes of globalisation (Axford, 1995; Waters, 1995; Urry, 2003), increasing complexity (Luhmann, 1995; Buckley, 1998; Parker and Stacey, 1997; Urry, 2003) and shift from Keynesian welfare national state to Schumpeterian workfare postnational regime (Jessop, 2002) – and recent advances in social research – studies of new modes of governance, especially

heterarchical network governance (Thompson, 1991; 2003; Mayntz, 1993; Messner, 1997; Börzel, 1998) and elaborations on meta-governance (Jessop, 2002; 2007) –, the issue of steering of societal development is nevertheless as relevant as ever. It touches the very core of research on contemporary societies, including their ability to adapt to global trends. It cannot be interpreted exclusively as a consequence of internal factors of development (e.g. theories of indigenous growth) or as a consequence of external factors, e.g. theory of imperialism, theory of dependency (Prebisch, 1950, Gunder Frank, 1969), theory of dependent development (Cardoso and Faletto, 1969) or world systems theory (Wallerstein, 1974; 1983). International environment, understood either in terms of constraining 'framework conditions' or even 'megatrends' (e.g. Naisbit, 1984; Bakas, 2006) can play important role in limiting strategic choices of individual and collective actors. However, as van Rossem's network analysis empirical test of world systems theory showed, "internal social, economic, and political structures and actors become vital factors in development, and can modify the effects of the international environment." (van Rossem 1996: 524).

From the perspective of this research, two interrelated shifts are especially important. Firstly, when contextualising changes in the social environment, most authors are focusing on the role of globalising processes and technological development (Castells, 1996; Urry, 2003) in increasing complexity. Complexity indeed plays very important role in research on societal steering. Luhmann's magnum opus is dedicated to analysis of the situation "when, because of imminent constraints in the element's connective capacity, it is no longer possible at any moment to connect every element with every other element." (Luhmann, 1995: 24). Etzioni, although coming from completely different perspective, analyses how the active society deals with 'the rise of social options' (Etzioni, 1968: 5). Taylor acknowledges that "the condition of complexity is irreducible and is as it is inescapable" (Taylor, 2001: 3). Attempt of the society (or social system) to grasp its complexity through cognisance or planning creates 'hypercomplexity' (Luhmann, 1995: 471). Although there have been some attempts to handle complexity without generating chaos (Mol and Law, 2002), in fact, much of recent social research has been a "revolt against simplification" (Ibid).

Secondly, social settings are reacting by employing multi-level strategic changes, which are best described by Jessop's conceptualisation of a transition from Keynesian welfare national state (KWNS) to Schumpeterian workfare postnational regimes (SWPR) (Jessop, 2002). This is a tendential shift from, first, Keynesian full employment towards Schumpeterian economic intervention. Second, there is a tendency to move from welfarist mode of social reproduction towards a workfarist mode, evident in "subordination of social policy to generation of competitiveness, i.e. flexicurity (Blanpain, 2008). Third, there is a clear shift from primacy of the national state towards multi-level responsibility for social and economic policies, i.e. 'postnational relativisation of scale'. Finally, there is a strong shift from public interventionism in market failures towards various forms of self-organising governance mechanisms in 'networked economy' (Jessop, 2002: 248).

These shifts rendered obsolete traditional hierarchies vs. market debates, which pervaded discussions on social steering mechanisms (Thompson, 1991; 2003). Important amalgamation of these debates was the rise of social corporatism and neo-corporatism, which shifted focus from competitiveness and confrontation to cooperation, political stability and compromising through voluntary communication. However, if societal communication only deals with the issues of redistribution, we can have problems with policies that should focus on resources that cannot be produced by classical redistribution mechanisms (Messner, 1997: 76). Highly developed and complex societies, which are not competing on the basis of 'basic factors' (Porter, 1990) have to focus on production of systemic competitiveness (Esser et al, 1996) or on generation of resources and mobilisation of competencies (Karnøe et al, 1996). Network forms of governance seem better for this task, implying self-organisation and self-coordination among autonomous actors. Some even see networks as a new paradigm for understanding the "architecture of complexity" (Kenis and Schneider, 1991: 25).

Networks are social innovations that can solve complex problems, where traditional forms fail. However, superiority of networks cannot be taken for granted, as networks are also prone to failure (Jessop, 2002: 236). According to Castells, networks can have "considerable difficulties in coordinating functions, in focusing resources on specific goals, in managing the complexity of a given task beyond a certain size of

network" (2000: 15). In spite of his technological deterministic claims that ICT development can render these weaknesses obsolete, some authors argue that exactly due to these difficulties it is unlikely that networks would replace traditional modes of governance. Consequently, it cannot be considered as a neutral, but as a new, third mode of governance (Jessop, 2002: 237). We have to look for theoretical and practical solutions in the emergence of fourth, 'umbrella' type of governance, meta-governance, which involves "rearticulating and collibrating different modes of governance" (Ibid: 241). We can hypothesise that in some cases meta-governance can solve problems which cannot be solved by other modes of governance, especially focusing on jointly defined goals and managing the tasks, i.e. ensuring effective implementation.

Path creation as coordination through discourse

Some social settings are able to handle problems of adaptation to global trends and others fail. Some adjusted quickly to demand for new complex forms of governance, others failed. The difference lies in the ability to actively grasp the situation. This is perhaps best captured by Etzioni's concept of active society as a society that distinguishes itself by two qualities. Firstly, it is able to develop consensus on key developmental goals, values and strategies and secondly, develops the ability to implement this consensus, i.e. it has the necessary tools, commitments and competencies (Etzioni, 1968). The active society is therefore, applying Parsons' distinction, not adapted, but adaptable (Parsons, 1966; also Boulding, 1978). Active orientation implies for individual or collective actor to stand "above and beyond the ongoing processes"(Etzioni, 1968: 4). "To be active is to be in charge. To be passive is to be under control, be it of natural processes, of social waves and streams, or – of active others." (Ibid.) The active orientation has three major components, which are relevant from our perspective, which helps to solve governance failures. First, individual or collective actors have to be self-conscious and knowing. Second, actors are committed to realize one or more clearly defined goals. Finally, they need to have access to levers (or power) that allow resetting the social (Etzioni, 1968).

Resetting the social is the key issue for several reasons. First, alternative institutional arrangements are very often the key difference between economic growth, stagnation and recession (North, 1990; Nee, 1998). Secondly, social actors are regularly acting in the context of

incomplete information and mental models, which contributes to transaction costs (Nee, 1998: 1). As transaction costs are important part of costs of production and exchange in contemporary economies, they hinder change in institutional arrangements. Finally, they usually do not have free choice, but make 'choices within constraints'. A number of formal and informal constraints are shaping selection of options (Nee, 1998: 8). This hinders ability to react positively to global trends, implying path-dependency of strategic choices. Process is 'path-dependent' in cases, when initial movement in one direction determines future direction, limiting other options. Social forces structuring social fields (institutions, networks or cognitive frames) have to change in order to create a new path. Sequence of events influences new events in a way that developmental trajectories limit set of options for future trajectories (Kay, 2003: 2).

However, 'choice within constraints' implies 'path-shaping'. In his analysis of institutional reforms of welfare state – undoubtedly a case of institutional arrangement where it is very difficult to achieve fast changes due to numerous vital and expensive interests – Torfing demonstrates that changes in well-established arrangements are indeed taking place, but policy-makers and other stakeholders have to take complex constellations of interests into account. Hence, policy path can also be defined as a relatively stable way to structure certain social field. Policy path is not just a policy-making method for regulation of objects, processes and actions, it is a discursive terrain at which objects of regulation, regulatory agencies and institutional forms of regulation are mutually structuring (Torfing, 2001: 286-287).

Path-shaping is possible through changing social field in reciprocal influence of institutions, networks and cognitive frames (Beckert, 2010: 612). Nevertheless, total discontinuity is not possible as old arrangements and structures exercise some influence on the new ones. It is therefore not possible to discuss institutional vacuum, not even in such rapid social and institutional changes like the post-socialist transition. (Nielsen et al, 1995). It is a difficult process, because we face the problems of 'hyper-rationality' 'mental residuals' (Offe, 1995). Therefore, two conditions have to be met in order to achieve successful institutional design (1995: 54-55). Firstly, existing arrangements have to be discredited and without legitimacy and ability to deal with challenges

that come from their environment. In the case of economic development this could be the situation of a deep and lasting economic crisis, which cannot be solved in the framework of existing arrangements (e.g. cases of Ireland and Finland in the 1980's). Secondly, they have to offer alternative vision. Therefore, such models are usually not "structured" in a specific social setting, but are in their initial form imported from different and more successful one and adapted to local circumstances.

Consequently, analytical step forward is to develop "explanatory frameworks, theories and models, explaining micro-foundations of these path-dependent processes" (Kay, 2003a: 406-407). We will move in this direction in next two chapters.

Meso level: (re)creating systems of innovation

The meso level of systems of innovations is where social settings exhibit ability – or lack thereof – to adjust to global trends by continuously (re)producing technological and social innovations. Basic factors of production and investment intensiveness are no longer the key factors of competitiveness of the most developed localities. Instead, it is innovativeness and sophistication of products and services. (Porter, 1990). This implies that we are dealing with context-specific process in which the key role is played by unique and locally embedded knowledge. Differences between the most competitive are getting smaller and smaller but at the same time these small differences are increasing in importance. This has since long been acknowledged for high-tech sector (Garnsey, 1998). However, the role of localised learning is perhaps even more important for medium- and low-tech sectors, where continuous improvements are the only key to success and survival of these activities, especially in areas with very high costs which do not allow for strategies of cost competitiveness (Lorenzen, 1998). Typical examples are Scandinavian countries, which prove that low-tech activities can prosper also in such areas (Maskell et al., 1998).

On innovation

To understand this phenomenon, we have to broaden our understanding of innovation in several directions. Many authors focus on the issue of technological innovation, leaving aside the notion of non-technological innovations. However, the issue of social innovations is becoming

increasingly important, even going as far as becoming a crucial factor in achieving and retaining competitive edge.

Furthermore, even when dealing with technological innovations, we have to distinguish between different types. Not only innovations, which are radically new in global context, are important (de Propris, 2001). Differences in types of innovations also imply differences in structuration of relationship between relevant actors. For example, in medium- and low-tech sectors non-radical types of innovation seem to be much more important. Case of Denmark is very informative in this respect. Structure of business sector is not very supportive of RTD activities, as we are mainly dealing with small companies with small resources. Nevertheless, these companies show very high levels of innovativeness in products, production processes and organisation. Dominant type of innovation is local incremental adaptation, a result of continuous process of cognitive and social learning. (Lundvall, 2002). The fact that these innovations are not radical does not reduce competitiveness of Danish companies.

This implies a new, interactive conceptualisation of innovative processes, taking interactions between actors into account (Lundvall, 2002: 3). Knowledge is no longer just information, it is a social process. Development and dissemination of knowledge is a social process, implying inter-organisational learning and communication. Innovation is therefore 'process rather than structure' (De la Mothe and Paquet, 1998). Knowledge is stored in in 'cognitive space' between actors of this innovative process and organisations differ in their ability to detect and absorb this knowledge. To understand innovative processes we therefore have to identify broader social processes and understand how this is influenced by relationship between actors in system of innovation.

Systems of innovation as adaptive infrastructure

System for production of innovations is primarily a social system. Learning and knowledge are central to innovation processes and involve interactions between different actors in markets as fields where knowledgeable actors meet (Meeus et al, 1999; Beckert, 2010). The term 'systems of innovation' is a generic term for a variety of systems of innovation at different levels: national, regional or local systems of innovation, and also sectoral, technological and metropolitan systems of inniovation. We can observe systems of innovations as social fields

influenced by three social microforces: institutions, networks and cognitive frames. Key function of this social field is (re)production, transfer and difusion of knowledge and technology. It can be diagnosed as a broad and dense infrastructure of knowledge-based enterprises, universities, universities, research and development institutions, a continuous and sufficient supply of highly qualified labour and a generally good infrastructure of business support institutions, as well as a dense network of intermediary institutions (liaison offices, technology transfer offices etc.). or their functional substitutes (e.g. think-tanks) to foster formal and informal interactions and dissemination of cognitive frames (Welter et al, 2009). It is based on the assumption that location and spatial proximity matter for innovation activities (Porter, 1998).

The positive influence of these systems has been acknowledged over a century ago. Alfred Marshall discussed the issue of “localisation” already in 1890. His discussion is considered to be a predecessor of now fashionable debates on business clusters (Brown and Duguid, 2000). The interest in flexible relations among different types of organisations grew exponentially after the end of the classical Fordist paradigm and emphasis put on flexible specialisation (Piore and Sable, 1984) and in a rather short period these linkages gained “discrete charm of secret objects of desire” (Steiner, 1998). It is therefore not surprising that governments at different levels (national, regional, local) are attempting to establish policies aiming to enhance specialisation and flexible forms of network organisation, although the success is rather limited (Lee et al., 2000).

As a result of this immense interest, different analytical approaches and research foci and substantial differences of this context-specific phenomena we have a plethora of partially overlapping concepts at our disposal and at the same time a lack of a coherent theoretical, conceptual and methodological approach to the study them. Authors are applying concepts of industrial districts, technopoles, business networks (Feser, 1998), systems of innovations at national (Lundvall, 1992), local and regional level (de la Mothe and Paquet, 1998). Methods for their systematic detection are poorly developed. Basic dynamics of their formation and operation is not well known (Rončević, 2007). Consequently, policies to support these linkages are not based on knowledge about these phenomena.

In this we cannot follow simple prescription. These processes are strongly context-specific. Empirical evidence from various international reports on competitiveness clearly demonstrates that intensiveness of formation of developmental coalitions differs among nations, regions and even localities within the same countries. Italy is a typical example of such differences in dynamics; some regions in the north are archetype of vibrant and propulsive entrepreneurial regions with abundance of successful business clusters. Regions in the south are, on the other hand, typical example of “amoral familism” (Banfield, 1958), weak social capital and inability to engage in heterarchical network-type of interorganisational linkages (Putnam, 1993).

Hence, the ability to formulate generally valid theories and relevant policy measures is rather limited. The solution is to develop context-specific analysis of social fields. This analysis in itself is rather complex as this is quite close to “networked polity”, where the unit of planning and leadership is not a single organisation, but a “multi-organisational project team” (Ansell, 2000: 309). This implies that we cannot focus only on single organisation or sector; instead, have to take into account all relevant stakeholders, as well as the infrastructure for (re)production of knowledge, intermediary organisations and relevant NGOs. Actors are vertically and horizontally disaggregated, but are at the same time engaged in continuous process of co-ordination. There is a continuous interaction and mutual influence between forces structuring this social field. Systems of innovation are a special type of social field where numerous formal and informal communications between members of this system are taking place. Innovative processes are above all social processes and social field can be structures to enable or prevent positive responses to global challenges.

Social Fields: institutions, social networks and cognitive frames

The success or failure of a specific social setting depends on our ability to adjust social forces operating at micro level. Institutions, social networks and cognitive frames have in the past been repeatedy confirmed as relevant in determining a rich variety of outcomes (Fligstein and Dauter, 2007: 106-107; Beckert, 2010: 605), like competitiveness of economies (Hall and Soskice, 2001), formation of prices (Uzzi and Lancaster, 2004) or levels of inward foreign direct investments (Bandelj,

2008), access to labour market (Granovetter, 1995) etc. These three forces are forming relational topography of social field, making it more or less conducive to successful adaptation to global trends by determining the outcome of innovative processes.

Relevant social forces are necessary and sufficient conditions of innovative outcomes. Interestingly enough, sociological analysis of systems of innovation seems curiously underdeveloped. Economy, economic and regional geography and political sicence are in the forefront of this strand of research. However, analysing systems of innovation as social fields constituted by social forces, sociology has much to offer. First, neo-institutionalism has much to offer in analysis of institutions (Dobbin 1994; Fligstein 1990, 2001; DiMaggio and Powell 1991). Second, social network analysis is one of the most thriving areas of sociological research in the past two decades, leading to important breakthroughs (e.g. Burt 1992; Granovetter 1973; White 1981, 2002). Finally, sociology of culture provides us with theoretically informed accounts of cognitive frames' role in influencing social action (e.g. Swidler, 1986).

Since Lewin developed the first version of social field concept (Lewin, 1951), new versions appeared (DiMagio and Powell, 1983; Fligstein, 2001; Bourdieu, 2005). However, hey all share the view of social fields as "being structured by social forces that increase stability in social interaction" (Beckert, 2010: 609). Three social structures all contribute to continuous (re)formation of social field to shape a topography of relations. Consequently, social fields are not determined by geography, but are culturally, socially and politically established (Scott, 1994: 206). This is not only theoretical-analytical assumption, but is true even in case when we are using social field as analytical tool for the analysis of a specific delimited phenomenon, e.g. regional system of innovation.

How do social forces shape specific social fields under scrutiny in this paper? First, institutions exert their influence by limiting permissible scope of actions, encouraging some and discouraging others. For example, supportive governmental regulation for establishing new firms and generating spin-offs, innovation support services, a dense network of technology parks and technology transfer entities, or presence of top-

quality universities is generally supportive to adapting to global trends by generating high innovation performance.

Secondly, social networks position individual and collective in social space, limiting ties with specific nodes and encouraging others. So, we can identify high levels of university-industry cooperation, inter- and intra-regional cooperation, cooperation of producers with customers and high level of mutual trust, social networks are 'lublicating' project-based organisations, resulting in higher innovative performances.

Finally, cognitive frames provide the necessary mental tool-kit to interpret introduction and nurturing firm-based innovation system, absorption of new knowledge or RTD expenditure as relevant. These interpretations are highly relevant because in complex environment we cannot foresee all possible combinations and formalise them as rules. These scripts contribute to desired structuring of social field by suggesting social action in spite of uncertainty of outcome (Beckert, 2010: 610).

Conclusion

Most oft he problems that nations, regions, localities or organisations today are facing are of external nature. However, internal processes play very important role as well (Hales, 1993; Paolucci et al. 1997; Tumay 1995). On all levels – macro, meso and micro - these are all too often insufficiently define for ill-managed. Hence, processes of social change are ineffective and innovative performance is failing. These processes are non-transparent and inflexible, too often fragmented and would in many cases require radical societal innovation. On the micro level we can, for example, observe that one of the main problems for the failure of organisational process reengineering is the lack of available tools to evaluate the effects of specific solutions before they are actually implemented (Paolucci etal. 1997, Tumay1995).

Process change and innovation has roots that extend into the middle oflast century, however even on the micro level organizations perceived it as a potential threat (Davenport, 1993) while on the macro level it seems too complex task (the problem of hypercomplexity). The need to improve operational processes was nevertheless found as one of the underlying requirements and concerns of the profit and non-profit

organizations of the 20thcentury and societies are increasingly trying to manage overwhelming complexity with more and more sophisticated policy mechanisms. As a consequence, an abundance of available methods, innovative techniques and academic research is today accessible (Crosnan et al, 2010; Foss, 2009; Stanko et al, 2011).

According to Davenport (1993) process innovation combines new strategy development with actual process planning and change implementation within all of its complex dimensions such as technological, human and organizational. Rockart in Short (1989) furthermore argue that process innovation can successfully cater the need for better co-ordination and the functional dependencies management. The fact still remains that the reasons, which compel societies and organizations to examine any innovation methods lay in the need to significantly improve their competitiveness. The process innovation radically and uniquely changes the key processes.

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