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HRM in turbulent times: how to achieve organizational agility?

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In this paper we develop a heuristic framework to identify how organizations survive in the dynamic environment caused by the economic crisis, by identifying organizational practices which are important determinants of organizational agility and determining in what way institutional mechanisms facilitate or hinder organizations in achieving organizational agility. Our paper starts with setting out the characteristics of a dynamic environment and the challenges organizations face in such an environment. Next, we discuss the concept of dynamic capabilities and develop this concept toward a heuristic framework for organizational agility. In this framework we focus our attention to three specific topics: the way in which an organization can scale its' workforce, maintain and extend its' knowledge base and is able to balance both control and autonomy through its' organizational infrastructure. We then turn our attention to the institutional context, which impacts the decisions of the adoption and implementation of relevant organizational practices and the attitude of management and available options toward this institutional context. The development of our heuristic framework is accompanied by a set of propositions derived from the theory and concepts discussed. Finally, we give a provisional evaluation of the potential contribution of our framework in being able to cope with unforeseen consequences and sometimes huge impact of a financial-economic crisis such as the present one.

Keywords: agility; dynamic environment; institutional pressure; strategic response

Introduction

Many papers on organizational theory and Human Resource Management (HRM) start with an introduction stating that organizations are facing a dynamic environment. This statement is even more true due to the economic turmoil resulting from the recent financial crisis. This crisis has left organizations struggling with unpredictable changes in their environment which impact the organization. Banks went from having sufficient assets to being badly in need of financial guarantees and backup by national governments, leading to postponement or even cancellation of projects in a wide range of industries. A truck manufacturer saw its' production decrease overnight from 500 trucks per day to only 15 trucks per day. This level of dynamics – with frequent unpredictable events that have an impact on the organization – confronts management with the need to align the organization with this ever-changing context, now more than ever. The focus is no longer on superior performance, but on survival. Organizations struggle when the rate of change in their environment outpaces their organizational capacity to keep up (Foster and Kaplan 2001). It is no longer possible for organization to get better: they need to get different (Hamel 2000). One way of doing this is by no longer managing the uncertainty caused by

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these dynamics but by embracing and organizing for it. This is what agile organizations do.

Environmental dynamism has led to a focus on organizational capabilities as the principle source of competitive advantage in such an environment (Grant 1996). These organizational capabilities are referred to as dynamic capabilities (Teece, Pisano and Shuen 1997). Aldrich (1999) focuses on the process of transformation of organizations – as a result from changes in the environment – which leads to a break in routines and involves a shift in competencies and required knowledge. Dyer and Shafer discuss a ‘growing interest in an entirely new organizational paradigm – one that views organizational adaptation not as a one-time or even periodic event, but as a continuous process. That paradigm is Organizational Agility’ (1998, p. 6). Organizational agility is considered a necessary dynamic capability for organizations operating in a highly dynamic environment. Eisenhardt and Martin (2000) expand the concept of dynamic capabilities by stating that the effective patterns of dynamic capabilities vary with market dynamism. This means that organizational agility is not an on/off-switch. Organizations can have a certain level of organizational agility. In this paper we discuss the organizational and HR practices that organizations might apply to cope with a dynamic environment, thereby enhancing their level of organizational agility. A high level of organizational agility allows organizations to survive in this economic crisis, and the next, and the next. The following sets of organizational practices – focusing on agility – will be explored: a scalable workforce (in terms of quantity and quality), fast organizational knowledge creation and a highly adaptable organizational infrastructure.

By focusing on dynamic capabilities, the research on achieving sustainable competitive advantage takes an inside-out approach (Grant 1996). The resource-based view (RBV) (Barney 1991) is one strand of literature in this approach emphasizing firm-specific capabilities and assets as fundamental determinants of sustained competitive advantage. RBV implicitly builds on the assumption of economic rationality of the actors (dominant coalition) involved. However, organizations sometimes apply organizational practices that at first sight seem to be incompatible with the objective of coping with a dynamic environment. For example, they continue to hire most employees on a permanent contract thereby running the risk of creating organizational rigidity at the expense of the possibility of having increased levels of flexibility thanks to a higher number of temporary workers. Other rationalities must be involved whenever decisions are being made. Paauwe (2004) explains this by stating that contingency factors limit the leeway of both organization and management, for example, normative rationalities (‘taken for granted’ decisions) that are closely related to institutional mechanisms as presented by DiMaggio and Powell (1983). Strategic decision-making can be affected by institutional mechanisms and their related rationalities (Paauwe and Boselie 2003, based on DiMaggio and Powell 1983): coercive mechanisms that stem from legislation and the influence of social partners (trade unions, employer’s associations and works councils), normative mechanisms that stem from professional bodies, and mimetic mechanisms that are the response to uncertainty or the result of hypes and trends in management.

Early institutionalists tended to emphasize the constraining effect of institutional mechanisms (Dacin, Goodstein and Scott 2002; Scott 2008). However, measures taken by governments in light of the economic crisis, such as retention programs to ensure employment, are beneficial to organizations. Even institutional mechanisms that are being considered as constraining employer behavior at first, might as well generate beneficial consequences in the long run (Streeck 1997). For example, in some Collective Labor Agreements (CLAs) there is an agreement on the maximum percentage of flex workers in

the total workforce. Although this might constrain the possibilities for a flex ring, in the long term employees probably perceive less job insecurity and investments in employee training might generate a better yield. More recently attention is given to using and enlarging the room to maneuver for organizations. This agency approach refers to the way in which an actor can choose his or her own response to institutional pressures (Oliver 1991; Lee and Pennings 2002). Human agency and strategic choice give organizations several options to cope with institutional pressures varying from active resistance to passive response (Oliver 1991). Boon, Paauwe, Boselie and Den Hartog (2009) develop three types of ways (or behaviors) of reacting to institutional pressures based on the works of Oliver (1991) and Mirvis (1997): conformist, innovative and defiant. These concepts stemming from neo-institutional theory provide a popular and powerful explanation for organizational action within this leeway (Dacin et al. 2002; Paauwe 2004; Pursey, Heugens and Lander 2009). By taking both the market mechanisms and institutional mechanisms into account we can balance the inside-out and outside-in approach.

Surviving in economic turmoil

The financial and resulting economic crisis since September 2008 (with the fall of Lehman Brothers) has impacted organizations in a significant way. Not only market demand has declined in many sectors, but also new competitors have emerged. For example in the consultancy sector, a whole new segment of competitors has emerged formed by independent workers that were earlier laid off. Furthermore, the financial crisis has impacted the willingness of financial institutions to fund projects in a negative way. This has led to last-minute cancellation or postponement of building projects for engineering and building companies. These are all examples of dynamics as a result of the financial crisis. To assess the level of dynamics in the environment we look at several aspects of dynamism. Dess and Beard (1984) define environmental dynamisms as the degree of change that is hard to predict and that heightens uncertainty. In our paper we distinguish three elements of dynamics. In general it is contended (Miles, Snow and Pfeffer 1974) that first it is important to distinguish between the rate of change and the unpredictability of change. A further addition is made in terms of amplitude (or impact) of change. These elements increase the perceived uncertainty of the actors in the organization (Duncan 1972).

Before turning to the organizational practices to deal with these dynamics, we first take a closer look at the sources for dynamics in the environment. The business environment consists of a vast number and range of external influences that affect the organization. Grant (2002) defines the industry environment – as the core of the business environment – by the firm's relationships with customers, suppliers and competitors. Starbuck (1976) defines the environment as those elements with which the organization is in direct exchange (being customers and suppliers) and as those elements that compete with the organization for the resources being directly exchanged (being competitors). These competitors compete for the resources supplied by customers and suppliers. This broadens the definition of competitors. Taking this broader definition of competitors also significantly broadens the definition of the industry, which in turn increases the potential dynamics in the environment of the organization.

However, the environment of firms does not solely constitute customers, suppliers and competitors. Institutions also play an important role in the environment of firms (Meyer and Rowan 1977; Powell 1998; Dacin et al. 2002; Pursey et al. 2009). DiMaggio and Powell (1983) provide the concept of an organizational field, which refers to 'those organizations that, in the aggregate, constitute a recognized area of institutional life: key

suppliers, resource and product consumers, regulatory agencies and other organizations that produce similar products and services' (p. 148). The organizational field expands the definition of the environment by adding to the industry institutions such as regulatory agencies.

Considering our focus on dynamics in the environment we also need to take a closer look at the temporal dimension of such institutions (Winn and Jennings 2001; Scott 2008). In other words, can these institutions add to the dynamics of the environment? Williamson (1998, 2000) distinguished four levels of social analysis, which also differ in terms of frequency of change. Environmental dynamism is related to the level of '[getting] the governance structures – markets, hybrids, firms, bureaus – right. The period over which such decisions come up for consideration is of the order of a year to a decade' (Williamson 1998, p. 29). For example, the decisions governments have taken to ensure the survival of organizations or preservation of employment through subsidies, or the changing regulation to accelerate decision-making on new infrastructural building projects, are within the scope of a year to a decade. These changes hold the potential for dynamics in the environment. For this reason, both industry as well as institutions such as regulatory agencies or professional associations should be considered as sources for dynamics in the environment of the organization.

Dynamic capabilities and organizational agility

Teece et al. (1997) developed the dynamic capabilities framework to analyze how and why certain firms achieve and sustain competitive advantage in dynamic environments. The dynamic capabilities framework refers to the combinations of competencies and resources that can be developed, deployed and protected as sources of competitive advantage.

Dynamic capabilities refer to the tangible and intangible assets firms use to develop and implement their strategy (Ray, Barney and Muhanna 2004). Aldrich (1999) considers three levels of organizational transformation as a mark of real change. First, an organization might make a significant shift in the market, products or services it wants to be in, which is considered a change in goals. Second, an organization might change the boundaries of the organization. And finally, an organization might apply significant changes in their activity system. All of these transitions are currently taking place due to the economic crisis. Firms are looking for ways to cater to the changed needs of their customers and outsource some of their activities to achieve lower costs. In this paper we focus on the ability of the organization to cope with these transitions. Teece et al. (1997) pose that the competitive advantage of the firm lies with its managerial and organizational processes, shaped by its asset position and the paths available to it. The organizational and managerial processes are related to 'reconfiguration and transformation', learning and 'coordination and integration' (Teece et al. 1997). The aforementioned elements can be developed into three competencies which organizational agility as a dynamic capability is composed of as will be outlined in the following sections.

When considering employees/human resources as important assets in a firm's asset structure, we need to think about the competency to reconfigure and transform the workforce. Dyer and Ericksen (2006) suggest workforce scalability as a requirement of organizations operating in a dynamic environment. Workforce scalability refers to 'the capacity of an organization to keep its human resources aligned with business needs by transitioning quickly and easily from one human resources configuration to another and another, ad infinitum' (p. 3). This leads us to the first competency for agile organizations: having a scalable workforce.

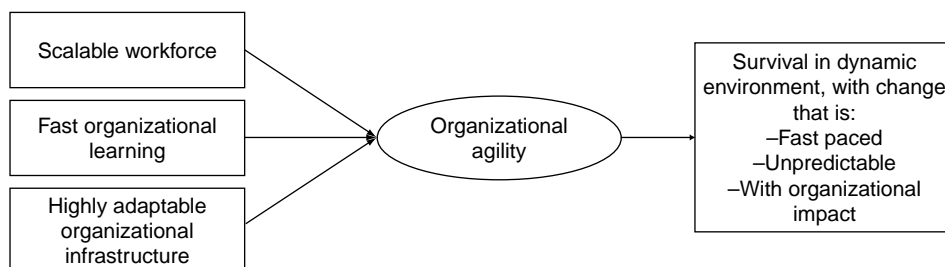


Figure 1. A heuristic framework for organizational agility as a dynamic capability.

But a scalable workforce in which human resources are reconfigured and transformed leads to the risk of loss of knowledge. More importantly it might lead to a disconnection in the social capital (employee's social network and unique relationships) important for creating new knowledge (Wright, Dunford and Snell 2001). Dyer and Shafer (2003) suggest a number of organizational competencies related to learning and knowledge generation for agile organizations: 'sensing the market, mobilizing rapid response, exploiting temporary advantage and embedding organizational learning' (p. 12). Constantly obtaining and creating organizational knowledge is very important in a dynamic environment. Without this, an organization's knowledge reservoir would rapidly become outdated. Dyer and Shafer mention the 'capacity to constantly create, adapt, distribute and apply knowledge' (2003, p. 14). So the second competency for agile organizations is fast organizational knowledge creation.

Finally and related to our third element of coordination and integration, Dyer and Ericksen (2006) mention a highly adaptable organizational infrastructure as a prerequisite for workforce scalability (Dyer and Shafer 2003). Here we would go further and pose that a highly adaptable organizational infrastructure (Mintzberg 1992; Dyer and Shafer 1998; Volberda 1998) in itself is a key competency for agile organizations and not just related to enabling workforce scalability since this organizational infrastructure is key to coordinate and integrate activities and to deploy resources. This makes having a highly adaptable organizational infrastructure our third competency for agile organizations.

In this theoretically focused paper we use the concepts as depicted in Figure 1 as a starting point to look for possible relevant organizational practices stemming from the theoretical literature.

Organizational practices and organizational agility

Now that we have identified the organizational competencies for agile organizations, it is time to focus our attention on the possible organizational practices associated with the three competencies. Agility has been studied in a wide array of theoretical reviews and case studies dispersed across various fields of study, such as business agility, enterprise agility, IT agility, agile manufacturing and agile supply chains. Viewing organizational agility from a dynamic capabilities point of view is a fairly new field, especially when focusing on the HR-aspects of this dynamic capability. To guide future research we develop and discuss the practices associated with the three competencies of agile organizations and develop a number of propositions to be tested in follow-up research.

Before turning our attention to the practices per organizational competency, we first discuss the configurational character of organizational agility. The configurational approach refers to the view that patterns of multiple practices lead to the required results.

This approach differs from the universalistic approach – which assumes the presence of best practices – and the contingency approach – which focuses on the strategic fit of individual HR-practices (Delery and Doty 1996). As discussed, organizational agility is deemed a dynamic capability. The dynamic capabilities framework refers to the combinations of competencies and resources that can be developed, deployed and protected as sources of competitive advantage (Teece et al. 1997). From a configurational point of view, multiple patterns of practices associated with workforce scalability, fast organizational learning and highly adaptable organizational infrastructure lead to survival in a dynamic environment.

The relevant organizational competencies first refer to scalability of the workforce. The workforce needs to be aligned with the objectives and goals of the organization to survive. These objectives and goals are a constantly moving target in a dynamic environment. In an economic downturn, it is most likely that firms are forced to reduce their workforce and/or redeploy them in alternative activities. To know what is going on in the dynamic environment, and to make sure that all relevant actors in the organization are aware of these developments, fast organizational learning becomes important. Employees need to understand what is going on in their environment, and change their behavior and activities accordingly. Finally, both workforce scalability and fast organizational learning lead to a redistribution of resources. To maintain a grip on the organizations' resources, the organizational infrastructure comes into play.

This requires a configurational approach, focusing on integral bundles of relevant organizational practices. These bundles of HR-practices might differ, but practices related to each of the three relevant organizational competencies can be expected. The configurational approach leads to our first proposition:

Proposition 1: To survive in a dynamic environment, agile organizations apply bundles of organizational practices regarding fast organizational learning, a scalable workforce and a highly adaptable organizational infrastructure in a unique organization specific configuration.

Scalable workforce

Workforce scalability refers to 'the capacity of an organization to keep its human resources aligned on an ongoing basis by constantly transitioning from one human resource configuration to another and another, ad infinitum, on a timely basis and in a seamless way' (Dyer and Ericksen 2006, p. 11). According to Dyer and Ericksen (2006), these human resource configurations comprise of four dimensions: headcount, competence mix, deployment pattern and employee contributions. Headcount refers to the number of full-time equivalents, competence mix to the distribution of employees' knowledge and skills, and deployment pattern to employees' assignment across organizational and/or physical locations. Employee contribution refers to the organizational value of the tasks employees perform.

Workforce scalability takes a complementary perspective that takes the view that both strategic fit and flexibility are required for organizational effectiveness (Wright and Snell 1998). Workforce scalability consists of organizational practices aimed at workforce alignment (fit) and workforce fluidity (flexibility). Workforce alignment exists when an organization has the right number of people, with the right knowledge and skills in the right place at the right time doing the right things right. Workforce alignment leads to a state-of-fit between the workforce and the strategic goals of the organization (Wright and

Snell 1998). Workforce alignment is a steady state – although not for long. Workforce fluidity refers to ‘the speed and ease with which transitions are made from one aligned human resource configuration to another . . . ad infinitum’ (Dyer and Ericksen 2006, p. 12). Wright and Snell (1998) offer a useful distinction between resource flexibility – aimed at broad applicability of practices, skills and behavior – and coordination flexibility – aimed at reconfiguring the value chain and redeploying resources. Resource flexibility can be achieved by having employees with a broad skill set through training or a broadly applicable practices, such as management by objectives as a appraisal technique (Wright and Snell 1998). Coordination flexibility can be achieved by having employees that can quickly learn and apply new skills and behaviors or by practices that allow for quick feedback to adjust these practices. Both types of flexibility increase the level of workforce fluidity.

Workforce alignment is aimed at creating a temporary steady state. In this steady state the workforce is aligned with the goals and objectives of the organization. This requires organizational practices focused on strategy formulation and planning. In these processes, HR planning needs to be aligned with business planning. However, the dynamic environment forces strategy formulation and business planning to be adaptable and with a focus on implementing fast decision-making. Faster decision-making in the study by Eisenhardt (1989) was associated with simultaneous consideration of multiple alternatives. Eisenhardt also shows that ‘the greater the integration among decisions, the greater the speed of the strategic decision process’ (p. 565). Considering multiple alternatives is a key feature of scenario planning. This requires business and HR plans to be open for adaptation, while maintaining a stable core and sense of direction.

More importantly, it requires the organization to be in constant dialogue with their employees on the business planning, taking a participative approach (Wright and Snell 1998; Aldrich 1999). A closely linked organizational practice is employee involvement. Comments and suggestions intended to improve organizational performance – especially in a dynamic environment – are critical for an organization (Senge 1990; Detert and Burris 2007). For example, a suggestion box for both internal improvement suggestions as well as new business ideas. Eisenhardt (1989) also points to the role of experienced counselors such as senior executives or experienced senior employees in the decision-making process. Their buy-in is crucial for the speed of decision-making. Furthermore, communication on both the strategy and the context in which the organization operates is of importance to instill a shared mindset (Dyer and Ericksen 2006), giving employees a sense of direction within the dynamic environment. There are several organizational practices that can contribute to employee participation (Sumukadas and Sawhney 2004). Examples are employee participation groups aimed at suggesting improvements to work-related problems (Ledford, Lawler and Mohrman 1988), or suggestion systems aimed at mobilizing employee ideas on improving work or the work environment (Schroeder and Robinson 1991). Furthermore, formal voice mechanisms should be considered as well, such as works council and trade union representatives. These are excellent examples of beneficial constraints (Streeck 1997) requiring organizations to share information and thereby facilitating the development of a long-term cooperative relationship in which employees participate in decision-making.

Since the changes in a dynamic environment are fast-paced, it is important to involve employees in a fast decision-making process to ensure the quality of the decisions taken. For employees to be aligned and be able to contribute to the decision-making process, it is important for them to know and understand the goals and objectives of the organization. However, these might also change in the same fast-paced manner as the environment

(Aldrich 1999), restricting the organization in keeping all employees informed at all times. Instead, the organization might give the employee a sense of direction by instilling a shared mindset in communicating the strategy of the organization.

Proposition 2a: Agile organizations apply practices regarding fast decision-making, instilling a shared mindset and employee participation aimed at constantly aligning and realigning the workforce with the goals and objectives of the organization.

Workforce fluidity refers to the speed and ease of transitions in the human resource configuration. This is in line with time being a key resource in dynamic environments (Stalk 1988). On the basis of the principles formulated by Wright and Snell (1998) and Dyer and Ericksen (2006), we suggest a number of organizational practices aimed at fluidity.

Dyer and Ericksen (2006) refer to acquiring talent as one of the principles for achieving workforce fluidity. When applying principles of agile supply chains for acquiring resources (Christopher 2000), we might consider workforce supply management as a specific organizational practice. One of the keys of agile supply chains lies in the quality of supplier relationships. With regards to the workforce these supplier might be universities, training institutions or agencies. Managing the relationship with these suppliers is not only important for the swift acquisition of talent, but also for working together in making sure the potential workforce has the required skills. This is analogous to the process of new product development in agile supply chains, where introduction time can be reduced by involving suppliers in the innovation process (Christopher 2000), or in the case of human resources involving universities and students to work on specific projects. This allows the organization to preselect the most talented students, while making use of their talents before hiring them. Another aspect related to acquiring talent is the management of the outflow of human resources. Related organizational practices revolve around an integrated outplacement process. This can be done by building relations with possible alternative employers for the workforce or other mobility concepts like industry or region specific alliances or in-house or outsourced mobility centers.

The previous organizational practices are aimed at external mobility to aid workforce fluidity. Dyer and Ericksen (2006) also refer to internal transitions, as part of workforce fluidity. Again, we can apply certain aspects of agile supply chain management to the workforce. An important agile supply chain tactic is postponement. Postponement refers to carrying an inventory in a generic form, awaiting final localization (Christopher 2000). When we think about the principle of postponement with respect to employees, we can consider organizational practices such as training and development aimed at competencies instead of jobs and horizontal career paths. Volberda (1998) also refers to a high level of training, which is focused on craft (versus a low level of training and education, which is focused on routine) in discussing organic organizational structures with a high flexibility potential.

Only if employees have a broad skill set, they can perform a flexible range of tasks. To enhance this skill set, training is vital. Specific forms of training in agile organizations refer to cross-training (Hopp and Van Oyen 2003) and job-rotation (Sumukadas and Sawhney 2004). When we think about postponement with regards to work design, we can consider organizational practices such as discretionary work design (Dyer and Shafer 2003). Discretionary work design refers to specifying only a minimal core of required tasks and responsibilities. Employees are expected to take up other tasks and responsibilities that need to be done based on own initiative. All of these organizational

practices are considered to broaden the sets of skills and behavior of either the workforce or the individual worker, while being applicable across multiple employee groups creating both resource and coordination flexibility at the level of the skills, behavior and HR-practices (Wright and Snell 1998).

Other practices – perhaps more simple organizational practices – are creating organizational slack and managing overtime (Koene, Paauwe and Groenewegen 2004). This allows the organization to quickly deploy employees where and when needed. The obvious downside however are the additional costs.

Proposition 2b: Agile organizations apply practices aimed at resource and coordination flexibility that facilitate a fast and easy transition in the headcount, competence mix, deployment patterns and employee contribution.

In the table below we give an overview of potential organizational practices with regards to having a scalable workforce:

<i>Workforce alignment</i>	<i>Workforce fluidity</i>
<ul style="list-style-type: none"> • Open (workforce) planning • Creating a shared mindset • Employee participation 	<ul style="list-style-type: none"> • Building relations with suppliers of human resources as well as potential employers of the workforce • Competence-based training • Training aimed at building a broad skill set (e.g. cross-training and job-rotation) • Discretionary work design (relying on own initiative) • Allowing organizational slack

Fast organizational learning

When looking at organizations in a dynamic environment we consider two different aspects with regards to organizational learning. First of all the organization needs to keep a constant look toward the outside world to be able to proactively obtain knowledge about the dynamics in the environment. In line with workforce alignment we define this as knowledge alignment. Knowledge alignment refers to having the right knowledge at the right time to proactively respond to changes in the environment. Second, an agile organization needs to manage the constant creation, adaptation, distribution and application of this knowledge. Van den Bosch, Volberda and De Boer (1999) refer to this as absorptive capacity.

When changes in the environment are so rapid and discontinuous as they are in a dynamic setting, decisions will often be based on inaccurate, unavailable or obsolete information (Bourgeois and Eisenhardt 1988). However, organizations benefit from trying to constantly sense the environment and obtain knowledge. Eisenhardt (1989) focuses on both speedy and high-quality strategic decision-making. The features of this decision-making process include the usage of real-time information, which is defined as ‘information about a firm’s operations or environment for which there is little or no time lag between occurrence and reporting’ (p. 549). Sumukadas and Sawhney (2004) refer to the importance of access to relevant and timely information, if employees are expected to respond to changing organizational needs. Having real-time, up-to-date information on the dynamics in the environment as well as constantly monitoring the environment are required to be able to respond to these dynamics. Otherwise, the management and the workforce does not know what new situation it needs to align to.

Proposition 3a: Agile organizations apply practices such as acquiring real-time information and inviting external experts to constantly sense the environment to align the organization with its' dynamic environment.

Dyer and Shafer (2003) and Dyer and Ericksen (2006) discuss the process of learning with regard to organizational agility: 'Learning is a process by which repetition and experimentation enable tasks to be performed better and quicker' (Teece et al. 1997, p. 520). With regard to dynamic capabilities we focus on the organizational level. The aim is to create appropriate organizational knowledge. 'Any organization that dynamically deals with a changing environment ought not only to process information efficiently but also create information and knowledge' (Nonaka 1994, p. 14). In this approach Nonaka takes an organizational and proactive approach.

Nonaka and Von Krogh (2009) give the following definition: 'organizational knowledge creation is the process of making available and amplifying knowledge created by individuals as well as crystallizing and connecting it to an organization's knowledge system' (p. 635). In the process of organizational knowledge creation there are three main building blocks: tacit knowledge, explicit knowledge and knowledge conversion. Tacit knowledge refers to knowledge that is unarticulated and tied to the senses, intuition or implicit rules of thumb. Explicit knowledge refers to knowledge that is uttered and captured in drawings and writing. The concept of knowledge conversion refers to the process by which tacit and explicit knowledge interacts (Nonaka and Von Krogh 2009). When we look at the process of knowledge conversion we can see several organizational practices, which are related to four specific phases with regard to creating, adapting, distributing and applying knowledge. In the first phase, individual tacit knowledge is shared among individuals. Then, tacit knowledge is articulated into explicit concepts, which means that knowledge is being discussed and reflected on. In the 'combination' phase, the newly formed explicit knowledge is combined with other explicit knowledge that the organization holds. In this phase the knowledge is documented and shared. Then, the 'internalization' phase aims at individuals embodying this explicit knowledge into their own tacit knowledge (Nonaka, Von Krogh and Voelpel 2006), for example, through experimentation or simulation. These organizational practices might be both formally and informally and at the inter- and intra-organizational level (Nonaka 1994).

In an ever-changing environment, knowledge becomes obsolete more quickly. Yesterday's reality is today's history. In such an environment creating new knowledge is more important than processing this (obsolete) knowledge.

Proposition 3b: Agile organizations choose practices aimed at new knowledge creation over practices aimed at knowledge processing.

In the table below we give an overview of potential organizational practices with regards to fast organizational learning.

<i>Knowledge alignment</i>	<i>Knowledge creation</i>
<ul style="list-style-type: none"> • Collecting real-time information • Constantly monitoring the outside world 	<ul style="list-style-type: none"> • Sharing knowledge between individuals • Discussing and reflecting on knowledge • Documenting knowledge • Experimenting and simulating

Organizational infrastructure

Dyer and Shafer (2003) and Dyer and Ericksen (2006) mention the highly adaptable organizational infrastructure as key in facilitating workforce scalability. However, the highly adaptable workforce is a key competence for organizational agility on its' own. This line of reasoning represents a departure from prevailing practice in the SHRM literature, which, to date, has limited attention for organizational infrastructure as a potentially important construct (Wright and Gardner 2000; Becker and Huselid 2006). Dyer and Shafer (1998) state that three components in the organizational infrastructure stand out: organizational design, business processes and supporting technologies. Dyer and Shafer (2003) provide two relevant organizing principles in this context:

- Fluid organization design: flat, minimal formal authority, limited organizational boundaries, cellular division into small sub-units, and team based (Ashkenas, Ulrich, Jick and Kerr 1995; Morgan 1997; Youngblood 1997; Hamel 2000; Dove 2001).
- Flexible core business processes: routinize internal processes only where, when and no more as absolutely necessary, otherwise rely on the ability of employees to cope with the autonomy given (Foster and Kaplan 2001).

Mintzberg (1992) provides four typologies for the environment of the organization. One dimension is dynamic/stable, while the other is complex/simple. In our discussion we focus on the dynamic environment, in which the best fitting organizational form is 'organic', which is typically an adhocracy (Mintzberg 1992). An organic organizational design includes flexible procedures, mutual adaptation (coordination through informal communication) and a minimal level of standardization. Volberda (1998) provides an overview of the design variables of the basic organizational form with a high flexibility potential. It describes the degree of functionalization to be low in agile organizations, which refers to the extent to which management is subdivided into various functional areas. Furthermore, Volberda (1998) also mentions a flat organization with low process regulations and only rudimentary planning and control systems. By having a minimal level of formalization, routinization and standardization, the organizational infrastructure becomes more adaptable.

A workforce can be scalable, the organization can sense the environment and create new knowledge, however it needs to take place within an organizational infrastructure that allows for employees and management to act accordingly. Therefore, the organizational infrastructure should be characterized by room to maneuver over rigidity, and by output steering over direct control.

Proposition 4: Agile organizations use rudimentary forms of planning and control systems, a flat hierarchical structure and process regulations as to facilitate fast malleability of the organizational infrastructure so that it supports fast reconfigurability of resources.

In the table below we give an overview of potential organizational practices with regards to a highly adaptable organizational infrastructure.

Highly adaptable organizational infrastructure

- Flat hierarchical organization
 - Minimal formal (functional) authority
 - Minimal routinization and standardization
 - Informal coordination
-

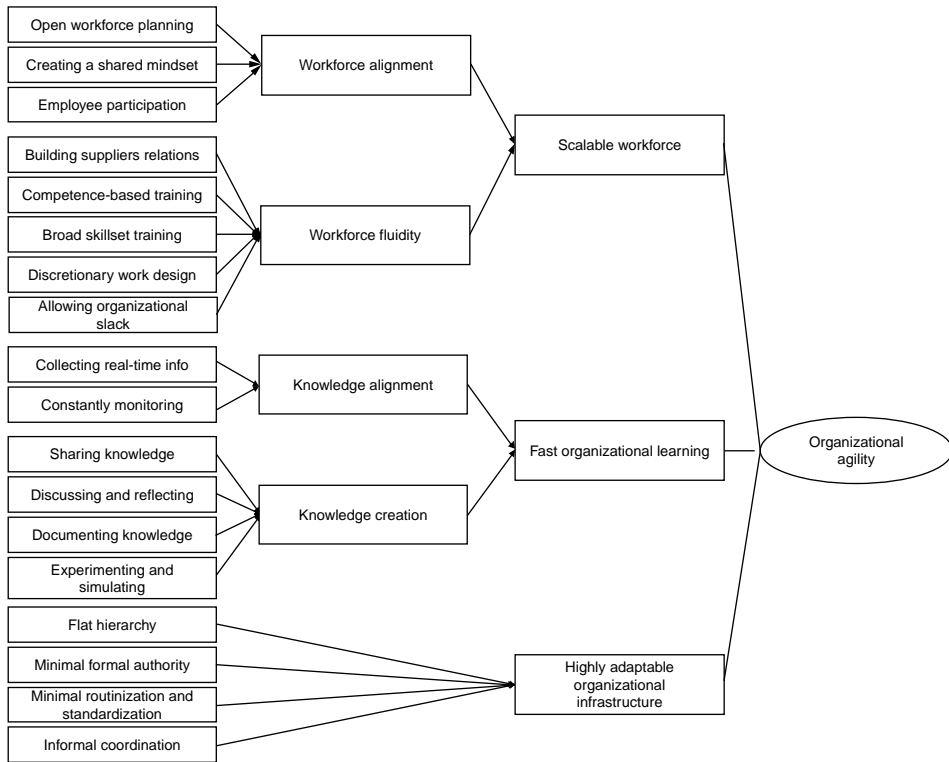


Figure 2. An extended heuristic framework for organizational agility as a dynamic capability.

On the basis of the discussion of possible relevant organizational practices stemming from the theoretical literature, we can now take the next step in developing our heuristic framework from a dynamic capabilities perspective (Figure 2).

Strategic response to institutional setting

The behavior of organizations is not solely a response to the dynamics in the business environment, but also to institutional pressures (Greenwood and Hinings 1996). DiMaggio and Powell (1983, p. 150) put it best: 'Organizations compete not just for resources and customers, but for political power and institutional legitimacy, for social as well as economic fitness'. Legitimacy refers to the situation in which a firm is accepted or judged appropriate by its' environment (Deephouse 1998, p. 360). The search for legitimacy is relevant for an organization's access to resources. To be perceived as legitimate, organizations adapt their formal structures and routines to conform to institutional norms (DiMaggio and Powell 1991). DiMaggio and Powell (1983) describe three important institutional mechanisms. The first mechanism is based on the threat of coercion from either critical resource sources – such as financial institutions giving out loans – for the organizations or governments with legislative power over them. These mechanisms include rules, laws and sanctions, and are legally sanctioned (Scott 2008). The second institutional mechanism refers to organizations mimicking other organizations when faced with uncertainty about what to do. The safe choice then is to implement the practices that everyone else seems to implement. This mechanism includes common beliefs, shared logics

of actions (Scott 2008) and best practices. The third mechanism refers to the normative processes associated with professionalism. The members of an organizational field determine who is in and who is out, based on the conditions of membership and applied methods of work. These normative ideas are diffused by credential institutions (Honig and Karlsson 2004) or professional networks (Greenwood, Suddaby and Hinings 2002; Lee and Pennings 2002), such as schools and universities, professional associations or trade organizations. These institutions determine the content and conditions for the relevant professions.

Hannan and Freeman (1984) suggest that stability and standardization of an organizational form positively affect their access to resources. According to this view, stability leads to consistent actions and outcomes, which resource holders value and reward (Hannan and Freeman 1984; Delacroix and Rao 1993). Jaffee (2001) states that organizations are constrained in their free will by standard operating procedures, values and premises that regularize patterns of behavior, increase the predictability and enhance legitimacy. These propositions make it relevant to take the institutional context into account as a potential constraining factor. Not only is the leeway for organizational action determined by the institutional context, for organizations operating in a dynamic environment it might actually lead to counterproductive organizational practices. For example, the requirement for manufacturers of medical equipment to document all development processes and procedures might hinder the speed by which a new product can be introduced in the marketplace.

The room to maneuver for organizations in implementing organizational practices regarding organizational agility might therefore be limited by the institutional context. However, based on the discussion on beneficial constraints by Streeck (1997), in the long run the institutional context might facilitate organizational agility.

With regards to workforce scalability we see mostly coercive mechanisms, such as national and international labor law and CLAs. These mechanisms might limit the possibilities regarding labor contracts and flex workers, decreasing the level of workforce fluidity. On the other hand these mechanisms might facilitate workforce alignment. Workforce alignment requires employees to be constantly aware of the strategic goals of the organization and the resulting priorities. To make them aware, a strong dialogue is necessary. The formalized voice through the Workers Council helps to involve employees in this dialogue, leading to stronger long-term cooperative relationship (Streeck 1997). Another example might be the agreements on training in the CLA aimed at increasing employability for employees, thereby broadening the skill sets.

Proposition 5a: Coercive mechanisms limit the speed and ease of the transitions in the workforce configuration while increasing the level of workforce alignment.

With regard to fast organizational learning one sees that the institutional context mostly stimulates organizations to process knowledge, leaving less time and effort for new knowledge creation. Normative pressures from accountants, auditors, engineers and scientists require extensive documentation of not only the outcome of the work, but also the procedures that are used. Coercive pressures regarding accountability on both financial and social results and corporate governance lead to extensive documentation. Furthermore, there is a strong mimetic pressure regarding implementing a knowledge database or a 'Wiki-like system'.

Proposition 5b: The institutional context requires organizations to focus on processing knowledge.

These same institutional pressures lead to an increasing focus on strict planning and control processes. The recent financial–economic crisis and society at large call for more governance, compliance (and thus increased formalization) and top management to be held accountable, which limits the use of only rudimentary forms of planning and control systems.

Proposition 5c: The institutional context limits the options of agile organization to apply only rudimentary forms of planning and control systems.

Early institutionalists tended to emphasize the constraining effect of institutional mechanisms (Dacin et al. 2002; Scott 2008), whether being beneficial in the long run (Streeck 1997). More recently attention is given to the room to maneuver for organizations to institutional change. This agency approach refers to the way in which an actor can choose his own response to institutional pressure and provides an explanation for the variation found within an organizational field (Oliver 1991; Lee and Pennings 2002). Jaffee (2001) states that not necessarily the most effective and efficient organizational practice is chosen, but that there is a certain degree of differentiation and conformation needed for high performance (Deephouse 1999). Oliver (1997) states that even in a highly institutionalized context, the right level of adaption to institutional mechanisms can be a source of organizational success. These statements require the organization to have a certain degree of freedom to respond differently to institutional pressures. Agency refers to the active role of decision-makers (Colomy 1998). Management is considered the most dominant decision-maker (Kochan, McKersie and Cappelli 1984; Paauwe and Boselie 2003). Human agency determines whether and how organizations can create more room for strategic choice (Paauwe 2004). Strategic choice gives organizations several options to cope with institutional pressures varying from active resistance to passive response (Oliver 1991). Boon et al. (2009) develop three types of institutional fit based on the distinction by Oliver (1991) and Mirvis (1997) between ‘leaders’, ‘followers’ and ‘laggards’: conformist, innovative and defiant. ‘Conformist’ behavior refers to a passive or neutral response. This means that organizations comply with the rules and regulations and follow normative and mimetic pressures. ‘Deviant’ behavior refers to active resistance, or in other words, not complying with rules and regulations and not following normative and mimetic pressures. Whether organizations opt for conformist or deviant behavior depends first off all on the perception of risk. In the context of institutional theory this means that organizations assess the risk of not complying on their legitimacy. Second, it depends on the focus of attention (Lehman and Ramanujam 2009). This means that an organization might not be able to assess all risks and all efforts on being compliant or deviant. The third type of response refers to being ‘innovative’ in coping with the institutional context by active development of this context.

The level by which the institutional context actually co-determines the success of the agile organization depends on the strategic response chosen by the organization. Propositions 5a–5c illustrate the potential limiting effect of the institutional context. When solely complying with these institutional pressures, the level of organizational agility is limited.

Proposition 6a: By taking a compliant response to the institutional pressures the level of organizational agility will decrease.

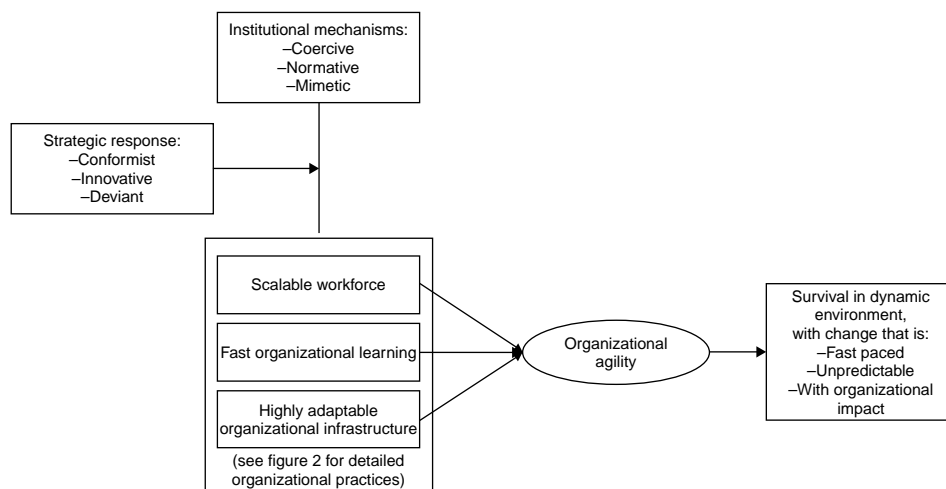


Figure 3. Extending the initial heuristic framework.

When not complying to the institutional pressures the organization is negatively affected in their access to resources (Hannan and Freeman 1984; DiMaggio and Powell 1991). This has consequences for an agile organization, with regards to workforce scalability (in building relations with suppliers of human resources) and knowledge alignment (in being able to access information). Therefore, the organization should – selectively – choose in which cases and with regards to which institutional pressures it can choose an innovative or deviant response.

Proposition 6b: By selectively choosing an innovative or deviant response the level of organizational agility will increase.

This leads us to the third step in our heuristic framework (Figure 3).

Now that all elements of a balanced heuristic framework are explored and discussed, it is time for evaluating, albeit in a provisional way, the application of our framework and possible contribution in times of economic crisis.

A ‘provisional’ evaluation of the contribution and application of our framework in times of crisis

The financial and economic crisis has left both practitioners and policy-makers wondering about how to ensure the economic survival of firms. The focus seems to be on trying to improve the models for predicting the future to prevent or at least predict the next economic crisis. In our contribution we suggest a different approach to the next economic crisis. Making use of the concept of agility we have outlined a framework that highlights a range of organizational practices focusing on three core competencies: a scalable workforce, fast organizational knowledge creation and a highly adaptable organizational infrastructure. Taking into account the institutional setting as well (which can be both constraining as well as facilitating), we have offered an alternative approach, which has the potential to equip organization better for unforeseen and unpredictable circumstances. So, practitioners might be better off accepting that predictions about the future environment of the organization are impossible. Therefore, more efforts should be given in

making sure that organizations embrace this unpredictability and are ready for this uncertain future.

In this economic downturn, as well as the next and the next, it is likely that organizations need to take certain measures, irrespective of the specific events that cause this need. They need to scale down their workforce to reduce costs, while maintaining both the strategic valuable knowledge as well as the possibilities to upscale their workforce once an opportunity arises. And even though this economic crisis is harsh, long-lasting and holds the risk of double dipping, it will someday end and shift toward an economic upturn. In this upturn, again new challenges and opportunities will arise, requiring organizations to be agile enough to take advantage of these opportunities. Organizations will need to upscale their workforce, perhaps even to the limits of possibilities in the labor market. The investments made in training, building relationships with educational institutions and having supply chain management in place, and allowing for organizational slack will then pay off. Until the next economic crisis, when downscaling becomes necessary again, organizations can benefit from having built up an integrated outplacement process and extensive relationships with possible alternative employers or other mobility concepts like industry or region specific alliances.

An organization needs fast organizational learning to spot and take actions on the opportunities in the marketplace that has become increasingly dynamic by the economic turmoil. In the current economic crisis, organizations need to deliver what they can and be innovative to survive. This requires organizations to constantly sense the market, and create new knowledge through discussion, sharing and experimentation. Although these practices in itself seem to be costly and with the risk of financial loss – a risk not welcome during an economic crisis – their effect on the ability to quickly respond to new opportunities will probably offset the costs. By using downtime to experiment with new methods and technology, organizations can not only cut cost when necessary, but also benefit from their new competitive edge in the economic upturn.

Finally, in this economic crisis – with the perceived uncertainty that comes with it – managers might feel a tendency to take control. In fact, in the public debate ‘taking responsibility’ has become a key issue. However, will this prove effective? When expecting employees to be flexible and capable of performing in a scalable workforce, while taking actions to enhance fast organizational learning, they need to be managed and controlled accordingly. This means a focus on discretionary work design, own responsibilities and minimal routinization and standardization. In an economic downturn own initiative from employees is focused on how to do more with less. Until economic conditions change for the better, employee initiative is focused on exploring new ideas. The whole set of these practices are required to be agile and can and will be of use both in times of downscaling as well as upscaling.

However, we understand that this is not an easy task. Due to the often short-term financial consequences – firms not even able to pay next months’ salaries – it is hard to remain focused on building organizational agility. Investing in extensive communication to establish a common sense of direction, building long-term relations with educational institutions, training employees on a continuous base, are all hard to do when organizations find themselves in an economic downturn. However, ‘agility requires waste to be eliminated, but only to the extent where its ability to respond to change is not hindered’ (Conboy and Fitzgerald 2004, p. 39).

Here, firms can make good use of the (beneficial) restraints posed by the institutional mechanisms. By not going into a process of firing employees, but instead making use of constraints imposed by unions or subsidies from governments, organizations can provide

alternative activities, such as training, additional maintenance activities or focus on knowledge creation, increasing their long-term level of organizational agility.

For researchers and practitioners alike the proof of the pudding is in the eating of it, so in the next section we conclude by giving a few recommendations for future research.

Recommendations for future research

Although research has focused on coping with the challenges from a dynamic environment, the specific dynamic capability of organizational agility has been investigated only sparsely in empirical reality. The next step in researching organizational agility is to conduct explorative case studies given the newness of the subject and the approach of combining the dynamic capabilities view with neo-institutional theory (Yin 2003). The explorative nature of the case studies allows academics to get more insight into the actual practices that contribute to or constitute organizational agility. This however leads to multiple research challenges.

First of all, the outcomes of an organization aiming for organizational agility are not just superior performance, but survival. In an ideal situation of empirical testing one would compare organizations that survive in a dynamic environment with organizations that did not. However, how to investigate the latter if they do not exist anymore? An alternative might be to compare organizations that survive in a dynamic environment with organizations that survive in a non-dynamic environment. However, we started this paper with the assumption that nowadays, most organizations face at least some degree of dynamics. To overcome these challenges with regards to theoretic sampling, an objective measure for dynamics in the environment needs to be applied which allows the study of a greater variety of dynamic environments. So we would like to recommend carrying out a number of case studies in organizations, which experience varying degrees of dynamics. In this respect it is important to make sure that we are open to rich and varied information, both with regard to the organizational practices in use as well as the way in which the institutional context impacts the organizations and the way in which management copes with these constraining pressures or is able to convert them into opportunities for increasing agility.

The explorative nature of these studies also requires a constant comparison and interaction between theory and empirics. As shown, there is plenty of academic literature regarding subfields of organizational agility, dynamic capabilities and related concepts such as flexibility. To explore the organizational practices that make up the dynamic capability of organizational agility and the related institutional responses we recommend the use of concepts of grounded theory. One specific basic concept of this approach is constant comparison (Glaser and Strauss 1967). Constant comparison refers to the process in which data are collected and analyzed simultaneously. This contradicts the traditional view of a clean separation of data collection and analysis (Suddaby 2006). The flexibility and limited structure in this kind of research help to keep an open view and allow room for emerging insights to develop new theory based on the data (Glaser and Strauss 1967; Yin 2003). The qualitative design allows for gathering rich and deep data needed to go in-depth into ill-explored concepts and theory. However, the method of grounded theory does not ignore existing literature. The point made by Glaser and Strauss (1967) is not to ignore all prior research, but to prevent researchers to be forced into hypothesis testing, instead of directly observing social phenomena. In this respect grounded theory requires a balancing act between a theory-laden view of the world and an unfettered empiricism (Suddaby 2006). So, the propositions we have developed can be considered as trying to combine the best of both the worlds.

Second, there is the dilemma of differentiation within the organization. When researching organizational agility, where should we look? Here we consider three elements:

- First, and most importantly, the question is whether the organization as a whole is agile, or specific functions or even departments should be agile? Dynamic capabilities are focused on achieving and sustaining a competitive advantage (Teece et al. 1997; Eisenhardt and Martin 2000). Following the emerging trend in the strategy literature achieving and sustaining a competitive advantage is focused on effective strategy implementation (Barney 2001). Becker and Huselid (2006), focusing on the link between HRM and strategy, emphasize the importance of strategic business processes and strategy implementation as well in achieving and sustaining a competitive advantage: 'That focus on strategy implementation is operationalized and made concrete by a focus on strategic capabilities and activity systems reflected in strategic business processes' (2006, p. 903). Strategic business processes refer to those business processes that are the source of the value customers derive from the firm's products or services (Becker and Huselid 2006). This approach has an important implication for analyzing organizational agility. In fact, we assume that only in strategic business processes the presence of organizational agility leads to sustainable competitive advantage in a dynamic environment. Therefore, the focus in doing empirical research should be on key strategic business process and whether organizational and human resource practices aimed at achieving organizational agility are linked to these key business processes.
- Second, we need to consider the focus on perceived uncertainty within organizations (Duncan 1972). More and more organizations are facing at least a minimum level of dynamics in their environment. Taking mimetic pressures into account (such as the introduction of a flexible ring in the workforce) organizations that actually do not face high level of dynamics, might still perceive a high level of dynamics. As a result they might even implement practices aimed at counteracting these dynamics. This focus on 'perceived' dynamics leads to a need to focus on the actual organizational practices, which might differ from the intended practices aimed at counteracting the perceived dynamics (Nishii and Wright 2007).
- Third, Becker and Huselid (2006) point out that managing the workforce is a shared responsibility for HR and management, unlike managing the HR architecture. This means that in the analysis of the organizational practices aimed at developing the competencies that lead to the dynamic capability of organizational agility we recommend a focus on both HR professionals and line managers at various levels in the organization, and their role in the implementation of the intended organizational practices, while also focusing on the employees with regards to the actual practices.

Conclusion

We have endeavored developing in a systematic way a range of capabilities and practices to survive the unforeseen dynamics of an economic crisis such as the one that started in 2008 and one of which the consequences are still felt in every aspect of daily life, not only within the business community but also for consumers and citizens alike. Governments – short of money due to having invested a lot to back up banks and speed up economic growth – are right now cutting down on budgets for health care, education and social welfare programs. As a consequence social unrest hits the streets of many European countries. Our framework will not be able to resolve those issues, but we hope to make a contribution for those companies, who want to be prepared for the next economic crisis.

Hopefully our insights developed so far will help policy-makers – both within the organization as well as outside – to enable and enlarge organizational agility. In the meantime testing our propositions is the next step, of which the outcomes will help to further refine and extend the framework as depicted in this paper.

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