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TOWARDS A SUSTAINABLE RISK MANAGEMENT: ORGANIZATIONAL COMPLEXITY AND ACHIEVEMENT OF STRATEGIC OBJECTIVES

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Abstract

This article advances in analyzing and developing arguments about the possible convergence of different models of specific risk management, with the purpose of giving support to a Sustainable Risk Management (SRM), from a systemic perspective that takes into account the present complexity within the organizations. Thus, the management framework of ISO 31000:2009-Risk Management through which the promotion of a context of assessing diverse risks in an integrated way (such as the environmental, the related to health and occupational safety or to quality) is presented. Finally, we move forward in proposing the articulate inclusion of other strategic organizational subsystems such as innovation, knowledge management and others, which aims to enabling the emergence of synergistic effects between risk treatment and the set of decisions-actions related to its management, making an impact on achieving organizational objectives in a key way.

Key Words: Risk Management, Sustainability, Organizational Complexity, ISO 31000.

Topics groups: Critical Management.

INTRODUCTION

Integrating sustainability and risk management in the organizational strategy arises as an answer to the need of managing multiple and complex variables involved in organizations. This strategic integration would have the purpose of minimizing the unwanted possible effects of some risks and explore new opportunities derived from the analysis of sustainability risks.

¹ GINGEOS in Spanish.

The organizational sustainability integrates other areas capable of being managed in an organization consistent with the society and the environment that is to say, managing from the complexity that requires the thought os sustainable organizations. That is how to tradicional administration adds up the need to attend to other variables of preponderant performance, and from there to outline organizational strategic objectives in search of satisfying the *stockholders*' group that are integrated in it. That is, strategic objectives that cover the economic-competitive needs and, in the same order, aspire to meet the interests of society, the environment, people, the clients, among others, in the search of sustainability.

In the development of these multiple –and sometimes antagonistic– management objectives is how complexity becomes clear. Given the set of dissimilar activities that interact among them, generating a quantity of processes that must be managed systemically and coherently, in such a way that enables the compliance of outlined objectives, taking the organization as a whole and analysing the set of needs, effects, and interactions associated.

Generically, ISO (2009) indicates that "organizations of all types and sizes are facing a range of risks that can affect the compliance of their objectives", establishing that risks may have a positive or a negative effect on the organization. The failure to meet the objectives outlined would lead to greater difficulties in progress, it would reflect on the positioning and impact of the organization in the market that operates on and, finally, it would affect the interest groups associated, thus reducing its sustainability.

That is why, in the attempt to deal with certain demands, the organizations make use of varied tools of specific risk management, by which different risks try to be systematized through emerging techniques from the following series of standards: ISO 9000 (Quality Management System); ISO 14000 (Environmental Management System); OHSAS 18000 (Occupational Health and Safety Management System); ISO 26000 (Guidelines for Social Responsibility); and ISO 27000 (Information Security Management System), among others specifics standards of business area. Carrying on these parallel systems of risk management presents the difficulty of the multi-task work and the sector-wide barriers imposed in it.

When analysing these standards, it is possible to distinguish that each one of them defines risk from a limited content perspective, which deals with and proposes a treatment according to its determined object application, without considering the system as a whole and lacking in the analysis of possible performing interactions. In every case, they cause a series of application of actions in common, such as analysis, treatment, and continuous improvement of the appropriate indicators of each system.

Then, it is necessary to emphasize that the risk related to a vector present in an organization is just one. It has derived effects in multiple areas and therefore it is required to make the link correctly between risks – effect in the organization and, from there, to be able to manage it, understanding the benefits with provides its adequate treatment, without the restraints that the sectorial analysis outlines. The sectorialized treatment of different risks, typical of old conception of the organizations, deviates from the current tendencies of management from the complexity science. The understanding of complex phenomena, according to Rezzónico and Fernández (2011), demands thus "a holistic thought, in contrast with the simplifying analytical vision that, when the whole is broken into its parts, leads to considering just the elements of the systems,

regardless the complex articulation and dynamic functioning of its emergent properties".

From the understanding of this complex organizational reality, the arguments for the Sustainable Risk Management (SRM) adoption are intended to be developed, taking as reference frame the proposed by the standard ISO 31000:2009 –Risk Management. This is so to contribute with a generic tool that enables a logical and institutional framework in which to deal with risks, minimize certain uncertainties and loses, and cooperate in a critical way in the decision-making to take advantage of new opportunities and achieve its strategic objectives in the safest possible context to its sustainable performance.

INTEGRAL RISK MANAGEMENT

For stating qualities, scope and limits related to risk, its definition is initially presented, to analyse then the issues related to risk management (RM). Technically, the precursor Australia/ New Zealand standard AS/NZS 4360-2004 about risk management defines it, as "the chance of something happening that will have an impact on objectives, measured in terms of probability and consequences". Meanwhile, the standard ISO 31000:2009 provides a generic and systemic framework to risk management in organizations, defining it as an "effect of uncertainty on the objectives", understanding that the "effect is a deviation from the expected, positive or negative. Objectives can have different aspects and can apply at different levels, such as strategic, organization-wide, product and process."

To visualize and to describe the causes of uncertainty in the completion of organizational objectives would mean to narrow the field of risks to management scope, i.e., not to treat risks as uncontrollable dynamics, but as susceptible to being managed. To incorporate risk in management process, such as Pucci (2004) states, "allows operationalizing the own concept of risk, which leads to innumerable advantages: risks become tangible and can be associated with specific processes and therefore be analysed, valued and treated adequately".

Thereby, it becomes beneficial to stress that in all organizations a potential of events can be configured as opportunities to acquire benefits or, to the contrary, threats to sustainability and business success. That is why Dopazo y Candelario (2011) sustain that "the present models of integral risk management address both aspects, being this strategic attitude key to ensure the balanced progress of the organization". The ambivalence proposed towards a risk has an exception in the case of occupational safety, in which it must be taken in the negative sense and, therefore, the work will aim at avoiding or preventing the unwanted consequences of these.

That is how the need to evaluate from the organization's complexity emerges, from the interconnections network enabling different answers and effects towards a possible risk. This is risk managing in an integral way, establishing an appropriate infrastructure for analysis and developing an according organizational culture, which allows to evaluate and to measure the effects in holistic terms. In line with complex thinking, ISO (2009) promotes the "establishment of organizational context and communicational and consultation activities and holistic and systemic thinking, taking the organization as a whole where different phenomena, cause of risks, interact". In the same sense, Rezzónico and Fernández (2011) point out that "the existence of the varied set of phenomena, its relationships and the effects they cause in the organization, aspiring to a

multidimensional knowledge of the ways in which different strategies can affect the organization's performance" must be examined.

This distinctive characteristic of RM permits to recognize risks, evaluate and regulate them integrally, ones in relation to others, taking the organization as an "living organism", as stated by Morgan (1990), where it is not possible to analyse the parts in a separate way, but to study the general interaction and the organism's responses to the environment and the possible regulations which emerge from the feedback among them. That is, trying to create a network of sites linked to decisions and actions produced with regard to risk evaluation and treatment, creating interconnections such as the ones of a brain –accordingly to the proposed by Morgan– where communication, information and decision making flow, as well as the improvement of the ties and the integrity of the organism.

As indicated by Martínez García (2009) and Dopazo and Candelario (2011), managing every risk in an isolated way, without considering the relations among them, "introduces inefficiencies because the organization does not really know its exposure to real risk, both its volatility, frequencies nor severity effects. That is to say, the organization does not have the adequate information to assign its resources in an efficient way". In addition, to Martínez García (2009), these models "incorporate management experience, inherent to systemic revision of processes, orienting the uninterrupted learning loop to capitalizing the experience in a constant search of knowledge and adaptation to change of an organization".

In consequence, a RM system that makes visible and integrates them would help in the organization with the intelligence to analysing, evaluating, and treating the factors, and it would contribute to clarifying –in organizations' human resources– the decision making logics and facing the emergent complexities of environments in which it is operatively acted. Therefore, the implementation of a RM system would be considered a strategic process with the aim of integrally improving the management practices: to align behaviours, processes, communication, direction, and standards compliance, according to risk culture and strategic objectives proposed.

SUSTAINABLE MANAGEMENT

At the same time that in large companies risk management began to be implanted, different countries, organizations and institutions worldwide started to debate about sustainability. The expression sustainable development (SD) is attributed to the report generated by the UN World Commission on Environment and Development (1987), in which it is stated, "sustainable development is development that meets the needs of present generations without compromising the ability of future generations to meet their own needs". Most recent conceptions provide a wider concept of sustainability. Dresner, cited by Nemli (2004), points out that in SD "economy, social justice, environmental science, business management, politics and laws are combined".

Kliksberg (2009), who ensures that "nowadays citizens, consumers, investors, or workers expect that companies and managers, whose decisions influence in the life of all, adopt high ethical standards of behaviour", exposes the relation of the SD impact on society and the changes that it has produced. In reference to the changes in the inclusive ways of thinking and acting, emerged with the intensification of SD, Albarracín (2002) states that "while before the idea of a blind growth, in which the future was simply the development of existing potentials, prevailed; now the future acquires the critical reference value of social actions".

The management of SD in organizations has been translated under a new logic, widely spread, known as Corporate Social Responsibility (CSR), in which the corporate government is related to social, environmental, and ethical commitment that an organization has to carry out. At present, socially responsible organizations delimit and promote policies and programmes that integrate with its environmental and social setting, having become aware of being in front of an initial process of sustainable continuous improvement, becoming thus in an essential management tool in its future evolution. In this way, to emphasize the role of corporations that face this reality becomes significant, given that, as expressed by Nemli (2004), the corporations "are the fundamental cells of modern economic life" as for they are a receiving and formatting part of the scenarios of society where they operate through on-going feedback that open systems suppose.

Global challenges related to SD require multiple aspects. In fact, these challenges would have consequences on every aspect of the corporation's strategy, where the view of organizational complexity takes a fundamental value, because the effects of specific actions derived would reflect on the organization, creating new internal and external regulations. In such sense, Dunphy et al. (2003) suggests that corporate sustainability is "creating value in a long-term, taking advantage of the opportunities and the risks derived from the economic, social and environmental evolution management, in order to achieve competitive advantages through adoption and development of strategies based in sustainable commitment".

Then, it is necessary to incorporate a new concept: sustainability risk, an useful expression when an organization intends to signify itself as a responsible and sustainable corporation. According to Dopazo and Candelario (2011), it refers to "the evolution in the interpretation of risk and the concept of improved integrated risk management models, according to the incorporation of CSR". This refers to certain maturity in the RM and in the organization, which accomplishes to involve CSR in managerial process, in decision-making and in their strategies determination, improving thus the capability to create value. The link that it presented when including sustainability under risk management in an organization is, for Yilmaz and Flouris (2010), "an emergent research field", given the need to minimize uncertainties related to the strategic objectives achievement, in which the derived principles of sustainability are included, such as requested by diverse social actors.

The SRM refers to a model that sets up the analysis and the integral treatment of sustainable risks as a source of competitive advantages that are sustained over time, actively including the economic, social, and environmental aspects in strategic objectives. The SRM model, thus understood, would help managers to create value in the long term and to establish a sustainable culture, which gives support and initiative to responsible actions and which helps to use sustainable tools.

SPECIFIC RISK STANDARDS

For the purpose of giving support to guidelines in pursuit of analysing a possible models inclusion from systemic integrity and sustainable development in organizations, we

pretend to analyse how particular standards applied by organizations deal with the subject risk, in response to the need of minimizing some risks.

ISO 9001:2008 - Quality Management Systems: this standard "focuses in the efficiency of the quality management system in order to meet the customers' needs". For this, an approach based on processes is proposed, in which "the customers play a significant role in defining requirements as inputs" (ISO, 2008), to then evaluate the product or service acquired and to generate a systemic feedback indicator based on satisfaction.

Under the thought of risk presented, it is appropriate to point out that the standard addresses the customer's satisfaction subject risk. If this were evaluated from its negative viewpoint, the causes and effects linked to the "nonconformity of the customer" (ISO, 2008) and to its potential loss would be analysed, with what this could generate in the organization. Meanwhile, if it is positively linked, the actions and decisions that helped to increase this satisfaction would be assessed, to extend and optimize them continuously.

ISO 9004:2009 - Managing for the sustained success of an organization-A quality management approach. This standard includes the needs and expectations of all interested parts in its analysis and provides guidance to the systematic and continuous improvement of the organization's overall performance. As defined by ISO (2009), "the sustained success of an organization is achieved by its ability to meet the needs and expectations of the customers and other interested parties, over the long term and in a balanced way".

In its definitions, ISO (2009) establishes that the sustained success is a "result of the ability of an organization to achieve and maintain its objectives in the long term", where meeting the needs and expectations of the parties interested contributes to achieving the sustained success for the organization. Then, based on the above, the subject risk dealt with is the achievement of long-term objectives.

ISO 14001:2004 - Environmental management systems. This standard states the "requirements for an environmental management system to enable an organization to develop and implement a policy and objectives which take into account legal requirements (...) and information about significant environmental aspects and, based on it, take the necessary actions to improve its performance" (ISO, 2004).

From this standard, environmental aspects are managed, considered by ISO (2004) as "aspects of an organisation's activities, products or services that can interact with the environment", and environmental impacts, defined as "any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspect". In this definition, the possibility to take both positive and negative aspects of environmental aspects is included, in correspondence to risk management proposal of ISO 31000:2010.

OHSAS 18001:2007 - Occupational Health and Safety Management System. This standard is in itself a complete risk management system related to health and safety in the work environment and, as such, it proposes hazard identification, risk assessment, and control determination, making possible for an organization to examine its risks and improves its performance in this sense. The subject risk that it deals with is defined by OHSAS (2007) as the "combination of the probability of a hazardous event or exposure

occurring and the severity of injury or illness that can be caused by it". It is clearly stated, "It deals with occupational health and safety (OHS), and not with other health areas, such as welfare programs for the employees, products' security, damage to property or environmental impacts".

ISO 26000:2010 - Guidelines for Social Responsibility. This standard defines Social Responsibility (SR) as the "responsibility of an organization before the impact of its decisions and activities cause to society and the environment, through an ethical and transparent behaviour that: contributes to sustainable development, including health and society's welfare; takes into consideration the expectations of its interested parties; complies with the law in force and is coherent with the international norms of behaviour; is integrated throughout the organization and takes it into practise in its relations".

Thus, the standard can be used as a summary of the society's expectations that need to be taken into account by the organizations. In line with the arguments previously exposed, based on organizational complexity, ISO (2010) suggests, "an organization must analyse the fundamental matters in a holistic way, i.e. it should consider all fundamental matters and affairs and their interdependence, instead of focusing in one affaire".

From the analysis of the subject risk to address, this standard includes the risks presented by the other standards mentioned, to which other guidelines, mainly ethical, add up, intending to strategically install the treatment of all these factors and in an integrated manner, valuing and making decisions about the set of activities and the involved that integrate an organization.

ISO 27001:2005 - Information Security Management System. This standard is based on a specific risk management model for the safety of all types of information in an organization. As such, it establishes and defines a management system based on informational risk assessment, estimation, analysis, and control in the context of the business' type.

So far, diverse risks and how some standards try to manage each one of them have been described. The analysis and treatments that each standard proposes are found on similar systemic and complementary structures. However, each one of them narrows the management model to an area from where it proposes the evaluation of factors and its effects.

SUSTAINABLE RISK MANAGEMENT

To face the amount of risks that organizations are exposed to (environmental, economic, physic, of market, legal, among others), there are three possible targets where they can affect: finances, people, and environment. Thus, the analysis of the diverse risk factors and its effects must be integral and convergent. Following the guidelines of Labadová (2004), "organizational management must be coherent, not being the application of several independent management systems possible in a corporation", even more if they are applied without the synergy of the joint assessment of factors and the possible effects derived from them.

In this sense, risks management can be used as an integration factor, given their nature and the common denominator towards their management. Pucci (2004) emphasizes, "the common element that has this risk diversity is uncertainty and indeterminacy component, which involve a risk management of specific characteristics, which differentiates it from other kind of management". Thereby, after the understanding of complex risk phenomena that can affect an organization and in pursuit of advancing towards sustainability, it is possible to join the connections between risks and synergic effects over the organizational targets and, from there, to justify applying a contextual and professional framework focused on risk management.

The contribution of the standard ISO 31000 is the generation of a framework of context and associated risks analysis as the basis of a management system from complexity. To identify and assess risks within the contextual framework would help to decision-making, being based on the contributions and threats that risks effects can cause in the outlined objectives. In this way, ISO (2009) justifies that "risk management contributes in a tangible manner to the achievement of objectives and to the improvement of the organization's performance".

The La SRM proposed, based on ISO 31000, leads to the generation of a model supported in the principles of SD, for the management of any kind of risk. That is to say, it integrates as a keystone to the planning and managing process, so that it can orientate the actions of the organization based on the contextual sustainable framework developed. As of that point ISO (2009) recommend, "the organizations develop, implement and improve in a continuous way a framework which objective should be integrate the risk management process in the government, of strategy and planning processes, in management, and elaboration of reports, as well as in policies, values and in the entire organization culture", under an agreeable, explicit and clearly agreed and communicated context.

The process proposed by ISO initiates with establishing *the context* of the organization, i.e., defining the external and internal environment, valuing its nature, its reason to be, the objectives and politics that give the organization the framework where individuals must work, outline and align their individuals objectives to accomplishing the strategic objectives if the organization.

This process must be supplied by *communication* and *consultation* with the interested parts to know their needs and objectives, and finally *monitor* and *check* continuously their accomplishment and the coherence of the decisions and actions taken. In the case of the SRM presented, the SD's principles the organization promotes must be established, the internal and external parameters to be included in its SRM and the boundaries of the society where it will generate bonds and the current economic and environmental details with which the organization counts on must be defined. Besides the identification of assets and liabilities which it will have to face the objectives to be proposed.

In the core of the process of RM of ISO 31000, risk assessment is centred. This stage subdivides in risk assessment, analysis, and evaluation. As to the *risk identification* stage, the goal to achieve is to generate an exhaustive list of risks that can affect the organization's accomplishment of objectives, for it will be necessary to consider possible causes, effects, and scenarios. As regards *risk analysis*, the objective will be to determine the likelihood of risk occurrence, considering its positive and negative consequences. This analysis must be understood from multiple levels of risk and areas

of the organization, considering dissimilar information, data, and sources. Finally, *risk evaluation* has the purpose of helping in decision-making, based on previous analysis and in the priority consideration of risks that need to be treated, according to the proposed ideological framework.

Finally, *risk treatment* includes the selection of one or several systems to control and change risk, basing it in the cyclic process of continuous improvement. Given that ISO 31000 does not propose any structured management system, it is possible to include methodologies and tools from other management systems in a compatible way, situating them under the contextual framework of the organization and its principles.

Every standard, based on the cycle of continuous improvement, concludes it model with monitoring and constant revision of the executed management processes. This one not being an exception, although it is necessary to point out that for ISO (2009) "the risk management activities must be traceable", so as to keep base files to the improvement of methods and tools of the management processes made. From the viewpoint of organizational knowledge management, it is key to store, treat and transfer this strategic information with the purpose of improvement, re-use, experience capitalization, decrease in costs and efforts, among many other advantages of knowledge management, claiming the proposed traceability to these profits.

The SRM, thus understood, integrates the principles of sustainability suggested in ISO 26000, for it creates, holds, and improves a Framework based on ISO 31000 and integrated from organizational complexity. As justified by Merlin et al. (2012), "the sustainable development principles directed by contextual thinking, must guide the procedural thinking", to provide with the conditions, resources and objectives to accomplish. To position SRM to a managerial level in organizations is then suggested in order to give the adequate treatment to its transmission, communication, and institutional involvement. The operational level, characterized by the task making, must perform the specified functions to reach the established goals in superior levels.

The standards ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007, and ISO 27000:2005 have direction to operational level. That is to say, they provide the Tools and techniques, which help to set operatively the treatment of diverse identified and valued risks in a contextual integral framework and carry out the necessary continuous improvement cycles so that risks achieve specified tolerable levels.

A convergent of the diverse treatments of specified standardized risk would be accomplished, from the integration within the logical framework proposed in SRM. Only then it would be possible to make the intervening risks visible in an organization and give consistency and meaning to specific treatments, which tend to achieving sustainable objectives that the organization has proposed.

ARTICULATION OF ORGANIZATIONAL STRATEGIC SUBSYSTEMS

As mentioned previously, the SRM proposed tries to be used as a starting point to the inclusion of other intervening logics in its management in an organization, and necessary to be integrated and managed in a strategic way. For Moller y Henriksen, cited by Henschel (2011), in the last level of maturity of RM not only we can find risk control, but also an opportunity seeker, where RM is used as a proactive management discipline. The application of integral RM in the organization, according to Henschel

(2011), has been recently called risk leadership, "which has emerged to explain how a set of broad fields are every time more integrated into the organization's strategy, from where to communicate, to educate and to measure according to the designed strategy".

To use the SRM from its positive side as a proactive trigger would help as a detector of new objectives and improvements, applied to horizontal organizational disciplines. One of these disciplines is knowledge management, which, as stated by Rezzónico y Fernandez (2009), integrates in its meaning aspects related to creation, storing, transference, and application of knowledge. The knowledge is created and transmitted by an individual, a work group or an organization, which have to learn from their own experiences and studies and from the results achieved by other actors, who operate as external sources.

The joint use of risk management and the tools proposed by organizational knowledge management would give the power to detect opportunities and tacit knowledge and share them in an organization, enabling innovation in different areas, learning from experience to sort conflicts and decision-making. As stated by Mohsen (2010), knowledge is intangible, dynamic and difficult to measure, but without it none entity could survive.

Other way of use SRM as a proactive trigger is from its links to needs for innovation. As emphasized by Rezzónico, Mansur y Muñoz (2010a), "the innovative ability is largely dependent of stored knowledge and the activities done to activate it". ISO (2009) suggests, "the organization should evaluate related risks with the innovation activities planned, considering the potential impact of change on the organization". As this need is displayed and managed properly, the possibility to innovate is more likely to be materialized.

As regards to the development projects of new products, the need to manage an integrated process is identified, so as to be able to include activities such as: detection of market needs, marketing analysis, competitive intelligence and intervening technology, among others. Choi and Choi (2012) suggest that RM gives the necessary support to identify, assess and treat the intervening risks in an integrated design of products and processes through the correspondence between communication and consultation under the paradigm of concurrent engineering.

Thus, it is possible to include other needs and risks of strategic important, to name a few: risks in the integration with providers, the making of growth projects, external financing needs, competences management in human resources, the risk of qualified personnel drain, the cultural diversity approaches when interacting and working in global markets, among others.

Finally, the SRM would provide the sufficient framework to act under the principles of organizational sustainability. The internalization of SRM would grant the posture of: before an event, situate it in the organizational context and its principles, assess its risk: positive or negative, analyze the possible consequences on the objectives and decision making, all inserted in the process of sharing internal knowledge, with the aim to driving the growth and double loop learning. That is to say, make intensive use of the virtues of sustainability in intra-institutional cooperation, through an adequate risk management.

CONCLUSIONS

From the understanding of complex organizational reality and the inclusion of needs and objectives of the different people involved in organizations, the SRM is presented. This sets an organizational culture based on the integral risks identification and analysis and their impacts on organizational objectives, in order to make according decisions, showing itself as a source of competitive advantages that will be sustained in time.

SRM objective is to minimize loss, potentiate and take advantage of opportunities and act accordingly to achieve the strategic objectives actively including in them the economic, social, and environmental aspects. The accomplishment of objectives and its management from this proposed logic would contribute to the organization's success and the sustainability in the market it operates.

The standard ISO 31000:2009 provides a holistic and transverse tool, which allows to give a cultural, logic and institutional framework where to deal with risks, systematically cooperate in decision making and be a proactive trigger in the identification of emergent factors and organizational continuous improvement. Thus, it is possible to append the standardized treatments of specific risks, integrating them as operational tools and techniques for risks treatment assessed in a defined contextual framework.

This SRM proposal would help managers to create value in a long term and to establish a sustainable culture, which gives support and initiative to responsible actions and which helps to manage other key factors and to face the complexities from the environments in which one acts. Finally, it would contribute to align behaviours, processes, communications, direction, and standards accomplishment according to risk culture in a significant way, thus providing success to the organization and the people involved.

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