# TOWARDS A MOTIVATIONAL MODEL TO UNDERSTAND THE MANAGERIAL COPING WITH SUSTAINABILITY ISSUES INTO THE UNIVERSITY SYSTEM

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## Abstract

Researchers have consistently shown a relationship between the efforts and the sustainability goals pursued by Universities, but this inquiry has yet to fully examine the theoretical mechanisms through which this relationship works, at an individual level.

The present work will use the Motivational Perspective Theory, that has gained support and attention as a way to understand the relationship among sustainability issues, its relevance and profile of individuals in charge of decision makers into the University System. In this theory, primary and secondary appraisals could be considered elements about what achieving the SDGs.

Using items that assess three latent variables (F01-Efforts; F02-Returns; F03-Mandatory) of sustainability relevance, the Motivational Perspective could be used to examine whether primary and secondary appraisals mediate the relationship between sustainability relevance and ways of coping.

The contribution aims to deepen the understanding of how and to what extent sustainability issues could affect the decision-making processes in the University System. The Authors are conducting an exploratory analysis to verify how the Universities' managers who are in charge in pursuing the sustainability deal with the scopes.

Authors are adopting the Motivational Perspective to analysing the prevalent commitment (*challenge* vs *threat*) and to identifying the underlying coping strategies.

The research uses two samples: the first includes the Italian State Universities listed in two important sustainability performance rankings – Times Higher Education (THE) and UI GreenMetric; the second, used as control sample, includes Italian Universities (public and private) with the correspondent proportion in sizes (small, medium, big) and locations (North, Centre and Southern Italy).

Comparing the decision-making processes by the two samples to coping with the sustainability issues, the Authors aimed at:

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1.  measuring the relevance of some Sustainable Development Goals (SDGs) related to the University System, by defining three latent variables(F01-Efforts; F02-Returns; F03-Mandatory);
2.  identifying the mechanisms through which coping may be related to personality characteristics (primary appraisals) and outcomes needed (secondary appraisals), based on the Motivational Perspective;
3.  assessing the way (Challenge *vs* Threats) in which an individual in charge with sustainability actually copes with topics and events related to it.

When Universities are asked to pursue sustainability goals, it is interesting to verify what is the role of the individual, his personal characteristics, perceptions and objectives in defining the strategies to achieve such goals.

The results of the study could enrich the theory on sustainability with insights on the the relationship between the relevance of sustainability issues and the individual motivational pushes.. The results may lead to define the relevance as a multidimensional construct comprised of items extending beyond the ethical sphere, such as the efforts made, the returns gained and the compulsory/regulatory nature of some issues.t.

**1. Introduction**

Sustainability has become a central topic in the international, national and local political agenda, as well as in the scientific research as it is witnessed by the substantive interdisciplinary international contributions (Billi *et al.*, 2021). Nonetheless, the concept of sustainability, now also declined in sustainable development[1], is difficult to define due to its intrinsic multidimensionality – economic, social and environmental aspects– and its dynamic nature – the concept is evolving due to the historical-spatial influence of the main actors on the global economy and politics scenario.

In response to this complexity, the sustainability and sustainable development literature initially focused on environmental issues (Atkinson, 2000; Lozano, 2019), then shifted the focus on the need to balance traditional environmental sustainability issues with economic and social dimensions (Ryan & Cotton, 2013), as well as on the need to adopta holistic perspective where the interconnections among the different dimensions are considered. This perspective is primarily related to the triple bottom line framework (Elkington, 1997; Lozano, 2019) "a model that presently dominates the political and to some extent the academic debate on sustainable development" (Holden, *et al.*, 2014, p. 131).

From the socio-political and institutional view, the United Nations have provided the most recent interpretations of sustainable development in the form of the Millennium Development Goals (from 2000 to 2015), with its seventeen Global Goals and 169 targets for sustainability development, and now with Agenda 2030, an action plan structured on SD objectives and corresponding targets. In particular, Agenda 2030 calls all the categories of socio-economic actors (individual and collective) to embrace new models and trajectories in all areas of political action, society, and economy (Di Nauta *et al.*, 2020), providing a widened sustainability frame declined in the SDGs and their targets.

When shifting the focus from the concept of sustainability-sustainable development to the concrete choices that individual decision makers put in place in order to adopt sustainable behaviors from the perspective of the organizational competitiveness, the decisional context, where their preferences are structured, becomes particularly relevant.

It is no coincidence that the ample literature on organizational decision-making processes describes the decision maker approach based on his perceived risk profile, on the criteria for evaluating the expected returns/outcomes in respect to the availability of resources, as well as socio-institutional pressures (from the others, Baird & Thomas, 1985; Sitkin & Pablo, 1992). This is confirmed by Organizational Change Management (OCM) literature, which recognizes the decision-maker responsibility of defining the actions trajectory to be taken from the organizational competitiveness perspective (Hambrick & Mason, 1984; Wiersema & Bantel, 1992; Mento *et al.*, 2002; Judge *et al.*, 1999; Rodríguez *et al.*, 2019); in addition, "organizational leadership is one of the main internal drivers for corporate sustainability" (see Lozano, 2015, 2013; Domingues *et al.*, 2017, p. 299).

To analyze the willingness of the organizations to inspire their governance and management to the sustainability principles, it is thus appropriate to adopt an approach focused on the decision-maker's perception of the contextual conditions or need-variables that guide, more or less directly, the decision-making process. These conditions influence the decision-maker as to whether qualify the scenario as a challenge to be accepted in a competitive key or, rather, as a threat from which to escape.

The analysis of the perception of the social, environmental and economic drivers that guide the organizational decision-making process becomes a prerequisite for the evaluation of the

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[1] The introduction of the "sustainable development" concept adds dynamism to the broader concept of sustainability. In fact, "development" requires the objectives identification to be achieved with respect to the different economic, social and environmental dimensions, requiring the improvement and change search with respect to a given context condition.

effectiveness of the actions , the results achieved and any deviations from the set objectives. This means that every decision depends on the decision maker's perception of the strategic options to be put in place and which can alternatively configure a threat or challenge. This approach is classified as the process of appraisal and it relates to a number of factors (among whichi availability of coping mechanisms and previous experience). If "it is very important for managers at different levels in an organization to understand: (1) *Why* change is important? (2) *When* change is needed? (3) *What* needs to be changed? (4) *Who* will be involved and (5) *How* change can be successfully managed?" (Ha, 2014), at the same time, it seems appropriate to focus on the decision-maker/organizational leader's perception of the conditions that characterize its decision-making space and, therefore, on the action, motivation and cognitive processes as discriminants of the relative strategic conduct.

The research examines the High Educational Institutions (HEIs) and the actions taken by their organizational top management in the field of sustainability. The challenge for complex organizations is to seize the opportunities arising from sustainability principles to promote new institutional governance mechanisms, orienting internal decision-making processes, the resources allocation, the incentives system for the teaching and research areas. In fact, in the last decade, these organizations have begun to adopt a wider vision on sustainability, clearly characterizing their mission, training, and research policies and objectives, both individually and collaboratively.

In addition to that, the research objective is to deepen the understanding of how and to what extent the sustainability issues could affect the decision-making processes in the Italian University System. In doing so, the research acknowledges that for many universities around the world, sustainability is no longer just one of the possible approaches available, but is now the single necessary and responsible development strategy.

The successive reflections start from the results of a previous research (Di Nauta et al., 2020) aimed at circumscribing the areas of the strategic planning within Universities that envisaged a greater commitment in terms of sustainability. A content analysis was conducted on the strategic plans and sustainability reports of a sample of Italian universities. The declarations have been classified according to the four organizational pillars – *Education and Learning*, *Research*, *Operations and Governance*, and *External Leadership* – and have been categorized consistently with the Sustainable Development Goals (SDGs of Agenda 2030). Despite this article addresses the impact of sustainability dimensions in universities and the adoption of planning and reporting tools (*What do Universities do?*), it doesn't investigate the perception of the challenges to an effective change management and the leadership role in the process of embedding sustainability into the core activities and operations of universities (Mader *et al*., 2013).

From the methodological point of view, the research group proposes a theoretical approach, based on the Motivational Model (Skinner, 1990) and on the integration between the theoretical assumptions of the Prospect Theory (from the others Levin *et al.*, 1998) and Operational Change Management (recently Rodríguez *et al*., 2019), to identify the motivational approach to the sustainability objectives of the decision maker in a complex organization.

This paper is structured as follows: after this preliminary introduction, §2 presents the research scenario and the findings of the previous research, preparatory to the current analysis; §3 proposes the Theoretical Model for the successive steps of the research; §4 offers the conclusions and a future research agenda.

## 2. Sustainability Principles in the Strategic Planning and Reporting of Universities: a first step of research[2]

Universities - as High Educational Institutions (HEIs) - fulfil the socially important role of institutions that perform a public function in the service of the national community, and other social realities that operate in the same territorial area, "especially with regard to their institutional leadership role in promoting sustainable development" (Di Nauta *et al.*, 2020; Eustachio *et al.*, 2020; Nigro *et al.*, 2016). To this end, Universities are committed to playing the role of the central node in a dense network of relationships, configuring the European transnational system, to orient it to the growth and sharing of knowledge, and the critical transmission of knowledge, with a view to quality and excellence, and then sustainability (Barile *et al.*, 2012; Nigro *et al.*, 2016; Barile et al., 2018; Nauta *et al.*, 2018).

Given the nature of their role and mission, Universities: are depositories of culture and hold responsibility for the education of future generations; are directly invested by sustainability culture; can directly contribute to its diffusion, given their centrality in the socioeconomic context which they directly affect and within which they operate. In other words, HEIs represent a strategic resource for changing the lifestyle of people and the country they live in, by creating the conditions for active and aware citizenship, and then contributing to building resilient and sustainable societies (Barth & Rieckmann, 2012; Filho *et al.*, 2017; Vilalta *et al.*, 2018; da Silva Neiva *et al.*, 2020). In other words, HEIs must play a key role "in addressing the social, cultural, economic and environmental challenges facing the world over the coming decades" (Mader *et al.*, 2013, p.265).

Here is why today quality and sustainability of higher education are most debated issues connected to social development in addition to scientific and technological progress. The need to improve the sustainable quality of higher education is linked primarily to the requirements of knowledge-based innovative economy and to individual and societal needs for enhancing the territorial competitiveness and quality of life.

Nowadays, consistently with this need, Universities are called to justify their activities to a critical public that choose the value proposition coherent with the improvement their qualify knowledge, and at the same time select a sustainable context which take care of their social growth. This condition determines the strategic importance of quality management in educational organizations, in terms of research, education/training and public engagement.

It is clear that the sustainability principles have a strong impact on universities performances, to be understood as the achievement of social, economic-financial and environmental objectives.

This interconnection between performance - in terms of quality and excellence - and sustainability is even more evident if we take into account the current evaluation systems diffusion (such as Times Higher Education World University Rankings and UI GreenMetric World University Ranking) to which HEIs can respond, by voluntarily choosing to get involved, in order to make visible the results of actions aimed at achieving performance in terms of sustainability, consistently with the principles underlying the Sustainable development goals - SDGs of Agenda 2030. Whether this action is finalized to the acquisition of social legitimacy rather than to the confirmation of the organisational effectiveness management and governance, it is not currently verified. It is interesting to evaluate the HEIs governance responsiveness to adopting new accreditation standards (sustainability metrics), considering that it is increasingly evident that university rankings are becoming a proxy for quality and excellence (Easley *et al.*, 2021).

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[2] Cfr. Di Nauta, P., Iannuzzi, E., Milone, M., & Nigro, C. (2020). The Impact of the Sustainability Principles on the Strategic Planning and Reporting of Universities. An Exploratory Study on a Qualified Italian Sample. *Sustainability*, 12(18), 7269.

In this scenario, a range of stakeholders are demanding that HEIs provide information and declarations on social and environmental issues, as well as information relating to training courses and research lines and projects, to estimate: the awareness of the quality as an increasingly important element in the competitiveness; the understanding of the requirements for performance excellence; the information sharing degree (transparency in communication) on successful quality management practices; benefits derived from implementation of strategies. Many HEIs have responded to this challenge by making sustainability central to the critical dimensions of university life and adopting strategic planning tools to define actions and, therefore, performance to provide an excellent and quality service and, thus, to increase 'customers' satisfaction degree (students) and the perception of the main other parties involved in the research and training-education processes (teachers, administrative staff, suppliers, social community).

In summary: the 'sustainability' dimensions become central drivers in the performance quality topic of Universities; the voluntary reporting tools (as well as for Public Sector Organizations - PSOs) for internal and external communication emerge as key strategic planning tool "in supporting the assessment and communication of sustainability management practices and activities of organizations [...] helping to overcome resistance to organizational change" (Hedberg and von Malmborg, 2003; Domingues *et al.*, 2017); last but not least for our analysis, Universities play the role of 'change agent' (Peer and Stoeglehner, 2013; Stephens *et al.*, 2008; Bohunovsky *et al.*, 2020) through a rethinking current purposes and leading to an organizational transformation towards sustainability.

Coherently, sustainability report could represent a starting point for planning change (Lozano *et al.*, 2016), contributing to the organizational transition from a certain status quo to a more sustainability-oriented state in a continuously iterative process (Lozano, 2013, 2012).

In the last decade, Universities, with a view to increase the transparency of their actions, have activated a communication process that reports performances bearing economic, social, and environmental dimensions. Several Italian universities have decided to report their performance with the use of voluntary reporting, in particular Sustainability Reports (Report on UN Sustainable Development Goals), which is intended to trace the universities' contribution to the achievement of each of the 17 SDGs of Agenda 2030.

Against this background, to evaluate the degree of transposition of sustainability and sustainable development principles (Agenda 2030 SDGs) into the Italian university system, the research group has conducted an exploratory research on universities' institutional declarations (sustainability reports – SR – and strategic plans – SP) available online (Di Nauta *et al.*, 2020). In the Authors opinion, the widespread and clear presence of these objectives in the official declarations represents a prerequisite for greater communication effectiveness, contributing to the construction of a sustainable reputation and to a social legitimization of universities.

From the methodological point of view, the Authors have conducted a qualitative content analysis to analyze text data of institutional communication documents of a sample of Italian universities through a systematic classification process (defining of coding and themes with MAXQDA 2020). In particular, the identification of the categories for the analysis emerged from the synthesis of the Guide to Universities, Higher Education Institutions, and the Academic Sector produced by Sustainable Development Solutions Network (SDSN) (see Table 2. *Pillars of Agenda 2030 as analysis categories* in Di Nauta *et al.*, 2020).

The sample consisted of a group of 13 Italian state universities that, in the last year, fulfilled all the following conditions: presence in one of the two sustainability performance rankings (Times Higher Education (THE) Impact Rankings and the UI GreenMetric World University Ranking); online availability of Sustainability Reports and Strategic Plans; membership of RUS (*Rete delle Università per lo Sviluppo Sostenibile* – Network of Universities for Sustainable Development).

First of all, research findings have demonstrated "on the part of the universities a considerable awareness of and commitment to the key role played by sociopolitical and economic levels for the diffusion and penetration of the Agenda 2030 SDGs within the university system and within civil society" (Di Nauta *et al.*, 2020, p.16).

In details, the content analysis of the SRs made it possible to identify the areas of greatest interest in line with the four pillars – *Education and Learning*, *Research*, *Operations and Governance*, and *External Leadership* – of the Agenda 2030. Regarding the first pillar, Universities consolidate the process of teaching quality enhancement, expanding and requalifying the range of training they offer with a view to meet sustainability and sustainable development goals. The analysis of the Research pillar allows to assess the commitment of Italian universities to specific research projects, international, national, and local, on economic, social, and environmental sustainability issues, through the activation of ad hoc networking processes and providing their support to policymakers in understanding the implications of different policy options and designing new political scenarios. Operations and Governance resulted as the pillar with the greatest degree of sustainability transposition shown in governance structures and operational policies and decisions (such as those relating to employment, finance, facilities, procurement, human resources, and student administration). Finally, the External leadership pillar emphasizes the key role of universities in networking and partnership processes to support the implementation of the SDGs within the university (through teaching, research, and operations) and influence the institutional public sphere.

From the first step of research, it can be argued that Italian universities the have accepted the sustainability challenge, and at the same time this challenge is still open to: seize the opportunities to promote new institutional governance mechanisms; guide internal decision-making processes; influence the political and institutional processes to tracing the development trajectory of a sustainable society.

## 3. The proposed theoretical model

The findings of the first phase of the research contributed to ensuring that the research group shifted the second phase focus on the top players in the organizational decision-making process and, thus, on the social, environmental, and economic drivers' perception leading the individual choices, aiming at shaping the sustainability issues in terms of relevance.

In fact, once the sustainability interest areas in universities have been highlighted, classified the actions in the programmatic declarations developed by the Italian universities of the sample, and recognized their priority, in terms of topic attention and of allocated resources, the research group acknowledged the need to change the point of view. Coherently with the Motivational Model, the relevance of the sustainability issues must necessarily be traced back to the issues' perception by the decision maker. The Motivational Model (Skinner, 1990) was adopted to polarize behaviors through two different options emerging from the decision maker's perception of the relevance of sustainability issues (first step of research model (a) as follows: to address the changes introduced by the topic of sustainability (*Challenge*); to perceive and manage the issue as a risk (*Threat*)

In line with the new research focus, the research group wants to propose a theoretical model that explains, first of all, (a) the *Relevance of Sustainability issues* for the decision maker based on their motivation – driving force behind all efforts –, and then (b) to deepen the understanding *of how and to what extent sustainability issues could affect the decision making processes* in the Italian University System – focusing on cognitive appraisal of ways of coping – through the development of strategic conducts (c) that will orient the adoption of specific coping through the development of ad-hoc strategies. The last stage (c) was developed in the previous research summarized in the previous paragraph (§2).

In the following the Theoretical Model is proposed (Figure 1).

**Figure 1 -** *Theoretical Model proposal*
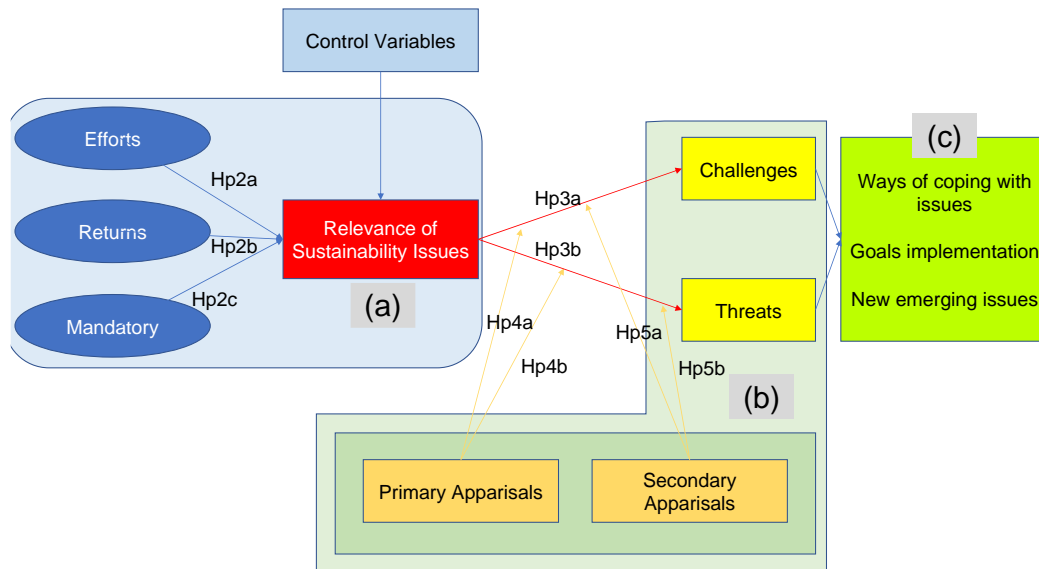


**Source:** Our elaboration

In particular, the logical moments (a) and (b) are the subject of the current exploratory analysis on field.

(a) At the first stage, the model relies on Motivational Model (Skinner) to describe the Relevance of Sustainability Issues by explanatory factors (Figure 1.1), i.e., it provides a scheme for reading the motivations that drive the decision maker to opt for a strategic conduct rather than another. This because *motivations must shape actions and actions implementation will be designed to achieve objectives*.

(b) The second stage of the model focuses on *cognitive appraisal of ways of coping* to explain like the personal characteristics influence the management and organizational change (Figure 1.2). The starting point for this second stage consists of the conceptual analysis of stress (in our study *change*) and coping (Lazarus, 1966; Lazarus & Folkman, 1984). The Authors argued that stress/change consists of primary and secondary appraisals: primary appraisals describe a process by which an actor interprets the importance of a situation or event for their goals (Lazarus, 1991, 1999)[3]; secondary appraisals describe the cognitive-evaluative process where actor focuses on what can be done about a specific situation (Lazarus, 1991, 1999)[4].

Before the description of the model in reference to (a) and (b), it is considered necessary to provide the theoretical foundations of the model proposal.

### 3.1. Theoretical foundations: a motivational approach

The literature on the managerial coping with organizational change focus the attention on the distress in organizational life, associated with negative/positive outcomes (Ashford, 1988; Schweiger & DeNisi, 1991). From the Lau and Woodman' perspective (1995) the reactions to organizational change are linked to the individual's change approach (Judge *et al*., 1999). In fact, the organizational change management literature has been largely dominated by a macro systems-oriented focus. Recently another, even if small, part of researchers has focused the

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[3] The recurring questions underlying this process are: "*Do I have a goal at stake, or are any of my core values engaged or threatened? And if there is a stake, what might the outcome be*?" (Lazarus, 1999, p. 76).

[4] In general this process represents the cognitive underpinning of coping, and it is influenced by the actor perception about options and resources available to face the demanding situation. Cfr. Lavoie, C. É., Vallerand, R. J., & Verner-Filion, J. (2021). Passion and emotions: The mediating role of cognitive appraisals. Psychology of Sport and Exercise, 54, 101907.

attention on micro person-oriented point of view, typically involving the role of top management in instituting change (Judge *et al.*, 1999; Rodríguez *et al.*, 2019).

In a review of the literature on the organizational change it emerged that the success of this phenomenon largely depends on the employees' vision of the change situation and, at the same time, on their availability to cope with it. It also emerged that the availability for change is generally understood as the employees' internal resources/capabilities used to solve specific change-related problems. Coherent with this micro-perspective, studies of individual behavior in relation to organizational change typically has been focused on the role of top management (Hambrick & Mason, 1984; Wiersema & Bantel, 1992).

The ability of an organization to respond to change, both internal and external, is one of the most important ways to ensure its competitiveness and viability; the nature and effectiveness of organizational responses depends on the top management capacity to trigger and interpret strategic issues. This condition is designed through different elements: receptivity to change or openness to pursuit a new strategic conduct to cope with change; willingness to take risk; creative-innovative decision making; diversity of information sources perspective (Wiersema & Bantel, 1992).

The adopted conceptualization useful to develop the new theoretical framework is connected to a process model of motivation which holds that individuals' perception contributes to organization performance by promoting or undermining their engagement in diverse activities. At the same time the institutional context can have an important impact on the individuals' perceptions (Skinner, 1990, p. 22), sometimes concurring to the emerging of new problems and issues. For this reason, we used a general motivational model explaining the relations among context, self, action, and outcomes proposed by Connell and his colleagues (Connell & Wellborn, 1991) (Figure 2). According to this model, a worker's perception is influenced by the contingency and by individual involvement, and results in engaged or disaffected patterns of action that then have an impact on organization performance (Skinner, 1990; see also Skinner & Connel, 1986).

**Figure 2** – General motivational model
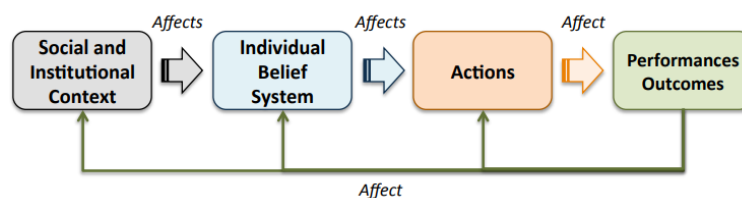


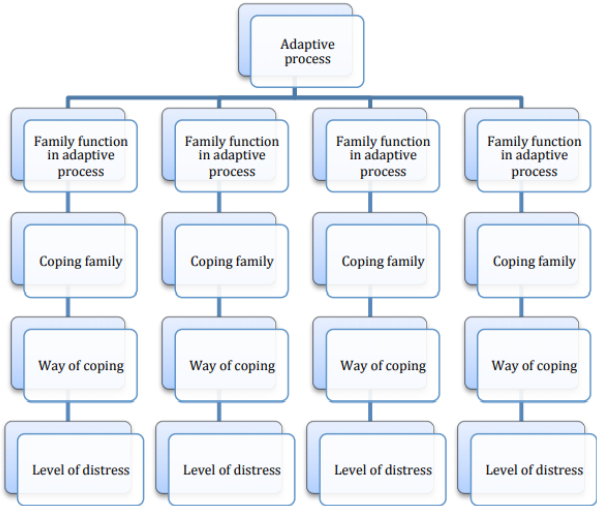**Source:** our elaboration of Skinner, 1990, p.23.

In this model, "person and the environment are viewed as being in a dynamic, mutually reciprocal, bidirectional [and stressful] relationship" (Folkman et al., 1996, p. 472). The motivational theory identifies two processes as mediators in person-environment relationships and their outcomes: cognitive *appraisal* and *coping*. In particular, appraisal is a process through which actors evaluate whether environment conditions are relevant to their goals and, if so, in what way (Folkman et al.,1996).

In particular, *cognitive appraisal* is divided in: *primary*, when "the person evaluates whether he or she has anything at stake in this encounter" (Folkman et al., 1996, p. 472), in order to suffer a potential harm or to gain benefit to self-esteem; *secondary*, where "the person evaluates what, if anything, can be done to overcome or prevent harm or to improve the prospects for benefit" (Folkman *et al.*, 1996, p. 472). In this process, actors evaluate their resources to cope with the events; then they may perceive the 'new state of things' as a *challenge* or a *threat*.

Until now, the wide managerial literature have neglected the possibility that successful 'coping with change' lies within personal traits of actors. But a part of literature is beginning to shift the attention from the ability of the manager to cope with organizational change to the capacity of all the concerned employees (Chatman, 1989; Skinner *et al.*, 1990; Skinner *et al.*, 2003; Appleton *et al.*, 2006; Gaspar *et al.*, 2016).

In the early '80s, the scientific debate on the relationship between stress events and individual behavior was focused on the actors adaptive mechanisms, with particular reference on the 'ways of coping with' change. Even today the socio-psychological literature sets up theoretical motivational models that requires to provide an individual behavior interpretation. To this end Skinner *et al.*, 2003 have developed a hierarchical structure of coping (Figure 3). The first level refers to coping as a "strategy of adaptation" (White, 1974); from here it presents evolutionary functions, classifiable as threats or challenges. In a "challenge situation" the actor secures adequate knowledge of the environment; on the contrary, in a "threat situation", the actor escapes from a potentially dangerous environment. In the last level there are "way of coping" in which actors can feel encouraged, optimists, self-doubt, pessimists. Between the adaptive process level and the way of coping level two intermediate levels are needed. In the "family function in adaptive process" there are the immediate reactions to the adaptive process, while in the "coping family" is superstructure in which falls within the immediate reaction.

Figure 3 – A hierarchical conceptualization of the structure of coping



Source: our elaboration of Skinner et al., 2003

*3.2. Theoretical Model proposal: Relevance of Sustainability Issues* and *Cognitive Appraisal of coping mechanism*

To better circumscribe the motivation behind the analysis model of the Relevance of Sustainability Issues, it is opportune to start from a premise: *decision making processes and motivation are interdependent and mutually influencing*, then *motivation has a crucial impact on the decision*. That said, the decision-making process - based on the motivational program of a decision maker - should be based on the best knowledge of the situation in terms of organization, human resources, and vision of the company. The result of decision-making process may be finding that: 1. change is not needed and the status quo is satisfactory; 2. change in the organization is essential and necessary (see Pohankova, 2010).

Starting from this premise, the research group have developed the model for analyzing the relevance of sustainability issues structured on three factors: F01-*Efforts*, F02-*Returns* and F03-*Mandatory* (Figure 1.1).

**Figure 1.1 –** *Theoretical Model: Relevance of Issues*
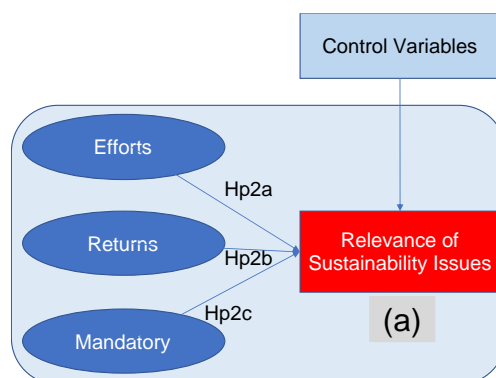


**Source:** Our elaboration

The first and second factors – efforts and returns (tangibles and intangibles) – are strictly interdependent according to the wide managerial literature on the decision-making process (e.g. see Nemati *et al.*, 2010 for a literature review). Strategic decision making depends on decisions makers who decide on the use of resources available for the success of an organization in term of returns in the long run. In particular, the effective internal resources use (human capital, financial, technology, innovative abilities, etc.) can produce advantage in a competitive context. Then, the best strategic conducts emerge by the combination of available resources (including resources from actors not directly involved in organizational life but related to it), and at the same time by the analysis of threats and opportunities.

At the same time, Steel & König, 2006 proposed an interesting Temporal Motivational Theory (TMT) as an integration of theories of motivation – *Picoeconomics* (Ainslie, 1992) *Expectancy Theory* (Vroom, 1964), *Prospect Theory* (Tversky & Kahneman, 1992), and *Need Theory* (Dollard & Miller, 1950) – focusing the attention on the time as a critical dimension of choice or motivated behavior.

In summary, with the *Relevance of Sustainability Issues* analysis model, the Authors aim to investigate the reasons orienting the decision-making process of the organizational top management, leaded by the *perception of the efforts* to be made due to possible strategic options, *in relation to estimated returns*, both tangible and intangible.

The estimate of the *efforts-returns connection* is part of a temporary socio-political and institutional scenario which pushes the decision maker, in a binding way, to choose the implementation of a certain action course in a competitive way. Hence the third factor of the model: *mandatory*.

The decision maker, in this case the top management within the complex organizations of the public university system, acts within a framework of constraints that necessarily guides their choices. And, even where the actions field do not present an *ad-hoc* regulation – in fact the sustainability topic even if widely treated as an organizational priority, as well as a social one, it is not subject to binding framework, if not for some limited generalist issues – the effects that implemented actions could generate at a socio-economic and environmental levels (measurable for example in terms of financial incentives that regulate organizational survival) could make perceive this field as binding. Hence the "mandatory" as relevant factor in the motivational model, understood at the same time as a universally binding regulatory requirements (in Italy the obligation for individuals and organizations to Separate Waste Collection (SWC)) and as simple recommendations aimed, for example, to lead organizations towards the green economy (the emissions reduction, energy efficiency, the circular economy in waste management, the natural capital protection and biodiversity). In this regard, it should be noted that, to date, the regulatory system in the European Union has shown itself prone to an increasingly frequent use

of non-binding legal instruments, so-called "soft law", including the same recommendations, aimed at creating a participatory system regulation.

Up until now it has been emphasized that, in the Authors opinion, the decision-maker could perceive different levels of relevance of different sustainability issues (as well as for any topic that requires an organizational, governance and/or management change) due to the motivations described in the Figure 1.1. Hence the second logical level of the theoretical model which, starting from the decision-maker's perception with respect to the sustainability issues, detects the actor's reaction with respect to them and the evaluation of the conduct to be adopted: he will act by accepting the *challenge* or will consider that option to be neglected because it qualifies as a *Threat*. The way in which decision makers categorize a possible topic as a challenge or as a threat, strongly affects the subsequent processes of decision making (Schneider & Meyer, 1991; Jackson & Dutton, 1988). This is consistent with the premises of the Change Management literature- *the actions trajectory to be taken from the organizational competitiveness perspective depend on the decision-maker responsibility* (Hambrick & Mason, 1984; Wiersema & Bantel, 1992; Mento *et al.*, 2002; Judge *et al.*, 1999; Rodríguez *et al.*, 2019) – and of the Prospect Theory conceptualizations- in according to which "*decision-makers respond differently to different but objectively equivalent descriptions of the same problem*" (Levin et al., 1998, p.150).

Then, the nature and effectiveness of organizational responses depends on the top management capacity to trigger and interpret strategic issues. This condition is designed through different elements: receptivity to change or openness to pursuit a new strategic conduct to cope with change; willingness to take risk; creative-innovative decision making; diversity of information sources perspective (Wiersema & Bantel, 1992). The conceptualization adopted in the second stage of theoretical model is situated within a process model of motivation which holds that perceived control contributes to organization performance by promoting or undermining individuals' engagement in very diverse activities and that the institutional context, in this case directors and executives' behaviors, can have an important impact on individuals' perceptions of control (Skinner, 1990, p. 22).

**Figure 1.2 –** *The Theoretical Model: cognitive appraisal of coping mechanism*
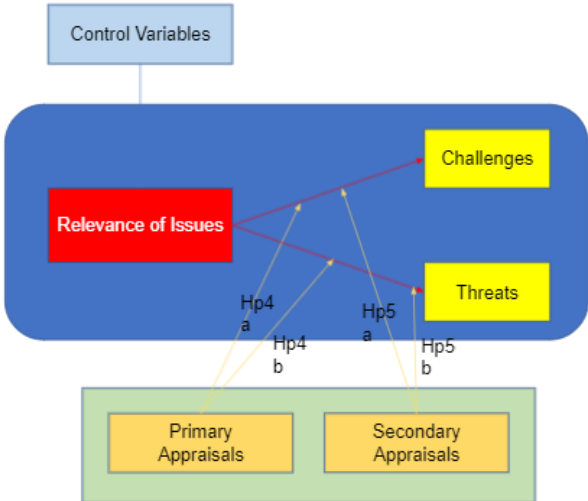


**Source:** *Our elaboration*

At this level of analysis, it follows the third step of model (c), as described in Figure 1, which the research group has investigated with an *ex post* approach, through a content analysis of reports and planning declarations (Strategic planning and Sustainability reporting) of a universities sample, focusing the attention on the undertaken and reported actions.

## 4. Conclusions: future research agenda

It should be noted that the research group is testing the theoretical model on the top players of a sample of Italian universities, updated in comparison to the sample of the first research step and based on new 2021 rankings THE and GreenMetric. It means that the sample increased from 13 units (2020) to the current 23 units (2021) (Table 1). This aspect should make us reflect on the crucial importance of the sustainability objectives are assuming in the Italian university system.

**Table 1.** *The Research Sample*

| Institutions | Size | Geographical Location |
|---|---|---|
| Alma Mater Studiorum, Bologna | over 40,000 students | Northern Italy |
| La Sapienza University of Rome | over 40,000 students | Central Italy |
| University of Milan | over 40,000 students | Northern Italy |
| University of Milan-Bicocca | 10,000 to 20,0000 students | Northern Italy |
| Politecnico di Milano | Polytechnic | Northern Italy |
| University of Bari Aldo Moro | over 40,000 students | Southern Italy |
| University of Brescia | 10,000 to 20,0000 students | Northern Italy |
| University of Florence | over 40,000 students | Central Italy |
| University of Modena and Reggio Emilia | 20,000 to 40,000 students | Northern Italy |
| Polytechnic University of Bari | Polytechnic | Southern Italy |
| University of Salerno | 10,000 to 20,000 students | Southern Italy |
| University of Turin | over 40,000 students | Northern Italy |
| University of L'Aquila | 10,000 to 20,000 students | Central Italy |
| University of Ferrara | 10,000 to 20,000 students | Northern Italy |
| Polytechnic University of Turin | Polytechnic | Northern Italy |
| University of Trieste | 10,000 to 20,000 students | Northern Italy |
| University of Tuscia | up to 10,000 students | Southern Italy |
| University of Bergamo | 10,000 to 20,000 students | Northern Italy |
| University of Calabria | 20,000 to 40,000 students | Southern Italy |
| Marche Polytechnic University | Polytechnic | Central Italy |
| University of Rome III | 20,000 to 40,000 students | Central Italy |
| University of Udine | 10,000 to 20,0000 students | Northern Italy |
| University of Foggia | up to 10,000 students | Southern Italy |

For greater test significance, the analysis will be completed by submitting the model to a control sample in which the units meet the same criteria of size and geographical location, but not having taken part in the before mentioned rankings.

The expectations with respect to the current analysis are: to verify a clear description of the motivational factors guiding the decision-making process; to identify the relationship between the three factors and dependent variable (as in (a)) that underlines their relative impact on the topic perception, as challenge or threat (as in (b)), and, therefore, on the actions implementation.

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