

Chapter 123

A Conceptual Framework of Risk Treatment in Scale up Companies Supported by Using Nudge Theory



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123.1 Introduction

Within an Entrepreneurship ecosystem, companies are divided in three phases of development: startup, scale up, and unicorn. This paper addresses the scale up phase and focuses on the bottleneck of transition stage from startup to scale up and considers various challenges from point of view of risk management [26]. Unmanaged risk is the greatest source of waste in every business [34] and exposed to several risks and subsequently, to respond to these risks properly, an effective risk management system should be implemented [36]. Interest in enterprise risk management (ERM) has continued to grow in recent years and many organizations have implemented or considering it because of the effect of ERM on firm value [19]. Although, [3] indicates that implementing ERM requires a significant investment by firms; however the operational profits of reduced costs and increased revenues are often hard to recognize. According to [11] ERM enables an organization to prioritize and allocate resources against those risks that reinforce the continued sustainability of the organization. In other words, an organization's ability to maintain something of value (such as the delivery of services or products to customers) relies on its ability to understand and plan for those risks that may impede the achievement of its business objectives/goals or risks that could significantly impair its capital. Hoyt [19] Estimated the effect of ERM on firm value and found a positive relation between firm value and the use of ERM. ERM is a more complex approach but supposed to enhance more value for the stakeholders. In general, the establishment of ERM processes is highly sophisticated. All of ERM frameworks are a very broad guidance and entities still struggle in implementing ERM [22].

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On the other hand, poor risk management leads to failure of projects and an efficient risk management needs to be considered [33]. Therefore, Founders should always be in a position to understanding the challenges that are associated with implementation of Risk Management to avoid the failure. At present, there is growing concentration in endorsements for behavioral economics, focusing on making the choice architecture more aiding for the preferred behavior and unconsciously impacts human decision-making [28] that can be applied in facing risk decisions and policy making. Although, applying risk management can be useful for scale up companies, implementation of risk management has many barriers and challenges that were addressed in Sect. 123.4. In addition, because of the nature of startup/scale up companies that makes them agile and lean, therefore, the challenge of organizational culture and engaging employees to accept risk management framework encounters problems. Subsequently, due to the complexity and meaningfulness of some executive steps and tasks/actions of risk management process are not properly done.

To overcome some of the obstacles of ERM related to behavioral barrier; it is desirable to find solutions that can simplify and make the tasks and actions meaningful, especially in the risk treatment to deal with risks. On the other hand, compulsory policies to enforce regulations and guidelines of implementing risk actions do not seem to be a suitable approach to guide employees in scaling up companies.

Influencing employee's behavior instead of pushing them appears to be an attractive alternative [38] when action plans are made for risk treatment. Moreover, nudge interventions designed to engage people in order to steer us towards more sensible decision making [29]. The team of firms may be agile in the early phases of the new venture's development but when the venture grows, the firm is not flexible enough [39]. Therefore, the commitment of team has a vital role in using ERM and may impede implementation of Risk Management process. Therefore, the advantages of behavioral economics, in particular nudging techniques, can be utilized to streamline and manage strategies in the process of managing risk. Nudging can be applied in different aspects of the risk management process. In this research like other recent studies [2, 5, 38], the potential of applying nudge theory in risk treatment is discussed and a conceptual framework is presented that can be used to evaluate the efficiency of nudges technique in related organizations. In future research, case studies will be conducted with real data to identify the most efficient nudges. The final goal of our study is to investigate whether engagement of individuals in organizations is influenced by the use of specific nudges to direct behaviors to achieve a desired outcome from implementing the risk management and subsequently show a significant improvement in employ's engagement or not.

This article is structured as follows. The next section presents about scale ups and growth pain, as well as identification of relevant risks that they are facing during transition period and a review on challenges of enterprise risk management. The third section elaborated Behavioral Economics and Nudge Theory. We focus on studied related to nudging techniques. Section fourth expands on the role of Nudging in risk management and a framework is presented. Finally, the fifth section exposes the results and concludes and presents policy implications.

123.2 Scale Ups and Relevant Risks

In order to explain an initial motivation of our general approach; let us briefly consider a definition of scale up companies and their growth challenges as follows.

A scale up (company) is a company who has an average annualized return of at least 20% in the past 3 years with at least 10 employees in the beginning of the period [27]. A scale up can be identified as being in the “growth phase” life-cycle in [25]. Endeavor found that scale ups, companies growing at more than 20% per year over the past three years.

The period of transition commences when a startup has defined and validated its business model and are going to be scaling. Therefore, it is a bridge between startups and scale ups, and as a part of scaling up phase. Noticeably, entrepreneurs face diversity of obstacles during the growth phase of the organizational life cycle. Harnish [17] Explains there are three barriers to scaling up related to 1. Leadership, 2. Infrastructures and 3. Market dynamics. Flamholtz and Randle [9] Discussed Growing pains are problems that occur as a result of inadequate organizational development in relation to business size and complexity. However, there is no clear way to make a successful transition from early-stage venture to a future stage of growth. But managing the relevant risks has a high potential to support stakeholders of entrepreneurial firms in this stage.

123.3 Scale up Risks Identification

In our previous research [26], it contributes for research on entrepreneurship’s risks by applying risk management for transition performance of scaling up companies by that should be considered. Therefore, it was attempted to establish the context of a risk model by identifying the relevant risk factors of scaling up companies during transition period. Additionally, a state-of-the-art literature review was performed to establishing the context as first step in a risk management process. The main objective was to find a risk classification as best practices that should be managed to obtain the relevant risk events and risk consequences that support the development of a risk model focused on the integration of best practices and risk profile attributes. Subsequently, Joseph C. Picken’s research [31] about laying the foundation of scalable enterprise deployed, in order to find our best practices for entrepreneurs during transition period. He has identified eight hurdles of transition that we have used the as the basis of classifying the risks of scaling up companies. These eight best practices are: “1. Setting a direction and maintaining focus; 2. Positioning products/services in an expanded market; 3. Maintaining customer/market responsiveness; 4. Building an organization and management team; 5. Developing effective processes and infrastructures; 6. Building financial capability; 7. Developing an appropriate culture; 8. Managing risks and vulnerabilities”.

123.4 Risk Management Challenges

In the absence of appropriate implementation, risk framework and planning are empty words and wasting the resources. “The global recession highlighted significant failures in firms’ risk management practices. These failures implicated weaknesses not only in firms’ financial risk modeling, but also the human or governance side of risk management. On the other hand, meaningful risk-management practices can enhance firm performance.”[16]. Fraser and Simkins [12] described many of the misconceptions about ERM that were then limiting organizations’ abilities to implement ERM. Fraser and Simkins [13] explores the challenges companies face when implementing ERM and offers solutions for firms struggling with the concepts and execution. Article of [16] analyzed potential barriers to implementing meaningful ERM at U.S. firms and considers whether regulation or a different approach is needed to encourage U.S. corporations to invest the necessary human capital in meaningful ERM. Indeed, the board and senior management team are vital to creating a risk culture. In study of [22] the possible aspects that cause mistakes when implementing an ERM tool discussed. Cho [4] Provides many practical consideration points for practitioners to consider towards breaking down barriers to effective risk management through the lens of a proposed Risk Governance Framework (RGF). A part of recent ERM challenges are presented in Table 123.1.

123.5 Behavioural Economics and Nudge Theory

“In recent years, behavioral economics has gained considerable traction in the policy discourse, with a particular conceptual framework called libertarian paternalism, which informs nudge policy, dominating” [30]. The argument for nudging relies on relevant research in behavioral economics and after Thaler and Sunstein’s book entitled “Nudge”. They thus expound “Nudge theory” and “libertarian paternalism” [18]. “The use of behavioral economics to inform policy has over recent years been captured by those who advocate nudge interventions. Nudge, is a non-regulatory approach that attempts to motivate individual behavior change, through subtle alterations in the choice environments that people face” [29]. “In many situations, some organization or agent must make a choice that will affect the behavior of some other people. There is, in those situations, no way of avoiding nudging in some direction.” [18]. “Adopting a nudge theory perspective changes the workplace environment, so that individuals make decisions that are helpful to themselves for job satisfaction and professional growth as well as positive for the organization. Research suggests that nudging has positive results that contribute to increased productivity, higher morale and decreased expenses” [15] According to some prior studies such as [24, 32], changing people’s behavior through rules and regulations is not only a solution to execute the plans in organizations or governments, incorporating nudge insights to encourage and enable people to make better choices for themselves can be an intel-

Table 123.1 Challenges and barriers of enterprise risk management

Research	Implementation challenges
Fraser and Simkins 2007 [12]	Ten Misconceptions about Enterprise Risk Management. 10 mistakes as follows: inherent risk is a workable basis for ERM, risk management is an end unto itself, independent of business objectives, risk tolerance is the same as risk appetite, risk management can be decentralized and done piecemeal, one skill set is enough, ERM is a low-level treasury or finance project, 7: all risks are equally important, managing upside risk is a routine focus of ERM, ERM has no discernible effect on financial markets or firm value, ERM is primarily a response to Sarbanes Oxley
Hubbard 2009 [20]	Flawed perceptions (cognitive biases) and Dunning Kruger effect i.e. overconfidence in ones abilities for assessing the risks, inability to quantify claimed risks
Harner 2010 [16]	Behavioral and Cultural barriers for developing meaningful risk assessment. Such as: management's disability to assess risk accurately by cognitive biases (including confirmation bias, overconfidence or optimism bias, and framing), lack of integration and communication
Eriksen 2010 [8]	Commitment at the top, Clear communication, Clear, simple framework and guidelines/standards, Integration with normal business processes, Sufficient resources
Flassig 2013 [10]	Diversity and non-classified risks based on firms area, difficult to set up a regulatory framework because of un clear legal guidance, cultural and behavioral influences, values and biases
Kerstin et al. 2014 [22]	Composition of the system itself can be inappropriate, Suitable metrics (identification of key risk indicators and scoring model), human errors and the complex environment (volatility, uncertainty, complexity and ambiguity)
Cho 2015 [4]	Lack of accountability, Lack of qualified personnel to execute practices, Inadequate oversight by the board and senior leadership, Lack of a well-defined and clearly understood strategy toward risk management in the organization, Inadequate level of documentation, Lack of lower levels of management involvement, Environment (Organization challenges in accommodating socio-political factors/pressures), Auditability
Fraser and Simkins 2016 [13]	Eight internal challenges: (1) corporate culture, (2) boards of directors' knowledge, (3) not applying a KISS mindset, (4) training without having risk workshops, (5) identifying too many risks, (6) no timeframes, (7) not making ERM enjoyable or meaningful, and (8) not recognizing ERM as change management

Table 123.2 Recent studies that highlighted some important Nudges

Dolan and et al. 2012 [6]		Sunstein 2014 [35]		Lindhout and Reniers 2017 [23]	
Nudges	Brief explanation	Nudges	Brief explanation	Nudges	Brief explanation
Messenger	We are heavily influenced by who communicates information to us	Default rules	e.g., automatic enrollment in programs, including education health, savings	Framing	how to present an issue
Incentives	Our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses	Simplification	in part to promote take-up of existing programs	Social norms/ standards	inform people about what others do
Norms	We are strongly influenced by what others do	Uses of social norms	emphasizing what most people do	Priming	influences by unconscious cues that create awareness
Defaults	We 'go with the flow' of pre-set options	Increases in ease and convenience	e.g., making low-cost options or healthy foods visible	Emotion and mood	emotional associations can shape our actions
Salience	Our attention is drawn to what is novel and seems relevant to us	Disclosure	e.g., the economic or environmental costs associated with energy use	Defaults	We like to follow pre-set options
Priming	Our acts are often influenced by sub-conscious cues	Warnings, graphic or otherwise	as for cigarettes	Salience	people look for new and seemingly relevant things
Affect	Our emotional associations can powerfully shape our actions	Pre-commitment strategies	by which people commit to a certain course of action	Commitments	people like to keep promises and reciprocate acts

(continued)

Table 123.2 (continued)

Dolan and et al. 2012 [6]		Sunstein 2014 [35]		Lindhout and Reniers 2017 [23]	
Commitments	We seek to be consistent with our public promises, and reciprocate acts	Reminders	e.g., by email or text message, as for overdue bills and coming obligations	Feedback	give immediate feedback on behaviour
Ego	We act in ways that make us feel better about ourselves	Eliciting implementation intentions	e.g., “do you plan to vote?”	Structure complex choices	inform people about peer preference
–	–	Informing people of the nature and consequences of their own past choices	“smart disclosure” in the US and the “midata project” in the UK	–	–

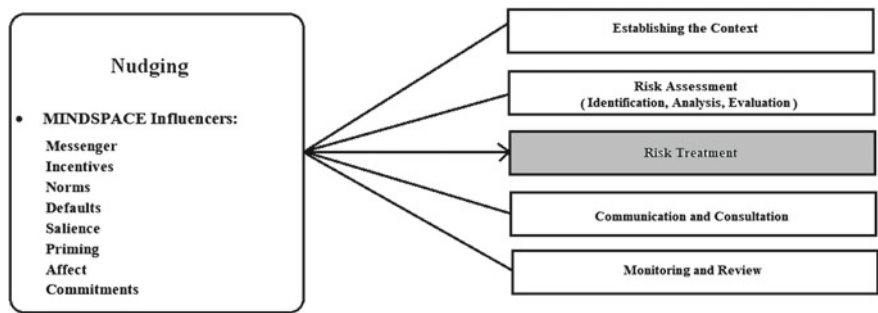


Fig. 123.1 Nudge influencers for sections of risk management process (by authors) [1, 6]

ligent way. Efforts for changing behavior by education and information have faced with limited success therefore, automatic and unconscious processes for behavioral change have been increasingly explored [28]. The goal of many nudges is to make works simpler or easier to steer people in a certain direction without struggling [35]. In addition, Nudges are simple techniques that efforts to provide a gentle push in the right path [21].

Table 123.3 The Framework of risk factors and nudges for risk mitigation in scale up companies (1)

	Best practices	Risk factors	Risk mitigation		
			Nudge	Risk action	Effectiveness of nudges (1–10)
1	Setting a direction and maintaining focus	(1) Establishing unclear goals and strategic priorities (2) Viewing the situation idealistically (3) Keeping the organization focused on the inappropriate objectives (4) Not having a clear market entry strategy against competitors	Messenger Incentives Norms Defaults Salience Priming Affect Commitments Ego		
2	Positioning products/ services in an expanded market	(1) Lack of development distribution channels (2) Product/service offering has not expanded, refined, repositioned to meet the needs of an expanded market (3) Unrecognizing the ongoing dynamics of the customer relationships (4) Not responding to a continuously evolving set of customers and requirements (5) such as ancillary products, services and support	Incentives Norms Defaults Salience Priming Affect Commitments Ego		
3	Maintaining customer/ market responsiveness	(1) Slow process and losing of a sense of urgency in resolving the customer's issues and problems (2) New internal processes have not implemented to maintain customers responsiveness (3) Conflicts between the need for stability and standardization on operations and customer demands for customization, variety, and responsiveness	Messenger Incentives Norms Defaults Salience Priming Affect Commitments Ego		

(continued)

Table 123.3 (continued)

	Best practices	Risk factors	Risk mitigation		
			Nudge	Risk action	Effectiveness of nudges (1–10)
4	Building an organization and management team	(1) Lack of careful planning and flexibility to ensure that staffing and structure are aligned with strategy and the needs of the business Messenger with strategy and the needs of the business (2) Lack of accountability and stretching beyond their capabilities by key people (3) Communications break down (4) Lack of development for management team (5) Delayed and poor quality decisions	Incentives Norms Defaults Salience Priming Affect Commitments Ego		
5	Developing effective processes and infrastructures	(1) Ineffective decision processes (2) Non-efficient operational and management processes (3) Lack of new systems/infrastructures for adapting the changing environment (4) Ineffective planning to avoid chaos that inevitably occurs	Messenger Incentives Norms Defaults Salience Priming Affect Commitments Ego		
6	Building financial capability	(1) Non-efficient utilization of invested funds (2) Ineffective control on management of working capital and cash flow (3) Delivering unreliable financial projections (4) Unclear and ineffective stakeholders communications	Messenger Incentives Norms Defaults Salience Priming Affect Commitments Ego		
7	Developing an appropriate culture	(1) Losing the opportunity to shape a culture supportive of the firm's business purpose and strategy (2) Establishing a culture in organization that constrains the implementation of the strategies	Messenger Incentives Norms Defaults Salience Priming Affect Commitments Ego		

(continued)

Table 123.3 (continued)

	Best practices	Risk factors	Risk mitigation		
			Nudge	Risk action	Effectiveness of nudges (1–10)
8	Managing risks and vulnerabilities	(1) Lack of proactive management for managing the potential risks (2) Overlooking the early warning signs vulnerabilities before they become crises (3) Inadequate infrastructures and information management or bias toward entrepreneurial risk-taking	Messenger Incentives Norms Defaults Salience Priming Affect		

123.6 Nudging for Risk Management

The current study adopts risk management challenges in execution with the behavioral economics approach, using nudge theory as the key concept for the investigation. In this section we provide some relevant studied that already applied nudges. Yevseyeva [38] Proposes a ‘soft’ mitigation strategy for user actions based on nudging in security risks. The study of [2] applies nudges and explores the contribution of behavioral insights to cybersecurity for policy-makers interested in warning users about potential cybersecurity risks for improving their online browsing experience. Coventry and Briggs [5] utilized nudges to mitigate insecure behaviors around selection of wireless networks for facing cyber security attacks.

Noticeably, “What would make nudging truly appealing is if behavior can be reliably influenced in such a way that there is significant impact on outcomes. What we can say is that the success of nudging can only be evaluated in relation to the outcomes sought” [14]. In the terms of the article of [7] in this issue, “some of the basic insights of nudge theory can be adapted and implemented in an organizational setting to improve efficiency, effectiveness and motivation of stuff. The advantages of nudge management, in contrast to many other change management approaches, are evident: nudges are usually not very intrusive, easily scalable, and employees are not forced to make extensive changes to their working habits.” Table 123.2 illustrates some recent studies about important Nudges.

Based on previous studies such as [5, 23, 32, 37], they have used MINDSPACE Nudges for our framework as in the Fig. 123.1 is shown.

According to Fig. 123.1 by using Nudge influencers of MINDSPACE [6]; we have provided a framework in Table 123.3 to present risk factors in Scale up companies,

and nudges for risk mitigation are proposed. The risk actions for every nudges should be designed by every policy maker and determine the effectiveness of each one to improve the performance of risk treatments. The effectiveness of nudges can be rated from 1 to 10 (Table 123.3).

In accordance with this conceptual framework; using Nudges seems to enhance risk management performance in risk mitigation actions. However, this model is not enough to claim that a more intensive use of nudge theory is the best strategy. That is, applying behavioral economics with a suitable or optimal mix of nudges will benefit by their effects, and consequently experience higher performance. Each entrepreneurial firm should build a specific portfolio of nudges considering the firm's resource base and their availabilities should be customized. Beyond what already mentioned, more opportunities for future research arise from the model and its findings. In consequence of this study, we will also perform an empirical analysis of some real case studies of scaling enterprises and strive to consider some relevant hypotheses. To demonstrate the usefulness of the proposed framework, we should show how it can be applied to pragmatic cases. As a part of a PhD dissertation our future case studies will be carried out on relevant scale up companies.

123.7 Conclusion

This paper first does a brief review of the most relevant literature by describing some challenges of implementing risk management and suggesting nudge theory to prevent the behavioral barriers. The objective of this research was to propose specific focus on risk treatment in the Risk Management framework of scale up companies, in order to take an important step towards an overall understanding of the influence of nudge theory on the efficiency of risk mitigations. Our work adds to the growing body of literature on how entrepreneurial firms are able to respond to risk in nudging context and measure the effectiveness of different nudges.

Founders as policy makers in scaling up companies can learn to apply nudges and implement the risk treatments in a new format that has a potential to have higher performance in comparison with the traditional format that is regulation-oriented. The nudging framework of risk management supposed to be more effective because the behavioral barriers are considered rather than the team being merely nudged towards risk actions.

It is clear that there is still much to develop and improve a pragmatic research using real case studies to validate the model. Subsequently, further research is required to improve the framework by better understanding of risk actions and will deal with the identification and prioritization of the nudging actions. This study opens doors to a variety of perspectives for future research and other sections of risk management process (as shown in Fig. 123.1) should be covered by further studies.

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