

A Conceptual Framework of Risk Identification For Scale up Companies in Transition Period

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Abstract

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 in a bottleneck of transition stage from startup to scale up and consider various challenges from point of view of risk management. This research presents a risk identification framework based on some best practices. The method proposed is supported by established risk management concepts that can be applied to help scale up companies to gain awareness of the risks especially during transition period.

This paper contributes for research on entrepreneurship's risks by applying risk management for transition performance of scaling up companies by identifying the relevant risk factors that should be considered. Subsequently, these risks should be evaluated in order to executing proper actions. In addition, it gives to entrepreneur's insights on how the adoption of the growth will affect the enterprise scaling, and how it can increase the assurance of transition stage. The paper concludes with a summary of key ideas and promising directions for future work.

Keywords

Entrepreneurship, Risk Management, Start up, Scale up, Transition stage

1. Introduction

Early recognition and understanding of risks of business failure are important for establishing, sustaining and growing a business (Hyder,2016). Although, some recent researchers' concentration are on learning from failure (Atsan, 2016) and failure management through experimental approach to support entrepreneurs (Lee & Miesing, 2017); this research focuses on risk management process for presenting a systematic approach to help entrepreneurship stakeholders such as founders and investors in identifying, assessing and treating the risks.

This research aims to support scale up companies by identifying the risks in transition stage. Therefore, the consternation of the research is based on a new classification of risk factors special for this stage and not classic one

for other enterprises. For this purpose, we investigate the best practices in scale up phase especially in transition period by considering the situation and growth pains.

We are targeting the important stage of scaling up. Because of the following reasons:

- Completing the development of the offering and positioning the organization for rapid scaling (Picken,2017)
- Foundation of scale up companies is shaping during transition stage
- Placing the basis for a scale up company in this period is critical and may have a greater effect on venture success or failure (Picken,2017).
- Transition from start-up phase to scaling phase and its growing pains should be considered because beginning the first achievements in the market (Flamholtz, E.G., Randle. Y, 2015)
- Failures for invested start-ups (scaling up) in the beginning (in transition period) are more risky and costly.

The paper is structured as follows. In the next section, risk management is elaborated, which consists of risk management process and its main references. In section 3, we enumerate some researches relevant to business model canvas which analyze the risks of startups via this framework in the entrepreneurial process. In section 4, firstly we define the transition period in scaling up companies, and then focus on illustrating the details of risk factors in a classified table. Finally, section 5 the conclusion is presented.

2. Risk Management

2.1 Risk Management Fundamentals

“Organizations of all types and sizes face internal and external factors and influences that make it uncertain whether and when they will achieve their objectives. The effect this uncertainty has on an organization's objectives is “risk” “(ISO/FDIS 31000, 2009).

Risk management (RM) can be defined as the “coordinated activities do direct and control an organization with regard to risk – the effect of uncertainty on objectives” (ISO 31000:2009). A risk management process is the set of activities required to manage policies, procedures and practices in risk management. A crucial aspect of any RM process and assessment is to establish its context, i.e., setting the scope and objectives of the assessment [ISO 31000:2009]. RM can be applied in different contexts and for different purposes. In general, RM deals with the uncertainty that is present in any business or activity but its drivers and benefits can greatly vary (ISO 31000:2009). However, risk is defined as “a deviation from the expected – positive and/or negative.” (ISO Guide 73:2009). Therefore, a risk can represent a threat to the achievement of an objective or an opportunity to be explored (ISO 31000:2009)

To help organizations performing well in this environment full of uncertainty, International Organization for Standardization (ISO) as created numerous international standards that help organizations managing their risks effectively. In the following the most relevant principles and ISO standards related to Risk Management (RM) processes have been described.

The main references on Risk Management (RM) from the International Organization for Standardization (ISO) are:

ISO Guide 73: Vocabulary for risk management (ISO,2009);

ISO 31000: Risk management principles and guidelines (ISO/FDIS,2009a);

ISO 31004: Risk management—Guidance for the implementation of ISO 31000 (ISO/TR,2013);

IEC 31010: Risk assessment techniques (ISO/FDIS,2009b).

According to those sources, organization's (that find RM relevant to their governance) should define an internal RM process taking as a starting point the generic method proposed in ISO 31000 (ISO/FDIS,2009b). (Illustrated in Figure 1). IEC 31010 catalogues a set of techniques for risk assessment (ISO/FDIS,2009b).

2.2 Risk Management Framework

To achieve success in risk management a consistent risk management plan should be defined, for that purpose, this International Standard provides a risk management framework for risk management in an organization. This framework helps to manage risks effectively through the application of a systematic risk management process (illustrated in figure 13), and ensures that information collected about risk resultant from these processes is effectively reported and used as a basis for decision making and accountability.

The risk management process is exemplified in figure 1 and it represents the systematic actions to be taken in regard to risk.

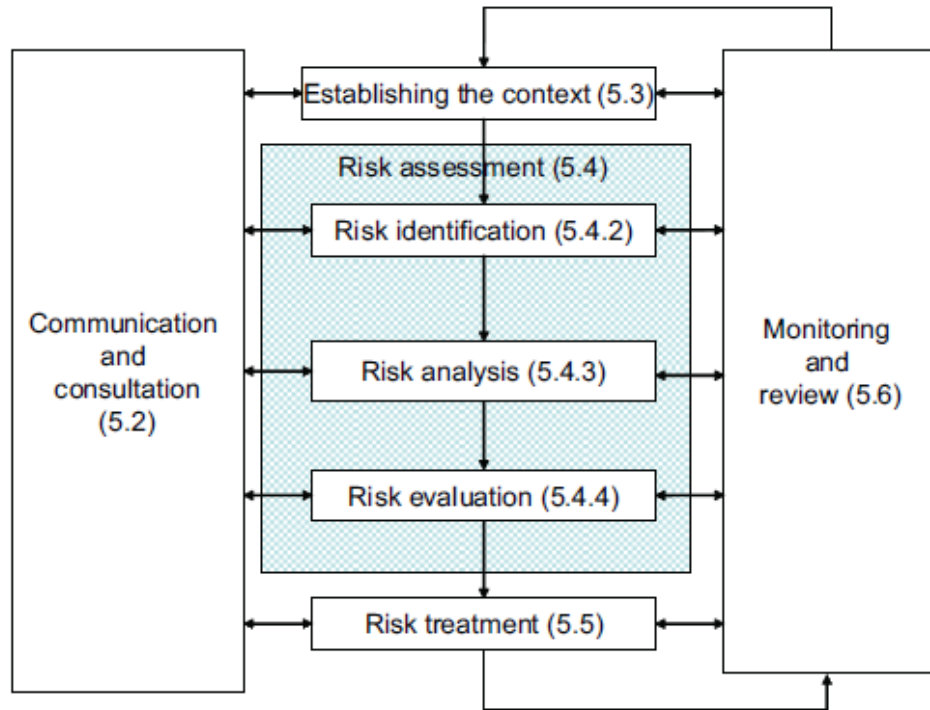


Figure1. The Risk Management Process according to the ISO/FDIS 31000

As shown, this process includes steps such as: communication and consultation, establishing the context, risk assessment, risk treatment and, monitoring and review. However, the risk assessment phase will be the one most relevant and where I will be more focused on. As we can see, it also represents the overall process. This stage comprises three steps: risk identification, risk analysis and risk evaluation.

In order to support ISO 31000, IEC 31010:2009 standard is launched, with this standard essentially supporting the risk assessment process. According to ISO, this is a supporting standard for ISO 31000, which provides guidance on selection and application of systematic techniques for risk assessment. When dealing with risk assessment process we try to provide evidence-based information and analysis to make decisions on how to treat particular risks (IEC 31010:2009).

Along with the techniques included in this standard, different risk management tools are also detailed. From all of them, one technique calls for our attention, since it works with the tools will be focused on, and because it can produce interesting reports that could be a basis for a risk treatment plan. This technique is entitled Structured “What-if” Technique (SWIFT). It’s a systematic team based study with the purpose of identifying different risks, and it contains a process including various steps. As an output, this technique can provide us a risk register with risk-ranked actions or tasks (IEC 31010:2009). Risk register is a tool generally used in risk management. It can give us a simple way of representing the information of the three steps of the risk assessment process, such as, identified risks, their sources, severity, treatment options and counter-measures.

3. Startups’ Risks

A start-up can be defined as “a temporary organization designed to search for a repeatable and scalable business model, in contrast to the concept of a company as a permanent organization designed to execute a repeatable and scalable business model” (Blank,2012).

It is acknowledged that the process of starting up a new venture is a very complex and demanding task, especially in the initial stages, where efforts are mainly focused on building the product that can be commercialized, and where the organizational and financial architecture of the firm has to be developed. Firms operating in the technology-intensive sector may face even some additional constraints such as large investments required to develop the product, or very short product life cycle, and emergence of many copycat competitors. This suggests that technology-based entrepreneurs (those that turn inventions and high-tech concepts into viable businesses) function in an uncertain and evolving environment. (Goktan & Miles 2011; Mulders & van den Broek 2012).

However, even though this process may make sense for ongoing business focused on execution on relatively known problems, it is less appropriate for new ventures (Furr & Ahlstrom, 2011).

New start-up ecosystems are being built up all over the world with the hopes of replicating the success of Silicon Valley. But despite the increasing importance of scalable start-ups, we still don't understand the patterns of successful creation. More than 90% of start-ups fail. For the less than 10% of start-ups that do succeed, most encounter several near death experiences along the way. Simply put, we just are not very good at creating start-ups yet. (Marmer, 2012)

A successful start-up can be highly rewarding, but it also is a high risk decision, therefore it will be very valuable to find the main reasons of failing to manage these risks. CB Insight has detected 20 reasons for startup failure by analyzing 101 startup failure post-mortems and FRACTEL after analyzing 200 founders' postmortems reports the reasons that founded startups fail. Both reports are shown in the table 1.

Table 1. Reasons of failure of startups

Rank	Reasons of failure of startups (CB Insight, 2017)	Percentage	Reasons of failure of founded startups (FRACTEL, 2016)	Number
1	No Market Need	%42	Ran Out of cash	41
2	Ran Out of Cash	%29	Business Model not Viable	39
3	Not the Right Team	%23	Not Enough Traction	27
4	Get Outcompeted	%19	Outcompeted	19
5	Pricing/ Cost Issues	%18	Lacked Financing/Investors	17
6	Poor Product	%17	Technical/Product Issues	17
7	Need/ Lack of Business Model	%17	No Market Need	15
8	Poor Marketing	%14	Bad Timing	12
9	Ignore Customers	%14	Lack of Focus	11
10	Product Mis-Timed	%13	Pricing/Cost Issues	10
11	Lose Focus	%13	Customer Development Issues	9
12	Disharmony on Team/Investors	%13	Legal Challenges	9
13	Pivot gone bad	%10	Disharmony on Team/Investors	8
14	Lack of Passion	%9	Failure to Pivot	6
15	Bad Location	%9	Hiring Mistakes	5
16	No Financing/Investor Interest	%8	Ignore Customers	5
17	Legal Challenges	%8	Inexperience/ Skill Gap	5
18	Don't Use Network/Advisors	%8	Poor Marketing	5
19	Burn Out	%8	Lack of Passion	3
20	Failure to Pivot	%7	Veered from Original Version	3
21			Fraud Victims	2
22			Bad Location	1
23			Burn Out	1
24			Pivot Gone Wrong	1

According to Blank (2006), start-ups usually solve invention risk by using simulation tools and solve customer and market risk by customer development process. In the meantime it has been suggested that doing a BMC exercise is already in some sense performing a risk assessment (Parrisius, 2013); (McAfee, 2013); (Proenca, 2015).

When startups apply Business Model Canvas they actually make some assumptions related to feasibility, desirability, and viability, and adaptability of their business concept that each of them includes a specific group of risks. It is shown in figure 2 (Osterwalder, 2016)

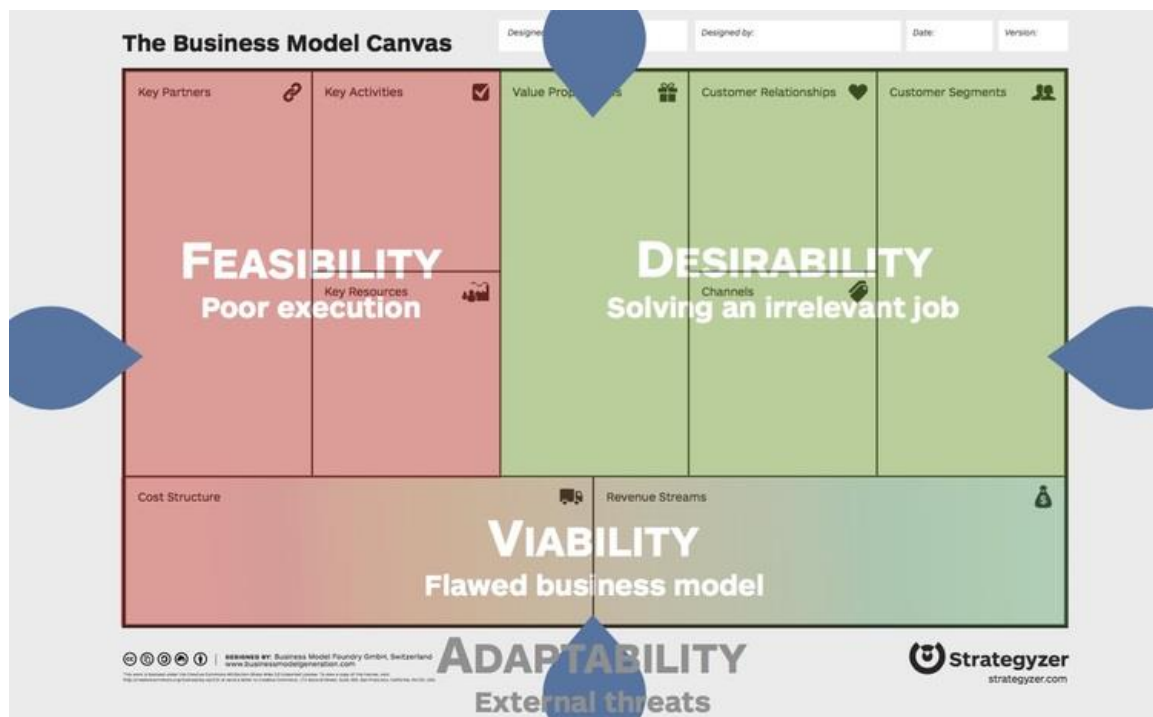


Figure 2. Assumptions and related risks in BMC (Osterwalder, 2016)

“Feasibility is about the assumptions that you chose the right infrastructure to execute your business model well and it leads to Risk of poor execution. Desirability is about the assumptions that will actually create customer value and it leads to Risk of solving an irrelevant customer job. Viability is about the financial assumptions that will earn you more money than you spend and it leads to Risk of flawed business model. Adaptability is about the assumptions that you chose the right business model within the context of external factors, like competition, technology change, or regulation and it leads to Risk of external threats” (Osterwalder, 2016).

In these situations it is advised to apply customer development and lean startup to test the assumptions to reduce the Start-up risks. In order to use Lean Methodology, the first significant milestone of a startup is achieving product/market fit, which isn't just about building the “right” product but building a scalable business model that works. Risks are tackled through experiments. The terrain before product/market fit is riddled with qualitative learning; though you may be able to mitigate some risks, you can never completely eliminate them through a single experiment. Ash Maurya in his book has explained that how lean canvas systematically eliminates three key risks of startups. 1. Mitigating Product risk by getting the product right, 2. Mitigating Customer risk by building a path to customers 3. Mitigating Market risk by building a viable business (Maurya,2012).

4. Scale up's Risks

4.1 Scaling up and Growth challenges

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 (OECD, 2007). A scale up can be identified as being in the "growth phase" life-cycle in (Millers and Friesen, 1984). Endeavor found that scale ups, companies growing at more than 20 percent 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. It is shown in the Figure 3.

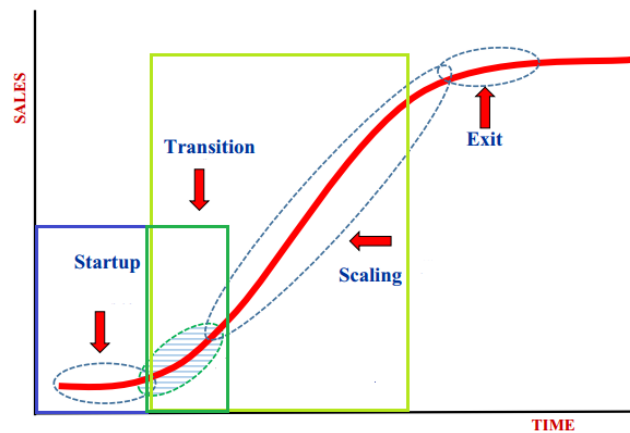


Figure 3. Transition (Picken 2017, Modified by the authors)

Entrepreneurs face diversity of obstacles during the growth phase of the organizational life cycle. In (Shah, 2013) research, Growth models and Growth strategies have been reviewed in an attempt to provide the entrepreneurs a guideline for finding the solution to problems particularly related to growth. Strategy has an important role in carrying out actions, which achieve the objectives and goals set by the firm. (Pasanen, 2007) has stated two broad strategies of firm's growth has mentioned: organic and non-organic (acquisition based) that entrepreneurs should carefully assess firm's circumstances such as customer and product structures, firm age, scale of operations and founders different factors, then select between the strategies.

Lean Startup methodologies are to validate a business model hypothesis as scale up methodologies is to identify the right counterparts and execute growth opportunities. It defines a scale up as a development-stage business, specific to high-technology markets, that is looking to grow in terms of market access, revenues, and number of employees, adding value by identifying and realizing win-win opportunities for collaboration with established companies. As with any capital-intensive company, the financing goal for a scale up is to reward its investors, either by being acquired via Mergers and acquisitions (M&A) or via an IPO (Onetti, 2014).

(Harnish, 2014) explains there are three barriers to scaling up: 1. Leadership: the inability to staff/grow enough leaders throughout the organization who have the capabilities to delegate and predict 2. Scalable infrastructure: the lack of systems and structures (physical and organizational) to handle the complexities in communication and decisions those come with growth 3. Market dynamics: the failure to address the increased competitive pressures that build (and erode margins) as you scale the business.

For managing these challenges scaling up companies should focus on the four major decisions areas: leading People, setting Strategy, driving execution and managing Cash. Therefore, team of the firms should be a master in the mentioned fundamentals.

(Flamholtz & Randle, 2015) discussed "Growing pains are problems that occur as a result of inadequate organizational development in relation to business size and complexity. Company's former mode of operation will no longer be effective. The underlying problem is the failure of the organization's infrastructure to match or keep up with the size and complexity of the business. This means that the organization's resources, operational systems, management systems and culture have not been developed to the extent necessary to support the size, complexity and growth of the enterprise".

(Flamholtz & Kurland, 2005) has introduced six key tasks for organizational development and growth: "Identification and definition of a viable market niche; Development of products or services for the chosen market niche; Acquisition and development of resources required to operate the firm; Development of day-to-day operational systems; Development of the management systems necessary for the long-term functioning of the organization; Development of the organizational culture that management feels necessary to guide the firm". These six key variables are expected to have an impact on the financial performance of organizations.

There is no clear way to make a successful transition from early-stage entrepreneurship to a future stage of growth.

All change is accompanied by risk and the need for organizational transitions and their accompanying personal changes is inevitable. Those who do not believe this are likely to increase the risk that their organizations will experience significant difficulties.

4.2 Scale up risks identification

As in the figure 4 is shown, this paper just targets two parts of Risk Management Framework: Establishing the context and Risk Identification. Moreover, in the future work we carry out the next steps of this framework by some practical cases. Meanwhile, along the last section we have tried to clarify the context and the desired objective as Establishing the Context. Therefore the research seeks to enhance identification of risks of invested ventures supporting by a pragmatic risk registry that can be used as a systematic method on the success of scale up ventures. Therefore, explores several key classes of risks that companies are facing in passing the transition stage. On the other hand, some classical risk categories such as ISO31000 SMEs Risk Classification have investigated. These risk categories includes risks factors such as Financial Risks, Equipment Risks , Reputation Risks, Operational Risks, Project Risks Strategic Risks, Strategic Risks, Stakeholder management Risks, Commercial Risks and etc. Although these are standard and comprehensive, a specific classification of risks is required to address our target stage. Because special risks factors for growth phase is considered and we are looking for specific classification that gives us more relevant risk factors that are the main concerns of entrepreneur.

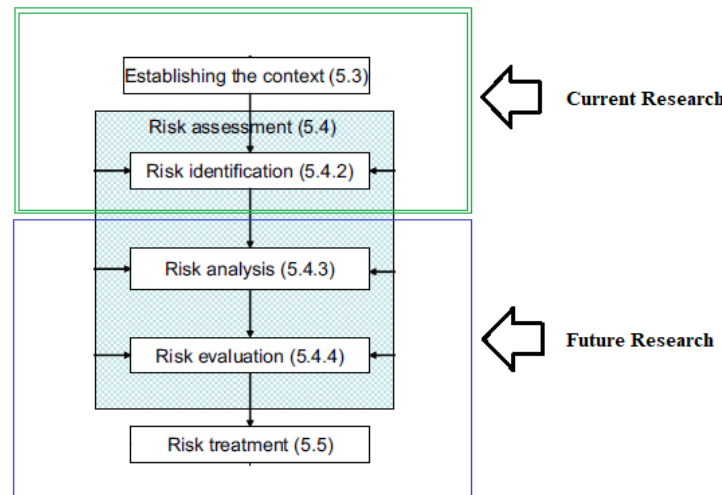


Figure 4. Current and Future Research

In the first part of the analysis, it was attempted to establish the context of our risk model. Subsequently, we deploy Joseph C. Picken's research (Picken, 2017) about laying the foundation of scalable enterprise, in order to find our best practices for entrepreneurs during transition period. He identified eight hurdles of transition that we have used the as the basis of risk categories. 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".

Although some enterprises are established for nonprofit purposes such as NGOs, other businesses that are not in this group are looking for economic achievement (In spite of having indirect benefits to other stakeholders such as social and political benefits for society); their main goal is to survive and grow to create financial benefits for shareholders. Therefore, the critical index of measuring the success/ failure of a company is about obtaining or losing money.

Additionally, offering value propositions by products and services to attract customers' attention and gain money for the company. In entrepreneurial firms, all of activities and resources are applied to earn money from the customers and also are attempted to make the business sustained and growth. Therefore, it is very important to understand that lose on this main goal happens in consequences of lose in some key objectives and key assets of a business.

In this research, on basis of reviewing the literature (Farht,2017; Fried,2015; ISO,2009; Osterwalder,2016; Rodríguez,2015; Sebor,2009, Shi,2009; Staniewski,2016, Unger,2011), six key objectives/assets with high potential to destroy or harm business financial goal are: Profitability (Financial management), Customer desirability (retention, satisfaction), Human capital (retention, performance), Infrastructures (operational and management systems), Reputation (brand), Sustainability (growth, continuity, market share). Therefore, it is very important to determine the impact of risk factors on these six variables to be clarified from severity of risk consequences. The identified risk factors and risk consequences are shown in the table 2. The severity of consequences can be rated by using the following descriptors: Negligible: 1, Minor: 2, Moderate: 3, Major: 4, Catastrophic: 5. (ISO, 2009)

Table 2. Identified Risk factors and Consequences for Transition stage

	Best Practices	Risk Factors	Direct Consequences	Consequences	
				Impact on	Severity (1-5)
1	Setting a direction and maintaining focus	<ul style="list-style-type: none"> Establishing unclear goals and strategic priorities Viewing the situation idealistically Keeping the organization focused on the inappropriate objectives Not having a clear market entry strategy against competitors 	<p>Wasting scarce resources by hunting goals of opportunities not on the organization's critical path</p> <p>Failure to capture market share against competitors</p>	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human capital (retention, performance)	
				Infrastructures (operational systems and management systems)	
				Reputation (brand)	
				Sustainability (growth, continuity, market Share)	
2	Positioning products/ services in an expanded market	<ul style="list-style-type: none"> Lack of development distribution channels Product/service offering has not expanded, refined, repositioned to meet the needs of an expanded market Unrecognizing the ongoing dynamics of the customer relationships Not responding to a continuously evolving set of customers and requirements such as ancillary products, services and support 	No sales increase and low profits by not covering the growing needs of current and potential customers	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human capital (retention, performance)	
				Infrastructures (operational systems and management systems)	
				Reputation (brand)	
				Sustainability (growth, continuity, market Share)	
3	Maintaining customer/ market responsiveness	<ul style="list-style-type: none"> Slow process and losing of a sense of urgency in resolving the customer's issues and problems New internal processes have not implemented to maintain customers responsiveness Conflicts between the need for stability and standardization on operations and customer demands for customization, variety, and responsiveness 	<p>Loss of customers and, consequently, profit; due to non-timely and non-responsively resolution of customer's problems</p> <p>failure to meet their growing needs</p>	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human capital (retention, performance)	
				Infrastructures (operational systems and management systems)	
				Reputation (brand)	
				Sustainability (growth, continuity, market Share)	
4	Building an organization and management team	<ul style="list-style-type: none"> Lack of careful planning and flexibility to ensure that staffing and structure are aligned with strategy and the needs of the business Lack of accountability and stretching beyond their capabilities by key people 	<p>Key challenges remain unresolved by confusion and chaos in the organization</p> <p>Finger pointing and blame shifting</p>	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human capital (retention, performance)	
				Infrastructures (operational systems and management systems)	

		<ul style="list-style-type: none"> Communications break down Lack of development for management team Delayed and poor quality decisions 	became a procedure	Reputation (brand)	
				Sustainability (growth, continuity, market Share)	
5	Developing effective processes and infrastructures	<ul style="list-style-type: none"> Ineffective decision processes Non-efficient operational and management processes Lack of new systems/ infrastructures for adapting the changing environment Ineffective planning to avoid chaos that inevitably occurs 	Failure to adapt to the new environment to provide new value to customers	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human capital (retention, performance)	
				Infrastructures (operational systems and management systems)	
				Reputation (brand)	
				Sustainability (growth, continuity, market Share)	
6	Building financial capability	<ul style="list-style-type: none"> Non-efficient utilization of invested funds Ineffective control on management of working capital and cash flow Delivering unreliable financial projections Unclear and ineffective stakeholders communications 	<p>Ran out of cash and wasting the fund</p> <p>Losing credit against investors</p>	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human capital (retention, performance)	
				Infrastructures (operational systems and management systems)	
				Reputation (brand)	
				Sustainability (growth, continuity, market Share)	
7	Developing an appropriate culture	<ul style="list-style-type: none"> Losing the opportunity to shape a culture supportive of the firm's business purpose and strategy Establishing a culture in organization that constrains the implementation of the strategies 	Creating constrains against organization's goal by development of a dysfunctional culture unintentionally	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human resources (retention, performance)	
				Infrastructures (operational systems and management systems)	
				Reputation (brand)	
				Sustainability (growth, continuity, market Share)	
8	Managing risks and vulnerabilities	<ul style="list-style-type: none"> Lack of proactive management for managing the potential risks Overlooking the early warning signs vulnerabilities before they become crises Inadequate infrastructures and information management or bias toward entrepreneurial risk-taking 	Loss of assets because of inability to manage the potential risks	Profitability (financial management)	
				Customer desirability (retention, satisfaction)	
				Human capital (retention, performance)	
				Infrastructures (operational systems and management systems)	
				Reputation (brand)	
				Sustainability (growth, continuity, market Share)	

5. Conclusion

This research investigated the possibility to utilize risk management in identifying the risks of transition stage of scaling up companies. 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. For this purpose, the authors have applied eight classes of hurdles during scaling up period as a basis of risk categories because of being relevant and comprehensive in explaining the research problem.

Briefly, it has presented a pragmatic risk registry that can be used to identify risks in scaling up firms. Noticeably, identifying the risk is just the first step of a risk formwork and it is important to complete the risk assessment process and risk treatment as well. In the future researches, the authors are looking to investigate these steps and presenting a more complete risk model and also using “empirical examples” of actual companies to study and demonstrate the core constructs and ideas. Afterwards, we are able to show the potential of using risk management process, which, if managed properly, can be helpful in preventing the company’s failure.

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