

**Role of Contemporary Management Accounting Practices in Reducing  
Customer Uncertainty in Entrepreneurial Startup Firms**

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## **Abstract:**

Many failures of new ventures are an outcome of the inability of the entrepreneurs to deal with uncertainties. Uncertainties impact almost all different stages of the entrepreneurial process, and the success or failure of firms depends upon how entrepreneurs deal with uncertainties before acting on an opportunity. Uncertainties in early-stage entrepreneurship can include customer, competitor, supplier, technological and resource aspects. An entrepreneurial firm must deliver value along the dimensions that matter most to its customers. Thus, Entrepreneurial firms should focus their scarce resources on the dimensions of value that most matter to customers. Creation of value for customers is a critical task for entrepreneurs, particularly when developing new products and services or starting new businesses. In addition, successful entrepreneurs understand the needs of their customers. Understanding the needs and wants of the targeted customer will help businesses to innovate and grow. On the other hand, Ignoring customer needs and not seeking their feedback can prove to be fatal mistake for most startups.

Many changes in the contemporary business environment have caused significant changes in management accounting. One of the most important trends in management accounting is greater focus on customer (customer orientation). Consequently, a hallmark of this era is the introduction of a diverse set of new managerial accounting practices that focus primarily on promoting value for customers. These practices can help in reducing customer uncertainty in entrepreneurial startups.

This research focus on how to use current management accounting practices to help in reducing customer- related uncertainty in startup entrepreneurship.

In attempting to identify the role of current management accounting practices in reducing customer-related uncertainty in startup entrepreneurship, the researcher will use the constructive approach.

**Key Words:** Entrepreneurship, Start-ups, Uncertainties, Management Accounting Practices.

## **Introduction:**

Entrepreneurship plays a crucial role in economic progress as it manifests its fundamental importance in different ways: by identifying, assessing and exploiting business opportunities; by creating new firms and/or renewing existing ones; by making them more dynamic; and by driving the economy forward through innovation, competence, job creation and by generally improving the well-being of society [ Cuervo et al., 2007]. The initialization and first year of a new business are critical stages in determining its success or failure. Many start-ups never reach establishment, and the majority close up within one year after they have become established. Identifying the causes of failure will help in establishing failure proof mechanisms, reducing the socio-economic cost of failure and the lessons learned will help future entrepreneur to minimize the probability of failure and enhance the prospects of success. In addition, It is expected to give entrepreneurs a competitive and sustainable advantage of understanding and doing business in the globally competitive business. Embarking on a new business is one of adventure and challenge but it brings with it high risk and uncertainty. Uncertainty is currently one of the most important research areas in the management and entrepreneurship literature because it restricts the entrepreneurs from taking entrepreneurial actions such as new product development, entry into new market, etc. [Ghosh et al., 2014]. It is commonly claimed that the initial stages of any startup business are dominated by continuous, extended uncertainty, in an environment that has even been described as chaotic. Thus, decisions are made in uncertain circumstances, so making the right decision is crucial to successful business[Kemell et al.,2019]. Consequently, In an entrepreneurship environment, understanding uncertainty is critical to startups because it is directly related to the context of decision making. Drexler (2014) contends that entrepreneurs need to make many financial choices and may be inadequately prepared to make such critical decisions. If a company does not have an accurate accounting system and financial expertise and guidance, they are unable to make sound financial decisions that will impact the survivability and sustainability of their business. Also, Ries (2011) mentions that startups require a flexible and specific form of accounting which helps them to make decisions and keep track of business in the dynamic and fast-changing startup environment. The fundamental function of management accounting is to support the entrepreneurs through informed decision making. By providing relevant, accurate, and timely financial and non-financial information to entrepreneurs in a format that will aid the decision-making process. Management accounting can help with many of the challenges facing entrepreneurs such as strategic planning, acquiring financing, understand the impact of their decisions, understand the current situation in general, consider development opportunities and find ways to reduce the risks of decisions. Proper use of management accounting can influence positively in the achievement of entrepreneurial goals. Thus, Management accountants can improve the entrepreneurship and sustainability of a start-up business. Specifically, it can help increase the success rate of start-up businesses.

## **Research Questions:**

The researcher will try to answer the following questions:

- What are the sources of environmental uncertainty in entrepreneurial startup firms ?
- How does current management accounting practices help in reducing uncertainty in entrepreneurial startup firms?

## **Research Objectives:**

The main goal of this research is to identify the role of current management accounting practices in reducing uncertainty in entrepreneurial startups firms.

This goal can be achieved by satisfying the following:

- Determining the sources of environmental uncertainty in entrepreneurial startup firms.
- Identifying the role of current management accounting practices in reducing uncertainty in entrepreneurial startup firms.

## **Research Methodology:**

In attempting to identify the role of current management accounting practices in reducing uncertainty in entrepreneurial startups, the researcher will use the constructive approach. The constructive approach means problem solving through the construction of frameworks, models, diagrams, plans, etc. it was proposed as a significant option for management accounting researchers to enter the field of relevant and useful problem solving (Kasanen et. al., 1993).

The research will be divided into two sections:

**First:** Sources of environmental uncertainty in entrepreneurial startup firms.

**Second:** Role of current management accounting practices in reducing uncertainty in entrepreneurial startup firms.

### **1. Sources of environmental uncertainty in entrepreneurial startup firms:**

#### **1.1 Startup Defined:**

A startup is generally defined as a new business that entrepreneurs initiate by combining business ideas and resources [Kim et al., 2018]. According to Ries (2011) startup can be defined as an organization that has been launched to create new products or services under the conditions of extreme uncertainty. These companies are based on business models that are in a dynamic development process, being constantly changing to adjust to the market. Blank (2013) defines

startup as an organization formed to search for a scalable and repeatable business model. It is a juvenile organization that has just started to emerge .It can be new entrepreneurial venture or a new business or a new partnership firm designed to reach for a climbable business model[Dutta]. A number of researchers have labeled this time period in an organization's life as Startup, Preorganization, Organization in Vitro, Prelaunch , Gestation , Organizational Emergence. These all refer to the same phenomenon. Also, startup-related search terms includes entrepreneurial, entrepreneurship and new venture [Pelz,2018]. This stage is also called the “valley of death”. Because, The general and long-term experience in developed countries is that half of all new businesses do not last for five years[Bethlendi and Urbanics,2018].

Various characteristics have been attributed to startups to differentiate them from other firms. Characteristics typically associated with startups include:

- 1- Newly started businesses.
- 2- Initial high costs that decline steeply with time [Bruno et al.,1987].
- 3- Startup companies are typically perceived as dynamic, unstructured, or even chaotic organizations[Pelz,2018].
- 4- The process of establishing the entrepreneurial start-up is characterized by high risk and uncertainty, in terms of outcomes, success, failure, survival, lack of knowledge and understanding [Bajwa,2017].
- 5- A basic characteristic of startups is innovation aimed at creating new products and services, entailing a significant risk [Bethlendi and Urbanics,2018].
- 6- They have little or no operational history (working history).
- 7- Highly reactive, rapidly evolving, flat organization, highly risky[Kemell et al.,2019].

## **1.2 Startups and Uncertainty:**

Entrepreneurship is “a process by which individuals –either on their own or within organizations– pursue opportunities” [Stevenson and Jarillo, 1990]. Opportunities are chances that exist to meet a market need or interest through the creative combination of resources and capabilities to deliver superior value [Ardichvili and Cardozo,2003].Entrepreneurial opportunity is a central concept within the entrepreneurship field. There are four principal activities that take place before a new business is formed—opportunity identification, opportunity evaluation, opportunity refinement, and opportunity exploitation. Even though these activities can overlap, interact and sometimes be confounded with one another, the opportunity evaluation occurs several times during the entrepreneurial process [Ardichvili and Cardozo,2003].Opportunity evaluation is a critical element of the entrepreneurial process. It is a long-term process concerned with investigating and assessing the external environment to understand the risks associated with the venture [Sebestova et al.,2007].Once an opportunity is identified, it needs to go through the evaluation process before it can be refined and exploited. Opportunity evaluation helps entrepreneurs to think beyond the current frame of reference in order to identify all the future influences

associated with the perceived opportunity and thereby reduce the fear to act on it [Mazzarol and Reboud,2006]. A key part of the entrepreneurial plan is to identify the uncertainties surrounding an opportunity. The environment poses both opportunities as well as threats for new venture creation. Many failures of new ventures are an outcome of the inability of the entrepreneurs to deal with uncertainties and bear the implications of the uncertainties. Environmental uncertainty has multiple definitions in the literature, including the unknown probability of outcome, hesitancy and indecisiveness, a lack of information related to environmental components for decision making, an individual's perceived inability to predict (an organization's environment) accurately, the availability of choice, a complex combination of environmental components, and an environmental state [Ghosh et al., 2014]. Thus, There is a lack of consensus about the definition of uncertainty. In this research, the term 'uncertainty' will be defined as an individual's perceived inability to predict an organization's environment accurately due to the lack of sufficient information [Milliken,1987]. Defining uncertainty broadly as "environmental uncertainty" is not sufficient; it is important to identify the various components of the firm's environment that acts as source of uncertainty for the firm. The environmental components (i.e., customer, competitor, supplier, market, technology, government, and resource)differentially affect the operational and strategic decisions of a firm. Changes in the environmental components and the complex interconnections among them create environmental turbulence, which initiates environmental uncertainty[Ghosh et al., 2014].

### **1.3 Sources of uncertainty in startup firms:**

The source of uncertainty is the domain of the organizational environment which the decision maker is uncertain about [Milliken, 1987]. Distinguishing between different sources of uncertainty is important for choosing appropriate strategies to cope with the uncertainty [Meijer,2008]. Uncertainties impinge upon almost all different stages of the entrepreneurial process, and the success or failure of firms depends upon how entrepreneurs deal with uncertainties before acting on an opportunity [Butler et al., 2010]. This research focus on the uncertainties in the opportunity evaluation stage of the entrepreneurial process, because this is the decision-making stage of the entrepreneurial process where the entrepreneur, after evaluating the strength of the perceived opportunity, decides whether to exploit or ignore an opportunity. Meijer(2008) proposes that uncertainties involved in the opportunity evaluation stage can be classified into customer, competitor ,technological, supplier, political and resource uncertainty. Thus, the different sources of uncertainties in the opportunity evaluation stage of the entrepreneurial process can be classified into uncertainties related to external environment(include customers, suppliers, competitors and technological) and uncertainties related to internal environment (include resources).

The different sources of uncertainties in the opportunity evaluation stage of the entrepreneurial process are shown in Figure 1

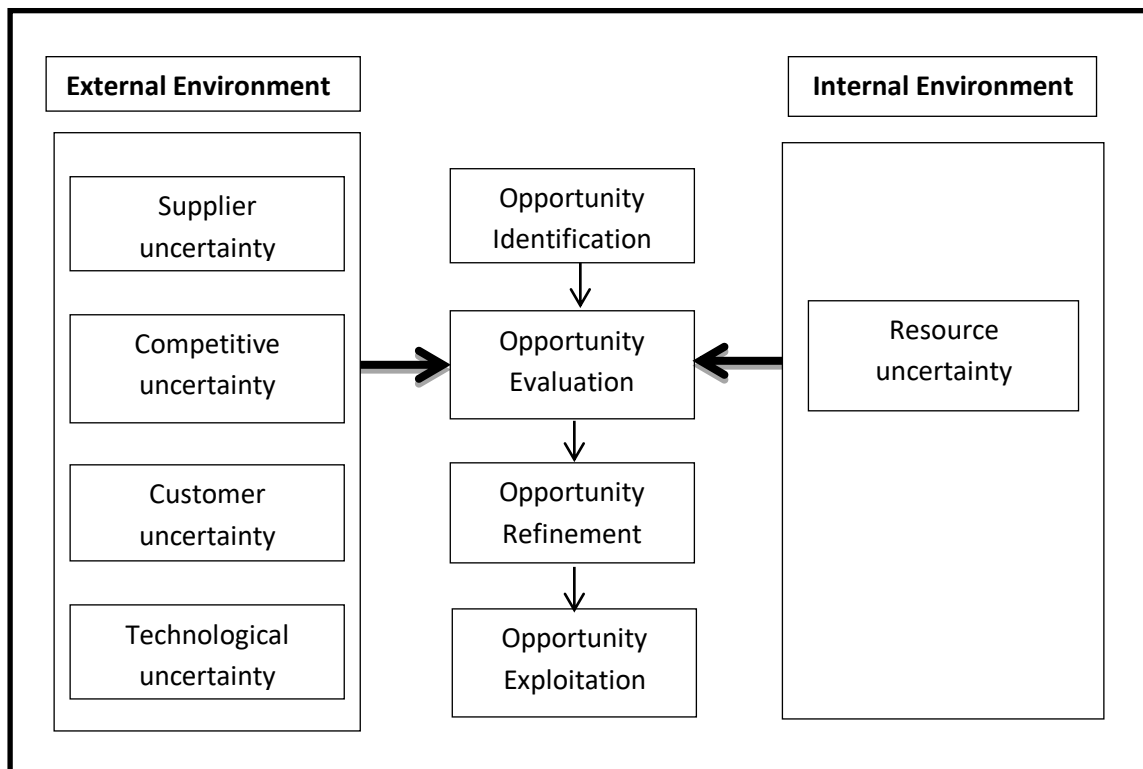


Figure 1. Uncertainties in the opportunity evaluation stage of the entrepreneurial process.

[Tomy and Pardede, 2018:4," Emphasis Added"]

**As to Resource uncertainty:**

It refers to perceived uncertainty about the availability of raw material, human and financial resources needed for innovation [Meijer,2008]. Questions arise regarding which kind and what quantity of key resources and activities are necessary to develop in order to execute the business; what the operating expenses will be; which resources and activities are most expensive; whether to search for key potential partners ; what channels need to be used; how costly they are; how to generate income; how much the customer pays; how they currently pay; how they prefer to pay; whether the cost is less than revenue; when the business will be profitable and so on [Rose, 2012 ; Osterwalder and Pigneur,2010].

**As to Supplier uncertainty:**

Among the factors that contribute to the success and failure of startups, Entrepreneurs ability to managing suppliers to supply at the right quality, quantity and time are prudential to better business performance [Wahab et al.,2010; Quadir and Jahur, 2011] .Securing relations with resource providers such as customers, suppliers, employees etc. represents a critical problem for start-ups[Evers, 2003]. Supplier uncertainty can be defined as uncertainty about the actions of suppliers i.e. uncertainty about the reliability of the supplier

[Meijer,2008]. When the dependence on a supplier is high, supplier uncertainty becomes increasingly important. In this case, suppliers have more bargaining power and can create uncertainty about their actions by threatening to lower the quality or increase the prices of their products. Bargaining power of suppliers can squeeze profits by putting downward pressure on prices, suppliers squeeze profits by increasing input costs. The bargaining power of suppliers determines the cost of raw materials and other inputs[IMA,1996]. Several factors influence the dependency on a supplier, such as the number of suppliers, the presence of substitute products, the size of the transaction costs (costs of switching from one supplier to another), or the threat of forward integration by suppliers [Porter, 1980].Therefore, entrepreneurs need to establish long lasting relationships with suppliers to reduce uncertainty.

#### **As to Competitive uncertainty:**

Ignoring competition was a recipe for failure in 19% of the startup failures [CB Insights ,2019]. Many entrepreneurs often lack business experience in the industry they wish to compete in. As well as lack of experience, the nascent entrepreneur tends to have limited knowledge of the industry they enter. Most start-ups lack innovative ideas or assets that could differentiate them from their competitors [Evers, 2003].On the other hand, entrepreneur with competitive advantage and core competence can be a market leader and maintain a very good relationship even with the competitor among others [Quadir and Jahur,2011]. Competitive uncertainty can be defined as uncertainty about the actions of (potential or actual) competitors and uncertainty about the effects of competitors' actions. Uncertainty about the actions of (potential or actual) competitors can either be innocent (arising from a lack of awareness about the prospective actions of competitors) or 'strategic' (when firms deliberately create uncertainty for their competitors in order to gain a strategic advantage) . There is not only uncertainty about which strategies competing actors will use, but also about the effects of these strategies on the competitive position of the firm[Meijer,2008]. Consequently, New firms are at a high risk of failure in comparison with existing firms because of lack of established channels with suppliers and customers. Thus, it is important for new firms to understand the competitive market in a way to react to actions of the competitors in a timely way with improved product and services [Shi et al.,2015].

#### **As to Customer Uncertainty (also called market uncertainty):**

Customer uncertainty play a dominant role in the startup phase. Customer uncertainty refers to the lack of knowledge about user acceptance and demand with respect to the product or service[Tomy and Pardede, 2017]. For startup firms, there will be high uncertainty about the customer expectations regarding a product, its characteristics, whether it fulfills the customer needs and preferences, quality, prices, and appropriate distribution channels[Giarratana,2004].

Below, key variables associated with customer uncertainty will be described in more detail:



## 1. Potential Market Size

Failure to evaluate the potential market size is one of the top reasons for the failure of start-ups [Griffith]. Uncertainties about the volume and value of potential market size act as a barrier to bringing an idea to market. If the market size is massive, the opportunities are high, while if it is a small niche, there will be limited opportunity [Eckhardt and Shane,2003].

## 2. Segmentation

Segmentation is important in understanding who our most important customers are and for whom we are creating value, and whether they are clustered or monopolized [Tomy and Pardede,2018]. Customers are grouped in different segments according to their needs, behaviors, and other specific attributes. Entrepreneurs are uncertain about which segment they will choose. They need to evaluate the attractiveness and profitability of each segment.

## 3. Customer Needs

Understanding the needs and wants of the targeted customer is a crucial part of entrepreneurship. The success of a company depends on the ability to recognize the customer problems and unfulfilled needs. On the other hand, Ignoring customer needs and not seeking their feedback can prove to be fatal mistake for most startup. Customer needs change day by day and new products and services are emerging fast. The entrepreneur needs to stay informed about the changes and fulfill their customer's needs over time to maintain its competitive advantage [Wenzel,2012]. Understanding customer needs will help in assessing opportunity's value to the customers. An entrepreneurial firm must deliver value along the dimensions that matter most to its customers. Creation of value for customers is a critical task for entrepreneurs, particularly when developing new products and services or starting new businesses. Thus, Entrepreneurial firms should focus their scarce resources on the dimensions of value that most matter to customers.

## 4. Purchasing Power of Potential Customers

According to Wenzel (2012), “a successful business provides valued products and services to customers at a price they are willing and able to pay”. Thus, the entrepreneur needs to understand how much the customer is willing to pay or how much the competitors are charging. The number of potential customers relative to companies offering the same product or service also determines the purchasing power. The switching costs to use other products or service or use of multiple services, quantity and frequency of purchase all depend on the customers' purchasing power [Gentry et al.,2013]. The degree of buyer power generally depends on: customer concentration (the higher the concentration of customers, the greater their negotiating leverage); the propensity for customers to integrate backward (the higher the propensity for backward integration, the greater the bargaining leverage); costs of switching suppliers (the lower the switching costs, the greater the buyer's leverage); and the number of

alternative suppliers (the greater the number, the greater the customer's leverage). Buyer power influences the prices that firms can charge. The power of buyers can also influence cost and investment, because powerful buyers demand costly service [IMA,1996].

#### 5. Living Conditions (social factors)

Social factors that have impacts on the market include demographic analysis, such as population growth rate, age distribution, unemployment rates, overall education levels of the population, willingness of individuals to work or start business, job market trends, workforce immigration, cultural and social conventions, life style changes, adoption of new technologies and services, acceptance and growth of e-commerce, provision of medical and career and environmental issues[Misra et al.,2012]. These factors do not only have impacts on the functioning of a business but also influence the ability of a firm to obtain resources, identify the opportunities and threats, and market its products and services [Spiegel and Marxt,2011]. Consequently, Ideas about living conditions and customer characteristics are needed to decide along which dimensions to segment the market[Meijer,2008].

#### 6. Purchase Behavior

It is important to have an idea whether the product or service offering is sustainable or not. Understanding the market and remaining flexible to the customer's changing needs can only lead to long-lasting business success. The key to the success of a venture is to "fulfill customers' needs in a way that keeps attracting new customers and keeps existing customers coming back." [Wenzel,2012].

#### 7. Potential Alliances

Entrepreneurial opportunity often demands the seeking of partnership arrangements which help to bring together the skills and firm specific resources in order to complete partial capabilities need to realize the perceived opportunity [Hoskisson and Busenitz,2002]. Ries considers that the strategy that a startup applies must include a perspective about partners and competitors. Also, Mehralizadeh & Sajady (2005) argue that having a better knowledge of the targeted customers, suppliers and interested groups to their products and services and collaboration with available network with other business owners in similar industries will assist in the improvement of chances for success for startups. New firms are at a high risk of failure in comparison with existing firms because of the limited availability of resources and a lack of established channels with suppliers and customers. Thus, it is important for new firms to understand the competitive market in a way to react to actions of the competitors in a timely way with improved product and services[Shi et al.,2015]. Often, an entrepreneur is uncertain about how to reach customer segments. Even though partnership and alliances help to create distribution channels for the products as well as services, new ventures are always confused about which ones work best or which ones are most cost-efficient [Rose,2012]. Collaborating with other actors such as

customers, competitors, suppliers may not only help in reducing uncertainty about the behavior of this actor, but also in coping with other sources of uncertainty such as sharing uncertainty about financial resources [Meijer,2008; Bajwa,2017]. Such collaboration can be done through horizontal or vertical integration. The emergence of the modern industrial enterprise towards the end of the nineteenth century was involved a significant extension of the boundaries of the firm through horizontal and vertical integration [ Casson, 2010]. Horizontal and vertical integration can lead to a competitive advantage for entrepreneurs. Being one's own supplier and /or buyer provides synergistic opportunities to conduct these transactions more efficiently than they are conducted with independent firms fulfilling these roles. Also, operating as a supplier and/or a buyer of the original business provides learning opportunities that could lead to new processes and/or new product improvements that would not have been available if this integration had not taken place. Further, horizontal integration provides the opportunity to increase sales of the existing product. For example, the existing product and the new product may be bundled and sold together, which may provide increased value to customers and increase sales. Examples of bundled products include computer hardware and software, televisions and video recorders, and telephones and answering machines[Hisrich et al.,2017]. Thus, entrepreneurs need to decide about key partnerships and alliances in their startup firm.

**From the above discussion, we can conclude that** the information required to help entrepreneurs reduce uncertainties in the opportunity evaluation stage of the entrepreneurial process include the following:

- Information about the industry entrepreneur want to enter and compete in. Identifying gaps in the industry positioning map. These gaps can be customer segments, needs that they seek to see supplied or new forms of production, delivery or distribution of products/services. Hence, the determination of which part or parts of the industry startup firm will occupy. Assessing the attractiveness of the industry for startup firm. The competitive position of the firm within their industry.
- Information that can help in understanding the needs and wants of the targeted customer, knowing the customer problems and unfulfilled needs and ways to capture maximum value for their customers and themselves.
- Information that can help in analyzing customer segments and evaluating the attractiveness and the profitability of different segments.
- Ideas about living conditions and customer characteristics and purchase behavior.
- Purchasing power of potential customers. This include many information like the number of potential customers relative to companies offering the same product or service, the switching costs to use other products or service or use of multiple services, quantity and frequency of purchase. and the number of alternative suppliers (the greater the number, the greater the customer's leverage).

- Information to help in making critical strategic decisions regarding make/buy and forward/backward integration and investment decisions.
- Information about bargaining power of suppliers. This include information about number of suppliers, the presence of substitute products, the size of the transaction costs (costs of switching from one supplier to another), or the threat of forward integration by suppliers,.
- Information that can help in the selection of suppliers, targeted customer(market segment), possible alliances (key partnerships with suppliers or customers).
- Information to decide which partnership arrangements work best or which ones are most cost-efficient.
- Information that can help in determining the degree of vertical integration or horizontal integration.

## **2. The role of current management accounting practices in reducing uncertainty in entrepreneurial startup firms:**

Management accounting is defined as the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of business events. This process is followed by management to assist in planning, evaluating, controlling, and assuring accountability of all business activities (referred to as the “responsibilities” of management )and to assure appropriate use of and accountability for its resources [El-Helbawy and El Nashar,2020]. Also, management accounting can be defined as the process of supplying managers and employees with relevant information both financial and nonfinancial for making decisions and allocating resources, consistent with the strategy, monitoring, evaluating and rewarding performance [Atkinson et.al,2012].

### **2.1 Evolution of management accounting:**

Management accounting began under the label ‘cost accounting’ in the distant past and split from cost accounting in the 1950’s. During this period, standard costing was viewed as the key accounting tool in cost control and few people questioned the ability of standard costing to provide effective managerial control. Cost variance, net profit and return on investment were the primary financial measures of managerial performance. The International Federation of Accountants (IFAC, 1998) identified four stages in which management accounting has evolved:

Stage 1 – Prior to 1950, the focus was on cost determination and financial control, through the use of budgeting and cost accounting technologies. Stage 2 – By 1965, the focus had shifted to the provision of information for management planning and control, through the use of technologies such as decision analysis and responsibility accounting. Stage 3 – By 1985, attention was focused on the reduction of waste in resources used in business processes, through the use of process analysis and cost management technologies. Stage 4 – By 1995, attention had shifted to the generation or creation of value through the effective use of resources, through the use of technologies, which examine the drivers of customer value, shareholder value and organizational innovation. Each stage is a

combination of the old and the new, with the old reshaped to fit with the new in addressing a new set of conditions in the management environment. The focus, therefore, shifts from the provision of information to the use of the available resources to create value for all the stakeholders [Atkinson et al., 2012].

## **2.2 Current trends in management accounting:**

Many changes in the business environment in recent years have caused significant modifications in management accounting practices. The primary changes are greater focus on the customer (customer orientation), Increase in global competition (the global business environment), Lean manufacturing (Advances in manufacturing technologies), New forms of management organization, use of information technology, the internet and Enterprise resource management and changes in the social, political and cultural environment of business [Blocher et al., 2010 ; Hansen et al., 2009].

Current trends in management accounting can be summarized in the following points [El-Helbawy and El-Nashar, 2020]: The appearance of Cost Management Concept, the appearance of Activity Based Management/Process Based Management, Customer Orientation, Strategic Orientation of Management Accounting and the appearance of Extended Enterprise Concept.

### **Customer orientation:**

One of the most important trends in management accounting is greater focus on customer (customer orientation). Customers are the most important stakeholder groups and intangible assets for firms as they create revenue streams. More than half of the value of a firm is composed of intangible assets and, as such, customer assets significantly influence financial performance [O'Cass & Ngo, 2010]. Customer feedback is still the most important benchmark that indicates the success or failure of a value creation program since a satisfied or unsatisfied customer will determine the long term sustainability of a firm [Lin & Lin, 2006]. Customers provide value to the firm in the form of sales revenues. On the other hand, the firm provides value to customers in the form of products or services provided to them [El-Helbawy & El-Nashar, 2020]. Firms are concentrating on the delivery of value to the customer with the objective of establishing customer loyalty. They receive value if the benefits they received from a product or service meet or exceed what they paid (including time, cost, etc.) [Cokins, 2007]. It is extremely important to fully understand the key elements of value in the eyes of the customer [Kothari & Lackner, 2006]. Customer value is the difference between what a customer receives (customer realization) and what the customer gives up (customer sacrifice) [Hansen et al., 2009]. What a customer receives is more than simply the basic level of performance provided by a product. What is received is called the total product. The total product is the complete range of tangible and intangible benefits that a customer receives from a purchased product. Thus, customer realization includes basic and special product features, service, quality, instructions for use, reputation, brand name, and any other factors deemed important by customers.

Customer sacrifice includes the cost of purchasing the product, the time and effort spent acquiring and learning to use the product, and postpurchase costs, which are the costs of using, maintaining, and disposing of the product [Awad,2014]. Producing value for the customer changes the orientation of managers from low-cost production of large quantities to quality, service, timeliness of delivery, and the ability to respond to the customer's desire for specific features. Today many of the critical success factors are customer oriented. Cost management practices are also changing; cost management reports now include specific measures of customer preferences and customer satisfaction [Blocher et al.,2010]. Consequently, A key question to be asked about any process or activity is whether it is important to the customer. Management accounting system must track information relating to a wide variety of activities important to customers (e.g., product quality, environmental performance, new product development, and delivery performance)[Hansen et al., 2009]. As a result, a hallmark of this era is the introduction of a diverse set of new managerial accounting practices that focus primarily on promoting value for customers.

### **Strategic cost management:**

There are three distinct approaches to convert a firm to strategic cost management. The first is to review existing and planned cost management initiatives to ensure that they enhance the firm's strategic position. This can be done through differentiating between three types of cost management initiatives: initiatives that strengthen the firm's competitive position, those that have no impact on the firm's position, and those that weaken it [El-Helbawy and El-Nashar, 2020]. The second is to extend the scope of internal cost management beyond the walls of the factory. Traditional cost systems are limited to the walls of the factory and are used to determine only the cost of products. Other potential cost objects such as suppliers and customers are ignored and the cost associated with them are treated either as general overhead and arbitrarily allocated to products or as period costs and assigned directly to the income statement. To enable these costs to be managed strategically, they must be assigned causally to cost objects other than products. The implications of extending cost management beyond the factory walls means that costs are assigned to suppliers and customers as well as products[Cooper and Slagmulder,2004]. As to procurement costs, assignment of procurement costs to suppliers will guarantee the improvement of suppliers selection decision. Instead of just looking at the purchase price, strategic cost management includes the costs associated with quality, reliability, and delivery performance. Consequently, Purchasing managers now are expected to evaluate suppliers on total cost, not just purchase price. They must use the concept of total cost of ownership(TCO). Thus, the resulting suppliers selection leads to strengthening the firm's strategic position. As to customer service costs, strategic cost management provides a more balanced view of customer profitability by assigning customer-related costs to the customers that cause them. Consequently, a more accurate view of customer costs and hence profitability is generated[El-Helbawy and El-Nashar, 2020]. The third is to extend the cost management

programs beyond the boundaries of the firm. This extension enables a firm to take advantage of cost management synergies between it and its suppliers and customers. In particular, the firm can actively seek to find ways to reduce costs across the value chain while simultaneously strengthening its strategic position. It achieves these objectives by coordinating its cost management programs with those of its suppliers and customers[Cooper and Slagmulder,2004].

### **2.3 Management accounting practices:**

Management accounting practices can be divided into three pillars:

**1- Concepts:** current concepts include multiple cost drivers, value added cost, non-value added cost, value chain, cost management, strategic cost management, total cost of ownership(supplier costs)(procurement costs),customer service costs and extended enterprise concept.

**2- Techniques:** management accountants, guided by a strategic focus, have responded to the changes in the contemporary business environment with many techniques that are useful in these dynamic times. Current techniques include Balanced Scorecard (BSC) and Strategy Map, The Value Chain, Activity-Based Costing and Management, Business Intelligence (business analytics or predictive analytics), Target Costing, Life-cycle Costing, Benchmarking, Business Process Improvement, Total Quality Management, Lean accounting, The Theory of Constraints, Enterprise Sustainability and Enterprise Risk Management. This research will focus on strategic cost analysis and value chain analysis.

### **3- Areas of Management Accounting:**

Areas of management accounting includes planning, decision making and performance measurement. Information provided by strategic cost analysis and value chain analysis can support the strategic planning area in startups. The value chain approach for assessing competitive advantage is an integral part of the strategic planning process. Like strategic planning, value chain analysis is a continuous process of gathering, evaluating and communicating information for business decision making. By stimulating strategic thinking, the analysis helps managers envision the company's future and implement decisions to gain competitive advantage [IMA,1996].

### **2.4 The role of strategic cost analysis and industry value chain analysis in reducing uncertainty for entrepreneurial startup firms:**

This research will focus on using strategic cost analysis and value chain analysis in reducing uncertainty in entrepreneurial startup firms:

### 2.4.1 Strategic cost analysis:

Managers need to be aware that cost analysis must explicitly consider strategic issues and concerns. SCA is cost analysis in a broader strategic context, where the strategic elements become more conscious, and formal. It is new framework which adapts the traditional body of knowledge called cost analysis to the rapidly developing body of knowledge on strategy formulation and implementation. Here, cost data is used to develop superior strategies en route to gaining sustainable competitive advantage. A sophisticated understanding and analyzing of the firm's cost structure can go a long way in the search for sustainable competitive advantage. Competitive advantage in the market place ultimately derives from providing better customer value for equivalent cost or equivalent customer value for a lower cost. Thus, SCA is essential to determine exactly where in the company's operations-from design to distribution customer value can be enhanced or costs lowered [Shank and Govindarajan,1989].The following table show the difference between traditional cost analysis and strategic cost analysis [Blocher et al.,2010]:

**Table 1: Traditional cost analysis versus Strategic cost analysis**

<b>Traditional cost analysis</b>	<b>Strategic cost analysis</b>
Short-term focus Not linked to strategy Product cost focus Focused on individual product or decision	Long-term focus Linked to the firm's strategy Customer focus Integrative; considers all customer-related situation factors

Data generated from traditional cost accounting systems are not appropriate for SCA since they do not help the firm understand the behavior of costs from a strategic perspective. Several modifications need to be made to make cost data sound basis for developing strategies. Such modifications include the use of value added activity instead of cost centers, focusing on value chain concept instead of value added, comprehensive view on cost drivers(Knowledge of organizational and operational activities and their associated cost drivers is fundamental to strategic cost analysis) , focus on manufacturing costs and nonmanufacturing costs, avoid cross-subsidy, exploit linkages with suppliers and customers [Shank and Govindarajan, 1989].

### 2.4.2 Value chain analysis:

Traditional management accounting takes a value-added perspective, starting with payments to suppliers(purchases) and stopping with charges to customers(sales). The key theme is to maximize the difference (the value added) between purchases and sales. From a strategic perspective, the value-added concept has two main problems: it starts too late and it stops too soon. Starting



cost analysis with purchases misses all the opportunities for exploiting linkages with the firm's suppliers. Such opportunities can be dramatically important to a firm. In addition to starting too late, value-added analysis has another major flaw; it stops too soon. Stopping cost analysis at sales misses all the opportunities for exploiting linkages with the firm's customers. Customer linkages can be just as important as supplier linkages. So the main problem of value added concept is the failure of studying the impact of management decisions on the overall value chain [El-Helbawy &El-Nashar, 2020].

### **The Value Chain Defined:**

The value chain concept is fundamentally different from value-added concept. The idea of the value chain was first introduced by Michael Porter in 1985 to depict how customer value accumulates along a chain of activities that lead to an end product or service [Porter, 1985]. The chain, as the name implies, represents a linked set of value-added activities. This set consists of primary activities, related directly to manufacture, sales and distribution, and secondary activities which support primary activities, such as planning, finance, R&D and human resources [Fearne et al., 2012]. Shank & Govindarajan (1993) describe the value chain in broader terms than does Porter. They state that "the value chain for any firm is the value-creating activities all the way from basic raw material sources from component suppliers through to the ultimate end-use product delivered into the final consumers hands." This description views the firm as part of an overall chain of value-creating processes. In other words, it is an analytic tool firms use to identify the specific steps required to provide a product or service to the customer. The term value chain is used because each activity is intended to add value to the product or service for the customer.

The value Chain consists of three main phases, in sequence: upstream, operations, and downstream. The upstream phase includes product development and the firm's linkages with suppliers; operations refers to the manufacturing operations or, for a retailer or service firm, the operations involved in providing the product or service; the downstream phase refers to linkages with customers, including delivery, service, and other related activities [Blocher et al.,2010]. Some have referred to the analysis of the upstream phase as supply chain management and to the analysis of the downstream phase as customer relationship management. The determination of which part or parts of the value chain an organization should occupy is a strategic analysis based on the consideration of comparative advantage for the individual firm, that is, where the firm can best provide value to the ultimate consumer at the lowest possible cost.

### **Value-Chain Analysis:**

In order to survive and prosper in an industry, firms must meet two criteria: they must supply what customers want to buy, and they must survive competition. A firm's overall competitive advantage derives from the difference between the value it offers to customers and its cost of creating that customer value. A strategic tool to measure the importance of the customer's perceived value is

value chain analysis. By enabling companies to determine the strategic advantages and disadvantages of their activities and value-creating processes in the marketplace, value chain analysis becomes essential for assessing competitive advantage [IMA,1996]. It is a strategic analysis tool used to better understand the firm's competitive advantage, to identify where value to customers can be increased and where costs can be decreased , and to better understand the firm's linkages with suppliers, customers, and other firms in the industry [Awad,2014]. Value chain analysis has two perspectives [Helal, 2012]: Strategic perspective, which consider Value Chain Analysis as a coherent set of activities that create value starts from obtaining raw materials to the use of the product by the ending user ,this perspective expands to outside activities beside inside activities to improve customer value and reduce costs with the purpose of achieving competitive advantage. The traditional perspective, which consider the Value Chain as a set of activities relate to each other, which is practiced

### **Types of Value Chains:**

#### **1- Firm's Value Chain :**

Accountants and managers refer to a firm's value chain as the set of activities required to design, develop, produce, market, and deliver products and services to customers[Hansen et al., 2009].

#### **2- Industrial Value Chain :**

Is the linked set of value-creating activities from basic raw materials to the disposal of the final product by end-use customers. A given firm operating within the industry may not span the entire value chain. Breaking down a firm's value chain into its strategically important activities is basic to successful implementation of cost leadership and differentiation strategies [Hansen et al., 2009]. The distinct value activities are the building blocks by which an industry creates a product valuable to buyers. It is possible to quantify the economic value created at each stage by identifying: the costs, revenues and assets for each activity. Successful pursuit of a sound strategic position mandates an understanding of the industrial value chain [Awad,2014].

#### **3- Total Value Chain(Overall Value Chain) :**

A firm's value chain is embedded in a larger system that includes suppliers' and customers' value chains. The analysis of the value chain should expand to outside the boundaries of the firm to include the impact of management decisions on customers and suppliers. As enhancing the firm's profitability and achieving the strategic goals is not only by analysis of value added activities of the firm by understanding how the firm's value activities fit into suppliers' and customers' value chains [El- Helbawy, 1994].

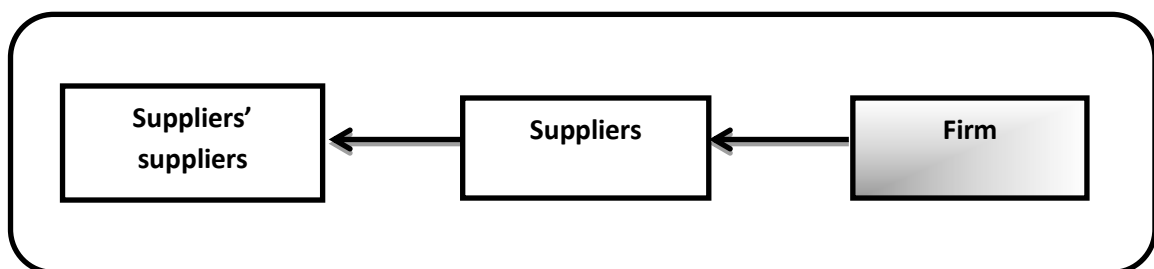
Fundamental to a value-chain framework is the recognition of the complex linkages and interrelationships among activities both within and external to the firm.

**There are two types of linkages:( Internal and External):**

- Internal linkages : are relationships among activities that are performed within a firm’s portion of the industrial value chain (the internal value chain). Value chain analysis recognizes the potential profit accruing from exploiting linkages among value activities across business units [Shank & Govindarajan, 1993].
- External linkages : describe the relationship of a firm’s value-chain activities that are performed with its suppliers and customers. External linkages therefore are of two types: supplier linkages and customer linkages. Using these linkages to bring about a win-win outcome for the firm, its suppliers, and its customers is the key to successful strategic cost management. Good cost management of supplier and customer linkages requires an understanding of what suppliers cost and how much it costs to service customers [Hansen et al., 2009].

Linkages with suppliers:

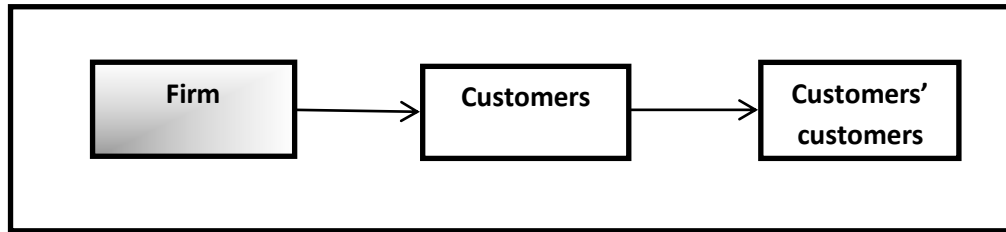
The link should be managed so that both the firm and its supplier can benefit. Such opportunities can be dramatically important to a firm. Suppliers provide inputs and, as a consequence, can have a significant effect on a user’s strategic positioning. Once this linkage is understood, then a company can work closely with its suppliers so that the product being purchased meets its needs. Beneficial linkages with supplier can be tracked more accurately with value chain analysis [Awad,2014].



**Figure 2 : Developing Competitive Advantages through Linkages with Suppliers** [Shank & Govindarajan, 1993]

Linkages with customers

Exploiting Customer Linkages Customers can also have a significant influence on a firm’s strategic position. Choosing marketing segments, of course, is one of the principal elements that define strategic position[Hansen et al., 2009]. The linkage with customers should be managed so that both parties can gain (mutually beneficial). The relationship with the customer need not be a zero-sum game, but one in which both parties can gain. The value chain framework highlights how a firm’s products fit into the buyer’s value chain. Under this framework, it is readily apparent what percentage the firm’s product costs are in the customer’s total costs. Thus firms can integrate together to reduce costs or is very useful in encouraging firms to work together to reduce costs[Shank & Govindarajan, 1993].



**Figure 3: Developing Competitive Advantages through Linkages with Customers**  
[Shank & Govindarajan, 1993]

To sum, gaining and sustaining a competitive advantage requires that a firm understand the entire value delivery system, not just the portion of the value chain in which it participates. Suppliers and customers and suppliers' suppliers and customers' customers have profit margins that are important to identify in understanding a firm's cost/differentiation positioning, because the end-use customers ultimately pay for all the profit margins along the entire value chain.

The way that the value chain approach helps organizations assess competitive advantage is through the following types of analysis [IMA, 1996]:

Internal cost analysis to determine the sources of profitability and the relative cost positions of internal value-creating processes; Internal differentiation analysis to understand the sources of differentiation (including the cost) within internal value-creating processes; and Vertical linkage analysis—to understand the relationships and associated costs among external suppliers and customers in order to maximize the value delivered to customers and to minimize cost.

### **Value chain methodology:**

The methodology for constructing and using a value chain involves the following steps:

- 1- Identify the industry's value chain and assign costs, revenues, and assets to value activities:

Competitive advantage cannot be meaningfully examined at the level of the industry as a whole. The value chain disaggregates the industry into its distinct strategic activities. Therefore, the starting point of cost analysis is to define an industry's value chain and assign costs, revenues, and assets to value activities. These activities are the building blocks by which firms in the industry create a product valuable to customers. Each value activity incurs costs, generates revenues, and ties up assets in the process. After identifying the value chain, one must assign operating costs, revenues and assets to individual value activities. With this information, it should be possible to calculate return on assets for each value activity [Shank & Govindarajan, 1993].

## 2- Diagnose the cost drivers regulating each value activity:

The next step is to identify the cost drivers that explain variations in costs in each value activity. Different value activities in the value chain are usually influenced by different cost drivers. In traditional management accounting, cost is a function primarily of only one cost driver, output volume. In the value chain framework, multiple-cost drivers are used. In the strategic management literature following Riley, the cost drivers are broken into two categories: structural cost drivers and executional cost drivers [Shank & Govindarajan, 1993].

## 3- Develop Sustainable Competitive Advantage by Reducing Cost or Adding Value:

In this step, the firm determines the nature of its current and potential competitive advantage by studying the value activities and cost drivers identified earlier. In doing so, the firm must consider the following [Blocher, et al., 2010]:

- a. Identify competitive advantage (cost leadership or differentiation). The analysis of value activities can help management better understand the firm's strategic competitive advantage and its proper positioning in the overall industry value chain.
- b. Identify opportunities for added value. The analysis of value activities can help identify activities in which the firm can add significant value for the customer.
- c. Identify opportunities for reduced cost. A study of its value activities can help a firm determine those parts of the value chain for which it is not competitive.

### **2.4.3 The role of information provided by strategic cost analysis and industry value chain analysis in reducing uncertainty for entrepreneurial startup firms:**

Information provided by strategic cost analysis and industry value chain analysis can assist in the improvement of chances for success for startups and reducing uncertainty. Every firm in the industry must construct a value chain for the total industry that breaks the total value in the chain into its fundamental sources of economic value. Even though they do not participate in every stage of the chain. This can help entrepreneurial startup firms in:

1. The determination of which part or parts of the industry value chain an organization should occupy based on the consideration of competitive advantage for the individual firm, that is, where the firm can best provide value to the ultimate consumer at the lowest possible cost. Thus, startup firms begin by focusing on their competitive position within their industry. The focus of the industry is external to the firm and sees each firm in the context of the overall chain of value creating activities of which it will be probably a part. It is a critical first step in understanding how a firm is positioned in its industry. Once the chain is explicated, the startup firm will

understand what factors drive competitive success at the value chain stages. It is possible to quantify the economic value created at each stage by identifying the costs, revenues and assets for each activity in the industry. Determining value-creating activities throughout the industry can reveal which activities are the most (and least) critical to competitive advantage (or disadvantage). Consequently, value chain analysis will help in understanding the industry and find out where the profits are.

2. Also, once the value chain is fully articulated, critical strategic decisions regarding make/buy and forward/backward integration become clearer. Investment decisions can be viewed from the perspective of their impact on the overall chain and the firm's position within it.
3. In addition, it points out the potential to exploit the linkages between a firm and its suppliers or between a firm and its customers with a view to reducing costs or enhancing differentiation.
  - The value chain analysis helps to quantify supplier power by calculating the percentage of total profits that can be attributed to supplier. This knowledge could help the firm to identify ways to exploit linkages with suppliers.
  - Also, the value chain framework highlights how a firm's product fits into the buyer's value chain; under this framework, it is readily apparent what percentage the firm's product costs are in the buyer's total costs. This can help quantifying buyer(customer) power. This information could be very useful in encouraging the firm and the buyer to work together in cost reduction activities.
  - The bargaining power of suppliers and buyers relative to the firm depends on the relationships between their value chains. Bargaining power will be a function of relative strengths, in particular, value activities that depend on one another. Identifying the specific activities involved and the nature of their strengths and relationships can give important insights into the power balance between buyer and seller, and how it may be altered for the firm's benefit.
  - Suppliers and customers and suppliers' suppliers and customers' customers have profit margins that are important to identify in understanding a firm's cost/differentiation positioning, because the end-use customers ultimately pay for all the profit margins along the entire value chain.
  - Value chain analysis allows startup firms to concentrate on the particular activities that allow them to capture maximum value for their customers and themselves.
4. Customers are grouped in different segments according to their needs, behaviors, and other specific attributes. Each segment must be assessed. A startup firm can use the information provided by VCA and SCA to decide whether to enter a market segment or not by analyzing segment attractiveness and evaluating the profitability of different segments.
5. It helps in the selection of suppliers, targeted customer(market segment), possible alliances (key partnerships).
6. It helps startup firms to determine the degree of vertical integration or horizontal integration.

7. It can help in identifying gaps in the industry positioning map, decides to fill them. These gaps can be interpreted as customer segments, needs that they seek to see supplied or new forms of production, delivery or distribution of products/services.
8. In addition, an analysis of the firm's value chain helps management to identify the specific steps required to provide a competitive product or service to the customer. It helps management to discover which steps or activities are not competitive (low-value added) to be eliminated, how much each activity contributes to the firm's profit, where costs can be reduced, or which activity should be outsourced. Also, management can use the analysis to find ways to increase value for the customer at one or more steps of the value chain through determining high value-added activities and low value-added activities and focusing on high value-added activities. In other words, it would help the management better understand the strengths and weaknesses of their firm's operations.
9. It helps to decide which partnership arrangements work best or which ones are most cost-efficient.
10. The information provided help in focusing the efforts that create value for customers during entrepreneurial processes.
11. Also, the information provided will help in discovering new business opportunities and some opportunities for further work can be highlighted.
12. Information provided help in enhancing the ability of entrepreneurs to identify and select right opportunities for startup firms. It help entrepreneurs to understand and evaluate the opportunity strength in a way to reduce the uncertainties by identifying the anticipated problems and to maximize the potential benefits.
13. Further, the proposed techniques provide an innovative way to identify the drivers and barriers of value creation and tackle strategic issues.
14. Finally, the proposed techniques will help to identify the strengths, weaknesses, opportunities, and threats associated with the perceived opportunity which will benefit nascent entrepreneurs to understand the most influential factors surrounding their potential businesses and how these factors contribute to the profitability and success of the firm.

## **Conclusion**

A major challenge in the entrepreneurial process is to evaluate the business opportunities in the fast-moving innovative global market. The main barrier restricting an execution on an identified opportunity is the uncertainties surrounding an opportunity. In addition, one reason why many entrepreneurs are not willing to start new firms is because of the surrounding uncertainties in the environment. To address this problem, a key part of the entrepreneurial plan should be to identify the uncertainties surrounding an opportunity. As the main goal of the entrepreneur is to reduce uncertainty, the consideration of different uncertainty factors with sufficient and reliable information can reduce uncertainties in the opportunity evaluation process. This research shows the

different sources of uncertainties that can affect the success and growth of a new venture. The research propose that strategic cost analysis and industry value chain analysis can provide valuable info that can help in reducing uncertainties surrounding opportunities in the opportunity evaluation process in the pre-startup phase. The proposed techniques provides an innovative way to identify the drivers and barriers of value creation and tackle strategic issues. The information provided will help entrepreneurs in the strategic planning of the opportunity evaluation process and in guiding startups' strategic choices. Further, some opportunities for further work can be highlighted. In addition, the information provided help entrepreneurs to focus on the strengths, weaknesses, opportunities, and threats associated with the perceived opportunity which will benefit nascent entrepreneurs to understand the most influential factors surrounding their potential businesses and to decide whether or not to proceed on opportunity. Finally, early recognition and management of uncertainties can help in addressing the problems of uncertainty and increasing the chance of success for new startup firms.



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