

AN OVERVIEW OF THE USE FRAMEWORKS IN NEW BUSINESS VENTURES

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1. Introduction

The creation of a new business venture is recognized as complex, difficult and risky process (Chrisman et al. 2005; Trimi & Berbegal-Mirabent 2012) and a great deal of business ideas never makes it to the market due to a wide range of problems that extend from the flawed conception of the idea to the failure to capture investment for their enterprise. A factor related to the risk associated with new ventures addresses the need to deal with uncertainty in a changing environment of consumer needs and expectations, market, products, competitors, team skills, and money requirements (Paternoster et al., 2014, Sull, 2004 and Chang, 2004). Eisenmann et al. (2011) considers as the greatest risk that an entrepreneur may come across is to sell a product that no one wants or needs.

This study aims at assessing the usefulness and limitations of six frameworks in helping entrepreneurs start and develop their business, helping them to cope with risk when bringing an innovative idea to the market. The six chosen methodologies are the Design Thinking, Lean Start-up, Business Model Canvas, Business Planning, Porter's 5 Forces and, a more recent one, the Value Creation Wheel.

2. Research Question

How useful are the frameworks of Design Thinking, Lean Start-up, Business Model Canvas, Business Planning, Porter's 5 Forces and Value Creation Wheel in helping entrepreneurs to deal with uncertainty and risk when launching and developing a new business? The problem addressed in this article is the usefulness and limitations of these six frameworks that may help entrepreneurs to succeed in dealing with uncertainty and risk in the process of launching and developing their new venture. This involves all the activities needed to provide the new product or service to the market and the process of business development.

3. Theoretical frameworks

In this session we will briefly present and analyse six frameworks that can add value for an entrepreneur when launching and developing a new business.

2.1.Design Thinking

Design thinking is a framework that aims to help solving problems creatively while thinking from a customer perspective (Brown, 2008). Tim Brown, CEO of IDEO defines it as “a human-centered approach to innovation that draws from the designer’s toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.” It is composed of five steps, namely, *Empathise* with the goal to understand the people needs and wants through interviews, creation of personas or surveys, *Define* with the objective of constructing a point of view based on the findings from step one, *Ideate* with the objective to develop solutions for the problems stated in step two (e.g. brainstorming), *Prototype*, where solutions developed in step three are filtered and turned into simple testable prototype, and finally, *Test*. In this last step prototypes are tested with customers and new insights are obtained that can contribute to an improved definition of the problem. It is expected that this inclusive, exploratory, iterative process will help designers arrive at decisions on what future customers truly want.

To sum up, design thinking represented in Figure 1 is a powerful interactive process of problem solving that begins with understanding unmet customer needs. From that insight emerges a process for innovation that encompasses concept development, applied creativity, prototyping, and experimentation.

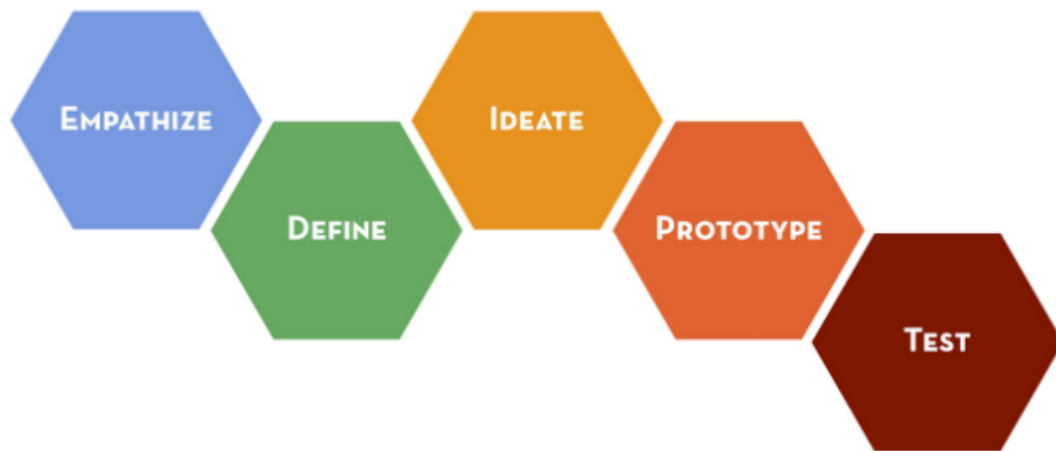


Figure 1. Design Thinking Stanford d.school. Adapted from Brown (2008)

Critical Analysis: In terms of limitations, this approach involves a linear way of thought that privileges the designer point of view, as the designer is the one who should generate information about the problem (the *Empathize* phase). In doing so, it limits the scope for truly innovative ideas, and makes it hard to solve challenges that are characterized by a high degree of uncertainty. Besides, the process of design cannot be systematized. A truly creative, and not systematic conservative design approach should seek feedback from the populations they target in a non-linear way trying to harvest the creative ideas generated by users who have improved products and services in a more open process.

2.2. Lean Start-up Methodology

The Lean Start-up methodology presented by Ries (2011) comes from the principles of the lean manufacturing (avoiding waste and optimizing the use of resources). According to Lundqvist et al. (2019), the inspirations for this methodology comes from Sull (2004), disciplined entrepreneurship, McGrath & MacMillan (2000), discovery-driven planning, and Lynn et al., (1996), probe and learn. The methodology benefits from a set of tools taken from other theories and methods, such as the customer development framework (Blank & Dorf, 2012), rapid prototyping of design thinking (Brown, 2008), and agile software development principles (Dybå & Dingsøy, 2008).

The core of lean startup methodology is the Build-Measure-Learn (BML) process. This feedback loop is shown in Figure 2. Basically, in this loop the learning is validated through purposeful experimentation, in which the effectuation principles of flexibility and affordable loss are applied (Read & Sarasvathy, 2005, Fredriksen & Brem, 2017).

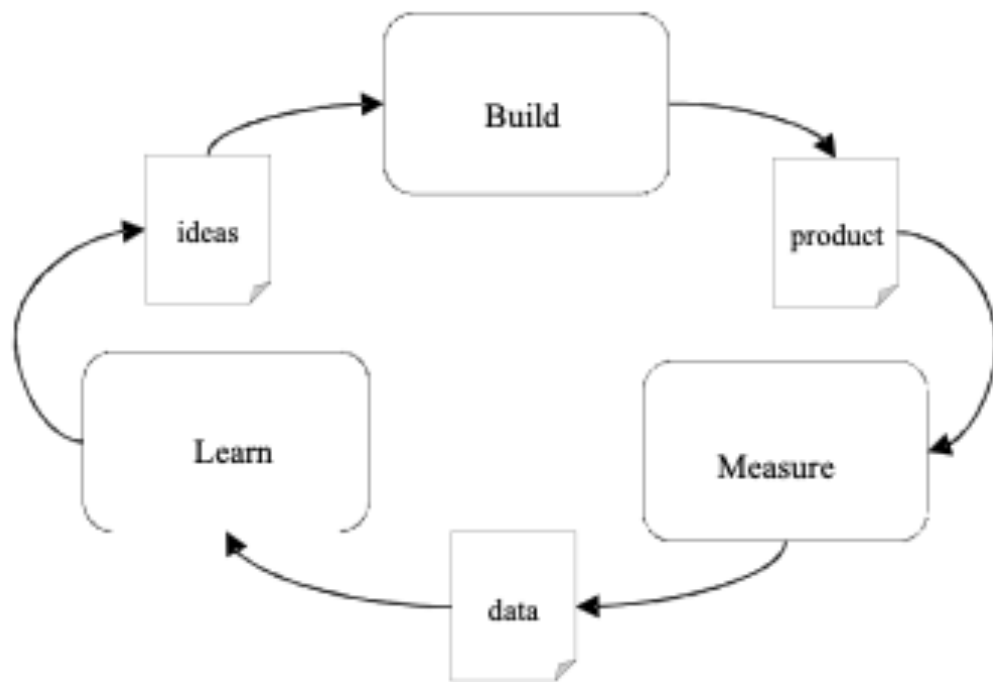


Figure 2: Build-Measure-Learn (BML) Feedback loop. Adapted from Ries (2011).

The steps of Build-Measure-Learn (BML) feedback loop are summarized as follows: i. building the business vision which involves a creative process of generating ideas and business models (Bortolini et al., 2021, and Mueller & Thoring, 2012). The business vision should stay the same during the BML cycle being discarded only if the the results are negative. ii. formulating the business model and hypotheses. In this step, the value proposition and its delivery to customers is designed with explicit or implicit assumptions regarding uncertain elements of the business model (Bortolini et al., 2021, and Blank & Dorf, 2012). iii. Building experiments where the entrepreneur tests the business model hypotheses through qualitative interviews, prototypes, launch pages, MVPs - Minimum Viable Product etc. iv. Measuring results: the entrepreneur must measure and monitor the results of their experiments using statistical tools and data analysis to conclude in relation to previously defined hypotheses; v. Validated learning: outcomes fall into four categories which are pivoting, iterating, escalating, and giving up. It is a key point for early stages of a startups as confirms or rules out hypotheses through experiments. After conducting an experiment and discarding a hypothesis, pivoting is the action of radically changing one or more dimensions of the business model in order to formulate a new hypothesis and test it through new experiments (Bortolini et al., 2021, Blank & Dorf ,2012). Iterating is a less radical change than pivoting. It consists of promoting one or more changes in the business model or product to test the new hypotheses. Generally, iterations have a positive value, as they mean the startup is approaching a viable business model (Bortolini et al. , 2021 and Blank & Dorf, 2012). Escalating is the situation in which entrepreneurs believe that they have found a sustainable business model and are willing to invest more in the business in order to create an functioning organization around it and obtain economies of scale (Bortolini et al. 2021, and Blank & Dorf, 2012). Giving up occurs when tests and experiments show that the business vision set is not able to generate a sustainable business model.

Critical Analysis: in the proposed methodology the entrepreneur plans and executes it without regard to further input until arrival at the solution, which is highly efficient. In contrast, according to Frederiksen & Brem (2017) an entrepreneur who is an effectual thinker will continuously get outside feedback and make adjustments until he arrives at a tested solution. While the path may be longer, the chance of final success tend to be higher. Ries may argue

that resources are limited, and it is important to focus. Also, according to Bortolini et al. (2021) there is the possibility of improving the process designed by Ries (2011) by adding, for example, milestones or checkpoints or even tools for designing immature products in a way that they can fit consumer needs and expectations better than current market solutions.

2.3 Business Model Canvas

According to Osterwalder et al. (2010) “A business model describes the rationale of how an organization creates, delivers, and captures value”. The Business Model Canvas (BMC) developed by the same author is a visual chart of a business model in a single page, allowing to describe, visualize, evaluate and modify it as shown in Figure 3. The BMC clarify and enhance the discussion about the business model, giving a clear and logical picture of how a future business might.

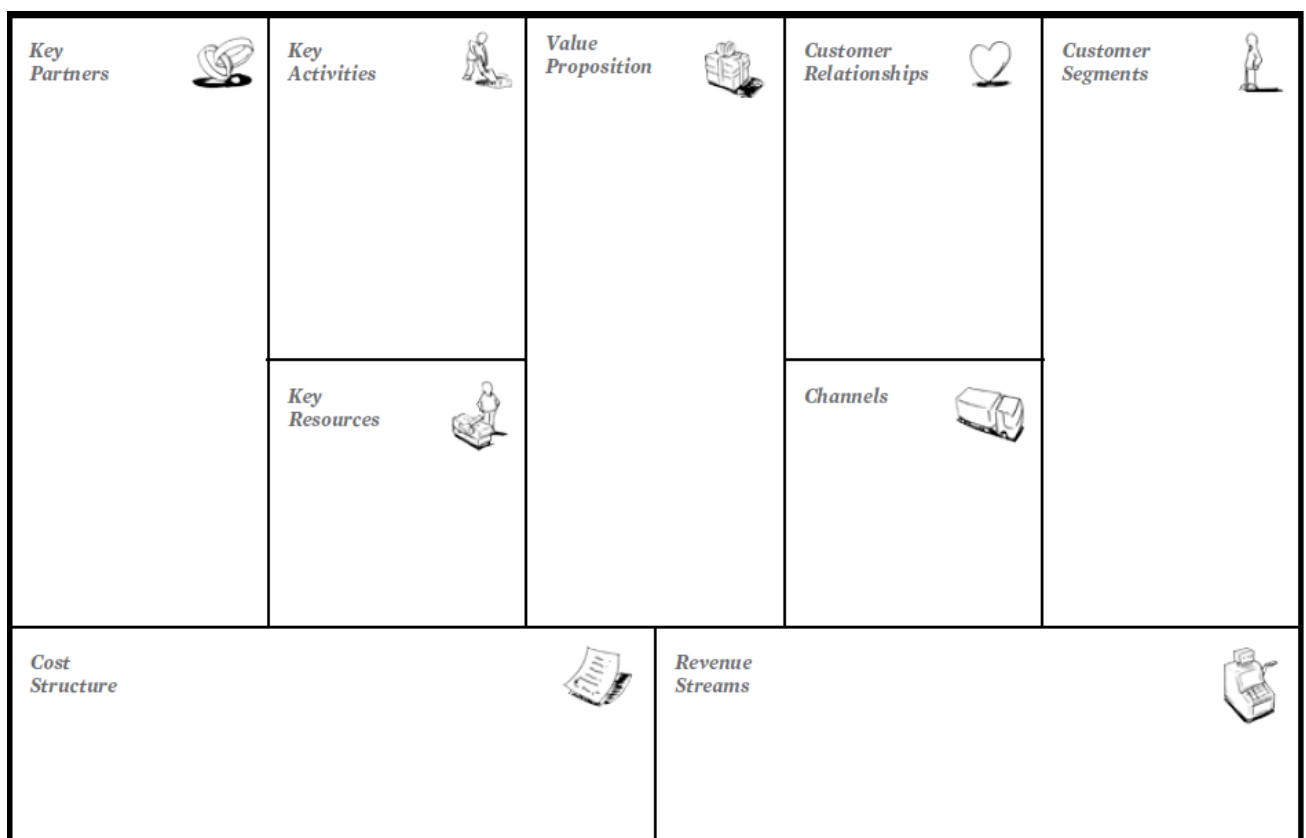


Figure 3. Business Model Canvas (adapted from Osterwalder et al. (2010))

Critical Analysis: The adaptation of its business models is crucial for ventures to survive in a changing environment. However, the Business Model Canvas is a static framework. Therefore, it demands extra tools, methods, and techniques, as well as indicators, to provide the required dynamism. It is necessary to integrate tools, methodologies, and indicators to the BMC to make it dynamic, helping entrepreneurs to manage and to innovate their business models.

2.4 Business Planning

Delmar & Shane (2003) define business planning as the founder’s team efforts to gather information about a business opportunity and to specify how the information will be used in launching a new business in order to exploit the opportunity. Castrogiovanni (1996), Delmar

& Shane (2003) and Sexton & Bowman-Upton (1991) include as part of business planning the processes of obtaining and analyzing information, evaluating required tasks, identifying risks and strategy, doing financial analysis projections, and documenting these things in a written plan. A business plan should not be thought of as a fixed written plan, but as a dynamic process that describes the current situation and it also reflects the team's vision, which are their aims and how they will do to achieve the proposed objectives. It is not only useful internally, but also externally. Investors want to understand which strategy has been thought off, which elements are considered, what are the expectations and which direction is intended to be followed. The existence of a business planning demonstrates that the team has been thought about their business opportunity and how to explore it.

Delmar & Shane (2003), Cyert & March, (1964), Simon (1964) & Smith et al. (1990) argue that business planning helps founders to develop their business because planning facilitates goal attainment in many areas of human action. Business planning helps entrepreneurs to make decisions more quickly than with trial-and-error learning as they thought about issues in a deeper way. Also help to manage resources to minimize time-consuming bottlenecks and to turn abstract goals into concrete actions more efficiently².

Critical Analysis:

Researchers have argued that business planning is not very helpful when launching a business as first, business planning takes time away from more valuable actions that shows that an entrepreneur has made a significant commitment to creating a new business as, for instance, filling a patent or buying a facility (Carter et al. 1996). Also, according to Bhidé (2000) entrepreneurs do not have much to lose from an erroneous forecasts of market size, sales and so on, as they usually do not put a lot of their own capital at risk. Third, according to Delmar & Shane (2003) entrepreneurs are better than other people to identify and evaluate opportunities relying on intuition than engaging in planning. Fourth, the uncertainty and fast pace of entrepreneurial situations undermine the value of business planning (Bird, 1988).

Note that these views and arguments conflict with the principles of organization theory, which holds that planning before taking an action improves the quality of most human action and in that a business plan facilitate new venture development. (Ansoff, 1991 and Locke & Latham, 1980).

2.5 Porter's 5 Forces

Microeconomic theory is behind Porter's model which is used to show that competition is a function of other four forces. Porter's 5 Forces is a dynamic model focusing on external environment and being more complete than a traditional SWOT analysis.

Porter's 5 competitive forces are: 1. the bargaining power of the buyers. 2. Entry barriers. 3. Rivalry. 4. Substitutes. 5. The bargaining power of the suppliers. They are depicted in Figure 4.

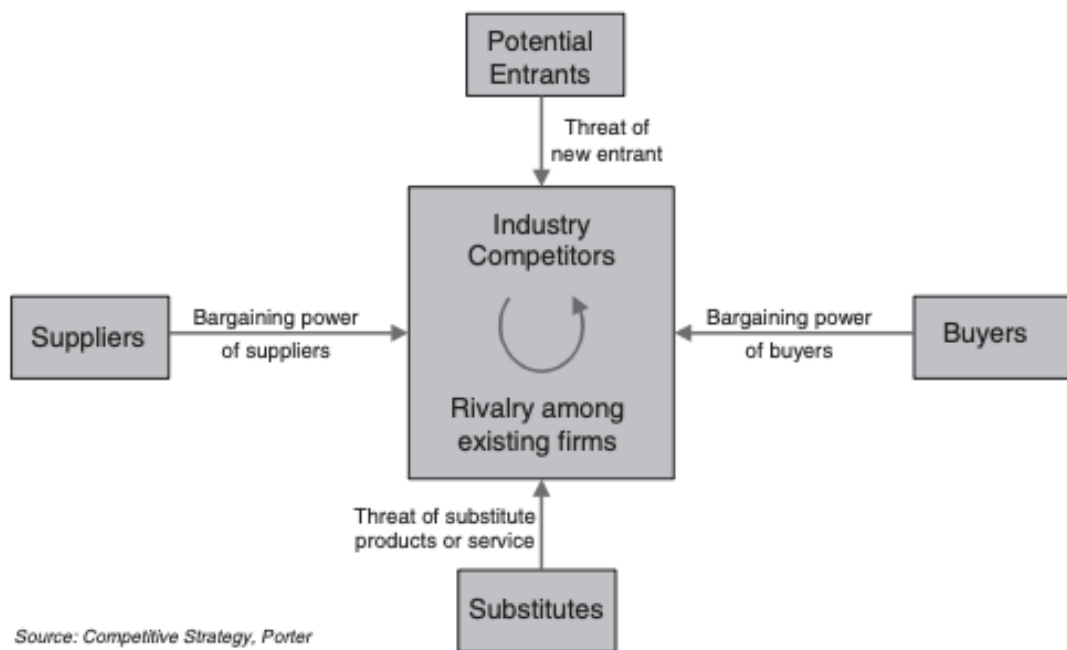


Figure 4. Porter's 5 Forces adapted from Porter (1985)

Critical Analysis: Porter's 5 Forces has less appeal to entrepreneurs due to the jargon used as well as the complexity of micro forces. According to Grundy (2006) the model tends to over-stress the industry level, as opposed to the analysis of more specific product-market segments at a micro level. Also, according to the same author, it simplifies the thevalue chain not allowing to distinguish the different buyers as, for instance, intermediate buyers, distributors, and end consumers. It does not help to define strategies on how to deal in the case of a startup with low influence over any of the five forces. It tends to encourage the mind-set of an 'industry' as a specific entity with ongoing boundaries while nowadays, the digital revolution helped making industry boundaries less clear (e.g. we can see car dealers offering financing services functioning in a similar fashion of a bank). It appears to be self-contained, thus not being specifically related, for example, to 'PEST' factors, or the dynamics of growth in a particular market.

2.6 Value Creation Wheel (VCW)

The Value Creation Wheel developed by Lages (2016) is a meta-framework that allows solving problems through a dynamic process for creating value for society and all the stakeholders involved in the value chain (e.g. customers, shareholders, and distributors). It is composed by a theoretical framework, DIANA, an acronym for Define, Increase, Assess, Narrow, Act, and by a customizable tool that adjusts to the problem and context of implementation called TIAGO, an acronym for Tap, Induce, Analyse, Ground, Operate³.

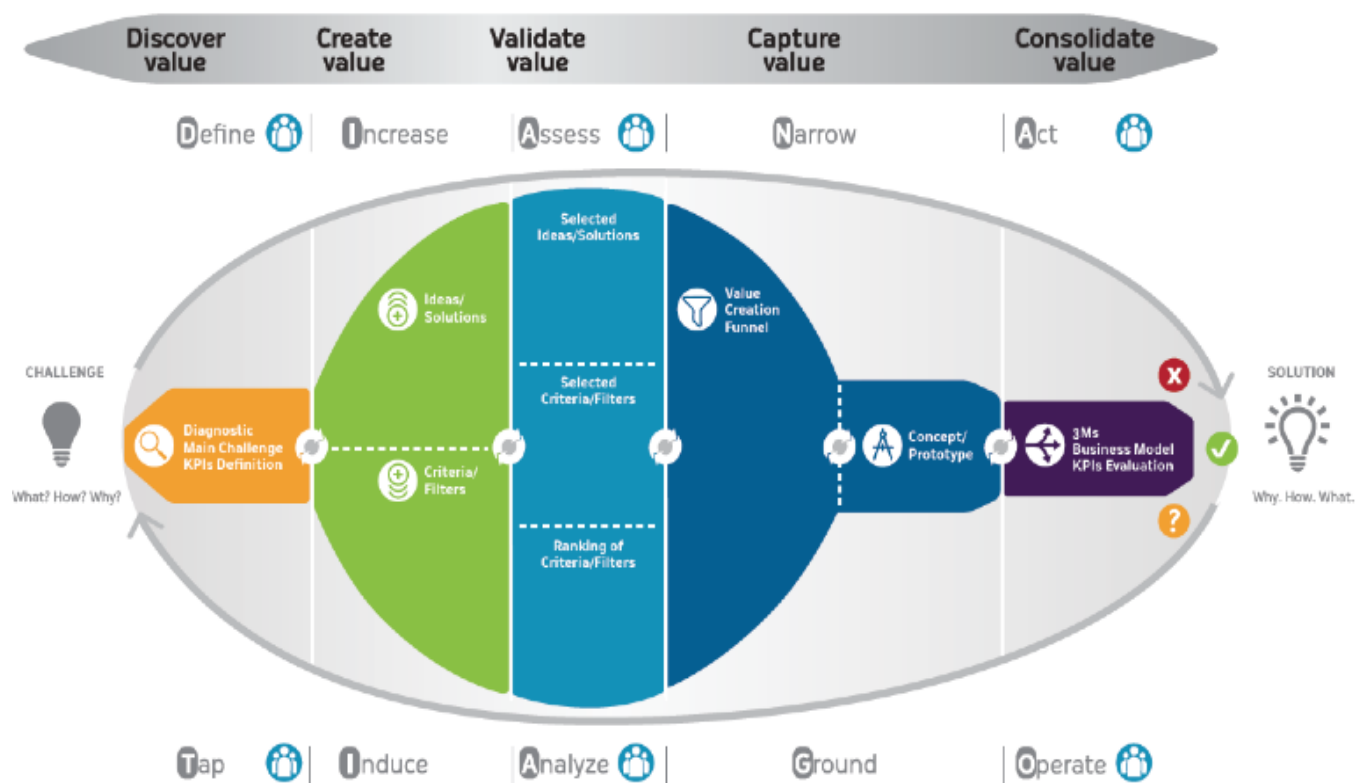


Figure 5. Value Creation Wheel from Lages (2016)

Critical Analysis: The VCW cannot be used when key decision makers are not involved or committed with the challenge, have no power, do not believe in the tool. It is not a static framework but follows an agile stage-gate approach to progress in the sense that it is possible to take a step back at any time. However, different time perspectives and cultural backgrounds when solving challenges may result in different ways of applying the VCW. For instance, some see the VCW as a “5 stage-gate sequential approach” (USA, Germany) while others prefer to see the VCW as a “circular approach” (Hong Kong and China).

5. Discussion

In a changing environment, new ventures need to deal with uncertainty and constant changes in all aspects since the launching of a business. However, the methodologies presented and discussed above may lack some requirements that are valuable for a new venture’s creation and development.

Business Model Canvas and Business Planning are static representations lacking the dynamic requirements to deal with uncertainty. On the other hand, Design Thinking is a systematic tool but, despite the misleading graphical representation, it involves dynamic interactive process as well as the Lean Start-up Methodology and the Value Creation Wheel, being more suitable to the need of constant adaptation of shifts in consumer needs and expectations, products/services, technology, competitors, business models, team and money requirements. While Business Model Canvas and Porter’s 5 Forces are mostly self-contained, The Lean Start-up, Business Planning and Value Creation Wheel allow to incorporate other methodologies (for example, Brainstorming, PESTEL and SWOT) in the analysis.

Table 1 summarizes the characterization of the 6 methodologies in two dimensions: static/dynamic representations and self-contained/allow incorporating other methodologies.

	Self-contained	Incorporate other methodologies
Static representation	Business Model Canvas	Business Planning
Dynamic representation	Porter's 5 Forces	The Lean Start-up Value Creation Wheel Design Thinking

Table 1. Characterization of methodologies in two dimensions: static/dynamic representations and self-contained/allow incorporating other methodologies

Design Thinking has flexibility in terms of incorporating other methodologies. However, it is mostly useful for Product/Service development. The other methodologies, except for Porter's 5 Forces, are also useful for Product/Service development as well help business development. The most simple and intuitive framework is Business Planning which does not require any specific skill or knowledge to be used. The most complex is Porter's 5 Forces which requires the knowledge of some microeconomics to be applied which explains why it is more popular in academia than to managers and entrepreneurs. The visual chart of the Business Model Canvas is also self-explanatory and simple. On the other hand, the Lean Start up and Design Thinking methodologies require some study but do not require any deep knowledge of a certain area. The combination of different methodologies could be a solution to overcome some limitations. For instance, the static analysis of Business Planning can be overcome if it is combined with some meta frameworks like the Lean Start up or the Value Creation Wheel for the whole process of launching and developing a new venture. Also, Design Thinking can be helpful for a better product-market fit. For sure Porter's 5 Forces is the most academic of the six frameworks presented and this explains why it is less popular outside the academic context, despite being very much useful to understand the industry dynamics.

5. Conclusion

The objective of this study was to analyze six frameworks in terms of helping a new venture to launch and develop a business. The most simple and intuitive framework is Business Planning which does not require any specific skill or knowledge to be used. However, despite allowing the incorporation of other methodologies it lacks the dynamism of other frameworks like the Lean Start up, Value Creation Wheel and Design Thinking. The Business Model Canvas is a simple visual chart, a static framework that is useful to have an overview of the chosen business model. The most complex is Porter's 5 Forces which is also a static and self-contained framework. Combining approaches to overcoming these limitations can be an alternative.

The study of the limitations of each framework may have implications in the way they are used by academia as, for instance, in entrepreneurship courses. Universities should be explored in doing research as well as teaching courses that involve strategic action under uncertainty of a dynamic environment (Dal-Soto et al., 2021). Limitations of each methodology are not in general discussed and often these frameworks are taught separately in specific courses and are not used in a combined way.

In addition, the importance of distinguishing the various types of risks faced by entrepreneurs (e.g. market risk, social capital risk as in Silva et. al, 2020, technological risk, financial risk and

the risk of not having the right team to explore a market opportunity) are not addressed directly by any of the frameworks, as well as the way to deal with them.

Further research suggestions include an empirical study with entrepreneurs to understand if they use some of these different frameworks for new venture creation and business development and how useful they are. Also, it could be interesting to develop an open theoretical model that includes other frameworks centered on the technology and market risks and how to deal with them. In terms of practical implications, this study may help future entrepreneurs to be aware of the limitations of different approaches and, ultimately, increase the success rate for innovation.

Notes

1. There are a wide range of inherently solution-driven approaches developed by companies (e.g., Big 5 Consulting Firms, Bain & Company, BCG, Booz Allen, Everis, Google, McKinsey, SAP, and Microsoft Solutions) as well as other frameworks that are either not directly related to new ventures creation or less well known. Thus, they were not included in the analysis.

2. Delmar and Shane (2003) results show that undertaking business planning matters more for product development, business development and venture disbanding, than any other factor under the control of entrepreneurs that they have identified.

3. DIANA and TIAGO frameworks can be related as follows: 1. Define/Tap Step - the objective of this step is to define the problem and tap into the issue in order to find clues for the major challenge to face; 2. Increase/Induce Step - The objective of this step is to have as many ideas as possible, both ideas of solutions to the problem and ideas of criteria to accept/refuse those ideas; 3. Assess/Analyse Step - In this step ideas of solution and ideas of criteria get selected. After selection the criteria are ranked according to their order of importance; 4. Narrow/Ground Step: In this step the selected ideas are filtered through the criteria and the best idea is selected according to its score on the criteria. Then the concept is elaborated, or a prototype is assembled; 5. Act/Operate Step: In this step the business plan is made, and a pitch is developed to present the idea.

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