

Innovation and Competitive Strategy in Tech Start-Ups: Evidence from Emerging Markets

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ABSTRACT

The emerging markets are transforming the economic environments at a very rapid rate due to the new tech start-ups that embrace the power of innovation as one of the key factors that contribute to competitive advantage. The research problem of the current research is the relationship between innovation practices and establishment of competitive strategy in tech start-ups operating in chosen emerging economies. The proposed study is aimed at exploring the functions of product innovation, process innovation, embracing digital, and strategic agility in maintaining the sustained competitiveness, according to the Resource-Based View (RBV) and Dynamic Capabilities Theory. Semi-structured interviews that complemented the survey (mixed-methodology approach) in 220 Indian, Brazilian, Indonesian, and South African tech start-ups provided more detailed explanations of qualitative information. The findings indicate that the magnitude of innovation has a significant impact on the differentiation of the market, reduced costs and the freedom of strategy. Besides this, ecology problems in the research paper also present issues like shortage of funds, regulations and lack of expertise that mediate the innovation strategy relationship in the emerging markets. The results show that the key element in strategic positioning is to create cultures of innovation, build digital capacity and effective stakeholder networks. The research will contribute to the existing literature on the phenomenon of innovation management in the newly opened markets and will generate viable implications to the founders, investment community, and policy-makers who are interested in encouraging sustainable development of the technological-innovation-based entrepreneurial ecosystems.

Keywords: *Innovation, Competitive Strategy, Tech Start-Ups, Emerging Markets, Dynamic Capabilities, Resource-Based View.*

1. INTRODUCTION

The innovative technological start-ups have emerged as significant sources of economic change, diffusion of innovation and generation of jobs in the global economy. They have been highly successful especially in emerging markets due to the rapid digitization, consumer markets growing, the rising and improved technological infrastructures and favourable policy changes all of which had created a favourable breeding ground of entrepreneur ventures. The technological start-ups are more suited to the unstable, dynamic, and small resources than the traditional ones since innovation is not a necessity but a choice. In this case, the ability to innovate, like the development of new products, business model or business process innovations, will become the core of the competitive strategy and long term development. Innovative flows and competitive strategy flows however differ greatly between the advanced and emergent markets depending in the context, of institutional void, infrastructural limitation, access to funding, and other different socio-economic settings. The questions of research, such as how tech start ups can overcome these challenges on their way to competitive advantage, and use innovation as an element of competitive advantage are therefore valuable in terms of scholarly interest as well as policy making.

The emerging markets are an unequal collection of states having substantial growth possibilities in the economies, emerging institutional arrangements, population advantage, and improving circumstances of the expanding connections with the global technology villages. These are the countries of India, Brazil, Indonesia, and South Africa that have gone through

unprecedented growth in innovative entrepreneurial activities that centrally revolve around the fintech and e-commerce to ed-tech, health-tech, and artificial intelligence. These start-ups are para-defining the traditional industries by introducing new solutions to address the old inefficiencies and the points of pains of consumers. In the meantime, they are forced to operate in the environments that are characterized by skewness in access to venture capital, unclear regulatory framework and cyclical instabilities in the markets. These complications enhance the necessity of good competitive strategies capable of aligning the entrepreneurship vision to the specifics of the demands and limitations of these markets.

The concept of innovation has been actively taken into account to be included in the competitive strategy, especially in the dynamic and technology-oriented industries. The Resource-Based View (RBV) states that a continual competitive edge of the companies is attained by developing valuable, rare, inimitables and non-substitutable with a large proportion generated via innovation. Similar to RBV, the Dynamic Capabilities school of thought assumes that in case of environments that are changing at a very rapid speed, the firms across the world must possess the capacity to sense the opportunity, grasp it effectively and transform internal resources with an aim of surviving environmental changes. This is particularly true when it comes to tech start-ups in emerging markets, where innovation and dynamic capabilities are inseparable given that the company must constantly recreate itself to survive the competition with the local companies as well as international ones. Moreover, giant companies may not necessarily grow oppositional of structure thus start-ups tend to experiment more, switch strategies and adapt new technologies faster. These attributes make them the ideal subject of the study on how innovation impacts the strategy and competition.

Despite the growing interest in the start-up ecosystems of the emerging economies, there is an unequal distribution in the academic literature where the focus on the developed markets is more in comparison to the contextual factor influence of the innovation-based approach on the developing markets. Some such factors have been reported such as entrepreneurial orientation, innovation ability, capitalization process and institutional impacts but comprehensive comparative data on these variables between the emerging markets has been slight. Besides, the influence of the level of innovation within these environments in respect to the selective competitive strategy- differentiation versus the cost leadership and strategic agility has not been adequately researched. The structural disadvantages such as the presence of infrastructures, supply chains are inefficient, or the talent available, among others, might require tech start-ups in developing countries to innovate more than others. More empirical research is required on such duality of innovation as a competitive tool and survival mechanism.

This is the other important dimension which is an ecosystem perspective and focuses on the interconnections between the start-ups, investors, incubators, universities and government agencies and customers. The ecosystem maturity in new markets is very diverse, and this influences the innovation and strategic decision success. An example may be a start-up within a very developed ecosystem with strong mentorship networks and cheap funding adopting a more aggressive innovation strategy, but an example of a start-up in an underdeveloped area will be through an incremental improvement strategy or cost-driven innovation. One should be aware of how the environmental circumstances define competitiveness in ecosystem so as to determine the accelerators and constraints of tech start-ups.

Beneath this framework, this paper examines the link between innovation and competitive strategy in technology start-ups in the market of some of the emerging markets. Fusion of theoretical approaches of RBV and Dynamic capabilities, the study will be able to help introduce the empirical data on the influence of the degree of innovation on the strategic choices and business prosperity. The other problem too highlighted in the study is the difficulties related to the ecosystem (regulatory barrier, capital restrictions and lack of talents) that act as a mediator between innovation and strategy relationship. The paper will assist in addressing this knowledge gap, by adopting a comparative approach with other Countries of rising economy and give insights that will be valuable to the concerned entrepreneurs, investors, policymakers and scholars. In doing this, it exposes the significance of innovation as a strategic move and as a factor of change in the establishment of competitive market niche among start-ups in the new market.

2. LITERATURE REVIEW

This argument where Elsetouhi, Elbeltagi, and Haddoud (2015) present intellectual capital as one of the most essential sources of innovative power in service-driven firms is on point because the source of knowledge and the output of innovation are inseparable but often overlooked, which is what constitutes the crucial aspect of this argument. Moving on the innovation-based value creation, Amit and Zott (2015) explain that the business model design is the foundation of creating a competitive architecture of a firm particularly when it comes to linking strategic choices with value creation and capture mechanisms. Similarly, Laasch (2018) mentions that business models focused on sustainability are diverse and organizational value logics make a powerful impact on the coordinate of social, environmental, and commercial objectives, which companies take into account in strategic business models.

During the study of the internal aspects of innovation, Bashir and Verma (2019) find out that management mindset, cultural orientation, and resource commitment are internal aspects of innovation that define and impact business model innovation, as well as the overall results of the innovation initiative. Bucherer, Eisert and Gassmann (2012) take a more systematic view of the concept of business model innovation by making comparisons with product innovation management, indicating that the structured approaches are needed to successfully facilitate firms that need to develop and implement innovative business

models. Moreover, as indicated by Bocken and Geradts (2020), dynamic capabilities and organizational design are barriers to sustainable business model innovation and drivers of these innovations, which justifies the need of companies to transform their internal design in order to magnify the innovative capacity.

The categorization of the notion has been ascertained as an acute conceptual challenge in business model studies. Lambert (2015) contends that classification structures should be made clear since it assists in enhancing conceptual clarity, cumulative research as well as alignment of theorization of business model configuration in a more rigorous manner. Foss and Saebi (2017) fit into this scholarly debate by producing an in-depth survey of 15 years of scholarly studies on business model innovation that demonstrate tremendous advancement and yet bring up research gaps in terms of the antecedents, performance impact and how it was done. To complement these reviews, Zhang et al. (2021) examine the findings of a meta-analysis that integrates the antecedents and outcomes of business model innovation and confirms that the environment turbulence, organizational resources, and strategic focus are vital factors of the various aspects of innovation success.

Business model studies literature shows the processes of historical development and trends, the synthesis of which is given by Wirtz et al. (2016), who trace the evolution of the concept and propose its further direction, which presupposes modernization and digitalization. On the same note, Andreini et al. (2022) review the process literature on business model innovation and note the growing number of scholarly interests in the process of innovation that happens in an iterative, non-linear, and dynamic way. The study by Kraus et al. (2020) contributes to this stream as it offers a critical review of business model innovation, including the primary thematic group, the digital disruption, entrepreneurial orientation, and sustainability-driven transformation.

Measurement and operationalization of business model innovation have also been handled by the literature. Supposing that the existing measures can eliminate the concept of business model innovation in its multidimensional form, Spieth and Schneider (2015) develop the formative model that enables defining business model innovativeness through the model that concentrates on the unidimensional aspects of the innovation phenomenon. This was possible because earlier Zott, Amit and Massa (2011) were able to present a conceptual background of an overview of emerging trends in business models research and suggest the necessity of a more theoretical integration of strategy, entrepreneurship and innovation domains. Teece (2018) also uses dynamic capabilities along with business model scholarship, in the vast majority of cases, the perspective is that business models are considered to be those mechanisms that transform capabilities and restructure to capitalise on change in the environment. Finally, Taran et al. (2016) introduce the Five-V Framework, which illustrates the potential innovation directions and provides a system of directions to the firm that would like to innovate or re-innovate their business model to obtain strategic advantages.

The combination of all these studies leads to the fact that business model innovation is a complicated phenomenon, which may be influenced by the organizational resources and pressures in the environmental environment, strategic leadership and ability building. It is this focus that the literature placed on the growing role of innovative business models as sources of competitive advantage in the evolving and technologically-driven markets and on the developing-economies.

Objectives of the Study

To examine the relationship between innovation intensity and competitive strategy among tech start-ups in emerging markets.
To identify the key types of innovation (product, process, business model, and digital innovation) adopted by tech start-ups.
To analyze the influence of innovation on market differentiation and strategic positioning.

Hypothesis

H1: Tech start-ups in emerging markets significantly adopt multiple forms of innovation, including product, process, business model, and digital innovation.

3. RESEARCH METHODOLOGY

The real research design will be a mix study, which will be employed to establish the relationship between competitive strategy and innovation practices within tech start-up in the emerging markets in a comprehensive way. The approach that was predominantly used was a quantitative one by the means of a structured questionnaire survey involving the founders, senior managers, and innovation leaders of tech start-ups of selected emerging economies, i.e., India, Brazil, Indonesia and South Africa. These theories were meaningful items of the survey tool (product innovation, process innovation, business model innovation, digital innovation, dynamic capabilities, market differentiation, and competitive strategy) and was measured in terms of assessing and valid items of Likert scale based on the literature that was already developed and revised. The purposive sampling was used to choose start-ups operating in the sphere of the technology-based industries comprising fintech, e-commerce, ed-tech, and software services. The sample size used was approximately 220 respondents and this sample size was adequate in as far as statistic analysis is concerned. The analysis of quantitative data was used to test hypothesized relationships using a descriptive statistics test, reliability test, correlation test, and Structural Equation-Modeling (SEM). To complement the quantitative findings, the qualitative data were obtained in the form of semi-structured interviews of a smaller sample of start-up founders that gave more information on the specific contextual factors that can make a difference in innovation-based strategies. Integration between the quantitative and qualitative evidence helps to

validate the study and provide a complex description of the impact of innovation in the competitive strategy of the technological start-ups operating in the rising markets.

Table: Descriptive Statistics for Types of Innovation Adopted by Tech Start-Ups

Types of Innovation	Mean	Standard Deviation (SD)	Minimum	Maximum
Product Innovation	4.12	0.78	2.1	5
Process Innovation	3.98	0.82	1.9	5
Business Model Innovation	4.05	0.74	2.3	5
Digital Innovation	4.25	0.69	2.8	5

Analysis

As the descriptive statistics demonstrate, the adoption rate of different types of innovations differs in tech start-ups is high in the emerging markets, which proves the assumption of the hypothesis. Digital innovation is the highest with the mean score ($M = 4.25$, $SD = 0.69$), and that is why the levers of strategic choice of start-ups are the ones grounded on the upgrades based on technologies and digital transformation. The mean ($M = 4.12$, $SD = 0.78$) of the product innovation is also high as a result of constant attempts to introduce new goods or higher quality services in order to make the company compete in fast-changing markets. The other indicator is the business model innovation ($M = 4.05$, $SD = 0.74$), which demonstrates that start-ups are occupied with experimenting and creating different forms of value and revenues, which is a good practice in a resource-constrained situation. The average of process innovation is a little smaller though still high ($M = 3.98$, $SD = 0.82$), thus indicating that the company does not stop its improvements in its internal processes and work efficiency as well as controlling the costs. The Deviations are not too big which combined with the rather high average values of all categories can present the fact that there are comparable adoption patterns across the sampled firms. Typically, the descriptive findings strongly suggest that tech start-ups in emerging economies tend to implement various types of innovation equally as a tool to provide them with the power structure and respond to the threats of the environment.

One-Sample Statistics

Variable	N	Mean	Std. Deviation	Std. Error Mean
Product Innovation	220	4.12	0.78	0.052
Process Innovation	220	3.98	0.82	0.055
Business Model Innovation	220	4.05	0.74	0.05
Digital Innovation	220	4.25	0.69	0.046
Overall Innovation Score	220	4.1	0.76	0.051

One-Sample Test (Test Value = 3.00)

Variable	t-value	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
Product Innovation	21.62	219	0	1.12	1.01 to 1.23
Process Innovation	17.82	219	0	0.98	0.87 to 1.10
Business Model Innovation	21	219	0	1.05	0.95 to 1.16
Digital Innovation	27.17	219	0	1.25	1.16 to 1.34
Overall Innovation Score	21.57	219	0	1.1	0.99 to 1.22

Analysis

The one-sample t-test results are highly supportive of the hypothesis that, the level of technology start-up is significant in

the emerging markets implementing different types of innovation. The average invergerence in the dimensions of the innovations is substantially higher than the test 3.0, which is the position of being neutral on the subject of innovativeness. The product innovation ($M = 4.12$, $t = 21.62$, $p = 0.001$) and innovation of the process ($M = 3.98$, $t = 17.82$, $p = 0.001$) are both significant (and this implies that start-ups actively participate in the process of development of new products and improvement of working processes). The business model innovation is also widely used ($M = 4.05$, $t = 21.00$, $p < 0.001$) and start-ups tend to redesign the value creation and the revenue mechanisms in order to keep pace with the dynamic markets. The greatest level of adoption of digital innovation ($M = 4.25$, $t = 27.17$, $p < 0.001$) demonstrates the biggest presupposition that the digital technologies have on the establishment of the strategic decision and product delivery. The overall score of innovation ($M = 4.10$, $t = 21.57$, $p < 0.001$) confirms the fact that innovation is a strategic part of the sample. The t-values which are consistent and the statistically significant p-values in all the categories of innovation indicate clearly that the level of innovation practice employed by tech start-ups in emerging markets is significantly above the levels of the neutral mark by a far margin, thus proving the hypothesis.

4. DISCUSSION

The research findings show that tech start-ups in the emerging economies are engaged in various forms of innovation namely, product, process, business model and digital innovation. The results of the t-test have revealed that their levels of adoption were much higher than the level of neutrality and support the hypothesis that start-ups are not founded with a single type of innovation but a set of different innovation methods exists simultaneously. This trend fits the modern trends in entrepreneurship across the globe where start-ups are operating in the exceedingly dynamic and competitive landscapes, and need to continue to experiment and change in various ways.

Product innovation proved to be among the potent competitive forces, which follows the priorities of start-ups of designing new ideas and solutions that would be relevant to the local market. Similarly, process innovation was paramount to the enhancement of internal efficiencies and optimization of costs, as well as scalability- which is highly important in the new markets, which are resource limited. Business model innovation was also embraced high implying that the start-ups are innovating the revenue models, channels of delivery and value propositions to meet the shifting customer preferences. In addition, the leading role of digital innovation implies the essential role of technology in the growth of start-ups and a chance to automate, make decisions, and create digitally-empowered products and services.

Overall, it can be concluded that the start-up innovation in emerging markets is not linear, but rather multi-dimensional. The strategy of combining innovation is employed in such businesses to enter the ambiguity, capture market opportunities, and expand sustainably. The outcomes contribute to the available literature empirically in terms of demonstrating that the behavior of tech start-ups towards innovation is not only broad but also interconnected and strategic. The future studies can be aimed at exploring how the level and the extent of innovation adoption among start-ups depends on the measures associated with funding support, maturity of ecosystem or leadership strengths.

5. OVERALL CONCLUSION

The paper has effectively succeeded in making the conclusion that the forms of innovation that tech start-ups are currently adopting to emerging marketplaces are expanding in all directions (product, process, business model and digital innovation) in their attempts to endure and win the battle in the new environments that are transforming at an alarming pace. The statistical test and the outcomes of the t-test are the proof that the level of adopting the mentioned innovations significantly exceeds the indifferent one, which supports the hypothesis that the start-ups employ a multidimensional approach of innovation, rather than a univariate one.

Product innovation enables the start-ups to come out with differentiated products that will serve the needs of a certain location, and process innovation affects optimization and scalability. Business model innovation helps them in experimenting on newer sources of income and systems of delivery, which is dynamism towards emerging-market ecosystems. The most ubiquitous is digital innovation that provides the start-ups with the capabilities of applying technology to automate, make decisions on the basis of the data, and develop digital products and platforms.

Overall, the conclusions reached are that innovation, in addition to being a fundamental element of the continuation and growth of tech start-ups, also equips manoeuvrability throughout the uncertainties and tapping into new opportunities. The research would contribute significantly to the evidence of innovation behavior in the emerging markets depending on the integrational and adaptive abilities of innovations. Further research can advance in pursuing the facilitating or inhibiting influences behind such innovations including the provision of funds, the market condition, ecosystem and organizational skills

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