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Does Business Incubation Help? Product Launching Challenges in Technology- Based New Ventures In Kenya.

James Mwangi Njau [a]
John Muhoho [b]

[a] Lecturer, School of Business and Leadership studies, St Paul's University, Private Bag, Limuru, 00217, Kenya, E-mail: jnjau@spu.ac.ke

[b] Senior Lecturer, School of Business and Leadership studies, St Paul's University, Private Bag, Limuru, 00217, Kenya, E-mail: jmuhoho@spu.ac.ke

Abstract

Development of new products and their launching is the most critical task for the entrepreneur during the new venture creation process. However, development and launching of new products are faced by challenges especially for the new ventures that lead to product failure in the market. Top among the challenges associated with product development and launching is pushing an idea to commercialization despite negative market research findings. The other challenges include incorrect positioning of the new product, overpricing of the new product and insufficient new product promotion. Technology business incubators impact on new ventures results in access to new knowledge, expertise and cost-effective access to leading-edge research and networks which consequently enables new ventures to launch products without large overhead cost couple with the credibility of the new venture products. Therefore, this study sought to explore product launching challenges in incubated technology-based new ventures in Kenya. Review of literature reveals knowledge gaps on the actual product launching challenges in new ventures, and the empirical evidence on the effect of business incubation on product launching. The study was informed by the entrepreneurial sense-making and new venture creation process model. Given the research objective, descriptive research design was appropriate for this study. A total of 9 incubators and 364 incubatees from Nairobi Metropolitan were involved in the study. From the business incubators, stratified random sampling was applied to obtain a sample size of 182 incubatees. A semi-structured questionnaire was used to collect both qualitative and quantitative data from the incubatees while an interview schedule collected qualitative data form the incubation managers. The quantitative was analyzed using SPSS tool; version 25 that generated both descriptive and inferential statistics. The Pearson's correlation coefficient indicated the magnitude of relationship between business incubation and product launching, with a positive correlation; $r=0.429$, $p<0.05$. Bivariate regression analysis indicted that business incubation had a statistically significant effect on product launching, with the beta coefficients; $\beta = 0.645$, $p<0.05$). The qualitative data was analyzed using a qualitative analysis process. The analysis indicated that majority of the incubator managers conquered that high product development cost was a key concern for incubatees seeking incubation services. Entrepreneurs sought incubation services to access production infrastructure innovation resources for a feasible product launching. Therefore, this study recommends that the business incubators value proposition should strengthened to address the product launching challenges in Kenya. The business incubators should increase the provision of training on product development skills and

intellectual property. The provision of subsidies to the tenants would help in cutting product development cost.

Key Words: Business incubation, Product Launching, Technology- based new venture Creation

1.0 INTRODUCTION

The creation, development and growth of technology-based ventures continue to gain attention from policy-makers globally as an avenue for enhancing levels of innovation, economic and wealth creation activity and employment creation (Basant & Cooper, 2016; Manimala & Vijay, 2012)New venture creation underscores the growth and competitiveness of national economies and industries in terms of job creation and knowledge stock amplifying innovation. Research indicates that new start-ups in the US contributed to net job increase which was not the case for existing businesses in the period between 1977 and 2005, and in the UK, the number of small and medium-sized firms (SMEs) has increased by 50% in the last 25 years (Gertner, 2013). Small-scale enterprises constitute a significant portion of most economies thereby making a valuable contribution to national economies through innovation and production of products and services (Jäckle & Li, 2006).

The importance of technology-based new creation in developing nations cannot be overstated given the role it plays in economic development through wealth creation, job creation and technology transfer and commercialization(Makanyeza & Ndlovu, 2016). Technology-based new ventures are as a result of technological entrepreneurship (TE).Shane defines technological entrepreneurship as a process where technology-based new entrepreneurs or technopreneurs assemble resources, technical systems and strategies to pursue business opportunities (Shane, 2008). The technology-based entrepreneur is normally involved in the development and production of new technology in the form of products, services, business models and processes. This leads to the creation of technology-based new ventures that may enter the growth path to become big enterprises such as Microsoft, Amazon and apple.

The technology-based entrepreneur is propelled by the possession of technology human capital and the know-how to exploit emerging opportunities based on the understanding of technologies, launching platforms and anticipation of future technology application(Ucbasaran et al., 2008). Technology-based innovation not only provides a basis for a firm's technology offering but also serves as a measure of competitive advantage in the market place, a very important factor in new venture survival (Distanont et al., 2018).Market entry is a critical step that could affect the success or failure of the new venture. A properly executed networking helps the entrepreneur to enter the market (De Carolis et al., 2009). The launched venture must continually create value to remain relevant in the market place (Datis, 2014)

However, despite the process of new venture creation being properly executed, technology-based new ventures face market pressure by being exposed to tough competition, a rapidly changing business environment and uncertain operating context, leading to a majority of them failing within two years from their creation (Gentry et al., 2013). Many failures of the technology-based new ventures are due to the inability of the entrepreneur to deal with the uncertainties and also bear the implication of these uncertainties(Dutta et al., 2015; Tomy & Pardede, 2018). To start with, Uncertainties during new venture creation arise because it is difficult to completely understand the current conditions, and how they are changing preferences and alternatives based on the situation that the entrepreneur is facing. Entrepreneurs are also not able to completely define the outcomes of the new venture (Brundin, Gustafsson, 2013; McMullen, Shepherd, 2006). The uncertainties are further compounded by rapid growth in the technology that makes it difficult for entrepreneurs to keep pace with technology by sidestepping

threats and grasping emerging opportunities (Rose, 2012). Understanding the uncertainties involved in early-stage venture creation is essential in supporting new ventures (Lanza & Passarelli, 2014). Business incubators play a vital role in helping nascent entrepreneurs deal with these uncertainties to successfully launch their ventures (Ratinho, 2011)

Product Launching in New ventures

Product launching is a process and not an event that signifies the point at which the product is first introduced to the consumers. Development of new products has received much attention in the published literature with particular emphasis on shortening the time from idea concept through product development to product adoption once sales begin (Koks et al., 2016). Development of new products and their launching are the most critical tasks for the entrepreneur during the new venture creation process. Bhuiyan, (2011) observes that the development and launching of new products are faced by challenges especially for the new ventures that lead to product failure in the market. Top among the challenges associated with product development and launching is pushing an idea to commercialization despite negative market research findings. The other challenges include incorrect positioning of the new product, overpricing of the new product and insufficient new product promotion (Faith & et al., 2018). Lack of proper management of the new product development process leading to high cost during the process has also been associated with a poor success rate in product launching. Research indicates that failure to properly address these challenges leads to failure of nearly half of all the new products introduced by companies (Ndiho, 2016).

New ventures are affected by the reliability of newness associated with lack of key resources and capability in new ventures that can cause them to fail in product launching (Douglas & Shepherd, 2000). The key resources that a typical new venture faces are lack of stable business relationships with customers and suppliers, prove of being reliable and trustworthy and reputation and legitimacy in the market place. This is compounded by uncertainty in estimating the new product or service value in the market (Dudu & Agwu, 2018). Technology business incubators impact on new ventures results in access to new knowledge, expertise and cost-effective access to leading-edge research and networks which consequently enables new ventures to launch products without large overhead cost couple with the credibility of the new venture products (McAdam & McAdam, 2008). The capability of new ventures to leverage resources available in the business incubator enables technology-based new ventures to perform better concerning new products and services launching. Financial resources and physical assets provided in the business incubator enable firms to sustain their efforts in technology commercialization (Dee et al., 2012).

GENERAL OBJECTIVE

The aim of this study was to explore business incubation and product launching challenges in technology-based new ventures in Kenya.

Specific Objectives

i. **E**xplore product launching challenges in incubated technology-based new ventures in Kenya.
ii. Evaluate the effect of business incubation process on product launching in technology-based new ventures in Kenya.

Research Hypothesis

H_{0_1} Business incubation Process has no significant effect on product launching in technology-based new ventures in Kenya.

2.0 LITERATURE REVIEW

Theoretical Framework

The focus of this research is business incubation as an intervention in technology-based new venture creation. Therefore, this research considered a cognitive perspective to new venture creation, and adopted entrepreneurial sense-making and new venture creation process model (Mehdivand et al., 2012). The choice of this model is underscored by the fact that it can be integrated into the incubation process to inform incubator managers on the selection of potential incubatees and the best approach in incubating the new ideas concerning incubation dimensions. This model divides the new venture creation process into three stages: exploration, planning and launching. Planning is conducted in two phases. Cognitive factors are brought into consciousness and are used to develop an idea and substantiate the reasoning behind creating a new venture. This is important because the basic nature of the venture is designed taking cognizance of the resources available; the uncertainties confronting the new venture such as market segment to serve and its legitimacy as a competitive player in the market are defined and explored. These are important factors in ensuring that competitive strategies are developed and resources are effectively managed.

Newbert, (2007) asserts that the availability of resources and capabilities in the market play a key role in the initial stages of a start-up. Therefore, this model is in line the incubation goal of supporting new ventures, whereby, the incubation management must consider the uncertainties confronting the new ventures when designing their service offering to the new ventures. This current study appreciated this consideration, and therefore, sought to assess the challenges affecting ventures during product launching. The process view approach is also important because, entrepreneurial teams also evolve during the various stages of new venture creation process (Diakanastasi, & Karagiannaki, 2016). In evaluating whether business incubators considers challenges and uncertainties that affect new ventures, the study evaluated whether the value proposition offered by business incubators in Kenya addresses these challenges. Figure 2.1 in the next page represents Mehdivand *et al.* (2012) model of entrepreneurial sense-making and new venture creation process.

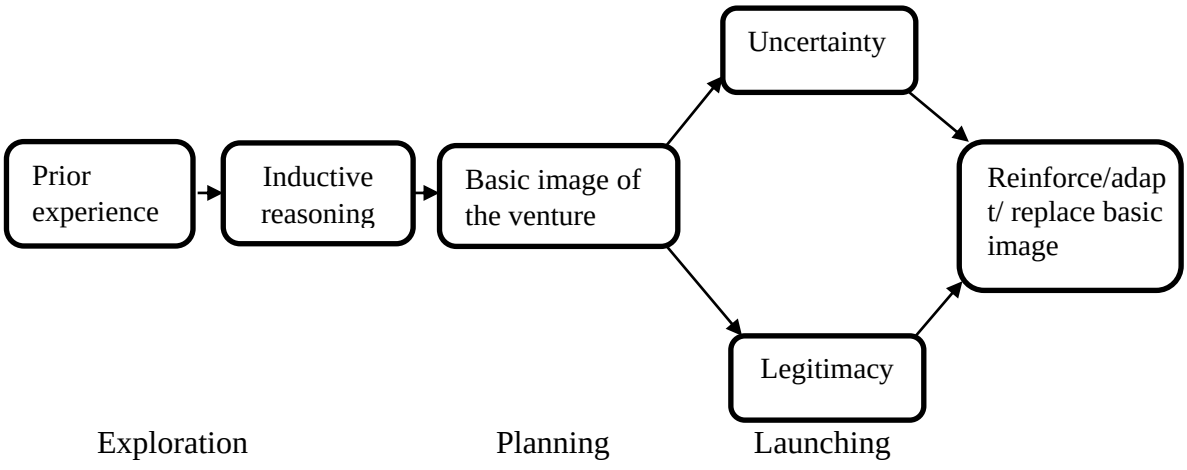

Figure 2.1: Entrepreneurial Sense-Making and New Venture Creation Process (Mehdivand et al., 2012)

Empirical Review

The creation, development and growth of technology-based ventures continue to gain attention from policy-makers globally as an avenue for enhancing levels of innovation, economic and wealth creation activity and employment creation (Manimala &Vijay (2012, Basant & Cooper 2016). New venture creation underscores the growth and competitiveness of national economies and industries in terms of job creation and knowledge stock amplifying innovation. Research indicates that new start-ups in the US contributed to net job increase which was not the case for existing businesses in the period between 1977 and 2005, and the UK the number of small and medium-sized firms (SMEs) has increased by 50% in the last 25 years (Gertner, 2013). Small-scale enterprises constitute a significant portion of most economies thereby making a valuable contribution to national economies through innovation and production of products and services (Jackle & Li, 2006).

Despite their immense contribution, Small enterprises face a myriad of challenges that include; lack of access to finance especially long term finance, cannot benefit from scale economies, constraints in process and product innovation, difficulties in accessing tangible and intangible resources and limited access to scientific knowledge all of which very much pronounced in new ventures (Adelowo Caleb et al., 2012). Research work on entrepreneurship indicates that one-third of new firms do not survive the third year and close to sixty per cent do not survive to the seven-year (Chandra, 2007). It is against this backdrop that business incubation is increasingly being adopted as an important tool for supporting new venture creation and entrepreneurial process in general in many countries.

Business incubators offer a range of services that encompass; management support, physical infrastructure, technical support, legal assistance, access to finance and networking. Business incubators provide a vehicle through which small businesses and aspiring entrepreneurs can access business support services for dealing with challenges in the entrepreneurial process. Business incubators can provide a remedy for the disadvantage of the ‘smallness’ by providing diversified business support services valuable in fostering technological innovation and industrial renewal(Pals, 2006) . Business incubation has been viewed as a mechanism for supporting new technology-based venture creation, supporting economic development through job creation, transfer and commercialization of technology and as an avenue to deal with market failures associated with knowledge and other innovation process inputs (Adelowo Caleb et al., 2012).

Ratinho (2011) observes that business incubators have become popular instruments for accelerating the creation of successful new ventures and mitigating business failure. As such, there are about 900 incubators found in the European Union member countries and more than 1400 in the US an indication of the increased interest that policymakers are vesting on business incubation as an important tool in economic development. Review of literature on the effects of business incubation on new venture creation indicates that a lot of focus by Business incubators is providing support to nascent businesses to promote growth and also increase chances of survival of these firms. Business incubation is in the form of access to business support, infrastructure and access to business networks (Bergek & Norrman, 2008; Hackett & Dilts, 2004; Rice, 2002). Other researchers have recognized the importance of an appropriate criterion for selecting incubatees and exit policies from the incubator as a prerequisite for successful incubation process (Aerts et al., 2007; Lee & Osteryoung, 2004).

A study by Björklund et al. (2007) while looking at the success or failure of new product development identified three measures of success in product launching namely profit goal, quality specification and speed to markets. There are many critical factors important in the successful development of new product development. However, the most common factors found in firms associated with successful product introduction are management support, use of cross-functional teams and a supportive organizational structure. The three factors have been positively associated with speed to market, Product development cost and product performance.

Another study by Ndiho (2016) evaluated factors that affect product development in manufacturing firms in Kenya. The study used descriptive research design and a population of 103 manufacturing firms of fast-moving consumer goods in Nairobi County and a sample size of 309 selected purposely from sales, marketing and production department. The research findings indicated that strategic organization orientation, market orientation and new product development process affected the success of new product development. 48.5 % of the respondents agreed and 19.2% strongly agreed that strategic orientation of a firm affected the success of new product development while only 12.6% and 19.3 % of the respondents strongly disagreed and disagreed with this view. On market orientation and new product development, 63. 3% of the respondents believed that market orientation affects the success of new product development while only 37.7% of the respondents thought otherwise. Finally on product development process measured in terms of commercialization of product within given timelines, use of Multifunctional teams in product development and having a schedule for launching new products, 66% agreed with the statement while 34 % disagreed. These findings indicate that majority of the respondent was of the view that all the three dependent variables affected the success of new product development.

A study by Ratinho et al. (2010) evaluated business support within business incubators. The study focus was an assessment of business incubators extent of support to their ventures in overcoming product development problems. The new ventures strategic concerns were to introduce new products to the market, accelerate time to market, get an advantage over competitors and increase credibility. The study employed a descriptive research design and a written questionnaire was used to collect data from 354 incubated businesses housed at 12 selected business incubators. The incubatees indicated that the most serious problems affecting them were related to the strategic aspects of the new venture that included introducing a new product (63.4%), accelerate time to market (64.4%), gaining an advantage over competitors (69.3%) and expanding market base at (80.2%). In terms of getting support within the business incubator to solve these challenges, only 7.9% indicated that they got support on accelerating time to market, get an advantage over competitors (5.9%), introduce new products (7.9%) and increase credibility (14.9%). The low score might indicate a mismatch between the support provided by the business incubators and the strategic needs of the tenants.

3.0 RESEARCH METHODOLOGY

The positivism philosophical underpinnings informed the choice of research methods in this research. The choice of descriptive research design allowed observation and description of the product lunching challenges in a business incubation context. The technology-based new venture creation has been explained in terms of the product launching challenges and the role of business incubators in solving these challenges. The study involved 9 business incubators in Nairobi Metropolitan with the units of observation being incubators' managers and incubatees involved

in creation of new ventures. A structured interview schedule was used to collect qualitative data form incubation managers. Quantitative data from incubatees was collected using a semi structured questionnaire. Qualitative data was analysed using thematic qualitative data method while descriptive and inferential methods were applied for the quantitative data.

4.0 RESULTS AND DISCUSSION

Challenges Affecting Product Launching

In determining the respondents' perception on the factors affecting business product launching in the new ventures, seven items were constructed on a scale of 1 to 5 points in Likert-type survey instrument where: No extent = 1; Little extent = 2; Moderate extent = 3; Great extent = 4 and Very great extent = 5. The results were analyzed and summarized in Table 1.

Table 1: Factors Affecting Product Launching In the New Ventures

	Response Rate Scale of 1-5				
Statement	**Non Extent**	**Little Extent**	**Mode-rate Extent**	**Great Extent**	**Very Great Extent**
Inability to control product development cost leading to a delay in new product launching.	5.3%	16.4%	31.6%	22.4%	24.3%
Inadequate technical skills and resources to underpin successful product development.	6.6%	17.8%	31.6%	25.0%	19.1%
Inability to build an appropriate cross-functional team so as to reduce the time need to develop and launch a new product.	11.2%	19.7%	26.3%	24.3%	18.4%
Inability to develop an appropriate distribution policy for the new product resulting in an inadequate channel.	7.9%	21.1%	30.3%	25.0%	15.8%
Inability to develop an appropriate logistic and inventory strategy to manage product flow from manufacturer to end-users.	10.5%	19.1%	33.6%	21.1%	15.8%
Inability to build an appropriate advertising and promotion level necessary to underpin a successful product launch.	9.9%	15.8%	34.2%	24.3%	15.8%
Inability to conduct adequate market research to gather appropriate information for planning successful execution of product launch.	13.2%	23.0%	29.6%	14.5%	19.7%

On average product launching was most influenced by the inability to control product development cost leading to delays with 31.6% of respondents at moderate extent, 22.4% of respondents at a great extent and 24.3% of respondents at very great extent respectively. The next factor in the ranking was inadequate technical skills and resources to underpin successful product launching with 31.6% of respondents at moderate extent, 25% of respondents at a great extent and 19.1% of respondents at very great extent respectively. Inability to build an appropriate advertising and promotion level necessary to underpin successful product launch was third in ranking with 34.2% of respondents at moderate extent, 24.3% of respondents at a great extent and 15.8% of respondents at very great extent respectively. Business incubation literature also avers that product development cost and new product promotion impedes successful product launching. For example, Mireftekhari, (2017) observes that the development and launching of new products are faced by challenges especially for the new ventures that lead to product failure in the market. Top among the challenges include incorrect positioning of the new product, overpricing of the new product and insufficient new product promotion (Fok-Yew, 2014). Lack

of proper management of the new product development process leading to high cost during the process has also been associated with a poor success rate in product launching. Research indicates that failure to properly address these challenges leads to failure of nearly half of all the new products introduced by companies (Ndiho, 2016).

Inability to develop an appropriate distribution policy for the new product resulting to inadequate channel was fourth in ranking with 30.3% of respondents at moderate extent, 25% of respondents at a great extent and 15% of respondents at very great extent respectively. The high ranking of product development cost effect on product launching is supported by Ndiho (2016) findings that indicate that lack of proper management of new product development process lending to high cost was associated with a poor success rate in product launching. The descriptive statistical analysis on the effects of business incubation on product launching agrees with views of incubators' management on the inability to control product development cost concerning product launching.

One incubator manager on product development cost averred that;

> "One of the challenges in launching a new product is the product development cost. Cost is normally high and resources constraining." (Incubator manager M5)

On product launching another incubator manager observed that;

> I think when it comes to launching a new product, the challenge is actually the process followed. Here, we try to encourage our entrepreneurs to be very customer centric since launching a product is a process rather than event. I have seen companies, even big companies launching a new product and it's the first time customers are seeing it. Customers have not experienced the product through market testing, they have not been involved and that can be a big bottleneck. I think what works for us is being customer centric, where the product is launched progressively and in different stages incorporating customer feedback. (Incubator manager M5)

Another incubator manager observed that;

> In terms of product launching, the challenge is coming up with a product that doesn't have a potential market – because you are trying to sell something and it is not picking. The other cause of failure is lack of funds, for others, it is because of lack of skills but being linked with the right mentor can help to move the idea forward. (Incubator manager M6)

Other key factors that affected product launching, though to smaller extent included: inability to build an appropriate cross-functional team so as to reduce time needed to develop and launch a new product with 26.3% of respondents at moderate extent, 24.3% of respondents at great extent and 18.4% of respondents at very great extent respectively, inability to develop an appropriate logistic and inventory strategy to manage product flow from manufacturer to end-users with 33.6% of respondents at moderate extent, 21.1% of respondents at great extent and 15.8% of respondents at very great extent respectively and finally, inability to conduct adequate market research to gather appropriate information for planning successful execution of product launch with 23% of respondents at moderate extent, 29.6% of respondents at great extent and 14.5% of respondents at very great extent respectively. These findings concur with Mireftekhari (2017) who avers that new ventures are affected by the reliability of newness associated with lack of key resources and capability in the new ventures that can lead to failure in product launching. These include; lack of stable business relationships with customers, prove of being reliable and trustworthy and uncertainty in estimating the new product or service value in the market.

4.6.2 Business Incubation and Product Launching

In analyzing the effect of business incubation on product launching, respondents were requested to indicate the extent to which they agreed with a set of nine statements as being direct effects of

business incubation on product launching of new venture. Responses were summarized on a Likert-scale of 1 to 5 points where 5 = to a very great extent, 4=to a great extent, = 3 to a moderate extent, 2= to a little extent and 1= to no extent. The results are shown in Table 2.

Table 2: Business Incubation and Product Launching

	Response Rate Scale of 1-5				
Statement	**Non Extent**	**Little Extent**	**Moderate Extent**	**Great Extent**	**Very Great Extent**
Speed to market of the new product is high for an incubated business.	2.0%	13.2%	15.8%	48.0%	21.1%
Meeting product quality guidelines is easier for an incubated business.	2.6%	7.2%	22.4%	40.8%	27.0%
Patenting of the product is easier for an incubated business.	2.0%	5.9%	25.0%	38.8%	28.3%
Market research skills and resources are more than adequate for an incubated business.	4.6%	9.9%	19.1%	39.5%	27.0%
Customer acceptance of the product is easier for an incubated business.	7.9%	15.1%	26.3%	27.6%	23.0%
Attainment of profitability goals is fast for a new venture in a business incubator.	5.9%	16.4%	25.7%	29.6%	22.4%
Percentage of new product sales compared to industry sales is high for an incubated business.	9.9%	13.8%	33.6%	27.6%	15.1%
Product performance levels are high for an incubated business.	4.6%	11.8%	29.6%	33.6%	20.4%
Product development cost is reduced in an incubated business.	3.3%	7.2%	17.1%	41.4%	30.9%

Analysis of results in Table 4.29 indicate that most respondents reported that the effect of business incubation on product launching was highest in ranking in relation to ease of patenting of the product for an incubated business with 25% of respondents at moderate extent, 38.8% of respondents at great extent and 28.8% of respondents at very great extent respectively. Meeting product quality guidelines for an incubated business was second in rating by incubatees with 24.4% of respondents at moderate extent, 40.8% of respondents at a great extent and 30.9% of respondents at very great extent respectively. Product development cost reduction in an incubated business was rated second with 17.1% of respondents at a moderate extent, 41.4% of respondents at a great extent and 30.9% of respondents at very great extent respectively. The other 7.2% and 3.3% of the respondents reported the extent to which businesses incubation affected product launching through product development cost reduction as moderate, little and none, respectively. The third factor in the ranking by incubatees was market research skills and resources are more than adequate for an incubated business with 19.1% of respondents at moderate extent, 39.5% of respondents at a great extent and 27% of respondents at very great extent respectively.

The fourth factor in the ranking was speed to market of the new product is high for an incubated business with 15.8% of respondents at moderate extent, 48.1% of respondents at a great extent and 21.1% of respondents at very great extent respectively. The descriptive statistical analysis on the effect of business incubation on product launching agrees with the views of incubators' management. Several business incubation managers linked cost reductions in product launching

to the infrastructure facilities provided in the business incubator. This was exemplified by two incubators managers:

> "The infrastructure support reduces the cost of doing business. The cost of launching a new product is reduced." (Incubator manager M4)

Incubator manager M8 observes;

> "Infrastructure facility support brings convenience, for example, accessing laboratory facilities when developing a product, boardroom for meetings etc. Access to the infrastructure support reduces the working capital needs for the incubatees."

These findings are in agreement with Ndiho (2016) observation that lack of proper management during product development leads to high cost leading to the poor success rate in product launching. The indication by incubatees that incubated businesses have better access to market research skills and resources was exemplified by one incubator manager;

> "Supplier and market networks are very important to our incubatees……We have a marketing department that helps in the marketing of incubatees' products. Incubatees have better access to the market because products meet the standards and specification." (Incubator manager M5)

Other key factors in relation to the effect of business incubation on product launching, though to smaller extent included: Product performance levels are high for an incubated business with incubatees rating of 29.6% of the respondents at moderate extent, 33.6% of respondents at great extent and 20.4% of respondents at very great extent respectively. Attainment of profitability goals is fast for a new venture in a business incubator with incubatees rating of 25.7% of the respondents at moderate extent, 29.6% of respondents at a great extent and 22.4% of respondents at very great extent respectively. Percentage of new product sales compared to industry sales is high for an incubated business with incubatees rating of 33% of the respondents at moderate extent, 27.6% of respondents at a great extent and 15.1% of respondents at very great extent respectively.

Incubator Managers' Views on the effect of business incubation on Product Launching

The study sought the views of incubators managers pertaining the incubatee section process. The respondents' comments and themes that emerged during the interviews with incubation managers are captured in Table 3 on the next page.

Table 3: Analysis of Incubator Managers' Views on Product Launching

Product Launching	Emergent themes	Comments
	Acceptability and market penetration of the new product.	Incubated businesses have high product acceptability in the market.
	High costs affect product launching.	Product development cost is reduced for incubated business.
	The infrastructure support reduces the cost of product launching.	Infrastructure facility support such as access to laboratories brings convenience when developing a new product
	Incubators increase product acceptability in the market.	Market penetration is easier for incubated businesses.

INFERENTIAL STATISTICS

Pearson Product Movement Correlation Coefficient

Before carrying out a test on research hypotheses, the study examined how the variables of the study were correlated using Pearson's Product Movement Correlation Coefficient. The correlation coefficient was used to determine the degree of relationship between the independent variable: Business Incubation, and the dependent variable: Product Launching in technology-based new ventures in Kenya.

Table 4: Pearson Product Movement Correlation Coefficient

Correlations

		Business Incubation	Product Launching
Business Incubation	Pearson Correlation	1	
	Sig. (2-Tailed)		
	N	152	
Product Launching	Pearson Correlation	.429**	1
	Sig. (2-Tailed)	.000	
	N	152	152

Table 4 shows outcome of this analysis indicated that Business Incubation Process had a moderate positive correlation with Product Launching in Kenya ($r=0.429$, $p<0.05$). Since the coefficient value was positive, it implied that an increase in the value of the independent variable would lead to an increase in the value of product launching.

Hypothesis Testing

H_{0_1} **:** Business incubation has no significant effect on product launching in technology based ventures in Kenya.

Testing the Model Fitness for Business Incubation

The effect of the business incubation (X1) on the dependent variable; product launching was determined using bivariate regression analysis. Table 5 shows the results from testing of the model fitness in the analysis output.

Table 5: Coefficients of Determination (R^2) and Adjusted (R^2) for Business Incubation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.429[a]	.184	.178	.74866	.184	33.771	1	150	.000

The R- square and adjusted R- square was (R^2) = 0.184 and adj. (R^2) =0.178 respectively as highlighted in Table 5. The R- square values indicates that Business incubation was able to explain at least 17.8% variation in the dependent variable; product launching. Given that R^2 ranges from zero to one, and the closer to the value of one, the better "fit" the model is.

ANOVA for Regression for Business Incubation

The analysis of variance (ANOVA) was carried to provide information about the variability within the bivariate regression model to form the basis for the test of significance. The outcome of the analysis of variance is shown in Table 6 below.

Table 6: ANOVA Results Business Incubation

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.929	1	18.929	33.771	.000[b]
	Residual	84.075	150	.560		
	Total	103.003	151			

The results of the significant test of the regression model had F statistics= 33.771 (1,150), p-value < 0.05, indicating a significant statistical meaning and "goodness" of fit of the model. For the model to have significant statistical meaning, the F change value should be greater than 10 (Field & Miles, 2013). The study, therefore, concluded that the model was statistically significant to predict the relationship between business incubation and product launching in Technology-based new Ventures in Nairobi Metropolitan.

Coefficients for Business Incubation

Table 7 shows the coefficients of the regression output for business incubation and product launching in technology-based new ventures in Nairobi Metropolitan. The Coefficients values were used to generate the model for business incubation and product launching in technology-based new ventures $Y=2.114+\mathbf{0.645}X_{1.}$

Table 7: Coefficients for Business Incubation

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.303	.406		3.212	.002
	Business Incubation	.645	.111	.429	5.811	.000

The results on Table 4.47 indicate that there existed a statistically significant positive relationship between the business incubation and product launching in technology-based new ventures in Nairobi Metropolitan ($\beta = 0.645$, $p<0.05$. This implies that if business incubation

increases by one unit, product launching in technology-based new ventures would increase by 0.645. The computed t value was 5.357, $p<0.05$. The computed p-value of 0.000 was less than 0.05. Thus, the null hypothesis $(H_{0_1})$was rejected and the alternative hypothesis(H_{a_1}) accepted implying that business incubation process had a significant effect on product launching in technology-based new ventures in Nairobi Metropolitan. The critical t value is supposed to be between -1.96 to and 1.96 to accept the null hypothesis. Therefore, the study concluded that the business incubation had a significant effect on product launching technology-based new ventures in Kenya.

5.0 CONCLUSION AND RECOMMENDATIONS

Development of new products and their launching in the market is the most critical task for the entrepreneur during the new venture creation process. The capability of new ventures to leverage resources available in the business incubator enables technology-based new ventures to perform better concerning new products and services launching. Business incubation in this study was found to have a significant effect on product Launching. The empirical findings indicated that the biggest challenge in product launching was the inability to control product development cost leading to delays. Another major limitation was inadequate skills and resources to underpin successful product launching. Incubatees also indicated that inability to build an appropriate advertising and promotional level for a new product was a major hurdle for new ventures.

Concerning whether business incubation helps new ventures to overcome product launching challenges, results indicates positives outcomes. For example, product performance levels are high for an incubated business. The ease of patenting for the incubated businesses was ranked highly by the respondents. Majority of the respondents indicated that product development cost was greatly reduced for incubated businesses due to access to infrastructure. Empirical findings also indicate that the percentage of new product sales compared to industry sales was high for an incubated business. Incubated businesses had better access to market research skills and resources.

Based on the findings, the study recommends that the business incubators value proposition should strengthened to address the product launching challenges in Kenya. The business incubators should increase the provision of training on product development skills and intellectual property. The provision of subsidies to the tenants would help in cutting product development cost. The study also recommends business incubators to model their infrastructural support to incubatees in terms of innovation infrastructure, research and development laboratories, and product testing and validation mechanisms. Collaborations with research institutions and universities could come in handy to help meet the product launching needs of the new ventures in Kenya.

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