

Organizational Innovation Capability, Entrepreneurial Passion, and Performance of Pharmaceutical Manufacturing Firms in Kenya

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Introduction

- Entrepreneurial passion is the whole or part of intense feelings that drive entrepreneurs to have intensity of positive feelings for desired goals, will not stop thinking about and discussing their ideas, and are active, inspiring resources to turn their ideas into reality (Huyghe, Knockaert, & Obschonka, 2016). Passion is a key element of entrepreneurship that promotes business performance.
- Innovation capability is the ability to consistently and effectively generate and manage innovative ideas and practices. It encompasses the organization's capacity to foster a culture of innovation, develop processes for idea generation and implementation and adapt to changes in the business environment (Teece, 2017).
- Pharmaceutical industry is a good subject to study innovation. The industry is R&D intensive with firms in OECD countries spending an average of 12% of their gross value added on R&D (Zhai & Ghosal, 2022). Despite this progress, the rate of innovation in the pharmaceutical industry is still slower than the global needs (Unsal & Rayfield, 2019).
- African Pharmaceutical industry is expanding across the board. Between 2005 and 2012, Africa increased its healthcare capacity by adding 70,000 hospital beds, 16,000 doctors, and 60,000 nurses (Rubagumya, Mutebi, Manirakiza, Abdihamid, Mushonga, Vanderpuye, & Booth (2023).
- The Government of Kenya is committed to making pharmaceutical manufacturing industry competitive. Kenya exports a significant percentage of its pharmaceutical products to its immediate neighbors, such as Tanzania, Uganda, and Rwanda.
- Despite the promising and enormous growth in Kenya's pharmaceutical business, the sector still faces numerous issues and difficulties. The industry is mostly focused on creating medications in the dosage form, and the drugs produced are generic, hence less competitive when compared to those from foreign sources, an indication of a lack of innovation.

Statement of the Problem

- Although pharmaceutical manufacturing is primarily concentrated among a few high-income economies, it has grown and expanded in developing countries such as Kenya. Among the total 60 pharmaceutical manufacturing firms in the COMESA region, 30 are from Kenya (UNIDO, 2012).
- Kenya Imports 70% of its pharmaceutical drugs from other countries. The local pharmaceutical products outlets are flooded with imported drugs from China and India. By importing drugs, they are limiting their innovative capability strategies despite pursuing mitigate risks which will help them to be profitable in a challenging business environment (Kadesa, 2018).
- According to the Global innovation index 2022, Kenya is ranked as the 4th Global Innovation Leader in Sub-Saharan Africa and 88th globally. This achievement is particularly noteworthy among developing economies, with Kenya consistently out performing in innovation for 12 consecutive years, according to the World Intellectual Property Organization (WIPO, 2022).
- However, despite this impressive performance, there is still a significant problem to address. The pharmaceutical industry in Kenya is among the sectors registering very low volume of new products, drugs most of which are generic, hence the need for the industry to confront their innovation challenges by improving innovation capabilities and enhancing the driving force of innovation (World Bank, 2012, UNIDO, 2012).
- The lack of aggressive, entrepreneurial and innovative behavior in the pharmaceutical manufacturing industry in Kenya has been highlighted as the primary contributor to the decline in R&D in the industry (Narayanan et al. 2010).
- Few studies in Kenya have explored the relationship between organizational innovation capability and firm performance (Macharia, 2016; Arunga, 2017; Owuor, 2018).
- However, these studies have not fully examined how organizational innovation capability and entrepreneurial passion can enhance firm performance, in Kenya's pharmaceutical industry, leaving an information gap which this study sought to close.

General Objective

This study aimed to assess the influence of organizational innovation capability and entrepreneurial passion on performance of pharmaceutical manufacturing firms in Kenya.

Specific Objectives

- i. To establish the influence of product innovation on the performance of pharmaceutical manufacturing firms in Kenya.
- ii. To evaluate how process innovation influences performance of pharmaceutical manufacturing firms in Kenya.
- iii. To examine the influence of marketing innovation on the performance of pharmaceutical manufacturing firms in Kenya.
- iv. To establish whether resource innovation influences performance of pharmaceutical manufacturing firms in Kenya.
- v. To determine whether entrepreneurial passion moderates the relationship between organizational innovation capability and the performance of pharmaceutical manufacturing firms in Kenya.

Hypothesis

- **H₀₁** Product innovation has no significant influence on the performance of pharmaceutical manufacturing firms in Kenya.
- **H₀₂** Process innovation has no significant influence on the performance of pharmaceutical manufacturing firms in Kenya.
- **H₀₃** Marketing innovation has no significant influence on the performance of pharmaceutical manufacturing firms in Kenya.
- **H₀₄** Resource innovation has no significant influence on the performance of pharmaceutical manufacturing firms in Kenya.
- **H₀₅** Entrepreneurial passion does not moderate the relationship between organizational innovation capability and performance of pharmaceutical manufacturing firms in Kenya.

Theoretical framework

No.	Theory / Model	Specific Objectives	Discussions
1	Schumpeter's Innovation Theory	Product innovation Process innovation Marketing innovation Resource innovation	A heavy emphasis is placed on the value of innovation in the venture creation. This idea covers the following five situations: The debut of a new product, a novel production technique, a brand-new market and discovery of new source of supplies, raw materials.
2	Contingency Theory	-Process innovation	It holds that organizational effectiveness in fostering innovation is reliant on a fit or match between the kind of innovations, new tech, environmental variability, the size of the organization, the features of the organizational structure, and its information system.
3	Mintzberg Theory	Entrepreneurial passion & Process Innovation	The Theory, which emphasizes on fundamental organizational configurations, such as the entrepreneurial, the machine, the diversified, the professional, the innovative, the missionary, and the political.
4	Self- efficacy Theory	Entrepreneurial passion	The theory is rooted in the socio-cognitive approach, which examines how cognitive, motivational, and emotional processes influence the decision to engage in entrepreneurship.
5	Resource-Based Entrepreneurship Theory	Resource innovation	The theory postulates that an entrepreneur's propensity for resources, such as financial, social, and human resources, is essential for seizing opportunities

Empirical Studies

No.	Specific Objectives	Scholars
1	Product innovation	Schumpeter (1934); Wan, Ong, & Lee (2016); Sidek & Rosli (2017); Oke, Burke, & Myers (2017); Crawford & Benedetto (2019); Atalay, Anafarta, & Sarvan (2018); Ar & Baki (2016); Sidek & Rosli (2017); Mairesse & Robin (2019); Griffith, Huergo, Mairesse, & Peters (2016); Hauser, Tellis, & Griffin (2017); Olson, Walker, & Ruekert, (2015)
2	Process innovation	Sidek & Rosli (2013); Damanpour & Gopalakrishnan (2016); Baer & Frese (2015); Varis & Littunen (2016); Sidek & Rosli (2017); Flammer (2015); Rubera and Kirca (2018); Gunday, Ulusoy, Kilic, & Alpkan (2011); Camisón & Villar-(2014); Koellinger (2008); Damanpour, Sanchez-Henriquez, & Chiu (2018); Bessant & Tidd (2017)
3	Market innovation	Barich & Kotler (1991); Johne (1999); Simula, (2012); Sidek & Rosli (2013); Staropoli (2018); Deshpande, John, & Frederick (2015); Kohli, Bernard, & Jaworski's (2017); Srivastava, Rajendra, Sonnentag, Volmer, & Spsychala (2018); Laforet (2009); Barich & Kotler (2005);
4	Resource innovation	Staropoli (2018); Lin & Chen (2007); Bravo & Herrera (2009); Demirkan, Srinivasan, & Nand (2018); Fogoros, Oлару, Trifan, & Dorin (2020);
5	Entrepreneurial passion	Zhang, Meng-Ying, School, & University (2019); Breugst, Domurath, Patzelt, & Klaukien (2012); Baron & Hannan (2002); Chen, Yao, & Kotha (2009); Huyghe, Knockaert, & Obschonka (2016); Cardon, Zietsma & Saporito (2005); Cardon, Gregoire, Stevens, & Patel (2013); Laaksonen, Ainamo & Karjalainen (2011); Baum & Locke, 2004); Fayolle & Liñán (2014); Rockwell (2002)
6	Firm performance	Ibraimi (2018); Baard, Rench, & Kozlowski (2016); Campbell & Wiernik (2015); Frese (2018); Mangos & Arnold (2016); Chenhall & Langfield-Smith (2007); Grafton, Lillis, & Widener (2010); Waiganjo, Mukulu, & Khariri (2016); (Pearce & Robinson, 2015); Cardon & Patel (2016); Hong & Hyun (2017); Li, Zhang, & Li (2018); Huang, Chang, & Lee (2015); Javed, Yaseen, Azam, & Zia-ur-Rehman (2020); Yilmaz, Sezen, & Tunç (2019)

LITERATURE REVIEW

The Conceptual Framework

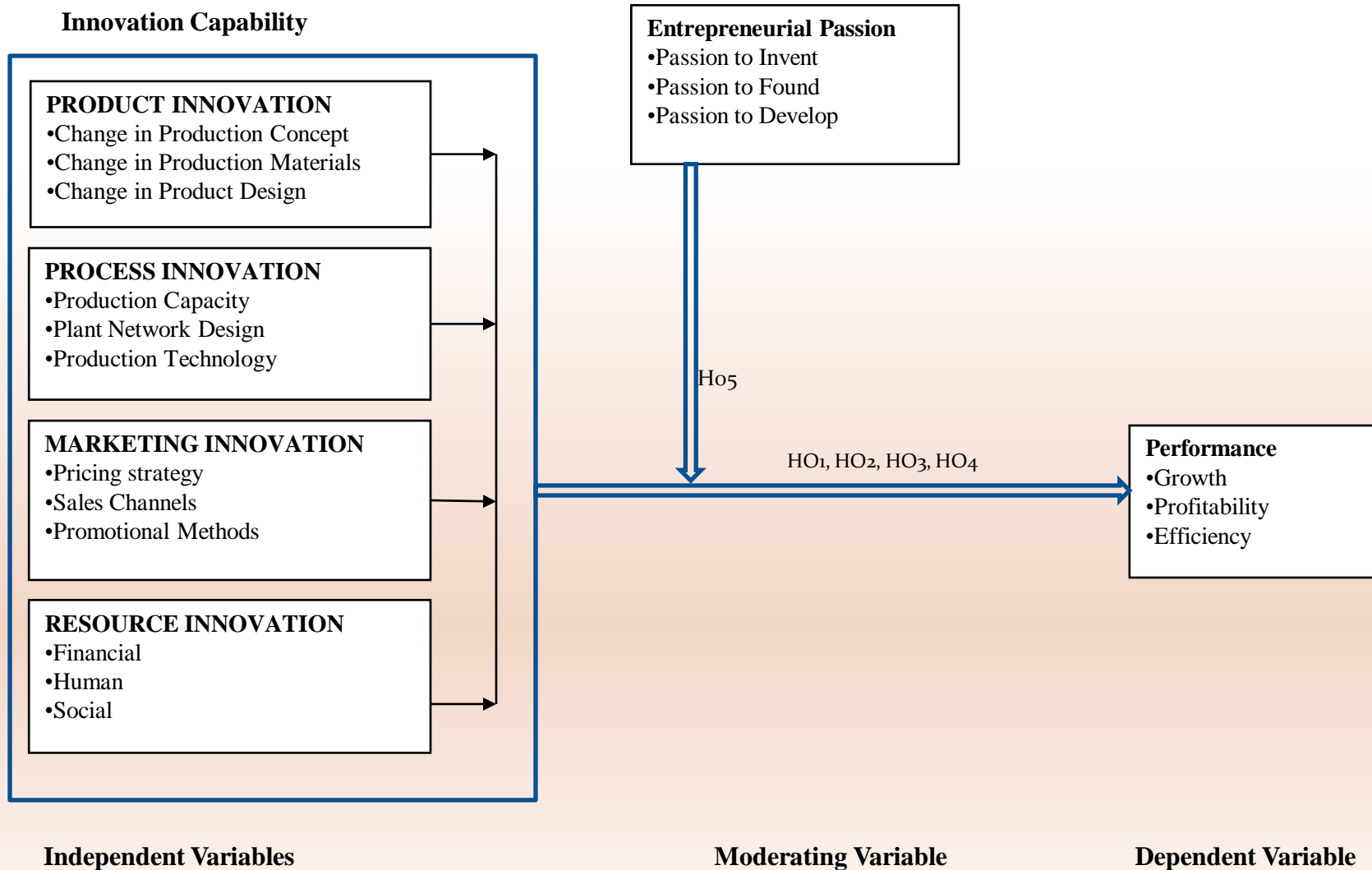


Fig 1 Conceptual Framework

RESEARCH METHODOLOGY

- This study used convergent parallel mixed methods approach guided by cross-sectional survey design. Convergent parallel mixed method allows a researcher to combine elements of qualitative and quantitative research approaches (Johnson, Onwuegbuzie & Turner, 2007). It adopted the pragmatic research philosophy.
- The study was a census of all the 30 registered pharmaceutical manufacturing firms in Kenya. The unit of analysis was the 30 pharmaceutical manufacturing firms in Kenya, with the unit of observation being 150 employees.
- Purposive sampling was then used to select 5 departmental heads from 27 pharmaceutical firms resulting in 135 participants. For pilot testing, data from 15 respondents (3 firms) was collected, representing 10% of the population in the study.
- The study used a **semi-structured questionnaire** with both closed- and open-ended items

RESEARCH METHODOLOGY CONTD..

- This study adopted internal consistency method to estimate test reliability. Cronbach's alpha coefficients ranged from 0.8 to 0.947, indicating high reliability of data gathering tools (Bryman, 2012).
- This study adopted construct validity. Both convergent and discriminant validity are considered subcategories or subtypes of construct validity (Bahl & Wali, 2014).
- For convergent validity the Average Variance Extracted (AVE) should be 0.5 or higher and composite reliability (CR) is greater than 0.7, for discriminant validity, Heterotrait-Monotrait (HTMT) values were less than 0.85 (Hair et al., 2019).
- The study adopted partial least squares structural equation model (PLS-SEM) due to its ability to estimate the relationships for a small sample size without subjecting the data to distributional assumptions.

Test of Assumptions of the Study Variables

No	Test	Threshold	Findings	Discussions
1	Outliers	Reasonable boxplots with symmetrical constructs (Bates, Candès, Lei, Romano, & Sesia, 2021; Hair, Risher, Sarstedt, & Ringle, 2018).	No outliers identified	In absence of outliers, there was no distortion of the true relationship between the study variables
2	Normality	Skewness and Kurtosis in the range of +/-3 (Mishra, 2019). Also, the line signifying the actual data distribution should closely follow the diagonal in the normal Q-Q plot (Kwak & Park, 2019).	Assumption of normality satisfied	Assumption of normality helped in knowing the shape of the distribution and in predicting dependent variables scores in this study.
3	Heteroscedasticity	Chi-square value should not be greater than 9.21 (Khaled et al., 2019).	Heteroscedasticity was not a problem (Chi-square values = 0.18)	Stable regression weights.
4	Multicollinearity	If VIF value is less than 3.3, then there is no bias (Khaled et al., 2019).	No presence of multicollinearity. All values were less than 3.3.	Independent variables were not closely correlated.

Validity

No	Test	Threshold	Findings	Discussions
1	Convergent Validity	<p>Loading values for AVE should be 0.5, while for CR should be 0.7 minimum (Hair et al., 2019).</p> <p>Convergent validity is satisfactory when the Average Variance Extracted (AVE), reflecting that the construct explains over 50% of its indicators' variance on average, exceeds 0.50 (Sarstedt, Ringle, & Hair, 2014).</p>	The Rho values were > 0.7 and that Cronbach's Alpha of the construct is > 0.7 , the AVE, their values were > 0.5 .	<p>The results of the measurement model evaluation indicate that, the research instruments of this study are valid and reliable measures of their respective constructs.</p> <p>The results showed a strong internal consistency and reliability of constructs.</p>
2	Discriminant Validity	The square root of AVE should be greater than inter-construct correlations, and maximum shared variance (MSV) should be lower than AVE. The Heterotrait-Monotrait (HTMT) values should be 0.85 for the harder criterion and 0.90 for the milder mode criterion (Hair et al., 2010).	The values of HTMT were all less than the tougher threshold of 0.85.	These validation tests taken together have demonstrated the measurement items validity and reliability.

Model Fits

No	Test	Threshold	Findings	Remarks
1	Standardized Root Mean Square Residual (SRMR)	The acceptable threshold is below 0.10 (Henseler, Ringle, & Sarstedt, 2014).	SRMR values were less than 0.08.	The findings indicate that the data fitted the model satisfactory .
2	The Normed Fit Index (NFI)	NFI values exceeding 0.9 generally indicate acceptable fit (Bentler & Bonett, 1980).	NFI values were greater than 0.90.	The findings indicate that the data fitted the model satisfactory .
3	Goodness-of-Fit (GoF)	GoF values range between 0 and 1, where 0.10 (small), 0.25 (medium), and 0.36 (large) signify global validation of the path model (Henseler et al., 2016).	The GoF of the overall model was 0.514	Adequate model fit reflects model parsimony and plausibility.
4	Squared Euclidean distance (d_LS) and Geodesic distance (d_G)	dULS and dG should be less than the 95% bootstrapped quantile (HI 95% of dULS and HI 95% of dG) (Henseler, Ringle, & Sarstedt, 2016)	The dULS < bootstrapped HI 95% of dULS and dG < bootstrapped HI 95% of dG .	The range met the threshold indicating that Empirical data fits the model well

Applications Software Used in the Study

No.	Software Used	Purpose of the Software in the Study	Other Studies that Used the Software
1	IBM SPSS version 21.0 for Windows 7 and 8	Data cleaning, specifically, for variable and case screening, missing data analysis and imputation for missing cases where applicable.	<ul style="list-style-type: none"> • Akman, & Yilmaz, (2018), in their study on Innovation capability, innovation strategy and market orientation, for data cleaning and descriptive analysis. • In Andjarwati (2020) study on the Impact of Innovation Capabilities on Firm Performance of Pharmaceutical Industry in Indonesia for data cleaning and descriptive analysis.
2	Ms-Excel for Windows 10	Data entry, case cleaning, variable screening and as a transit package in that the data from SPSS was saved in Ms-Excel.	<ul style="list-style-type: none"> • Unsworth, & Sorbello (2017), in their study on Effect of Organizational Innovation Capability on Business performance in Australian and Thai firms, for data entry, and variable screening. • Liang, Wang, and Li (2019), in their study on The Impact of Marketing strategy on the Performance of pharmaceutical firms in China for data entry.
3	R-Gui (R 4.1.2 version) <i>R-studio</i> using <i>R packages plspm, and semPLS</i>	EDA, Confirmatory Factor Analysis (CFA), generation of fit models, Path Analysis and partial least squares structural equation modeling (PLS SEM)	<ul style="list-style-type: none"> • Vargas, Rojas, Álvarez, & Torres (2020), in their study on the Relationship between Innovation capabilities, Entrepreneurial orientation, and Firm performance in the context of Colombian SMEs, for PLS-SEM analysis. • Rana & Elo (2021) in their study on the relationship between entrepreneurial orientation, innovation capability, and firm performance in the context of Pakistani small and medium enterprises (SMEs), for PLS-SEM analysis.

RESEARCH FINDINGS & DISCUSSIONS

Response Rate

- The study targeted 150 respondents from 30 pharmaceutical manufacturing firms in Kenya.
- A total of **113** questionnaires were returned from 23 firms resulting into a response rate of 83.7 %.
- Babbie (1990) stated that a response rate of 50% is adequate while Bailey (1987) set an adequate response rate at 75%.
- Mugenda (2008) avers that a response rate of 50% is adequate, 60% and above good, and above 70% very good.

Descriptive and Qualitative Analysis of the Study Variables

No.	Specific Objective	Findings	Discussions
1	Product Innovation influences Performance of Pharmaceutica l Manufacturing Firms in Kenya	Majority agreed: i) Change in Production concept- 86.8% ii) Change in production materials- 83.52% iii) Change in product design- 82.2%	<ul style="list-style-type: none"> • Respondents believe that change in Production concept is necessary for innovation to occur in their companies, and that creating new products and services as well improving existing ones is critical to success of their firms. • Respondents perceived their companies to be actively seeking new cost effective sources of raw materials and making efforts to minimize dead stock. Another area of importance was in quality control management to ensure high quality raw materials are supplied. • The emphasis on continuous improvement implies that these companies strive to stay innovative and responsive to evolving market demands. • An active (R&D) program for enhancing product range suggests that these firms explore alternative options to improve their products. • This reflects a commitment to innovation and a proactive approach to expanding their product offerings.

No.	Specific Objective	Findings	Discussions
2	Influence of Process Innovation on Performance of Pharmaceutical Manufacturing Firms	Majority agreed: i) Production capacity- 81.36% ii) Plant network design- 84.55% iii) Production technology -85.6%	<ul style="list-style-type: none"> • Firms are proactive and seeking to continuously improve their products; and prioritize efficiency and effectiveness in their processes and undertake measures to reduce time taken for new products development. • The pharmaceutical firms undertook measures to reduce the time for new product development. Companies that are able to develop new products quickly may have a competitive advantage in the market, and reducing development time may lead to increased profitability, increase of market share and customer satisfaction. • Automation was key to production efficiency and that the firms deployed quick technological automation adoption in order to enhance the company's profitability and sustainability. Furthermore, the firms indicated that they are constantly alert to technological changes in the industry and are quick to adopt them to improve their operations.

No.	Specific Objective	Findings	Discussions
3	Influence of Marketing Innovation on Performance of Pharmaceutical Manufacturing Firms	Majority agreed: i) Pricing strategy- 81.48% ii) Sales channels- 83.65% iii) Promotional methods - 83.6%	<ul style="list-style-type: none"> • Pharmaceutical manufacturing firms in Kenya are adopting more data-driven, customer-focused, and adaptable pricing strategies that are essential for remaining competitive in today's dynamic business environment. • The firms are increasingly recognizing the importance of using innovation and technology in sales channels so as to meet customer needs and remain competitive in today's dynamic business environment. • Importance of product innovation and customization to meet customer needs and preferences featured prominently; innovative Corporate Social Responsibilities (CSR) programmes; importance of an omni-channel approach to reach and engage with customers across multiple touchpoints and continuous improvements in their customer relationships to enhance customer satisfaction.

No.	Specific Objective	Findings	Discussions
4	Influence of Resource Innovation on Performance of Pharmaceutical Manufacturing Firms	<p>Majority agreed:</p> <p>i) Financial resources innovation-65.87%</p> <p>ii) Social resources innovation-81.1%</p> <p>iii) Human resources innovation-77.85%</p>	<ul style="list-style-type: none"> • Robust risk management and technology in payment systems were highlighted as key areas of innovation under the Financial resources innovation. • On social resources innovation; assessment of and determination of organizational culture was found to be vvery key. Firms encouraged collaboration and ideas between the departments to produce new approaches; advocated for clear and consistent set of values to govern how innovative ideas are rewarded and incorporated into plans; and the need to embrace a culture of involvement by all in championing innovative ideas. • On human resources innovation; majority agreed that companies supported employees who take initiatives in creating new ideas; and that high regard was given to R&D personnel and staff who innovatively transitioned from internal and external sources into valuable knowledge of the company and finally, • That the employees work in teams to develop and transform innovative ideas into results are the primary building blocks for human resources innovation

No	Specific Objective	Findings	Discussions
5	<p>Entrepreneurial passion moderates the relationship between organizational innovation capability and performance of pharmaceutical manufacturing firms in Kenya.</p>	<p>Majority agreed: Passion for Inventing- 80.1% Passion for founding- 79.52% Passion for developing- 79.1%</p>	<ul style="list-style-type: none"> • On passion for inventing, Majority agreed that they found it exciting when scanning the environment for new opportunities; that the leadership of the company was enthusiastic when developing product prototypes; and that they were excited to figure out new ways to solve unmet market needs that could be commercialized. • On passion for Founding; Majority pharmaceutical firm owners agreed that they enjoyed figuring out how to commercialize someone else's idea; the firm's leadership enjoyed creating new firms; the top management is enthusiastic about creating value for their company; they loved to develop new ideas from scratch. • On passion for Developing: Majority of the respondents asserted that the leadership was devoted to managing change; agreed that the top management was motivated by attracting new customers to their businesses; that the firms' leadership showed persuasiveness when communicating with customers and employees; that firm owner show perseverance in the face of obstacles, and that their firm owner leadership style is receptive to new ideas.

Hypothesis Testing

No.	Specific Objective	Hypothesis	Results
1	To establish the influence of product innovation on the performance of pharmaceutical manufacturing firms in Kenya.	H ₀₁ : Product innovation has no significant influence on the performance of pharmaceutical manufacturing firms in Kenya.	<ul style="list-style-type: none"> • Model fit indices (NFI, SRMR, dULS, dG) met respective acceptable fit thresholds levels • Relationship positive (regression weight = 0.724) • Relationship statistically significant with P =0.000 at 5% α-level, R² =0.523 • H₀₁ was rejected.
2	To investigate the influence of process innovation on the performance of pharmaceutical manufacturing firms in Kenya.	H ₀₂ : Process innovation has no significant impact on the performance of pharmaceutical manufacturing firms in Kenya.	<ul style="list-style-type: none"> • Model fit indices met respective acceptable fit thresholds levels • Relationship positive (regression weight = 0.703) • Relationship statistically significant with P =0.000 at 5% α-level, R² =0.494 • H₀₂ was rejected.
3	To examine the influence of marketing innovation on the performance of pharmaceutical manufacturing firms in Kenya.	H ₀₃ : Marketing innovation has no significant influence on the performance of pharmaceutical manufacturing firms in Kenya.	<ul style="list-style-type: none"> • Model fit indices met respective acceptable fit thresholds levels • Relationship positive (regression weight = 0.462) • Relationship statistically significant with P =0.000 at 5% α-level , R² =0.426 • H₀₃ was rejected.
4	To ascertain the influence of resource innovation on the performance of pharmaceutical manufacturing firms in Kenya.	H ₀₄ : Resource innovation has no significant effect on the performance of pharmaceutical manufacturing firms in Kenya.	<ul style="list-style-type: none"> • Model fit indices met respective acceptable fit thresholds levels • Relationship positive (regression weight = 0.770) • Relationship statistically significant with P =0.000 at 5% α-level , R² =0.593 • H₀₄ was rejected.
5	To determine whether entrepreneurial passion moderates the relationship between organizational innovation capability and the performance of pharmaceutical manufacturing firms in Kenya.	H ₀₅ : Entrepreneurial passion does not moderate the relationship between organizational innovation capability and performance of pharmaceutical manufacturing firms in Kenya.	<ul style="list-style-type: none"> • Model fit indices met respective acceptable fit thresholds levels • Entrepreneurial passion has a significant moderation effect (R² change = 0.127) ,P value < 0.05 on organizational innovation capability and performance relationship, demonstrating significant moderating effect • H₀₅ was rejected.

Conclusions and Recommendations

No.	Objectives	Conclusions	Recommendations
1	To Establish the Influence of Product Innovation on Performance of Pharmaceutical Manufacturing Firms in Kenya.	<ul style="list-style-type: none"> Product innovation also had a statistically significant influence on the performance of pharmaceutical manufacturing firms in Kenya. Therefore Companies must incorporate product innovation to stand out from their rivals. Businesses must continually develop new goods and services to be competitive 	<ul style="list-style-type: none"> The Government of Kenya should establish an industrial innovation hub only for pharmaceutical manufacturing firms. This will promote Kenya as a pharmaceutical innovation hub where affordable medicinal drugs are produced. The government will provide the necessary infrastructure that will enable the pharmaceutical firms to be efficient and effective in their production ways.
2	To Investigate whether Process Innovation influences Performance of Pharmaceutical Manufacturing Firms in Kenya.	<ul style="list-style-type: none"> Process innovation also had a statistically significant influence on the performance of pharmaceutical manufacturing firms in Kenya. Hence, Companies must emphasize process innovation as a unique primary skill. For a pharmaceutical manufacturing firm in Kenya to be impactful or competitive or profitable, it has to invest wisely when it comes to process innovation and more so in production technology. 	<ul style="list-style-type: none"> Private sector lobby groups like Kenya Association of Manufacturers (KAM) to lobby the Government to develop legislature that is favorable for the pharmaceutical manufacturing firms that will operate in industrial innovation hubs. This will enable the entrepreneurs responsible to pursue organizational innovations that will lower the cost of production.
3	To Examine the Influence of Marketing Innovation on Performance of Pharmaceutical Manufacturing Firms in Kenya.	<ul style="list-style-type: none"> Marketing innovation also had a statistically significant influence on the performance of pharmaceutical manufacturing firms in Kenya. Therefore, attention should be paid to underserved markets, appropriate market segmentation, trustworthy market information, increased customer value, exploration of various marketing channels, and the use of technology. 	<ul style="list-style-type: none"> Pharmaceutical firms should focus on developing both market-driven and market-driving marketing innovation strategies to enhance their performance outcomes. Market-driven strategies involve meeting current market needs and demands, while market-driving strategies involve creating new market opportunities through innovative ideas and products.

Conclusions and Recommendations (Cont'd)

No.	Objectives	Conclusions	Recommendations
4	To Ascertain the Influence of Resource Innovation on Performance of Pharmaceutical Manufacturing Firms in Kenya.	<ul style="list-style-type: none"> Resource innovation also had a statistically significant influence on the performance of pharmaceutical manufacturing firms in Kenya. Therefore, companies should examine their prospects, risks, and strengths identify its deficiencies and then adopt a resource-based entrepreneurial approach so as to develop a competitive edge. Companies should be keen on employee training, development, and retention programs for enhanced performance. 	<ul style="list-style-type: none"> Pharmaceutical manufacturing firms to partner with other related industries so as to champion open innovation. Through open innovation, technology transfer will be achieved and hence enhancing the organizational capabilities of pharmaceutical manufacturing firms in Kenya. Through strategic partnerships, and joint ventures, Kenya will position itself as the pharmaceutical manufacturing hub of Africa.
5	To Determine Whether Entrepreneurial Passion Moderates the Relationship Between Organizational Capability and Performance of Pharmaceutical Manufacturing Firms in Kenya..	<ul style="list-style-type: none"> A significant and positive moderating effect was reported on entrepreneurial passion in the relationship between organizational innovation capability and performance of pharmaceutical manufacturing firms in Kenya. Therefore, firms should not only prioritize organizational innovation but also the cultivation of a strong entrepreneurial passion among their employees. This could involve creating a positive work environment that fosters a sense of purpose and meaning in the work, encouraging employees to take ownership of their tasks and responsibilities and providing opportunities for professional creativity and continuous improvement, which can enhance the effectiveness of organizational innovation initiatives. 	<ul style="list-style-type: none"> Pharmaceutical manufacturing firms should track and measure the impact of entrepreneurial passion on innovation and firm performance. This can be achieved through metrics such as the number of innovative projects initiated, the success rate of those projects, and the impact on overall firm performance. Another strategy is to promote collaboration and cross-functional teamwork, as this can facilitate the sharing of ideas and expertise and lead to the development of more innovative solutions. Additionally, firms can incentivize employees to pursue innovative projects and reward those who demonstrate entrepreneurial passion and drive.

Contribution of Study to Body of Knowledge

Schumpeter's innovation Theory

- The theory postulates that innovation occurs when a business person opens a new market, discovers fresh source of raw materials, forms a new company or introduces a novel service or mode of production. **This study result have shown that having innovation capability is a sure way of making a firm to be competitive, performance driven, quality consciousness and willing to create an economic dis-equilibrium**

Entrepreneurial Passion Theory

- The theory focuses on the role of passion in driving entrepreneurial behavior and success. **The results of this study contributes in this theory that it is important for the owner and employees to be passionate in developing and sustaining entrepreneurial activities.**

Strategic Entrepreneurship

- Strategic entrepreneurship is a management approach that the elements of traditional strategic management and entrepreneurship to create a framework for identifying and exploiting opportunities in a dynamic and uncertain business environment. **The study results demonstrate that entrepreneurial thinking is key to development of strategy. The study informs scholars that an entrepreneurial orientation framework would be require for a company to be innovative and competitive.**

Contribution of Study to Body of Knowledge Contd....

Corporate Entrepreneurship

Also referred to as “intrapreneurship”, is about fostering entrepreneurship within a corporate environment. **The results of this study enhance the concept of having a unique employee who is passionate about creativity, innovation and proactiveness despite the minimal resources within his or her reach.** This fits the definition of entrepreneurship- **creation of value by people working together to implement an idea through the application of drive and a willingness to take a risk.**

Habitual Entrepreneurship

A pattern of behavior in which individuals repeatedly engage in entrepreneurial activities by starting and managing multiple businesses over time. This study results have demonstrated the **importance of continuous product development that makes an entrepreneur think of new venture creation continuously using different ventures.** These individuals have a strong inclination and motivation to create and operate businesses continuously throughout their careers. The study **results echo the components of entrepreneurial passion i.e. passion to invent, passion to found and passion to develop, which leads to new venture creation.** The study also adds value to this theory by **demonstrating that the spirit of capitalism, and adventurous spirit leads to new venture creation.**

Areas of Further Research

- The study relied on a cross-sectional data survey where the respondents were asked to share their perspectives on the item in the instrument. However, a factor like Entrepreneurial passion is generally strategic and dynamic in nature. Therefore, a longitudinal study is recommended as it could provide a more comprehensive view of the moderating effect of Entrepreneurial passion on firm performance in Kenya.
- Also comparative studies between manufacturing firms with high levels of entrepreneurial passion and those without, should be conducted to identify the key factors that differentiate successful firms in terms of organizational innovation capability and performance.

~ End ~