Product Development Strategy as a Predictor of Organizational Performance in the Context of Shimo La Tewa Prison Enterprises in Kenya

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Abstract: Recently, much attention has been paid to internal development plans and organizational success. This study examined the effect of product development strategy on the performance of the Kenya prison enterprise at the Shimo la tewa prison. The research variable was anchored on resource-based view theory. A cross-sectional descriptive analysis design guided the investigation. Prison officers at the management and artisan levels were randomly recruited using stratified sampling as the target population. Primary data was collected using structured questionnaires. Data analysis was conducted using descriptive and inferential statistics. Product development strategy ($\beta$=0.520, $p=0.000$) were found to have a positive and significant relationship with the performance of Kenya Prisons enterprise. From the findings, the study concluded that product development strategy has a positive and significant influence on the performance of Kenya Prisons enterprise. The study recommended that firms should emphasize on internal growth tactics such as product advancements in bid to ensure that their internal capabilities drive their competitiveness through the roof.

Keywords: Product development strategy, organizational performance, Kenya Prisons Enterprise

1. INTRODUCTION

Organizational effectiveness is seen as the most important criterion for evaluating the actions and environment of the organization (Habermann & Schulte, 2017). The capacity of the organization to execute its goal through sound control practices, powerful governance, and a persistent dedication to achieving the intended outcomes (Abdi & Kinyua, 2018). According to the arguments of Pobegaylov, Myasishchev, and Gaybarian (2016), the ability to update and maintain high-level organizational efficiency, effectiveness, and efficiency is a critical concern that today's leaders must face.

Hatane (2015) also claims that the idea of success is linked to the growth of company capital in an ever-changing market climate and global economy. Kaplan and Norton (2007) update their theoretical prescriptions for assessing performance in four dimensions to provide a more balanced integration of financial and non-financial indicators of organizational performance.

Several researchers have used income, return on investment, and return on funding for commercial enterprise overall performance (Akhavan & Mehdi, 2015; Huang, Meschke & Guthrie, 2015). Because finance is the fundamental resource, financial measurements exist at all levels of the organization, but nonfinancial indicators like as new products, product improvement, the speed with which new processes adapt to market crises have been discounted by other academics. Non-financial metrics are more reliable than financial indexes, which have limited implications for future operations (Sifuna, 2014).

The relationship between organizational characteristics and the nature of its growth strategy has been studied by Dang, Houanti, and Bonnand (2016). A business can grow in two ways, either through mergers and acquisitions, or by increasing its own wealth by reinvesting its cash flow in an existing company. For a variety of purposes, internal growth gives the company more control, promotes internal entrepreneurship, and safeguards the organizational culture. Managers have a better view of the company's assets and reinvestment, and exploiting synergies can also be costly, which in turn makes it more attractive to invest in firms (Plaskova et al., 2019).
Internal growth strategies are more personal and show fewer hostile actions by competitors, resulting in better rewards in the capital market (Wanjiru & Gongera, 2015). Internal growth strategy is usually defined as the level of organizational growth, excluding the increase in the size of acquisitions, mergers and acquisitions (Jayawarna & Dissanayake, 2019). Domestic expansion is accomplished by offering more goods to existing consumers (market penetration) as well as selling products to new customers. Companies that rely upon inner boom accomplish most people in their expansion via enhancing and expanding existing customer relationships. Most notably, capital markets support the internal development plan (Velasco-Gutiérrez et al., 2020). In this research, internal growth strategy is defined as product development.

Kenya Prisons Enterprise Corporation was established through a State Corporation Act (Cap.446) to take over the running and management of all assets and liabilities of the defunct KPE. Its objective is management of all assets and resources, developing and maintaining a meaningful work program to fully utilize prison labour and finally engaging with any public or private organization to further its objectivity (Kenya Prison Enterprise Corporation Order, 2018). The creation of the new organization means that all inventions, reading and writing skills, artwork, designs, symbols, names and images are generated during the course of the program, regardless of whether they are in the funds and exams (Prison Industry Fund) and Exchequer and Audit belong to the company, unless expressly provided for in a contractual obligation (KPECO, 2018). Shimo la tewa industries was established in the early 1960s with its core functions being manufacture of furniture, metallic products, construction works, farm products and mat making.

2. STATEMENT OF THE PROBLEM

Kenya prison industries products performance in the market has been on a downward trend for several years prompting an internal audit commissioned by the national treasury to the Kenya Prisons Enterprise for the financial year 2018-2019. It revealed that prisons industries were on the verge of insolvency and could not sustain their operation as the managers were also turning their eyes away from a loss-making robust vehicle number plate section, furniture and farm produce sections (Ministry of interior and national coordination report, 2019). The prison enterprise was projected to raise 246 Ksh or Kenya shillings revenue but it could only manage 147million ksh, which was a sharp shortfall of over 98million ksh. At the same time the budgeted expenditure was 234million ksh with an actual expenditure amount of only 130million ksh (Auditor general report, 2019). At the start of each financial year, the Kenyan government sets targets for prison enterprises to meet, along with the ability to spend money based on the previous year’s performance (Prisons industries report, 2012). The importance of prison enterprises to the Kenyan economy, according to Aidati (2010), cannot be overstated.

The existing relevant empirical literature manifest an assortment of research gaps supporting the case for this study. For instance, Chu-mei (2014) was carried out in Thailand, which presents a different empirical context disallowing generalization of the study findings to Kenyan correctional institutions. Local studies such as (Mwangi, 2015; Muturi & Mbithi, 2015) focused on other industries such as manufacturing and sugar industry. Further, there exist methodological gaps since some studies (GladsonNwakoh & Ofoghu, 2009; Akintoye, Ajolabi & Akamoli, 2015) relied on descriptive statistics and neglected the use of inferential statistics. Inferential statistics were utilized in this study to determine the relationship between the study variables. As a result, the goal of this research was to fill up some of the gaps in the literature by investigating the impact of product development strategy on the performance of Kenyan prison enterprises.

3. LITERATURE REVIEW

3.1. Resource Based View

This emphasizes the significance of internal capital within the commercial enterprise and their use in growing techniques to maintain a long-term competitive facet within the enterprise (Schroeder et al., 2002). According to Pobegaylov et al. (2016), an agency is a group of actual and intangible resources, along with physical, financial, non-economic, social or human, technical, and highbrow belongings, that enables to create fee for clients. Intangible resources are created in part due to complex social dimensions, making them difficult to reproduce and thereby gaining a competitive advantage.
Edith Penrose is credited with being the founder of organizational RBV (Penrose, 1959), which was later developed by other scientists (Wernerfelt, 1984; Barney, 1991). RBV examines why some businesses thrive and others struggle in the market from the inside out (Dickson, 1996). Organizational skills and talents, according to this theory, aid in the development of new goods and markets (Mungai, 2012).

RBV makes use of its capital and operational capabilities to create and maintain a competitive advantage that lasts (Madhani, 2010). The RBV focuses on the organization's characteristics and qualities rather than the industrial organization model's role. Organizational resources that VRIN are valuable, scarce, inimitable, and irreplaceable (Barney, 1991) have been observed to allow organizations to create and retain competitive advantage, as well as achieve ostensibly excellent business outcomes (Wernerfelt, 1984, Grant, 1991; Collis & Montogenry, 1995).

Organizational capital vision considers qualities such as expertise, tradition, and previous organizational competencies to be critical for improving efficiency and achievement (Hamel & Prahalad, 1994; Campbell & Luch, 1997). According to Barney (1991), resources are useful when they assist an organization in developing or implementing a strategic or execution plan that improves its productivity and effectiveness. As a result, RBV provides a theoretical foundation for internal growth strategies including product creation.

3.2. Empirical Review

Product development is defined as a focus on current customer needs and the broader customer market (Ansoff, 1987). Huang (2010) sees new product development as key in the organization and as a motive for competitive advantage in the product development process. Apart from promoting new products, organizations must meet customer demands and face the threats posed by competitors. Song and Montogwa-weis (1998) consider product strategy as the basis for product development.

Szutu (2010) suggested a strategy to encourage productivity by taking into account the minimal impact of the product on the environment during production and the balance required by customers between quality, convenience and price. In this case, the organization needs to innovate in product function and appearance, design, and customer satisfaction, which increases the efficiency of the organization. Based on this research, conclusions are drawn about the positive relationship between product development and product effectiveness. Chu-Mei et al. (2014) research concluded that all components of product development, including technical innovation, functional innovation, and market innovation, improve organizational performance.

Nwokah and Ofoeghu (2009) tested the relationship between product improvement and organizational performance within the Nigerian brewing enterprise. The survey data were collected from thirty-two (32) senior and middle managers, while the data analysis was calculated using the copy order correlation coefficient. The data shows that aspects of product development such as product quality and product mix have a positive and meaningful association with aspects of organizational efficiency, profitability, sales volume and customer loyalty. In this study quantitative data cannot be analyzed at the statistical differential level.

Rombo, Muturi, and Mbithi (2014) investigated the impact of product production strategies on the sugar industry's productivity in Kenya. The research design is a cross-sectional study with descriptive data to enable hypothesis testing that leads to objective conclusions (Cooper & Schindler, 2003). The survey was conducted on nine (9) sugar companies from all sugar belt areas with 120 respondents. Targeted samples and statistics were requested for data analysis. The study concludes that there are mixed results showing a low (increased capacity utilization) and high (income) relationship. Regression testing, on the other hand, revealed a shaky connection between product creation and all aspects of effectiveness. The generalizability of the findings and conclusions cannot be supported due to contextual variations between the research under consideration and the current analysis.

3.3. Conceptual Framework

The interrelationship of the independent and dependent variables completes the framework for positive expected results as indicated in Figure 1.
4. RESEARCH METHODOLOGY

A cross-sectional descriptive analysis design guided the investigation as has been widely used in extant empirical literature (Thangaru & Kinyua, 2017; Muthoni & Kinyua, 2020; Gatuyu & Kinyua, 2020; Ong’sa & Kinyua, 2020). Prison officers at the management and artisan levels were randomly recruited using stratified sampling as the target population. Primary data was collected using structured questionnaires. The characteristics of the study variables were defined using descriptive statistics such as frequency, percentage, mean, and standard deviation. The relationship between the independent and dependent variables was established using inferential statistics such as correlation and linear regression analysis. Data was described in the form of graphs and tables.

5. RESULTS AND DISCUSSION

5.1. Descriptive Analysis

Descriptive statistics was done to show the synopsis in the findings by simply including, percentage, mean and standard deviation.

Product Development Strategy

The respondents were asked to use the Likert scale to rate the extent to which they agree with the following statements on product development strategy. The results are presented in Table 1.

Table 1. Descriptive statistics for Product Development Strategy

<table>
<thead>
<tr>
<th>Indicators</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Our organization has undergone product redesigning.</td>
<td>0%</td>
<td>0%</td>
<td>16%</td>
<td>50%</td>
<td>34%</td>
<td>4.18</td>
<td>0.68</td>
</tr>
<tr>
<td>2. There has been great improvement of production technology in our organization.</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
<td>46%</td>
<td>49%</td>
<td>4.43</td>
<td>0.61</td>
</tr>
<tr>
<td>3. Our employees go through refresher trainings regularly.</td>
<td>6%</td>
<td>11%</td>
<td>12%</td>
<td>28%</td>
<td>44%</td>
<td>3.92</td>
<td>1.24</td>
</tr>
<tr>
<td>4. There has been continuous quality improvement in our organization.</td>
<td>0%</td>
<td>0%</td>
<td>45%</td>
<td>28%</td>
<td>28%</td>
<td>3.83</td>
<td>0.84</td>
</tr>
<tr>
<td>5. We have invested in research &amp; development of products and services.</td>
<td>12%</td>
<td>15%</td>
<td>28%</td>
<td>6%</td>
<td>40%</td>
<td>3.90</td>
<td>1.16</td>
</tr>
<tr>
<td>6. There has been improvement in our operational processes and systems.</td>
<td>0%</td>
<td>0%</td>
<td>40%</td>
<td>49%</td>
<td>12%</td>
<td>3.72</td>
<td>0.67</td>
</tr>
<tr>
<td>Average</td>
<td>3.83</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5=Strongly Agree 4=Agree 3=Not Sure 2=Disagree, 1=Strongly Disagree, M = Mean and S D = Standard Deviation

Table 1 indicates that 84% of the respondents agreed that their business enterprise has gone through product remodeling (mean=4.18≈4, SD=0.68). The results additionally imply that 95% of the respondents agreed that there has been fantastic improvement of manufacturing technology in their company. (Mean=4.43≈4, SD=0.61). The outcomes additionally shows that 72% of the respondents agreed that their employees go through refresher trainings regularly (mean=3.92≈4, SD=1.24).

The results showed that 56% of respondents agreed with continuous quality improvement in their organization (mean = 3.83≈4, SD = 0.84). The results showed that 46% of respondents agreed to invest in research and development of products and services (mean = 3.90≈4, SD = 1.16). The results show that 61% of respondents agree that their operational processes and systems have been improved (mean = 3.72≈4, SD = 0.67).
In conclusion, the average mean of the responses was 3.83 when viewed on a scale of five points presenting a standard deviation of 0.87. This implies that the majority of the respondents agreed that the aspects of product development strategy play an essential role in organizational performance. These findings corroborate those of Szutu (2010) who suggested that there is a positive relationship between product development and product effectiveness.

**Organizational Performance**

The respondents were asked to use the Likert scale to rate the extent to which they agree with the following statements on organizational performance. The results are presented in Table 2.

**Table 2. Descriptive statistics for organizational performance**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There has been improvement in our organization’s sales volume.</td>
<td>0%</td>
<td>0%</td>
<td>40%</td>
<td>49%</td>
<td>12%</td>
<td>3.72</td>
<td>0.67</td>
</tr>
<tr>
<td>2. There has been improvement in our organization’s profit margin.</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
<td>46%</td>
<td>49%</td>
<td>4.43</td>
<td>0.61</td>
</tr>
<tr>
<td>3. There has been improvement in our organization’s customer base.</td>
<td>6%</td>
<td>11%</td>
<td>12%</td>
<td>28%</td>
<td>44%</td>
<td>3.92</td>
<td>1.24</td>
</tr>
<tr>
<td>4. There has been improvement in our organization’s customer satisfaction level.</td>
<td>0%</td>
<td>0%</td>
<td>45%</td>
<td>28%</td>
<td>28%</td>
<td>3.83</td>
<td>0.84</td>
</tr>
<tr>
<td>5. Our organization has experienced improved customer loyalty.</td>
<td>0%</td>
<td>6%</td>
<td>22%</td>
<td>11%</td>
<td>61%</td>
<td>4.28</td>
<td>1.00</td>
</tr>
<tr>
<td>6. Our operational cash flow has increased overtime.</td>
<td>0%</td>
<td>0%</td>
<td>16%</td>
<td>50%</td>
<td>34%</td>
<td>4.18</td>
<td>0.68</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.06</td>
<td>0.84</td>
</tr>
</tbody>
</table>

5=Strongly Agree 4=Agree 3=Not Sure 2=Disagree, 1=Strongly Disagree, M = Mean and S D = Standard Deviation

Table 2 shows that 61% of the respondents disagreed that there was development in their company’s income quantity (mean=3.72≈4, SD=0.67). The outcome also implies that 95% of the respondents disagreed that there has been improvement of their business enterprise’s profit margin (mean=4.43≈4, SD=0.61). The consequences also imply indicates that 72% of the respondents agreed that there has been improvement of their employer’s patron base (mean=3.92≈4, SD=1.24).

The outcomes imply that 56% of the respondents disagreed that there was development of their organization’s customer pleasure degree (mean=3.83 ≈4, SD=0.84), 72% of the respondents disagreed that their corporation has skilled advanced purchaser loyalty (mean=4.28≈4, SD=1.00). The outcomes imply that 84% of the respondents disagreed that their operational cash float has increased time beyond regulation (mean=4.18≈4, SD=0.68).

The averages score of the responses turned into 4.06 whilst viewed on a scale of five factors imparting a popular deviation of 0.84. This means that the majority of the respondents indicated that the organizational performance of Shimo la tewa prison industries had been fairly proper. The findings agree with Pobegaylov, Myasishchev, and Gaybarian (2016) who state that the ability to update and maintain high-level organizational efficiency, effectiveness, and efficiency is a critical concern that today's leaders must face. Hatane (2015) also claims that the idea of success is linked to the growth of company capital in an ever-changing market climate and global economy.

**6. INFERENTIAL STATISTICS**

Correlation and regression analysis outcomes are presented in this section.

**6.1. Correlation Analysis**

The Pearson correlation coefficient was used to determine the association between the variables and the findings are shown in Table 3.

**Table 3. Correlation Matrix**

<table>
<thead>
<tr>
<th></th>
<th>Organizational Performance</th>
<th>Product Development Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Performance</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.643**</td>
<td>1</td>
</tr>
<tr>
<td>Product Development Strategy</td>
<td>Pearson Correlation</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**
Table 3 shows that product development strategy and the performance of Kenya Prisons Enterprises-Shimo la Tewa Prisons industries have a positive and significant relationship \( (r=0.643**, p=0.000) \). The r value of 0.643 suggests that the product development strategy is a linear variable that has a positive relationship with the performance of Kenya Prisons Enterprises-Shimo la Tewa Prisons industries. The findings agree with Szutu (2010) who suggested that there is a positive relationship between product development and product effectiveness.

6.2. Linear Regression Analysis

Linear regression analysis was conducted to determine the effect of product development strategy on the performance of Kenya Prisons Enterprises-Shimo la Tewa Prisons industries. The findings are shown in Tables 4, 5, and 6.

Table 4. Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.643*</td>
<td>.414</td>
<td>.408</td>
<td>.192</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Product Development Strategy

The results in Table 4 represent the fit of the regression with the described research phenomenon. The results show that product development strategy is very important for running prisons in Kenya - Shimo la Tewa prison company. This is evidenced by the R square value which is 0.414 implying that product development strategy explains 41.4% of the growth of social enterprises in Kenya.

Table 5. ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2.565</td>
<td>1</td>
<td>2.565</td>
<td>69.895</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>3.634</td>
<td>99</td>
<td>.037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.199</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Organizational Performance
b. Predictors: (Constant), Product Development Strategy

The model was statistically significant, implying that product development strategy has an impact on the performance of Kenya Prisons Enterprises-Shimo la Tewa Prisons industries, as shown in Table 5. F statistic = 69.895 > F critical = 3.92, which shows that the result was greater than the critical value at the 0.05 significance level (1, 99).

Table 6. Regression of Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.069</td>
<td>.239</td>
<td>8.663</td>
<td>.000</td>
</tr>
<tr>
<td>Product development</td>
<td>.520</td>
<td>.643</td>
<td>8.360</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Organizational performance

The results in Table 6 revealed that product development strategy and the performance of Kenya Prisons Enterprises-Shimo la Tewa Prisons industries have a positive and significant relationship \( (\beta=0.520, p=0.000) \). This means that a 0.520-unit improvement in one component of product development methods improves the performance of Kenya Prisons Enterprises-Shimo la Tewa Prisons industries. These findings corroborate those of Szutu (2010) who suggested that there is a positive relationship between product development and product effectiveness.

The model was as shown below:

\[
Y = 2.069 + 0.520X
\]

Where:

\( Y = \text{Organizational Performance}, X = \text{Product Development Strategy} \)

7. CONCLUSION

The study concludes that product development strategy has a positive and significant influence on the performance of Kenya Prisons Enterprises-Shimo la Tewa Prisons industries. The study also concludes that venturing into different products, encouraging pooling of organization resources together,
offering differentiated products to our customers, sticking to the firms’ core business, providing new and unrelated products and services to customers and addition of new products to complement the existing products are prolific elements that encourage the culture of diversification. Furthermore, product development strategy has been found to flourish on the basis of product redesigning, improvement of production technology, regular employee training, continuous quality improvement, investment in research and development and improvement in our operational processes and systems.

**REFERENCES**


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