

Effect of Customer Participation on Product Development Projects in Fast Moving Consumer Goods Industry: A Case of Unilever Kenya Limited

¹Musa Jorrim Huko, ²Dr. Muchelule Yusuf Wanjala

College of Human Resource Development, School of Entrepreneurship Technology, Procurement and Management,
Jomo Kenyatta University of Agriculture and Technology, Kenya

Abstract: Companies need to launch new products to meet ever-changing consumer needs and preferences. To achieve this best, organizations involve consumers in the process of developing new products. This is because of the advantages of understanding consumer perceptions as well as gathering necessary information. However, it is not always the case, which consumers are involved in product development process. In Kenya, there is a scarcity of studies that have explored how organizations can include consumers when they seek to develop a new product. In this regard, this study sought to establish the impact of customer participation on product development projects in the fast-moving consumer goods industry. The study used Unilever Kenya as a case study. The study was informed by the theory of change and theory of participation. A quantitative research approach was used where the researcher engaged employees involved in developing new products. Primary data was collected using questionnaires that were physically distributed. The study targeted 602 employees from 13 different product in Unilever Kenya Ltd. stratified Simple random was select a sample of 241 employees. Descriptive and inferential statistics were used in data analysis. Data from qualitative and quantitative questionnaires were coded and entered into a computer for analysis using descriptive and inferential statistical tools with the aid of IBM statistical package for Social Sciences (SPSS) version 24 to establish the relationship between the study variables. The study proved that knowledge integration makes it possible for the organization to be more relevant as it will reflect what the intended customers want. On the other hand, project complexity gives room for more opportunities that enhance product development. Besides, by involving customers in product development, the organization has knowledge on the customers' needs and can make use of innovative solutions to meet their desires. The study recommended that customers need to be viewed as providers of significant knowledge that contributes to product development. Also, there is a need for a balance among political, social, technological, economic, legal and environmental factors. Besides, it is utmost necessary to have the input of customers in the developments of products and have awareness on customers' expectations about new solutions.

Keywords: Product development, Project Management, Project Team, Fast-moving consumer goods.

1. INTRODUCTION

Companies are always losing customers, so to maintain share, you have to win an equal number of new customers to keep the bucket full. To grow share, you have to be especially good at new customer acquisition, or you have to slow the leak. In the product development stage (e.g., product design and engineering), customers can provide solution-related knowledge such as technical advice or design skills. Evolution of marketing trends show that mere adoption of customer orientation is not enough; organizations must obtain more information and knowledge from customers to create values that can meet their individual and dynamic needs [2]. By conceptualizing customer participation as a behavioral construct that measures the extent to which customers provide or share information and knowledge, make suggestions, and become

involved in decision making during the value co-creation and delivery process [1]. It is valuable to appraise both the process performance and product performance, because the project may create conflict between the efficiency of the process and product quality [7].

A crucial benefit when customers participate in new software project development is the preferred access to useful information about customer needs because project customer participation can provide feedback on product requirements[5]. If the customer is involved in new project development (e.g., idea generation), he or she can express his or her preferences and needs accurately through face-to-face discussions, or meetings [9]. Such communication can improve the possibility of appreciating the related knowledge of project members and customers [3]. Successful selling of consumer products in Kenya means intimately knowing both the size of your potential customers and how to reach them effectively [8]. With the rising consumption levels in Kenya, the possibility of selling an FMCG to the East African country continues to attract international and local companies of all sizes.

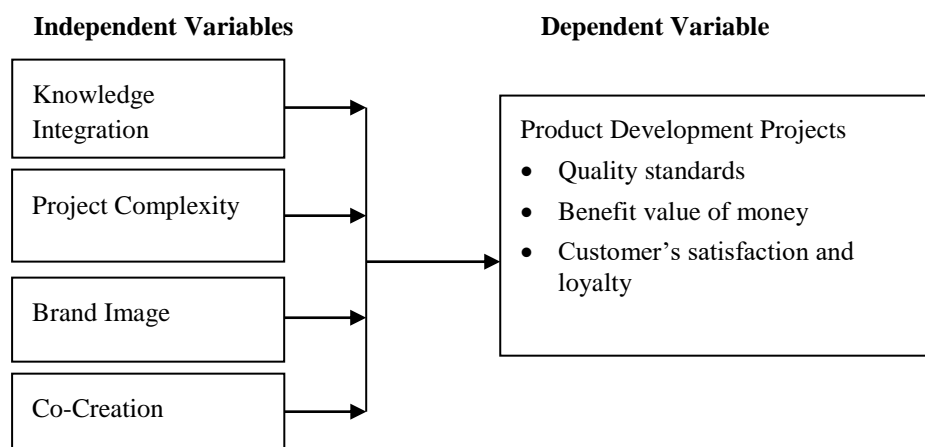
2. EMPIRICAL REVIEW

Empirical evidence has examined the positive relationship between knowledge integration and project performance, including studies from [3], which found that there are positive correlations between the effective integration of diverse knowledge and products. According to their opinions, knowledge integration was defined as the combinatorial process, which utilizes specialized expertise from different alliance partners at the project level. When customers participate in new project development, they can strengthen the use of essential information and knowledge. If customers participate in new project development, which can increase the chances of interaction, they can facilitate information disclosure and promote mutual loyalty.

From an organizational perspective, engaging customers during NPD leads to some positive outcomes for a company. By involving consumers, a business acquires information and knowledge regarding the brand and the intended product to be developed. As such the company can more relevant and usable products. In this regard, [6] conducted a study to explore how companies can obtain an advantage through the engaging consumers in the NPD process. The researcher conducted an online experiment involving 220 participants which focused on the selection of products by the company set against selection by customers; development of products by the company set against development by customers and the complexity of products Novelty seeking of customers was the moderator but was not manipulated. The findings showed that co-creation had a positive effect on consumer views.

[4] conducted a study to establish on how to engage customers in co-creation and capture customers' inspirations for collaborative innovation. The study revealed that most significant motivators for consumers' participation were intrinsic motivations and knowledge acquisition. On the other hand, socialization with other consumers, sharing mutual interests while being remunerated for their participation was not among the most significant motivators.

3. CONCEPTUAL FRAMEWORK



4. SUMMARY AND CRITIQUE OF EXISTING LITERATURE

In conclusion, the Existing literature shows that some studies have been carried out to explore involving of consumers in product development. These studies include those in the energy sector, banking, and finance as well FMCG. The studies have explored how best to engage customers when developing new products. Some studies have researched on the

advantages of engaging consumers in product development. This has shown that companies that involve consumers will benefit from the process [6]. Some of the advantages include understanding consumer needs and preferences and the factors that drive them. Also, corporations get to know consumer perceptions regarding their product. Literature shows that in some cases engaging consumers had its downsides which affect the outcome. This is determined by how the company sets up the project of engaging customers.

The studies have shown that there is a different relationship between aspects of customer engagement and success of new product development. The variation can be attributed to dissimilar methodologies used such as exploring of causal effect relationships merely being descriptive. On the other hand, [10] established that engaging consumers in product development can have negative effects on the company. The negative impacts are attributed to miscommunication and mismanagement of the process and mismanagement of the environment when involving consumers in co-creation. However, the researchers only interviewed 11 participants. This shows that the conclusions were drawn from a small sample size hence cannot be generalized to a wider population.

5. RESEARCH METHODOLOGY

The quantitative research design was used to allow the researcher to gather, summarize, present and interpret information for clarification. It is mainstreamed to fact-finding and may result in the formulation of important principles of knowledge and solution to significant problems. The target population 600 as per the 2016 human resource annual report and financial statement of Unilever Kenya. The stratified random sampling was used to select 402 field coordinators so that everyone in the target population has an equal chance of inclusion. The pre-test retest was carried out by the ten employees. These respondents were not included in the actual research undertaking. The study used self-administered questionnaires and observation schedules. This study utilized both primary and secondary data. Questionnaires were used to collect primary data which was distributed to the staff.

The test for significance of coefficient of correlation was determined by the use of f-test. The following multiple linear regression was used:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_0$$

Where:

β_0 = Y-intercept (constant) whose influence on the model is insignificant

X_1 = Knowledge Integration

X_2 = Project Complexity

X_3 = Brand Image

X_4 = Co-Creation

$\beta_1, \beta_2, \beta_3, \beta_4$ = Model coefficients which are significantly large to have a significant influence on the model. e_0 is the error term.

6. RESULTS AND DISCUSSION

Response Rate:

This researcher put into account the number of employees within the firm. 45.9% (105) of the respondents stated that there are 1-50 employees, 33.2% (76) of the respondents reported that there are 51-100 employees, 11.4% (26) of the respondents reported that there are 101-200 employees whereas 9.6% (22) of the respondents affirmed that there are more than 200 employees in the firm. This is a clear indication that majority of the firms have over 50 employees in the firm. In regards to the number of years the firm has been in operation, 34.9% (80) of the respondents stated that the firm has been in operation for 11-20 years, 26.6% (61) for 21-30 years, 14.4% (33) for 31-40 years, 10.5% (24) for 41-50 years, 8.3% (19) of the respondents claimed that their firm has been in operation for 1-10 years whereas 5.2% (12) of the respondents confirmed that their firm has been in operation for not more than 50 years. Since the majority of the firms have been in operation for over ten years, they have an essential source of resource sharing and have efficiently established their market share hence they would give reliable information as sought by the study. Finally, 49.8% (114) of the respondents have been working with the firm for a year, 23.6% (54) of the respondents reported that they have worked between 5 to 10 years, 14.4% (33) of the respondents have worked for 10 to 15 years, and 12.2% (28) of the respondents confirmed that they have worked for over 15 years with the firm.

6.1 Customer Knowledge Integration:

Customer knowledge integration is a significant factor that needs to be considered to realize success in product development projects. As such, the researcher sought to establish customer knowledge integration at Unilever Kenya. The results are presented in table As evidenced in the table, 53.3% (122) of the respondents strongly agreed that the company conduct frequents integration of knowledge to its customers (mean = 4.14, SD = 1.15).

Further, 49.8% (114) of the respondents agreed that the company collects customers' ideas and expectations about new solutions (mean = 3.95, SD = 0.9). As well, 37.6% (86) of the respondents agreed that the companies draw a breadth of specialized knowledge (mean = 3.82, SD = 1.11). Besides, 48.5% (111) of the respondents agreed that there had been an increase in the number of customers using the firm's online services. (mean = 3.72, SD = 1). Also, 40.6% (93) of the respondents agreed that their company makes use of customer complaints to improve its products (mean = 3.7, SD = 1.05).

However, 35.4% (81) of the respondents were not sure whether the company has the combinative capability to utilize customer knowledge (mean = 3.55, SD = 1.2). In a similar vein, 14% (32) of the respondents were uncertain whether the company has a preference of tacit knowledge over explicit knowledge though 35.8% (82) of the respondents agreed that there is the preference of tacit knowledge over explicit knowledge (mean = 3.54, SD = 1.35). Results on customer knowledge integration summed to a mean of 4.15 and a standard deviation 0.42.

6.2 Project Complexity:

The second objective of the study sought to investigate the effect of projects complexity in product development projects in fast consumer goods industry in Unilever Kenya. As evidenced in the results, 48% (110) of the respondents agreed that project complexity attributed to economic aspects (mean = 4.17, SD = 1.09). Additionally, 38% (87) of the respondents strongly agreed that project complexity associated with social factors (mean = 3.81, SD = 1.23). Besides, 38.9% (89) of the respondents strongly agreed that project complexity was attributed to environmental factors (mean = 3.82, SD = 1.27).

Also, 35.8% (82) of the respondents agreed that there is a timely determination of project complexity (mean = 3.72, SD = 1.03). Moreover, 45.9% (105) of the respondents agreed that project complexity attributed to technological factors (mean = 3.71, SD = 3.71). Further, 55.5% (127) of the respondents agreed that project complexity is attributed to political scenario (mean = 3.45, SD = 0.98). In a nutshell, project complexity is attributed to economic aspects, environmental factors, legal aspects, technological factors, social factors, political scenario and the product design. However, organizational factors had a limited role in contributing to project complexity. In general, project complexity summed up to a mean of 3.77 and a standard deviation = 0.45 meaning that respondents were not entirely in agreement.

6.3 Customer co-creation:

Customer co-creation is a situation whereby customers are actively involved in the creation of a new product offering. The study, therefore, deemed it important to examine the effect of customer co-creation in product development projects in fast consumer goods industry in Unilever Kenya. 44.1% (101) of the respondents strongly agreed that consumers influence when value is generated (mean = 3.91, SD = 1.27). In the same way, 39.7% (91) of the respondents strongly agreed that consumers influence how value is generated (mean = 3.85, SD = 1.23). Further, 38.4% (88) of the respondents affirmed that the firm's online services assist the customer to make various orders at the same time (mean = 3.86, SD = 1.23). Similarly, 36.2% (83) of the respondents strongly agreed that there is customer-driven innovation (mean = 3.59, SD = 1.43). Moreover, 47.2% (108) of the respondents agreed that consumers influence where value is generated (mean = 3.55, SD = 1.29). Results on customer co-creation summed up to a mean of 3.64 and standard deviation 0.74. Generally, consumers influence when the value is generated, how it is generated and where the value is generated. Furthermore, there is customer-driven innovation in that consumers are involved in all stages of product development. Besides, the online services in the firm assist customers to make various orders at the same time. Consumers are therefore active participants in product development.

6.4 Brand image:

The fourth objective of the study was to examine the influence of brand image in product development projects in fast consumer goods industry in Unilever Kenya. 41% (94) of the respondents strongly agreed that there is a brand image of competitors (mean = 4, SD = 1.13). As well, 41.9% (96) of the respondents strongly agreed that there are customers' expectations about new solutions (mean = 3.95, SD = 1.22). Further, 38.4% (88) of the respondents agreed that there is a

need to adhere to a consistent theme (mean = 3.75, SD = 1.3). In the same way, 34.9% (80) of the respondents affirmed that there is the strength of existing brand (mean = 3.75, SD = 1.27). Similarly, 43.7% (100) of the respondents agreed that there is a need to increase brand image (mean = 3.73, SD = 1.31). Finally, 43.2% (99) of the respondents agreed that there is a desired brand image to be achieved (mean = 3.59, SD = 1.32). Generally, brand image summed up to a mean of 3.79 and a standard deviation of 0.59.

6.5 Product development:

Product development projects in fast consumer goods industry in Unilever Kenya. 48.5% (111) of the respondents strongly agreed that the company had developed its product which has high market share relative to its stated objective (mean = 4.07, SD = 1.16). In a similar vein, 42.8% (98) of the respondents strongly agreed that the company had developed its product which has a high return on investment relative to its stated objective (mean = 3.98, SD = 1.03). Also, 51.5% (118) of the respondents affirmed that the company had developed its product which has high return sales relative to its stated objective (mean = 3.85, SD = 1.45). Further, 38.9% (89) of the respondents agreed that the company had developed its product which is of higher quality than competing products (mean = 3.82, SD = 1.27). Similarly, 34.1% (78) of the respondents agreed that the company had developed its product which is superior to competing for products regarding meeting customers' needs (mean = 3.6, SD = 1.32). Likewise, 32.8% (75) of the respondents were uncertain on whether the company has developed its product which offers unique benefits to the customers (mean = 3.45, SD = 0.93). In the same way, 20.1% (46) of the respondents were also impartial on whether the company has developed its product which performs better than competitors' products (mean = 3.39, SD = 1.23). Product development summed up to a mean of 3.74 and a standard deviation of 0.64.

6.6 Correlation Results:

The study analyzed the relationships that are inherent among the independent and dependent variables as well as among the independent variables/ factors. From the results, the most significant relationship exists between product complexity and product development projects with a correlation coefficient value of 0.436 (significant at $\alpha = 0.01$). Also, knowledge integration was significantly correlated with product development projects as indicated by the correlation coefficient value of 0.401 which is significant at $\alpha = 0.01$. Furthermore, brand image was positively correlated to product development projects as indicated by correlation coefficient value of 0.389. Further, customer co-creation was also positively correlated to product development projects as evidenced by correlation coefficient value of 0.357 (significant at $\alpha = 0.01$). As a result, there was a linear relationship between knowledge integration, product complexity, customer co-creation and brand image with product development projects.

6.7 Model summary:

The model summary indicates that 42.6% of the variation in the dependent variable is accounted for by the independent variables. This relationship is strong and significant; this is shown by the value of R-square=0.426. Further, there was no autocorrelation among the variable as indicated by Durbin Watson value =1.818 which were less than two thumb rule.

Table 6.1

R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Watson
.653a	0.426	0.416	0.36212	1.818
a Predictors: (Constant), Knowledge integration, Product complexity, Co-creation, Brand image				
b Dependent Variable: product development				

6.8 ANOVA Model:

Table 6.2 shows that the regression model is significant (F-value= 41.617 and p-value=0.000< α =0.05 at 4 degrees of freedom).

Table 6.2

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	21.829	4	5.457	41.617	.000
Residual	29.373	224	0.131		
Total	51.201	228			
a Dependent Variable: product development					
b Predictors: (Constant), Knowledge integration, Product complexity, Co-creation, Brand image					

The results showed that knowledge integration had a significant effect on product development projects ($\beta_1 = 0.303$, $p < 0.05$). As a result, for every unit increase in knowledge integration, there is 0.303 unit increase in product development projects. The t-value was 5.508 which showed that knowledge integration was more than the amount of variation contributed to the error due to it. The implication is that customers ideas and anticipations about new resolutions is likely to add different perspectives into the project thus resulting to a high degree of success.

7. CONCLUSION

In conclusion, knowledge integration positively influences product development projects. Through knowledge integration, organizations are capable of putting together dispersed information into useful use in the organization. Precisely, the organization acquires the knowledge regarding the brand and how well to improve on it to attract more customers. The implication is that knowledge integration makes it possible for the organization to be more relevant as it will reflect what the intended customers want. The resulting outcome is an improvement in product development projects.

Basing on the study findings, project complexity has a positive influence on product development projects. It could be that project complexity gives room for more opportunities that enhance product development. As such, the earlier the organization determines project complexity, the easier it is to focus organizational resources on eliminating the complexities identified. In so doing, a balance is attained in the macro-environment among political, social, technological, economic, legal and environmental factors. This is also the case for customers and organizational participants that make up the micro-environment.

Regarding customer co-creation, it is evident that the customers are involved in all stages of product development projects. By involving customers in product development projects, the organization knows the customers' needs and can make use of innovative solutions to meet their desires. The resulting outcome is that the risk of launching a product that does not meet customers' requirements are greatly reduced. Besides, products that customers have been involved are successful in the market. However, in areas whereby customers have limited knowledge of the product or in cases whereby there are complexities in product development, the involvement of customers in product development projects is counterproductive.

Finally, brand image has a positive and significant influence on product development projects in fast consumer goods. If a firm develops a better brand image compared to its customers, then it would enjoy a cushion against market changes such as launching of new products by competitors. Therefore, a good brand is a clear indication to customers that the said firm is different from other firms regarding offering superior products and services.

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