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Determinants of Porter's competitive strategy utilization among agro-dealers in Kenya

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Abstract: Utilization of Porter's competitive strategies is considered a crucial tactic in enhancing the competitiveness of small-scale agro-dealers in developing countries. The dynamic nature of the agro-dealer business environment further necessitates the businesses to strategically align themselves for survival sustainability. Despite the many benefits attributed to the utilization of Porter's competitive strategies, there is limited empirical literature on the utilization of these strategies in agro-dealer enterprises in emerging economies. This study sought to analyze determinants of utilization of Porter's competitive strategies using multivariate probit regression model among agro-dealers in Nakuru County, Kenya. Data were collected from 110 businesses using semi-structured questionnaires. Results indicated that age, experience, group membership, education, ownership structure, engagement in other businesses, business age, competitive rivalry, product substitution, operational costs and branding statistically influenced the choice of competitive strategies. Proper policy frameworks geared towards operational costs reduction, educating and training agro-dealers on the maximum utilization of competitive strategies should be implemented.

ABOUT THE AUTHOR



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PUBLIC INTEREST STATEMENT

The Kenyan agricultural input sector is becoming increasingly competitive following the opening up of markets to private investors. With agro-dealers being the centre of the Kenyan input sector by linking farmers to input manufacturers, they are at task to ensure they meet both farmers' and suppliers' needs. The gradual increase in competition has necessitated agro-dealers to strategically align themselves to remain competitive otherwise they will be phased out of the market. However, despite the many benefits of strategic alignment, businesses need to be knowledgeable of factors contributing to competition in their industry so that they can work towards devising strategies to cope with them. Hence, knowledge of factors leading to the utilization of Porters' competitive strategies is useful for agro-dealer organizations, agro-dealers and national and county governments for effective policy initiatives. The empirical findings of this study puts emphasis on the importance of considering such factors when implementing effective competitive strategies.

Subjects: Strategic management; Agricultural marketing; Value chain analysis

Keywords: cost-leadership strategies; differentiation strategies; focus strategies; diversification strategies; promotions strategies

1. Introduction

Business environments are constantly evolving with changing demands which necessitate businesses to constantly adjust in order to cope with the competition. Various forces in the environment (Dälken, 2014) have resulted in competition requiring businesses to be aware of for effective strategic alignment. The input sector in Kenya is one such environment that has continuously evolved bringing in more competitors and redefining input mandates in the country. Initially, the sector was largely dominated by KFA (Soi, 2016) but with recent developments through opening the market to private investors, there has been an upsurge in competition resulting from the frequent entry of new businesses (Korir, 2016) in the industry. Following this, agro-dealers are at task to come up with an attractive strategy that will give them a competitive edge over their competitors.

Adoption and application of strategic measures such as cost leadership, differentiation and focus (Porter, 1980) have enabled most businesses to lure and retain customers to their businesses. Competition intensified in the industry following the immense growth of the smallscale agro-dealer businesses in the country (Korir, 2016). This further necessitated agro-dealers to design plans on how best to sustain their survival and performance. However, it is crucial to first identify their sources of competition for them to effectively formulate strategies that will lead to their success. Dälken (2014) argues that factors leading to the competition are various and it is wise to only consider factors that affect businesses within a specific industry for proper strategic formulations. Identification of sources of competition in the dynamic environment (Arasa and Gathinji, 2014) enables a business to effectively develop strategies that match the organization's capabilities to cope with environmental changes.

Implementation of strategic measures not only enables businesses to remain competitive but also to take advantage of available market opportunities (Sifuna, 2014). Currently, most agro-dealer businesses aim at adopting strategies that will ensure they increase their sales (Bayesian Consulting Group [BCG], 2016) without properly considering their competitive edge in the long run (Odame & Muange, 2011). Pearce and Robinson (2010) note that effective monitoring of both external and internal environments enables businesses to understand how best to respond to changes.

Notable strategies that have been continuously used by agro-dealers include engagement in other businesses to help cushion them against off-peak seasons. Input focus has also been practiced with the businesses concentrating more on stocking and selling inputs that are majorly demanded in various geographical locations (Odame & Muange, 2011). With the industry being highly homogeneous in nature, charging low prices on products has not been efficient enough. Due to this, agro-dealers have tried coming up with different ways of reducing their service delivery costs through cross-cutting on operational costs. Extension service provision, training customers on product usage and offering price discounts on bulk purchases have been some of the strategic measures used by agro-dealers.

This paper contributes to the literature by looking into the determinants of utilization of competitive strategies. With modernization and changes in farming technologies becoming more appealing against the shrinking arable land, the industry is a lucrative area to venture into. However, the lucrateness comes with its share of disadvantages making the industry competitive. As such, analyzation of the determinants of utilization of competitive strategies is crucial as it will help make informed strategic decisions and implementation among smallscale agro-dealer businesses.

Tucker and Miles (2004) posit that, with dynamic changes in the business environment, the growth, survival and sustainability of businesses will depend on how well they respond to changes. However, no substantial efforts have been made to look into the main factors contributing to strategic utilization among the businesses yet they are an important segment in the agribusiness value chain in Kenya.

The outline of the paper is as follows: Section 2 describes the literature review, Section 3 discusses the material and methods (study area, sampling procedure and sample size, data collection procedure, data analysis and model estimation). Section 4 presents data analysis; descriptive and multivariate probit results and discussion. Section 5 presents the study's conclusions while Section 6 presents policy implications from the study.

2. Literature review

2.1. The agro-dealer industry in Kenya

Being small-scale independent input dealers, agro-dealers play a significant role in the distribution of farm inputs (Odame & Muange, 2011). The growth of the agro-dealer industry has taken a new turn following recent developments in the agricultural sector in Kenya. The input sector was initially dominated by the Kenya Farmers Association (KFA) which had a chain of stores country-wide (Sheahan et al., 2016; Soi, 2016). Its dominance caused most private investors to exit the market and some to fall under receivership while at the same time, it did not reach out to rural small-holder farmers. Following this, the Government of Kenya initiated plans to reform the input market through abolishment and relaxation of import quotas and decontrolling prices with the aim of encouraging private investment.

Nonetheless, since its full liberalization, significant reorganization took place bringing in more investors which redefined input mandates and influenced the role of agro-dealers in Kenya (Odame & Muange, 2011). Ensuing its liberalization, the number of agro-dealer businesses in the country has steadily been rising making the market competitive. As the entry of new businesses has continuously intensified competition making the industry uncertain, other factors, presumed to contribute to competition include changes in socio-cultural, economic, political, technological and customer preferences (Bayesian Consulting Group [BCG], 2016; Dälken, 2014; Tucker & Miles, 2004).

2.2. Competitive strategies

2.2.1. Cost-leadership strategy

Cost-leadership strategy is a strategic measure by businesses aiming to be low-cost producers in the industry (Porter, 2008). It puts emphasis on producing quality products at low costs per unit for its customers. With the high rate of price-sensitive customers, it is paramount for businesses to try as much as they can to ensure they reduce their costs below those of their competitors in order to attract more customers. The strategy is enhanced through economies of scale, low production costs, technology and preferential access to raw materials (Shao, 2015). Agricultural inputs present a highly homogenous industry with similar products ranging within the same price. By directing their prices at or near the market price, agro-dealer is assured of acquiring customers thereby improving on their performance. Therefore, cost advantage achievement necessitates the business to continuously improve their operational processes, increase production efficiency and gain access to lower production costs.

2.2.2. Differentiation strategy

With differentiation strategy comes the need to create a unique product for the market in such a way that rivals cannot imitate them. The strategy is effectively achieved when the business strives to provide a unique value to its buyers through the quality of products, product features, after-sales support, branding and customer service (Arasa and Gathinji, 2014). According to Porter (1985), having unique products provides a business with a high degree of customer loyalty. As

such, businesses can be able to charge high product prices as they have already built customer loyalty in the industry.

A successful differentiation strategy ensures low product costs, improved services, more product features and flexibility enabling a business to create a defensible position in the industry (Porter, 2008). It is worth mentioning that a satisfied customer will remain loyal to the business despite the increase in product prices. However, this may not be the case for the agro-dealer as most farmers prefer sourcing a quality product from a lower price bidder. Nevertheless, agro-dealer has mastered the art of differentiating themselves through repackaging of products such as seeds and fertilizers according to the needs of the customers.

2.2.3. *Diversification strategy*

Diversification strategy is an approach that a business uses to enter into a new market which is either related or unrelated to its existing market and product line. Unexpected changes in the business environment have resulted in most businesses looking for alternative ways of coping with the pressure and enhancing their performance. Diversification has taken a new shape in businesses with the strategy being a critical element in the survival and growth of companies (Chirani & Effatdoost, 2013). The strategy aims at increasing sales, expanding the market, increasing profits and reducing risks in businesses. According to Wan et al. (2011), a business that enhances diversification in its daily operations has high chances of improving its profitability as opposed to their counterparts. Agro-dealers engage in various businesses other than their core business with some engaging in vertical diversification through the sell of farm equipment while yet others engage in businesses that are totally unrelated to the sector such as selling of human drugs, cereals, financial agencies and general shops.

2.2.4. *Focus strategy*

Focus is a strategic approach that aims at concentrating on a specific buyer group, product line segment, specific products and market (Porter, 2008). It focuses on a narrow competitive scope of choice within an industry and combines both differentiation and cost-leadership strategies. With focused differentiation, a business strives to outdo rivals by offering its niche customers product attributes that will meet their tastes and preferences. Focused low-cost leadership aims at outcompeting competitors by offering low-cost prices for its products compared to its competitors. According to Mumbua (2013), the strategy is based on the assumption that the needs of a particular segment of customer/s can be best met by entirely focusing on them. Businesses embracing the use of this focus have a high degree of customer loyalty and product differentiation which discourages competition.

Different geographical areas in Kenya have different atmospheres for agricultural products hence it is common for agro-dealers to focus on stocking inputs considered to be in high demand in a particular region. Additionally, farmers have different tastes and preferences prompting businesses to take into consideration stocking brands farmers familiarize with. Studies done in the industry (Bayesian Consulting Group [BCG], 2016; Misiko, 2012; Odame & Muange, 2011) have shown that as much as agro-dealers may want to deal in a variety of input products, they are compelled to only stock products that are in high demand in their region of operation and the prevailing season.

2.2.5. *Promotions strategy*

Effective communication of the business's services to customers is attributed to promotions strategic approach. According to Adefulu (2015), three primary tools; consumer, advertising and trade promotions are commonly used by businesses to compete for market share in an industry. With an increase in consumer demand for farm inputs, it is crucial that businesses equip themselves with the strategy in order to remain competitive. Promotion strategies work well in new markets, customer retention and acquisition as well as the introduction of new products. Furthermore, these strategies enable businesses to reach out to their target customers, launch new products which in the long run helps them remain competitive and increase their sales. Most

importantly, customers are always sensitive to information concerning their products and need to be constantly reminded about their value.

2.3. Criticisms to competitive strategic approaches

Competitive strategic approaches aim at achieving a ground where businesses are able to gain preferential access to customers as well as improve their performance. Strategic approaches further enable businesses to achieve a competitive advantage over their rivals (Porter, 1980). However, some studies have critiqued this by claiming that competitive advantage is not all about what strategies the businesses adopt but it is deeply rooted on value addition on products and services by businesses (Klein, 2001; Knights & Morgan, 1993).

Factors leading to the utilization of strategic approaches vary and it is only wise to consider those that affect a particular industry for effective strategic implementation. Porter (1980) further notes that the performance of a business is affected by the five force model (bargaining power of buyers, bargaining power of suppliers, the threat of new entrant, the threat of substitutes and competitive rivalry) which also determine which strategies a business adopts. Dälken (2014) supports the Porter five force model indicating that the model is still useful in the current business environment as businesses interact daily with their customers, suppliers and their rivals. However, studies by (Ibraimi, 2014; Tucker & Miles, 2004) critic this by arguing that other factors other than the five forces can as well lead to competition. Tacit environmental knowledge, political, technological, market preemption are still some of the challenges businesses face in trying to adopt a competitive strategy.

Moreover, with the current innovations, three crucial forces; globalization, deregulation and delocalization have become great determinants to the kind of strategy a business adopts (Dälken, 2014). Dulčić et al. (2012) further argue that as environments change, the time change factor is also critical in determining the kind of strategies used by businesses. Business managers are at a better place to know the critical market trends given their presence in the industry for a longer period hence able to make informed strategic decisions.

3. Materials and methods

3.1. Study area and sampling design

The study was carried out in Nakuru East Sub-County, Nakuru County Kenya. Nakuru County being one of the leading agricultural hubs in Kenya was selected for the study. Multi-stage sampling technique was used to select the sampled agro-dealer businesses. Purposive selection of Nakuru East Sub-County was the first stage since its main economic activity is agriculture. Moreover, due to its centrality in the county, it has the highest number of agro-dealer businesses in the county. The second stage was the selection of three wards in the sub-county; Menengai, Biashara and Nakuru East since the majority of the farming communities are found towards the East side of the sub-county. Census sampling design targeting all the 138 agro-dealer businesses in the sampling wards was carried out achieving a 79% response rate with 110 questionnaires having been answered. Primary data were collected using semi-structured questionnaires through face to face interviews. Prior to data collection, a pilot study was conducted in two wards; Kivumbini and Flamingo to pretest the validity of the data collection instruments.

3.2. Analytical model

Porter's five forces model (bargaining power of suppliers, competitive rivalry, the threat of entrants, the bargaining power of buyers and threat of substitutes) was used a stepping stone in the research. Dälken (2014) in his effort to establish whether or not Porter's five forces are still applicable found out that the model was a strong management tool for analyzing the current industry's profitability and attractiveness by use of the outside-in perspective. As such, factor analysis was used to determine the main Porter's five competitive forces in the industry. The forces were in form of a 5-point Likert Scale where agro-dealer was required to rank the

statements according to what they perceived to be the main competitive forces in the industry with 1 being strongly disagree and 5 being strongly agree. From the responses, factor analysis for all the five forces was run to determine the main indicators. Factors that had an eigenvalue greater than 1 were retained using the Guttman-Kaiser rule that requires factors with an eigenvalue greater than 1 to be retained (Field, 2000).

Agro-dealers' decision to use or not to use a competitive strategy is determined by both observable and unobservable factors. For effective control of this, a multivariate probit model was used to measure the average effect by comparing the expected returns from users and non-users of a competitive strategy. As such, this study assumed that agro-dealers' aim to maximize on their performance by comparing expected returns provided by m , alternative competitive strategies. An agro-dealer, i , makes a decision on whether to use a specific strategy (m) if the decision associated with its usage (μ_{1im}) is greater than the utility associated with the decision not to use it (μ_{0im}). Wooldridge (2004) gives the utility index function as;

$$y_{im}^* = \mu_{1im} - \mu_{0im} \quad (1)$$

Where; y_{im}^* is the unobserved latent variable

The choice to use a competitive strategy depends on an unobservable latent variable y_{im}^* which is determined by several independent variables (Cappellari & Jenkins, 2003);

$$y_{im}^* = \beta_{im}X_{im} + e_{im} \quad (2)$$

Where; X_{im} is a set of independent variables influencing the choice of the agro-dealer to use a competitive strategy, β_{im} is the parameter estimate and e_{im} is the error term with a normal distribution.

The relationship between the unobserved (y_{im}^*) and observed variable (y_{im}) is given by;

$$y_{im} = \begin{cases} 1; y_{im}^* \geq 0 \\ 0; y_{im}^* \leq 0 \end{cases} \quad (3)$$

Where y_{im} is the usage of a specific competitive strategy; 1 if yes and 0 if otherwise.

4. Results and discussion

4.1. Socioeconomic and institutional characteristics of respondents

Descriptive statistics for socioeconomic and institutional characteristics of respondents are presented in Table 1. Majority of the respondents were using a differentiation strategy. This implies that agro-dealers consider this strategy due to their highly homogeneous business environment in nature hence the need to implement a strategy that will make them unique from other businesses in the market. Such strategies implemented by agro-dealers include, repacking of inputs to meet customer demands, branding, provision of free services such as extension services and farmer trainings on product use.

A large proportion of agro-dealers were business managers (67.3%) while business owners only constituted of 32.7%. This meant that most of the agro-dealer businesses were run by the business managers. Male respondents accounted for 64% while the remaining portion (46%) were female. These findings corroborate Misiko (2012) and Bayesian Consulting Group (BCG, 2016) findings which showed that there were more male respondents compared to females indicating low participation case of women in management and ownership of the businesses. Gender disparity (technology, access to credit, trust from farmers and information access) could be among the reasons contributing to low women participation in the business. The mean age of the agro-dealers was 35 years indicating that majority of agro-dealers involved in this business are youthful and enterprising in nature.

Table 1. Description and expected sign of variables used in multivariate probit regression model

Variables	Definition of variables	Cost leadership (n = 51)		Differentiation (n = 74)		Diversification (n = 27)		Promotions (n = 49)		Focus (n = 40)	
		Mean	Std. dev	Mean	Std. dev	Mean	Std. dev	Mean	Std. dev	Mean	Std. dev
Position	Position held in the business	1.63	0.483	1.69	0.466	1.67	0.480	1.71	0.456	1.70	0.464
Gender	Gender of the respondents	0.57	0.500	0.59	0.494	0.56	0.506	0.65	0.481	0.58	0.501
Age	Age of the agro-dealer in years	35.29	10.567	34.51	7.538	35.33	9.861	34.53	7.727	36.13	9.985
Work experience	Agro-dealers' work experience in years	10.07	8.877	9.26	7.254	9.06	7.714	9.06	7.254	10.81	8.693
Business age	Age of the business in years	9.44	7.565	9.13	7.254	9.98	8.094	9.17	6.294	10.09	7.238
Agro-dealer's education	Level of education of the agro-dealer	3.68	0.787	3.61	0.718	3.70	0.669	3.57	0.645	3.70	0.124
Formal training	Primary educational training of the agro-dealer	1.71	0.610	1.69	0.618	1.59	0.636	1.67	0.591	1.68	0.656
Employee training	Training of employees by businesses	0.39	0.493	0.43	0.499	0.41	0.501	0.41	0.497	0.43	0.501

(Continued)

Table 1. (Continued)											
	Definition of variables	Cost leadership (n = 51)		Differentiation (n = 74)		Diversification (n = 27)		Promotions (n = 49)		Focus (n = 40)	
Variables		Mean	Std. dev	Mean	Std. dev	Mean	Std. dev	Mean	Std. dev	Mean	Std. dev
Business branch	Number of business branches	1.24	0.428	1.22	0.476	1.19	0.396	1.32	0.555	1.18	0.385
Ownership structure	Business ownership structure	1.45	0.757	1.34	0.668	1.41	0.747	1.49	0.767	1.53	0.784
Business location	Location of the business	3.63	1.264	3.59	1.302	3.70	1.325	3.75	1.331	3.90	1.194
Group membership	Agro-dealers who are group members	0.43	0.500	0.42	0.497	0.48	0.509	0.51	0.505	0.48	0.506
Other businesses	Agro-dealers engaged in other businesses	1.45	0.757	1.34	0.668	1.41	0.747	1.49	0.767	1.53	0.784

Most of the agro-dealers had managed to attain a certificate/diploma course with a mean of 3 across all the five strategies. High levels of education enable business owners to expand their knowledge on strategies hence have a high ability of using modern improved strategies (Bayesian Consulting Group [BCG], 2016). These results point to a medium high literacy levels among the respondents with the majority of them having attained tertiary training increasing their ability to efficiently manage their businesses and make informed strategic decisions. According to Okello et al. (2020), education enables business owners to gain knowledge and insights into proper business management.

The mean operation years of the businesses were 9 years, a high indication of maturity of the businesses in the industry. Moreover, this implied that most agro-dealers have mastered the art of doing business and are well conversant with market trends in the industry hence are able to make informed decisions. The ownership structure of the businesses and business branches both had a mean of 1 suggesting that most of these businesses are sole proprietorships and are risk averse at expanding their ownership structures. Moreover, limited access to capital and the competitive environment has been a great hindrance to agro-dealers in opening up more branches with most of them having only one branch in which. Similar results were also reported by Misiko (2012) who found out that most agro-dealer businesses were sole proprietorships.

As concerns group membership, the majority of the agro-dealers did not belong to any group (54.5%) with only 45.5% belonging to a group. According to Owuor et al. (2006), group membership provides a business with varied benefits such as group marketing, access to credit and markets which is a reason enough for embracing groups. However, most agro-dealers claimed that they are too busy and do not see the need for joining groups.

Engagement in other businesses increased income generation and productivity of most businesses. A great proportion of the agro-dealers (64.5%) did not engage in other businesses while 35.5% were engaged in other businesses with the majority claiming it was for income generation. These findings are inconsistent with Odame and Muange (2011) and Bayesian Consulting Group (BCG, 2016) who found out that most agro-dealers diversified into other agricultural and non-agricultural items with the aim of survival during low seasons.

Majority of the agro-dealers (73.64%) had formal training related to the industry. Agro-dealers with training related to the industry have a high affinity of performing better and being knowledgeable about the industry compared to their counterparts. Moreover, only 40.9% of the businesses further went ahead to provide employee training while the rest (59.1%) assumed that they employed staff qualified for the job hence so no need for training them.

4.2. Results of factor analysis

Out of the 32-item scale, five factors were retained and scores generated to measure agro-dealer's score on each indicator. Results in Table 2 show the extent to which each item loaded on a specific factor. Items with loading greater than 0.4, were viewed to have loaded sufficiently on a factor, thus, used to explain the factor.

Factor1 which accounted for 26.45% of the total variance was interpreted as competitive rivalry based on the following items; numerous suppliers in the market, presence of numerous agro-dealers in the market, new agro-dealers advertise to overcome existing brands, well-informed customers and well informed about suppliers' services in the market. Based on the items that loaded highly on Factor2, it was interpreted as product substitution contributing 17.96% to the total variance. These included; low buyer concentration in the market, if substitute products are sold at better prices buyers easily shift towards it, suppliers sell farm inputs directly to agro-dealer customers, low product differentiation between businesses and high supplier switching costs.

Table 2. Factors and their loadings using Pearson correlation matrix

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness
Bsup1	0.7082					0.4656
Criv1	0.6895					0.4968
Bsup3	0.5132					0.6938
Tent1	0.4439					0.6564
Bbyr1	0.4434					0.7456
Bbyr5		0.6463				0.5493
Bbyr4		0.6275				0.5715
Bsup2		0.5999				0.5535
Tsub4		0.4612				0.7313
Bsup5		0.4359				0.5731
Criv5			0.5331			0.6990
Criv6			0.4294			0.6824
Tent5				0.5289		0.6467
Tent4				0.4596		0.7110
Bbyr2				0.4533		0.7293
Tsub3					-0.5914	0.6218
Tent3					0.5131	0.6872

Factor3 contributed 11.8% to the total variance and was termed as branding based on; the clear brand identity of the businesses in the market and fast growth rate of businesses. Factor4 was interpreted as buyer switching costs contributing 10.31% to the total variance. Items that loaded on this factor were; buyer switching costs, the difficulty of new businesses in acquiring customers and difficulty in buyer switching costs among businesses. Lastly, Factor5, which contributed 9.51% to the total variance, was interpreted as operational costs with two items; high initial capital investment and costly for customers to switch to other businesses loading highly on it.

4.3. Results of the multivariate probit regression model

4.3.1. Pairwise correlation analysis of strategic approaches

From findings, agro-dealers simultaneously use competitive strategies indicating a likelihood of correlation between strategic choices which was tested using pair-wise correlations across the multivariate probit residuals as in Table 3. The correlation coefficients of all the dependent variables were statistically significant from zero indicating a strong interdependence in strategic usage. The Wald test $\chi^2(70) = 88.31, p < 0.0687$ indicated the data fairly fit the model. The likelihood ratio test $\chi^2(10) = 23.811, p < 0.008$ of independence among the strategies was rejected inferring there existed no mutual independence among the strategies.

Table 3. Pair-wise correlations of competitive strategies

	CLS	DIVS	DIFFS	FS	Prmtns
CLS	1.0000				
DIVS	0.0204	1.0000			
DIFFS	0.0657	-0.1874*	1.0000		
FS	0.2067*	-0.0798	-0.1172	1.0000	
Prmtns	0.0103	-0.0437	0.1573	-0.1072	1.0000

* Indicates statistical significance at 5% significance level

Out of the 10 pairs of strategies, two pair-wise correlations coefficients across the residuals were statistically significant. Cost leadership and focus strategies were positively and significantly associated implying that agro-dealers use the strategies as complements. Agro-dealers opt to combine the two strategies by charging low input prices relative to their rivals in their target markets to gain a competitive edge. On the contrary, diversification and differentiation strategies were significant and negatively associated indicating that the strategies were used as substitutes by agro-dealers.

4.3.2. *Factors influencing utilization of competitive strategic approaches*

The results of the multivariate probit are presented in [Table 4](#).

An increase in age decreases the probability of using a focus strategy. The plausible reason could be because as one becomes older, he gains experience and exposure to the use of new and innovative strategies hence the low preference for focus strategy. Moreover, the increase in age brings about changes in goal orientation which making agro-dealers more unadventurous and less preoccupied with focusing on new product lines and markets. This conforms to a study by Gielnik et al. (2017) who found out that, as age progresses, business managers are less oriented towards new opportunities as they have literally attained their goals and are left with little energy to focus on new opportunities.

As an agro-dealer advances in his education, his probability of choosing a promotions strategy decreases. Advancement in education enables an agro-dealer to gain more knowledge and becomes more enlightened on various strategies that can be used to improve performance hence low preference for promotion strategies. Education provides a wider scope of exposure positively contributing to strategic choices made by businesses. These findings concur with Githige (2011) who found out that through education, people are empowered with knowledge and skills that hastens their will to choose on the usage of different strategies.

Agro-dealers who belong to a group have a high probability of using promotion strategy as opposed to their counterparts. A likely justification is that being a member of a group places an agro-dealer at an advantage through access to market information and a promotional avenue for selling their products. These findings corroborate those of Owuor et al. (2006) and Fischer and Qaim (2012) who found out that information access is greatly beneficial to group members as they are able to gain access to information, markets, credit access, new products in their industry.

Ownership structure positively and significantly influenced the choice of focus strategy. The plausible justification is that expansion of ownership structures brings about different players in the management hence varied decisions on trading such as concentrating on one product line in order to satisfy each players' interests. These results, however, are inconsistent with those of Faizal et al. (2016) who found out that concentrated ownership structures (expanded structures) prioritize differentiation strategies over other strategies claiming that for effective achievement of a larger customer base, businesses need to vary their products.

Agro-dealers with many years of experience have a high probability of adopting the use of focus and cost-leadership strategies. The plausible reason is that due to accrued knowledge and experience, they are knowledgeable of the business environment thus being aware of which input sectors have been performing well in the industry. As such, they divert all their resources to focus on that niche and further engage in cost-effective measures, providing discounts and charging low product prices to retain customers and remain competitive. These findings are consistent with a study by Wabwile (2016) who found out that farmers with many years of experience have knowledge of their industry hence it is hard to make them change their view to take up a different strategy.

Having several branches increase the probability of using promotion strategies by agro-dealers as opposed to having one branch. As agro-dealer opens more branches and move into new

Table 4. Multivariate probit results for determinants of Porter's competitive strategies utilization among agro-dealers in Kenya

Variables	Cost leadership strategy			Differentiation strategy			Diversification strategy			Promotions strategy			Focus strategy		
	Coef.	Std.Err		Coef.	Std.Err		Coef.	Std.Err		Coef.	Std.Err		Coef.	Std.Err	
Age	-0.074	0.045		-0.055	0.041		0.024	0.045		-0.035	0.042		-0.088**	0.045	
Educ_years	0.116	0.202		0.038	0.192		0.204	0.209		-0.468**	0.222		-0.072	0.189	
Group_mbrshp	-0.302	0.300		-0.352	0.306		0.074	0.322		0.707**	0.315		0.058	0.298	
Ownstructure	0.185	0.191		-0.249	0.199		0.020	0.208		0.279	0.208		0.341*	0.185	
Businessage	-0.009	0.023		-0.012	0.023		0.011	0.026		-0.026	0.025		0.027	0.024	
Work_exp	0.122**	0.052		0.051	0.048		-0.041	0.052		0.038	0.047		0.109**	0.052	
Bs_branch	-0.007	0.289		-0.205	0.298		-0.330	0.355		0.583**	0.295		-0.502	0.345	
Bslocation	-0.138	0.113		-0.122	0.112		0.081	0.113		0.100	0.110		0.094	0.111	
Other_bs	0.401	0.293		0.015	0.289		0.752***	0.293		-0.344	0.294		-0.163	0.290	
Competitive rivalry	-0.052	0.148		-0.033	0.163		-0.290*	0.157		0.223	0.152		0.079	0.167	
Product substitution	-0.100	0.157		-0.126	0.162		0.092	0.166		0.493***	0.165		-0.125	0.154	
Branding	0.399**	0.177		0.242	0.157		-0.004	0.181		0.035	0.159		-0.195	0.153	
Buyer switching costs	0.533***	0.181		-0.173	0.171		0.105	0.181		0.094	0.165		0.040	0.163	
Operational costs	-0.057	0.170		-0.313*	0.186		-0.011	0.186		-0.182	0.181		-0.112	0.171	
Constant	1.238	1.484		3.116	1.435		-2.293	1.537		0.939	1.408		1.534	1.446	

Notes: Lr. Test for Indep. Eqns. Rho21 = rho31 = rho41 = rho51 = rho32 = rho42 = rho52 = rho43 = rho53 = rho54 = 0; chi2 (10) = 23.811; Prob> chi2 = 0.008
Wald Chi2(70) = 88.31; Prob>Chi2 = 0.068; *, **, ***: significant at 10%, 5% and 1% level respectively

markets, they have to continuously promote their businesses through adverts and sales promotions in order to lure customers into their business. These findings concur with those of Cheruon et al. (2015) who found out that, through various forms of promotion strategies such as advertising, sales promotions and personal selling, businesses can reach out to more customers.

Engagement in other businesses significantly influenced the usage of diversification strategies implying that engaging in other businesses necessitates agro-dealers to use diversification strategies in order to sustain their competitiveness. As such the strategies provide a wide selling scope for agro-dealer which in turn helps cushion them against off-peak seasons and provides an extra income generation to them. Half of the stock held by agro-dealer agripreneurs constitutes of non-agricultural inputs which is a risk mitigation measure and an income generation strategy during off-peak season (Odamé & Muange, 2011).

The competitive rivalry had a negative association with a diversification strategy. A likely justification is that with intense competition is occasionally accompanied by high trade risks; hence, agro-dealers are left with minimal resources to fight for in the market such as customers thus they wholly concentrate on ensuring they reach out to them. As such, agro-dealers prefer to focus on evading risks associated with rivalry and pay less attention to diversification strategies. These results are inconsistent with Achiro (2016) who found out that, due to intense rivalry, businesses are actively engaging in diversification strategies to gain access to new markets and heighten their competitiveness.

Product substitution increased the probability of choosing promotions strategies by 0.493 units. Substitutes create a rivalry between products in the market; thus, agro-dealers need to invest highly on promotions strategies to ensure their stock sell otherwise they would only sell one product line. This, therefore calls for the adoption of various promotional strategies such as advertising, offering price discounts and advertising in order to sell all their product stock. However, Gümüş et al. (2016) argue that product substitution comes in various degrees and it does not mean that it will increase the likelihood of using promotion strategies. The higher the degree of product substitution the higher the chance of utilizing promotion strategy otherwise businesses rarely use it if the degree is low.

Agro-dealers who embrace branding had a high chance of using cost-leadership strategies as opposed to those who do not. A likely justification for this is that branding enables businesses to stand out amongst competitors. Visual branding such as logos, staff uniformity and premise branding enables a business attract farmers (Soi, 2016) and once customer acquisition is done, they can effectively adopt the usage of cost-leadership strategies by providing them with the best prices for the quality of their products. Similar results were established by Erdil et al. (2017) who found out that for Turkish brands, branding is positively associated with low price sensitivity, customer satisfaction and profitability.

Buyer switching costs were found to have a positive association with usage of cost-leadership strategy. A likely justification for this is that customers are likely to switch to input products that are less costly, quality and satisfy their needs hence agro-dealers need to ensure they effectively adopt the strategy in order to maintain their customer base. According to Bhattacharya (2013), if a business wants to remain competitive and maintain its customer base amidst high buyer switching costs; then, it has to ensure it gains a cost-leadership position in the market. Studies by Bhattacharya (2013) and Chen (2016) concur with these findings arguing that high buyer switching costs help counterbalance high market focus compelling businesses to lower their prices in order to remain competitive.

Small-scale agro-dealers intending to use differentiation strategy have to aim at reducing their operational costs as it was found to have a negative impact on the strategy. High operational costs leave businesses with minimal resources to use on strategic adoption as the majority of the resources are diverted towards operational production. Therefore, with costs associated with the

strategy such as branding, product packaging and new designs will be left out as the businesses concentrate more on their operational efficiency. These findings are consistent with Majukwa and Haddud (2016) who found out that alignment of operational costs such as business expenses, pricing strategies and ensuring that market demands are offered at low operational management costs can help cut down on cost usage.

5. Conclusion

This study sought to identify the determinants of Porter's competitive strategy utilization among agro-dealers in Kenya. The multivariate probit regression model was used to facilitate data analysis and results indicated that differentiation strategies were widely used among smallscale agro-dealers closely followed by cost-leadership strategies while diversification strategies were less utilized in the country. Work experience of the agro-dealers, branding and buyer switching costs were found to have a positive impact on utilization of cost-leadership strategies. Differentiation strategy was negatively influenced by operational costs. Utilization of diversification strategies was negatively influenced by competitive rivalry in the industry while it was positively influenced by engagement of the agro-dealers in other businesses. Usage of promotion strategies was positively influenced by the membership to groups by agro-dealer, the number of business branches and product substitution. However, the education level of the agro-dealers negatively influenced the usage of promotion strategies. Finally, the age of the agro-dealers negatively influenced focus strategies while work experience and ownership structures positively influenced the utilization of focus strategies.

6. Policy implications

Study findings indicate that agro-dealers need to take into consideration different factors; competitive forces, socioeconomic and business factors when deciding on which strategies to adopt. Effective policies geared towards the reduction in operational costs (licensing and taxation) by both the national and county governments should be spearheaded in order to engage more participation of the youth in the industry. Encouraging the sale of government subsidies especially on fertilizers through the businesses will create a conducive environment for the businesses instead of the government directly competing with them. Additionally, agro-dealers need to incorporate the usage of more than one strategy in order to improve their efficiency such as striving to be low-cost focus producers. Agro-dealer organizations, policy makers and government need to collaborate and design efficient policy frameworks entailing benefits of strategic approaches and new advanced agricultural trends to ensure competitiveness in the sector.

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Competing interest

The authors declare no competing interest.

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