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# **THE RELATIONSHIP BETWEEN PROACTIVENESS AND PERFORMANCE OF SMALL AND MEDIUM AGRO PROCESSING ENTERPRISES IN KENYA**

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## **Abstract**

*Objective of this paper was to establish the influence of proactiveness on the firm performance of agro processing small and medium enterprises in Kenya. Data was gathered from 111 agro processing SMEs who were registered members of Kenya Association of Manufacturers. Structural Equation Modeling partial least squares (PLS) approach using PLS algorithms and bootstrapping algorithms in Smart PLS 2.0 was used. Data analysis was conducted in two phases, measurement outer model estimation and structural, inner model estimation. The findings revealed that proactiveness was a significant predictor of firm performance of agro*

*processing SMEs in Kenya. The implications of these findings for managerial practice and suggestions for further research are discussed.*

*Keywords: Entrepreneurship, Entrepreneurial Orientation, Proactiveness, Firm Performance, Agro Processing SMEs, Kenya*

## **INTRODUCTION**

In many developing countries, small and medium enterprises (SMEs) constitute the bulk of industrial base (Kormawa, Wohlmuth & Devlin, 2011). SMEs play an increasingly important role as they address poverty by creating jobs; disperse economic activities in the countryside, and provide broad-based sources of growth (Singh, Garg & Deshmukh, 2008; Kropp, Lindsay & Shoham, 2006). Agro processing SMEs, in particular, contribute significantly to value added creation, maximize the efficiency of the resource allocation and enhance distribution by mobilizing and utilizing local human and material resources (Cunningham & Rowley 2007). Despite their importance, agro processing SMEs are faced by global competition, market liberalization, rapid technological advances and the introduction of stricter quality and safety regulations which affects their competitive (Da silva, Baker, Shepherd, Jenane & Miranda da Cruz, 2009). There is need to identify factors that affect the firm performance of agro processing SMEs.

Research has shown that today's dynamic environment requires SMEs to be entrepreneurial if they are to survive, grow and have superior performance (Fairoz, Hirobumi & Tanaka, 2010). Successful firm performance of agro processing SMEs requires that they are innovative, creative, proactive and have a risk taking behavior. According to Wiklund and Shepherd, 2003; Lumpkin and Dess, 1996; and Patel & D'Souza, 2012, firm - level entrepreneurship is key to enhancement of firm performance of small firms. Empirical studies done in developed and transition economies suggest that proactiveness as a firm - level strategy constitutes a potential source of competitive advantage and has positive, long-term effect on growth and financial performance of SMEs (Covin & Slevin, 1991; Yang, 2008; Wiklund, 1999).

### **Statement of the Problem**

In the period 2008 – 2012, the agro processing industries in Kenya experienced low firm performance. In 2012, the food and beverage, which is the largest component in the agro processing manufacturing sector, registered a 0.3 per cent decline after experiencing a 1.6 per cent decline in 2011. Other agro processing industries involved in the preparation and

preservation of fish, processed liquid milk, production of bakery products, processed and preserved fruits and vegetables registered a drop by 10.4, 13.7, 14.9 and 2.5 per cent, respectively during the said period (ROK, 2013). Furthermore, the workforce in these agro processing industries reduced by approximately 2 per cent (ROK, 2012). During the same period, the average growth percentage remained stagnant at 3 to 4 per cent. This growth rate is low given that the Kenya Vision 2030 expects that agro processing industries to grow at a rate of 10 per cent annually (ROK, 2007).

If allowed to continue, low firm performance of agro processing SMEs will lead to dominance by primary agro-based commodities, thereby increasing the country's vulnerability to international market price fluctuations (Onjala, 2010; Wilkinson & Rocha, 2009). It will also lead to low incomes for those employed in agro processing SMEs with correspondingly low standards of living. This will threaten the long term survival of these enterprises and will lead to closure despite the fact that the agricultural products are grown in Kenya (Kormawa, Wohlmuth & Devlin, 2011). SMEs need dynamic capabilities such as proactiveness that will enable them to enhance their competitive advantage and productivity in the long term. A few researches of entrepreneurial orientation in SMEs have been conducted in Kenya have centered on overall entrepreneurial orientation and how it affects firm performance, rather than the individual and independent influence of entrepreneurial orientation dimensions such as proactiveness and its influence on firm performance on SMEs. Osoro (2012) examined the effect of entrepreneurial orientation of the business performance of SMEs in the Information Technology in Nairobi. The study failed to identify the influence of proactiveness dimension of entrepreneurial orientation on firm performance of small and medium enterprises. This paper seeks to fill that gap by establishing the influence of proactiveness on firm performance of agro processing SMEs in Kenya.

## **LITERATURE REVIEW**

### **Proactiveness**

Lumpkin and Dess (1996) suggest that entrepreneurial behavior of firms is supported by five processes within an organization, which they call entrepreneurial orientation. In their framework, entrepreneurial orientation consists of five factors namely autonomy, innovativeness, risk taking, proactiveness and competitiveness. Entrepreneurial orientation as a firm level strategy is used by entrepreneurial firms to enact their organizational purpose, sustain their vision and create competitive advantage (Wiklund & Shepherd, 2005). Proactiveness is a firm's strategic orientation that captures specific entrepreneurial aspects of decision-making styles, methods and practices (Frank, Kessler & Fink, 2010). It refers to attempts to prepare for the future by

seeking new opportunities which may or may not be related to the present line of operations which enables introduction of new products and brands ahead of competition (Okpara, 2009). Proactiveness involves attempts to discover future opportunities, even when these opportunities may be somewhat unrelated to existing operations (Venkatraman, 1989; Rauch, Wiklund & Frese, 2004). Proactiveness is achievement oriented, emphasizing initiatives taking, anticipating, creating change, and predicting evolution towards a critical situation and early preparation prior to the occurrence of an impending uncertainty of risk (Boohene, Marfo – Yiadom & Yeboah, 2012). Proactiveness as a dimension of entrepreneurial orientation is an opportunity-seeking and forward-looking perspective that involves acting in anticipation of future demand and trends, and thereafter capitalizing on these opportunities to gain benefit (Kropp, Lindsay & Shoham, 2008). A strong proactive behavior gives SMEs the ability to anticipate needs in the market place and the capability to anticipate competitor's needs (Covin & Slevin, 1989; Miller & Friesen, 1983; Eggers, Kraus, Hughes, Laraway & Snycerski, 2013).

### **Firm Performance**

In the field of strategic entrepreneurship, firm performance has been considered as an important construct. There has been no agreement, however, among researchers on the appropriate measure of performance for small firms. Murphy, Trailer and Hill (1996) and Wiklund (1999) have suggested that growth and financial measures are important performance measures for small enterprises whereby growth focuses on the increase in sales, employees or market share while financial measures are account-based measures such as return on investment, return on equity, return on sales and net profit margin (Haber & Reichel, 2005).

Research has shown that growth measures are more accurate and easily available than account-based measures. On the other hand, financial measures are considered critical in determining the survival and success of the firm ( Zainol & Ayadurai, 2011). Financial measures, however, are considered unstable, sensitive to changing industry-related factors, myopic and not sufficient to capture overall firm performance (Aggarwal & Gupta, 2006). Furthermore, these measures are easily manipulated and hence do not reflect the real performance (Al-Swidi & Al-Hosam, 2012). A heavy reliance on financial measures could also hinder future competitive advantage as they do not reflect drivers of future performance and value creation (Keh, Nguyen & Ng, 2007). Wiklund and Shepherd (2005) propose a combination of both growth and financial performance measures in comparison with competitors. Research has shown that combining both growth and financial measures give a richer description of the actual performance of the firm than each does separately (Lumpkin & Dess, 1996; Wiklund & Shepherd, 2005).

Firm performance may be measured using subjective measures or objective measures. Objective measures are obtained from firm's annual accounts and collected without directly inquiring from the owner/manager (Moreno & Casillas, 2008). Lack of formal procedures and control, however, makes it very difficult to obtain objective measures. Additionally, owner/managers are generally unwilling to release financial information to outsiders (Chao & Spillan, 2010). On the other hand, subjective measures involve seeking for the perception of the owner/manager relative to that of competitors during a certain time period (Idar & Mahmood, 2011). Venkatraman and Ramanujam (1986) posit that subjective measures are reliable and subject to minimal functional biases. They can accurately reflect objective measures and are highly consistent with how the firm actually performed as indicated by objective measures (Lumpkin & Dess, 2001). Comparison with competing firms in the market reveals important supplementary information, especially whether the firm is simply pulled against market trends (Wiklund, 1999). Subjective measures of firm performance have been used in entrepreneurial orientation studies (Idar & Mahmood, 2011; Wang & Poutziouris, 2010).

### **Proactiveness and Firm Performance**

The importance of proactiveness and its influence on firm performance has been highlighted in both theoretical discussions and empirical research. At the theoretical level, proactiveness leads to enhanced firm performance because firms with this strategic posture pursue opportunities that are unrelated to existing operations (Venkatraman, 1989), which enables introduction of new products and brands ahead of competitors, giving them a competitive advantage that leads to better firm performance (Okpara, 2009; Rauch, Wiklund & Frese, 2004). Firms characterized by proactiveness initiate actions that competitors must react to, leading the way in products and services (Eggers, Kraus, Hughes, Laraway & Syncerski, 2013). Empirically, proactiveness leads to better performance in terms of sales and employee growth, profitability, product and customer performance (Krauss, Frese, Freidrich & Unger, 2005; Baba & Elumalai, 2011). Ahimbisibwe and Abaho (2013) examined the effect of entrepreneurial orientation and export performance of SMEs in Uganda. He found that proactiveness had a significant and positive influence on export performance. Similarly, Boohene, Marfo-Yiadom and Yeboah (2012) examined the influence of proactiveness and firm performance of auto artisans in Ghana. He discovered that there was a strong and positive relationship between proactiveness and firm performance. On the basis of these findings, the following hypothesis is proposed:-

**Ho<sub>1</sub>:** There is no relationship between proactiveness and the firm performance of small and medium agro processing enterprises in Kenya.

## RESEARCH METHODOLOGY

### Data Collection

Primary data was collected by means of a self – administered, semi structured questionnaire completed by owner/mangers of agro processing SMEs. A census of agro processing SMEs registered with Kenya Association of Manufacturers was used. A number of assumptions underlay the use of self-administered questionnaires. First, it was assumed that the respondents were capable of answering the relevant questions knowledgeably and accurately. Secondly, that the top managers were expert informants due their experience and insight about their enterprises and the industry. Additionally, it was assumed that the answers given by the respondents were representative of firm behavior and practice (Lyon, Lumpkin & Dess, 2000).

The questionnaire was pretested for reliability and validity on 20 agro processing SMEs that were not registered members of Kenya Association of Manufacturers but comparable to members of the study population. The pre-test sample was selected using purposive sampling technique. After the pilot test, any items that were not clear, confusing or could cause bias were modified or omitted. A total of 111 questionnaires were sent out and 97 usable questionnaires were received giving a response rate of 87.3% which was considered to be very good. Fourteen questionnaires were dropped because they were missing vital information needed in the analysis. According to Mugenda (2008), a response rate of 50% is considered adequate, 60% and above good, and above 70% very good.

### Measures

The measures in this paper were adapted from previous literature. The proactiveness construct (PR) was measured using a five point Likert scale ranging from 1=never to 5=always. The question solicit respondents to evaluate 1) the firm's proclivity to be the first to introduce new products and services 2) the firm's tendency to initiate changes ahead of competitors 3) the firm's tendency to act ahead of competitors in anticipating future customer needs. 4) the firm's predisposition to respond to marketplace opportunities 5) The firm's propensity to respond to marketplace opportunities. Firm performance which included sales and employee growth and profitability was measured by using a five point Likert scale ranging from 1=not at all satisfied to 5=extremely satisfied. It was very difficult to collect objective data because the owner/manager was unwilling to release firm's information to outsiders. As such, a subjective approach was adopted wherein firm performance was measured based on the perception of the owner/manager. They were requested to state their satisfaction with firms' performance for the past five years in comparison to their competitors.

## DATA ANALYSIS AND FINDINGS

### Characteristics of Respondents

The majority (62.3%) of the owner/managers were male while 37.7% were female. Majority (47%) of the respondents were between 31 to 40 years, 37% were between 21 to 30 years, 14% were between 41 to 50 years and 2% were below 21 years. Most (41.2%) of the respondents held bachelor degree holders, 39.2% held diploma, 11.3% held master degree holders, 6.2% held certificates while 2.1% held a doctorate degree. The majority (38.5%) of the respondents had worked for a period between 5 to 9 years, 26.9% for less than 4 years, 19.3% for a period between 10 to 14 years. A few (3.8%) had worked for a period between 15 to 19 years while 11.5% had worked for over 20 years. Most of the firms were limited liability companies, 14.4% were sole proprietorships while 10.9% were partnerships. Most (40%) of the firms had been in operation for 15 years while 24% for 5 to 9 years, another 22% had been in operation for less than 5 years, yet another 14% had been in operation for a period between 10 to 15 years. The business activities carried out by the respondents were food and beverage manufacturing (72.2%), leather and footwear manufacturing (4.1%), textile and garment manufacturing (8.2%) and paper and board manufacturing (15.5%). The average firm employed between 51 in 2009 (SD= 50.646) and 78 employees in 2013 (SD= 69.490).

### Measurement Model

The outer or measurement model assessed the relationship between the observable variables and the theoretical constructs they represent. A reliability test was conducted to determine the internal consistency of the measures used. The Cronbach alpha ( $\alpha$ ) value for proactiveness was 0.697 while firm performance had a value of 0.751 which is higher than the recommended threshold of 0.500 demonstrating adequate reliability (Hair, Black, Babin & Anderson, 2010). The variables were validated through factor analysis. Before performing exploratory factor analysis, two statistical tests were performed to assess the suitability of the data for structural detection; Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The result of KMO was found to be 0.687 above the threshold of 0.5 and Bartlett's Test of Sphericity was significant at  $p < 0.000$  which indicated that the data was useful for factor analysis (Kaiser, 1974). The variability of each observed variable that could be explained by the extracted factors were checked by extracting the communality values. The extracted communalities were found to be greater than 0.5 which indicated that the variables fitted well other variables in their factor (Pallant, 2010). Factor analysis was assessed using Principle component analysis. Two items of proactiveness and one item of firm performance were deleted as they had factor loadings lower than 0.5 (Cooper & Schindler, 2011).



Confirmatory factor analysis was estimated on multiple criteria of construct reliability, convergent and discriminant validity. All the variables exhibited construct validity as the composite reliability and the cronbach alpha ( $\alpha$ ) were above the acceptable threshold of 0.6 (Ahimbisibwe & Abaho, 2013) demonstrating construct validity. The Average Variance extracted (AVE) for proactiveness was 0.535 and for firm performance was 0.616 which exceeded the cutoff value of 0.5, thus confirming convergent validity (Bryman, 2012). To satisfy the requirement of discriminant validity of the measurement model, this study followed the criterion suggested by Fornell and Larcker (1981). The discriminant validity was confirmed as the square root of a construct's AVE was greater than the correlation between the construct and other constructs in the model (Madhoushi, Sadati & Delavari, 2011).

There was a weak correlation between proactiveness and firm performance ( $r = 0.371$ ,  $p < 0.05$ ). The normality of data was assessed by examining its skewness and kurtosis (Pallant, 2010). The result showed that skewness was within the range of -0.203 and + 0.306 and kurtosis was within the range of -0.156 and + 0.626 which complied with the normality threshold of -1 to +1 (Cooper & Schindler, 2011). Multicollinearity was tested using Tolerance and Variance Inflation Factor. The tolerance value was 0.856 and the VIF value was 1.168 showing that there was no multicollinearity associated with proactiveness and firm performance variables (Hair, Black, Babin & Anderson, 2010).

### **Structural Model and Hypothesis Testing**

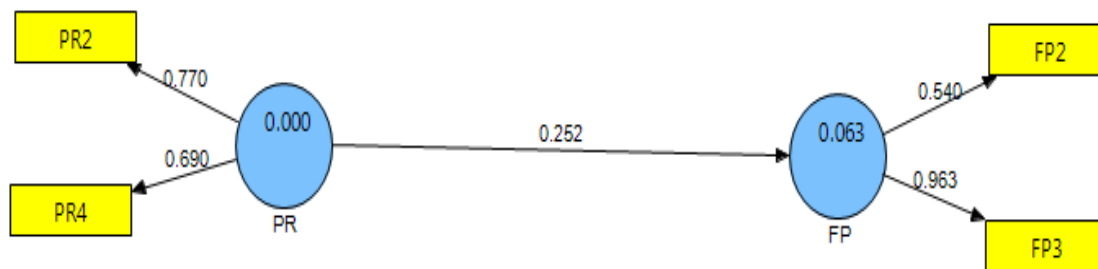
The structural or inner model identification was accomplished by examining path coefficients or betas for hypothesis testing (Hair *et al.*, 2011). The paths between the constructs represent each hypothesis. Structural Equation Modeling partial least squares (SEM-PLS) was used for model analysis and hypothesis testing. SEM-PLS was used because of four reasons. First, PLS makes no prior distributional assumptions and is applicable to small populations. Secondly, PLS can analyze complex model with large set of relationships among constructs and sub-constructs (Esposito Vinzi, Trinchese & Amato, 2010). It provides more flexibility in modeling second order constructs and formative constructs (Chin, 1998). Thirdly, PLS can account for measurement errors of latent constructs and assess significance of structural models simultaneously. Lastly, PLS examines the causal relationships among latent variables in situations of high complexity and low theoretical information (Byrne, 2001).

The statistical objective of SEM-PLS is to show high  $R^2$  and significant t-values, thus rejecting the null hypothesis of no effect.  $R^2$  values range between 1 and 0 where 1 means a perfect prediction of the structural model (Hair *et al.* 2010). The hypothesized relationships were tested by running PLS algorithm and bootstrapping algorithm in SmartPLS 2.0. The path

coefficient estimates was used to determine the significance of the relationship (Bordens & Abbott, 2014). The resultant T-tests statistics from the bootstrapping procedure provided the basis for determining which relationships are statistically significant (Hensler, Ringle & Sinkovics, 2009).

As indicated in Figures 4, the path coefficient between proactiveness and firm performance was positive and significant at 0.05 level of significance ( $\beta=0.262$ ,  $p<0.05$ ). The path coefficient implied that for every 1 unit increase in proactiveness, firm performance was increased by 0.262 units. The quality of the structural model was assessed using the determination of coefficients  $R^2$ . The value of  $R^2$  coefficient was 0.063 which indicated that 6.3% of the variation in firm performance can be accounted for by proactiveness. Based on the assessment criterion suggested by Cohen (1988), the outer model was found to reflect a very weak predictive relevance.

Figure 4: Path coefficient for Proactiveness and Firm Performance



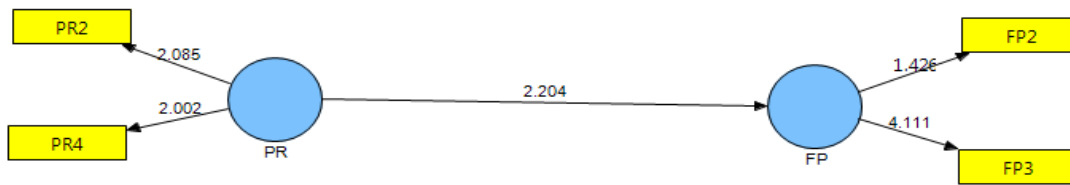
The stability of the estimates was examined by using the t-statistics obtained from a bootstrap test with 500 resamples. Table 2 below sets out the path coefficient and the t- values observed with the level of significance achieved from bootstrapping.

Table 2: Path Coefficient and T-values of Risk Taking

|                    | Original Sample | Sample Mean | Standard Deviation | Standard Error | Path Coefficient | T Statistics | P-value |
|--------------------|-----------------|-------------|--------------------|----------------|------------------|--------------|---------|
| <b>PR -&gt; FP</b> | 0.251797        | 0.257311    | 0.114268           | 0.114268       | 0.252            | 2.203574     | 0.05    |

The resultant T-tests statistics are illustrated in Figure 5 showed that the model was significant at 95% significance level for a two tailed test with  $t = 2.204$ . The results showed that proactiveness has a positive and statistically significant relationship with firm performance. The null hypothesis  $H_{01}$  was rejected and the alternative hypothesis that stated that there is a relationship between proactiveness and firm performance of small and medium enterprises in Kenya was supported.

Figure 5: T-statistics for the relationship between Proactiveness and Firm Performance



## DISCUSSION AND CONCLUSIONS

Based on the findings, it can be concluded that, proactiveness is a major predictor of firm performance of agro processing SMEs in Kenya in terms of employee growth and profitability. Specifically, proactiveness has a significant positive effect on firm performance in terms of growth and profitability ( $\beta=0.262$ ,  $p<0.05$ ,  $t=2.204$ ). The results are consistent with other studies that establish that proactiveness affects the firm performance of small firms (Boohene, Marfo-Yiadom &Yeboah, 2012; Arshad, Rasli, Arshad & Zain, 2013; Baba & Elumalai, 2011). The findings extend empirical studies by showing that proactiveness has positive effects on firm performance. The performance of agro processing SMEs could benefit from being proactive. Owner/managers of agro processing SMEs should consider proactiveness as an effective tool for enhancing firm performance. The findings demonstrate entrepreneurship as a way of thinking, reasoning and acting that is passionate about pursuit of favourable business opportunities. The findings illustrate the entrepreneurial leadership of owner/managers of agro processing SMEs whereby they act rather than react to business environment. The findings are in line with Resource Based Theory which suggests that long term competitive advantage lies primarily in firms creating bundles of strategic resources that competitors find difficult to substitute or initiate without great efforts.

## SUGGESTIONS FOR FURTHER RESEARCH

This study has a number of limitations that need to be addressed in further research studies. First, the study focused on agro processing SMEs in Kenya which affects generalization of the study findings to other industries and regions. There is need for more context specific research in developing countries before establishing a general theory on the relationship between proactiveness and firm performance. Secondly, the study established the relationship between proactiveness and firm performance of agro processing SMEs. Further studies should investigate the role of contingency factors in the proactiveness and firm performance relationship under the contingency models of entrepreneurship (Covin & Slevin, 1991; Lumpkin & Dess, 1996).

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