

The mediating effect of entrepreneurial orientation on the relationship between decision-making and firm performance in Kenya

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Abstract

Manufacturing firms are the single greatest contributors to industrialization and economic development. In Kenya, manufacturing firms contribute 14% of gross domestic product, train and employ 30% of the workforce, and develop the country's industrial infrastructure. However, the sector has experienced sustained poor total factor productivity and waning competitiveness in both domestic and global markets. Manufacturing operations seem to lack the input of entrepreneurial management. The purpose of this study was to establish how entrepreneurial orientation (EO) influences the relationship between decision-making and manufacturing firm performance in Kenya. Eighty-three owners/managers of food manufacturing SMEs were surveyed using a semi-structured self-administered questionnaire, and the collected data analyzed using Statistical Package for Social Sciences (SPSS) version 20 and Smart PLS 3 software's. The findings show that EO fully mediates the relationship between decision-making and firm performance. The paper concludes that coupling decision-making with EO forms a critical strategy for enhancing firm performance. The study recommends that manufacturing firms should develop and utilize employees' EO capabilities through such actions as strategic delegation.

Keywords: decision-making, manufacturing firms, operations financing, uncertainty, consultation

1. Introduction

The manufacturing sector is a kingpin in the economic development of nations. It advances economic growth through activities that generate value, by converting raw materials and semi-processed goods into finished goods with superior refined features. An increase in scale and multiplicity of these activities leads to industrialization, and the attendant economic and social advantages that go with industrialization. Manufacturing stimulates investment in a range of other support industries ^[1, 2] and accounts for most of the global economic development. Over 70% of the income variations of 128 countries, "including China, India, South Korea, Mexico and Brazil" are explained by differences in manufactured product export data alone ^[3].

Kenya's realization of its Vision 2030 to be a middle-income rapidly industrializing country is predicated on manufacturing. However, Kenya's manufacturing sector has for a long time experienced "poor total factor productivity ... growth rates that have been associated with sub-optimal plant sizes, under-utilization of installed capacities, low levels of investment, de-investment from the sector, limited technological advancement and lack of competitiveness in both domestic and foreign markets" ^[1]. Therefore, it has been difficult for manufacturing firms in Kenya to establish sustainable niches in the domestic and global market.

Several reasons have been advanced to explain these challenges. One is the evolving nature of competition for the market by all manufacturers in the globalized manufacturing ecosystem, coupled with the constantly changing nature of consumer tastes ^[2]. Another is the continuous obsolescence of familiar production technologies, and their repeatedly successive replacement with new technologies. There are also environmental concerns that easily attract legal backing related

to the toxic effects of by-products of manufacturing processes. These and other challenges coming from multiple directions can produce overwhelming uncertainty, and require strategic decision-making capabilities to guide manufacturing firms through the economic turmoil.

This study had two purposes. One was to determine the influence of decision-making on performance of manufacturing firms in Kenya. The other was to assess whether entrepreneurial orientation (EO) mediates the relationship between decision-making and performance of manufacturing firms in Kenya. The study was informed by epistemological philosophy, guided by the positivism paradigm. It was anchored on the resource-based view (RBV) of the firm and strategic entrepreneurship concept, supported by Schumpeterian theory of economic development.

1.1 Decision-Making

Decision-making is a rational process of determining what do, by engaging in a series of cognitive processes whose objective is to enable informed action, and the informed action in turn leads to desired outcomes ^[4]. Choice is the outcome of a mental process, which involves evaluation and judgment; it is the active cognitive assessment of different alternatives to inform the selection of one of the alternatives ^[5].

Operators of manufacturing firms routinely use decision-making skills to align management decisions with the organization's strategic perspectives. Of necessity, these decisions include financial determinants, to avoid halting enterprise operations because of unavailability of funds ^[5, 6]. Importantly, some decision-making rights are devolved to lower levels of management to expedite firm operations ^[7]. Therefore, employees need to be trained to use a structured approach when making decisions involving their work-specific

functions. The ability of manufacturing firms to confront spontaneous business challenges with innovative decision-making alacrity makes a far-reaching contribution to securing their firms' competitive advantage. However, it is important that the decisions made should reflect existing market needs, so that the firm responds appropriately to its clients. Failure to consider the market portends obsolescence of the firm [8].

The complexity of firm dynamics usually retards the expeditiousness of the decision-making process, and the reliability of the ensuing decisions [4]. Nevertheless, the decision process remains a critical determinant of profitability and firm performance [5, 7]. This study examined the effect of decisions regarding inputs/raw materials, source of product design, and the type of financing used by the firms.

1.2 Entrepreneurial Orientation

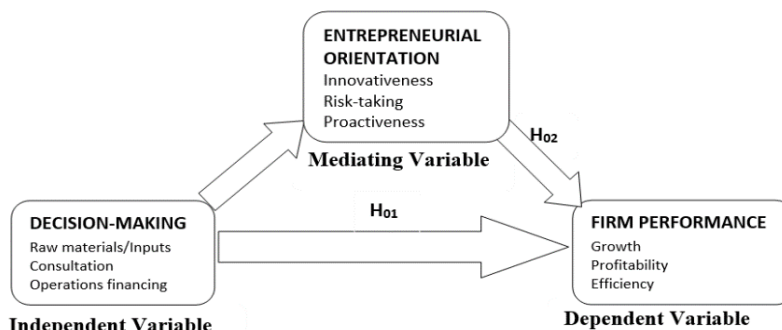
The genesis of EO can be traced to the work of Mintzberg [9], Khandwalla [10], Miller [11], Covin and Slevin [12], Miller and Friesen [13], and Lumpkin and Dess [14]. Researchers have embraced the importance of EO with much interest, popularized it and spinned off numerous studies on it [15, 16, 17]. Miller [11] conceptualized EO in three dimensions - innovativeness, risk-taking propensity and proactiveness. Innovativeness is concerned with supporting and encouraging new ideas, experimentation and creativity likely to result in new products, services or processes. Risk taking involves the willingness to make decisions that commit resources in the face of risk and uncertainty. Proactiveness is concerned with the initiative to move first and fast, and taking other actions aimed at securing and protecting market share, with a forward-

looking perspective in anticipation of future demand [14]. Miller [11] avers that these three components of EO comprise a basic unit dimensional strategic orientation.

Later, Lumpkin and Dess [14] added competitive aggressiveness and autonomy to the EO concept. They defined competitive aggressiveness as the intensity of a firm's effort to outperform industry rivals, characterized by a strong offensive posture and a forceful response to competitor's actions. Competitive aggressiveness relates to entrepreneurial behavior in reference to the competition, and is distinguishable from Proactiveness, which is more oriented to taking the initiative toward clients. Autonomy is based on notions of entrepreneurial independence to develop and implement an idea [14, 15].

Indulgence in EO dimensions can project manufacturing firms into the high performance trajectory [18]. If woven into the conduct of every enterprise function, EO develops into a culture, and becomes the driving force for realizing a firm's objectives, actualizing its vision and enabling it to establish a forceful posture among rivals in its industry [14, 15] (Arshad *et al.*, 2013; Lumpkin & Dess, 1996). Furthermore, EO increases firm performance and sustains firm growth [19, 20].

Many extant studies have investigated EO as a moderator relating various antecedent variables and performance outcomes [21, 22, 23], but results have not been definitively conclusive. Hughes and Morgan [24] proposed that researchers should investigate different ways in which EO influences firm performance. This study focuses on the mediating effect of EO on the relationship between decision-making and performance of manufacturing firms in Kenya. This hypothesized relationship is shown in the conceptual framework in Figure 1.



Source: Adapted from Albert & Hayes (2003) in Hall et al, (2011)

Fig 1: Conceptual Framework

2. Methodology

The study used a cross-sectional survey research design employing both qualitative and quantitative methods, in order to enhance the quality of results [25]. Using the 2015 KAM register as the sampling frame, a census of the 83 SME food manufacturers registered by the Kenya Association of Manufacturers (KAM) was conducted. The food manufacturing sub-sector was chosen because it is the most prolific sub-sector in the Kenyan manufacturing ecosystem, and accounts for 22% of KAM membership [26]. Thus, the sector may be considered to dictate the pace of Kenyan manufacturing industry.

A semi-structured self-administered questionnaire was employed to collect data from enterprise owners/managers, because they are the most conversant with the firm's strategic position [23], and take responsibility for actions intended to align the firm's strategy, structure, process and environment.

SPSS Version 20 and Smart PLS 3 software developed by Ringle, Wende and Becker [27] were used to analyse the data.

3. Results and Discussion

The study variables and their first order constructs are shown in Table 1, which also shows the results of construct reliability test. One construct, operations financing, had a Cronbach alpha value less than 0.6. However, Chin [28] and Bacon, Sauer and Young [29] explain that, because it does not assume equal weighting of measures, composite reliability detects internal consistency more reliably than Cronbach alpha. Moreover, it is sufficiently reliable for use with PLS-SEM, which prioritizes indicators according to their reliability during model estimation [30]. Therefore, when both Cronbach alpha and composite reliability are given, analysis can be undertaken if composite reliability values are adequate, even if some Cronbach alpha values may be below 0.6.

Table 1: Construct reliability

Study variables	Construct	Cronbach's alpha \geq 0.6	Composite reliability \geq 0.7	Average variance extracted (A.V.E.)
Decision-making	Consultation (CO)	0.755	0.860	0.673
	Operations financing (OF)	0.696	0.866	0.764
	Raw materials/inputs (RM)	0.831	0.922	0.855
Entrepreneurial Orientation	Innovativeness (IN)	0.786	0.875	0.700
	Proactiveness (PR)	0.878	0.925	0.804
	Risk taking(RT)	0.852	0.910	0.772
Firm Performance	Profitability (PP)	0.776	0.872	0.695
	Growth (PG)	0.541	0.811	0.683
	Efficiency(PE)	0.709	0.873	0.774

Table 2 shows results of convergent and discriminant validity, which were assessed by examining Pearson correlation coefficients and average variance extracted (AVE). The bold figures in the diagonal are AVE values for the respective first order constructs. The high correlations among constructs of the same study variable show good discriminant validity, because they load highly on the variables to which they belong than to those they do not.

Additionally, the AVE values show that each construct is quite highly correlated with its own construct which it is intended to measure. Also, for each group of related constructs, it can be seen that they have a small range between them, an indication of acceptable convergent validity. Therefore, the entries in the table show that the constructs fulfilled both requirements of convergent and discriminant validity.

Table 2: Validity Analysis

	RM	CO	OF	IN	RT	PR	PG	PP	PE
RM	.925								
CO	.792**	.820							
OF	.465**	.746**	.874						
IN	.580**	.632**	.488**	.837					
RT	.503**	.556**	.450**	.723**	.879				
PR	.599**	.643**	.574**	.600**	.518**	.897			
PG	.230*	.189	.163	.222	.295**	.207	.756		
PP	.263*	.274*	.310**	.333**	.288*	.262*	.719**	.818	
PE	.387**	.395**	.300**	.397**	.381**	.378**	.703**	.637**	.879

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Diagonal values shown in bold are square root of AVE for each respective construct

The relationships between the study variables, their sub-constructs and indicators were modeled reflectively. The results in Table 3 and Figure 2 show that all the paths were positive and significant. There was a significant relationship between decision-making and firm performance, with a path weight of 0.350, significant at $p < .01$. The R^2 value for firm

performance was 0.122. This means that decision-making accounts for 12.2% of the variation in firm performance. This addressed the first objective of the study, and shows that decision-making influences the performance of manufacturing firms in Kenya.

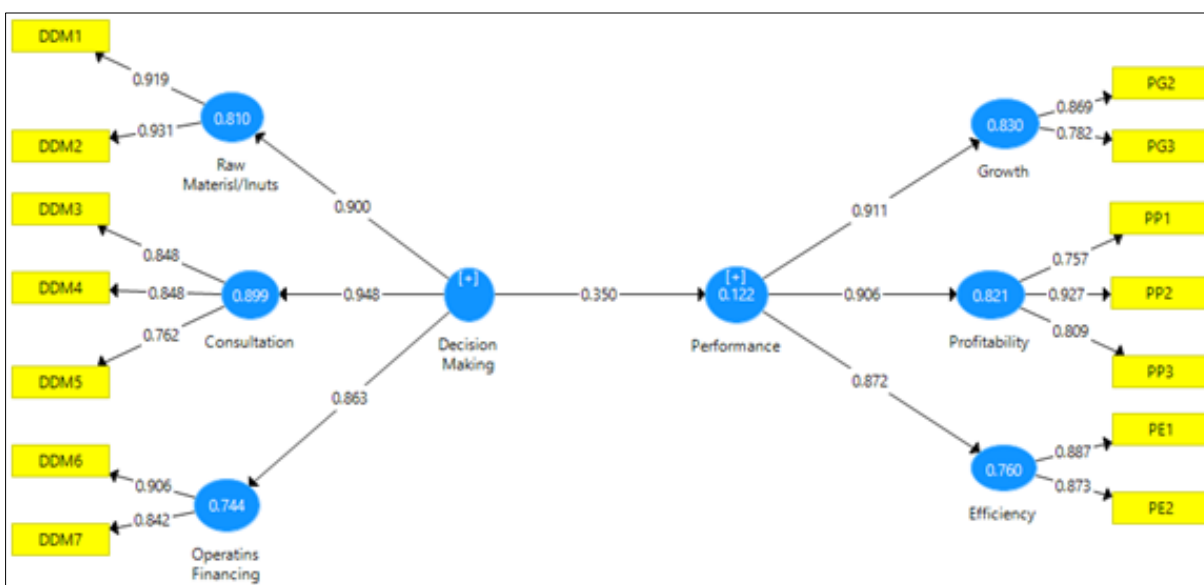


Fig 2: Influence of Decision-making on Firm Performance

Table 3: Decision-making Path Coefficients

Path	Sample mean	Std. dev.	t-statistic	p-value
Decision-making → Firm performance	0.350	0.11	3.15	0.00
Decision-making → Consultation	0.948	0.02	42.14	0.00
Decision-making → Operations financing	0.863	0.05	18.71	0.00
Decision-making → Raw materials/inputs	0.900	0.03	26.68	0.00

The mediation model was tested by entering EO in the path model and examining the path coefficients, using Baron and Kenny's [31] procedure. Table 4 and Figure 3 show the mediation model results.

The results in Table 3 and Figure 2 fulfil the first condition in the mediation test sequence [31] (significant positive relationship between predictor variable and criterion variable). The mediation results in Table 4 and Figure 3 show that when EO was introduced into the relationship, there was a positive and significant relationship between decision-making and EO, with a path coefficient of 0.724 at a significance value of p=0.000, thus fulfilling the second requirement. In addition, while controlling for the effect of decision-making, there was

a positive and significant relationship between EO and firm performance (0.320, p<.1), thus fulfilling the third condition. Upon examining the path coefficient between decision-making and firm performance, it was observed that it had shrank from a positive and significant value of 0.350 (p=.00), to a non-significant value of 0.119 (p=.51). This means that EO fully mediates the relationship between decision-making and firm performance. In addition, the value of R² changed from the earlier 0.122 to 0.171, indicating that introduction of EO enhanced the relationship, so that with EO in the relationship, decision-making accounted for a greater variation (17.1%) in firm performance.

Table 4: EO Mediating Influence on Relationship between Decision-making and Firm Performance

Path	Sample mean	Std. dev.	t-statistic	p-value
Decision-making → EO	0.724	0.089	7.72	.000
EO → Firm performance	0.320	0.119	1.88	.06
Decision-making → Firm performance	0.119	0.180	0.66	.51

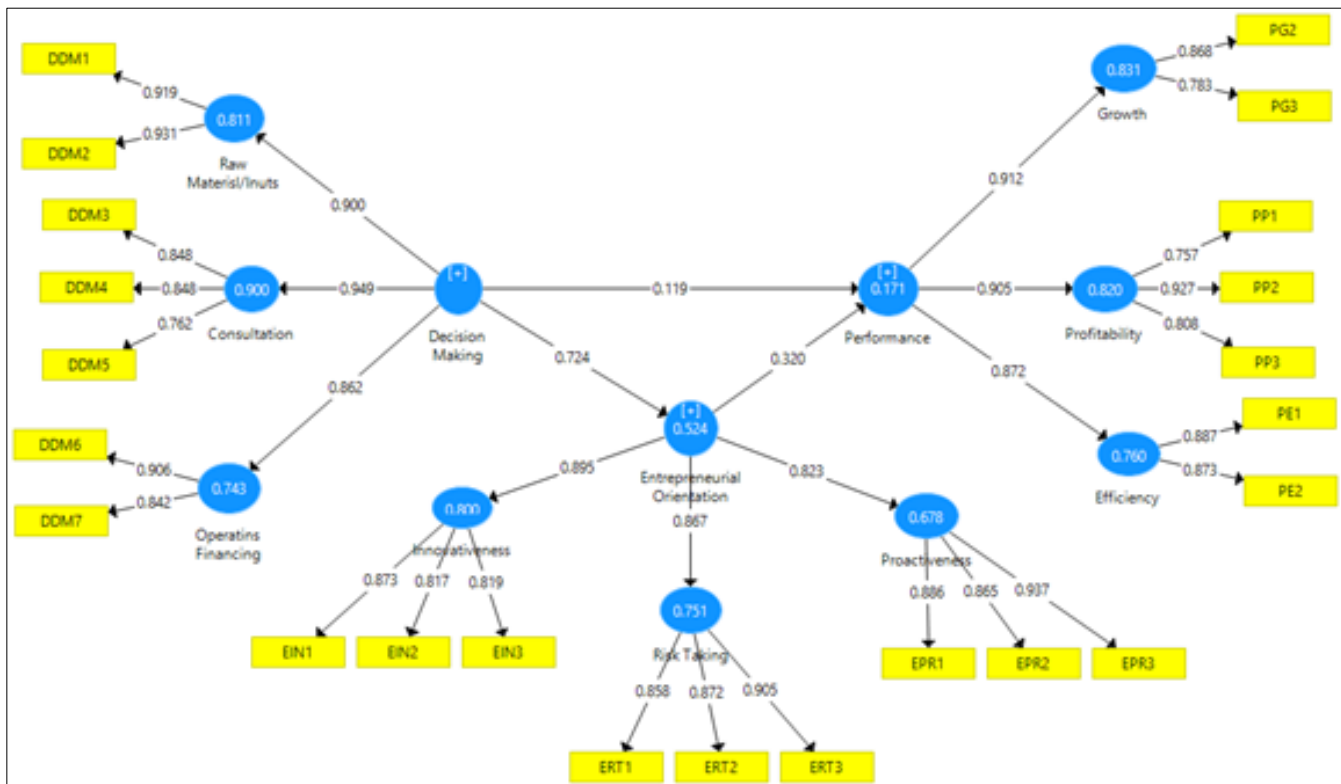


Fig 3: EO Mediating the Relationship between Decision-making and Firm Performance

Several extant studies have investigated the mediating role of EO on the relationship between some organizational aspects and performance. In a study on the relationship between strategic human resource management and firm performance, Zehir, Gurol, Karaboga and Kole [32] found that EO has a full mediation role between strategic human resource management

and financial performance, and a partial mediation role between strategic human resource management and employee performance. Korry, Toena, Hadiwidjojo, and Noermijati [33] examined the role of EO in mediating the effect of organizational culture and government policy on business performance in a case study of *Koperasi Unit Desa* in Bali

Province, Indonesia. They found that EO mediated the relationship between organizational culture and business performance.

Also, Khedhaouria, Gurău and Torrès^[34] found that creativity and firm performance are fully mediated by EO. Likewise Rosenbusch, Rauch and Bausch^[35] found EO mediation effects in their meta-analysis study. They found that EO mediates the relationship between munificence, dynamism, and complexity. The findings of this present study therefore corroborate the findings of related research. Entrepreneurial orientation is an important organizational competence that gives performance advantages to manufacturing firms. A firm assembles resources possessing specific capabilities, and the assembled resources together possess a joint potential to transform the firm's performance outcomes, upon exploitation of their inherent potential. However, it is EO that can activate the resource capabilities to exploit the potential.

Therefore, EO is a catalyst competence for activating the other competencies that a firm possesses. This means that even when a manufacturing firm is well resourced, it may not achieve the performance advantages envisaged if it fails to engage EO. Thus, decision-making, coupled with EO, will enable manufacturing firms to perform strategically relevant organizational activities that will result in enhanced firm performance.

For example, attaching EO to decisions involving capital outlays for new product development will result in a superior advantage, which can put manufacturing firms ahead of competitors. Entrepreneurial orientation will enable manufacturing firms to establish innovative organizational structures that institutionalize decision-making processes, to obviate situations where employees fail to act because they are not empowered. In addition, EO will enable manufacturers to capitalize on market intelligence, so that they may make products possessing features that reflect the real demand in the market.

In this way, EO will enable manufacturing firms to realize efficiencies in resource utilization. These actions will increase the performance of manufacturing firms in Kenya, and result in superior competitive advantage.

4. Conclusion

This study investigated the role of EO on the relationship between decision-making and performance of manufacturing firms in Kenya. Since there are hardly any studies that have addressed this phenomenon, this study provides new knowledge which can be used as a starting point for further inquiries in this area. The study is also informative for manufacturing firm managers. Their decisions regarding acquisition of assets judged critical for firm operations need to be matched with engagement of EO to activate the entrepreneurial behaviours necessary to extract rents from the installed firm capacity.

Therefore, EO is a salient competence that manufacturing firms should prioritize to gain, because when it is employed, it energizes the inherent value creation potential of other firm resources. Manufacturing firms in Kenya should therefore value employees whose actions demonstrate entrepreneurialism and motivate them to exploit their entrepreneurial capabilities for the firm's benefit. Doing so will make their firms to generate a competitive advantage over

competitors, and this will guarantee them enhanced growth and superior performance.

Future studies should be conducted involving the decision-making constructs investigated in this study, especially in relation to manufacturing firms, as this will generate the knowledge required to reverse the decline in Kenya's manufacturing competitiveness. Future research could also focus on how EO can be used to maximize the benefits of collaborative arrangements between local firms and multi-national firms.

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