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## CALCULATED RISK-TAKING AND PERFORMANCE OF VALUE-SYSTEM ACTORS IN THE LEATHER INDUSTRY IN KENYA

Simon Kamuri<sup>1</sup>, Prof. Romanus Odhiambo<sup>2</sup>

### **Abstract**

The importance of entrepreneurial orientation traits in determining performance of businesses has been empirically established in Small and Micro Enterprises (SME's) but little studied in Africa or from an industry ecosystem perspective. Further, traditional factor-based industries such as leather have also not received enough attention in entrepreneurship studies with the increasing attention to knowledge-based industries. This study was exploratory and diagnostic research on the influence of calculated risk-taking and performance of value-system actor businesses in Kenya's leather industry. A mixed sampling was carried out of sixty-eight value-system actors as industry representatives. Fifty-two responses were found to be valid for analysis. Factor analysis showed calculated risk-taking was a unidimensional construct comprising three indicators while performance comprised two dimensions dependent on the wording of measurement items. The study showed a significant positive casual relation between calculated risk-taking and performance of value-system actors in Kenya's leather industry (r=0.212, p<0.05), determining 46.1% ( $\beta$ =0.461, t-statistic 3.670, p-value 0.000) of performance. The study concludes that enhancement of calculated risk-taking as an entrepreneurial orientation of value-system actors determines their performance. It recommends an ecosystem perspective in entrepreneurship studies, policy and practice for enhancing risk-taking propensity amongst industry actors in order to realize economic benefits of entrepreneurship in the wake of globalized competition.

**Key words:** Calculated risk-taking, entrepreneurial orientation, value-system actors, leather industry, performance, entrepreneurial ecosystem

<sup>&</sup>lt;sup>1</sup>Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

<sup>&</sup>lt;sup>2</sup> University of Science and Technology, Meru, Kenya

### 1.1 Background of the Study

Despite having potential comparative advantage in natural resource factors and labour, African countries are net importers of manufactured goods and exporters of raw or semi-processed goods. This is the case in agro-based sectors such as the leather industry (Mwinyihija, 2016; Dinh & Clarke, 2012; Banga, Kumar & Cobbina, 2015). Kenya for example is a low-cost producer of leather which it exports largely as a semiprocessed commodity with little quality or design differentiation, thus generating marginal benefits to the Kenyan population (Hansen, Moon & Mogollon, 2015). Most of the leather-goods manufacturers in Kenya are the vibrant Micro and Small Enterprises (MSE's) clustered around Kariokor market (Mwinyihija, 2015; Hansen et al., 2015). Production of leather goods in Kenya has been declining due to importation of cheap second-hand (Mitumba) leather goods and substitutes (Mwinyihija, 2015; Hansen *et al.*, 2015) but is expected to increase in value to USD \$94 million through development of industrial clusters (MOIT&C, 2016).

The Kenyan leather industry value-chain comprises producers (livestock breeders), butchers, hides and skins traders, tanners, footwear and leather goods manufacturers. These are illustrated as the leather value-chain in Figure 1.1. Government acts as regulator through policy intervention in determining the industry's socio-economic performance (Mwinyihija, 2015). Production of hides and skins is often reported under livestock industry and only as an input in the leather industry (KNBS, 2015).



(Adapted from Hansen, Moon and Mogollon (2015) and Mwinyihija (2015))

### Figure 1.1: The Leather Industry Valuechain

The value-chain actors along the industry's core-product flow is complemented by other stakeholders with supportive roles such as research agents and industry associations to form an entire industry ecosystem – or value-system (Porter, 1985). Acs *et al.* (2015) argue that national economic resilience can be achieved through strengthening entrepreneurial ecosystems of start-ups. Entrepreneurship is one way of exploiting the Kenyan leather industry's potential thus

harnessing its contribution to the country's social and economic development (Mwinyihija, 2015).

### 1.2 Study Objective

The objective of this study was to determine the influence of risk-taking as an entrepreneurial orientation of value-system actors on the performance of the leather industry in Kenya, for which the following research hypothesis was formulated:

**Ha:** Calculated risk-taking as an entrepreneurial orientation of value-system

actors determines performance of the leather industry in Kenya.

This study focused on calculated risk-taking as psychological disposition of firm leaders whose role is crucial and tied to performance of firms in entrepreneurship studies. Cassia, Fattore and Paleari (2006) assert that "from a market, organizational or whole industry viewpoint, the entrepreneurial phenomenon is always strictly related to individual action, that of the entrepreneur". The entrepreneur is one who creates (Bwisa and Ndolo, 2011) and is indispensable to the understanding of entrepreneurial phenomenon.

### 1.3 Risk-taking as an Entrepreneurial Orientation

Entrepreneurial risk taking involves organizing and investing resources for uncertain returns (Jain, 2011). Rauch, Wiklund, Lumpkin and Frese (2009) define it as committing significant resources to ventures in uncertain environments. Zhao, Seibert and Lumpkin (2010) meta-analytic studies assert that risk-taking propensity has shown contradictory empirical evidence in relationship with firm performance and requires further research. Acs et al. (2015) recognize risk acceptance as one of the personal traits which form pillars of entrepreneurship while the converse, fear of failure and aversion to risk, as obstacles that retard entrepreneurship. Risk-taking is a distinct dimension of entrepreneurial orientation and positively associated with pro-activeness and innovation in Swedish family SME's (Naldi, Nordqvist, Sjoberg & Wiklund, 2007). For this study, calculated risk-taking as a propensity was defined as "propensity for business venturing that has

elements of considered commitment significant resources such as physical, financial, labour or knowledge, for uncertain outcomes or in uncertain environments".

### 1.4 Performance of Value-system Actors

Various entrepreneurship scholars have used performance as an eventual and desirable outcome of entrepreneurship in their studies (Rauch et al., 2009; Al-Ansari, 2014; McMullan & Kenworthy, 2015). Lumpkin and Dess (1996) advocated for use of multiple and broad firm performance measures in entrepreneurship. They used such dimensions as: sales growth, market share, profitability, overall performance and shareholder satisfaction. Meta-analysis by Rauch, et al. (2009) give a guide to the types of firm-level measures used for performance as a variable dependent on entrepreneurial orientation. Dinh and Clarke (2012) concluded that entrepreneurship influence performance of manufacturing firms in Africa. In this study both financial and non-financial measures were used to study the performance variable as shown in Table 2.2.

### 1.5 Critique of Existing Literature

Various authors have discussed (calculated) risk-taking as a personality trait entrepreneurs and therefore central to entrepreneurship (Rauch & Frese, 2007; Jain, 2011; Kuratko, 2014). Scholars have used various financial (economic) and nonfinancial (social and environmental) outcomes of entrepreneurship (Lumpkin & Dess, 2001; Rauch et al., 2009; Santos & Barito, 2012; Stephan, Hart and Drews, 2015). Some like profitability, growth and stakeholder satisfaction may be influenced

negatively by risk-taking and innovation in the short-term (Puhakka 2002; Rauch *et al.*, 2009) innovation activities especially at early stages of new venture development.

Entrepreneurial risk taking involves organizing and investing resources for uncertain returns (Jain, 2011). Rauch et al. (2009) define it as committing significant ventures uncertain resources in environments. As a personality trait, it is a propensity or an inclination to engage in risky activity. From an industry perspective, actors in the chain need to demonstrate having taken actions that mobilize resources for uncertain future gain. Although risk-taking propensity has shown no empirically significant effect on firm performance, it may be a significant disposition related to entrepreneurial stages involving searching and recognizing new business opportunities (Zhao et al., 2010). Kreiser, Marino, Kuratko and Weaver (2012) surveyed relationship between disaggregated entrepreneurial orientation construct (comprising innovativeness, proactiveness and risk-taking dimensions) and firm-level performance amongst 1,668 SMEs in nine countries across 13 different industries. The survey collected self-reported data from SME owners and general managers. Kreiser et al. (2012) found risktaking had a predominantly negative influence on SME performance. The negative influence of risk-taking on performance was theorized to be due to costs associated outweigh benefits in resource-constrained SMEs. In contrast, more recent study by Wang and Poutziouris (2010) surveyed 236 family firms in UK for risk-taking intensity by the owner-managers and found a positive correlation between risk-taking and firm

sales growth when controlled for pertinent firm and entrepreneur characteristics.

This study addressed the ambivalent relationship between risk-taking and performance by going beyond the simple use (especially financial profitability) performance measures to include other quantitative and qualitative measures such as production quality, quantity, sales and market growth, productivity, and stakeholder satisfaction.

### 2.0 Research Methodology

This cross-sectional survey adopted an exploratory design to refine calculated risktaking and performance as entrepreneurship variables, followed by a diagnostic design aimed at revealing the relationship between them Kenya's leather industry (Kothari & Gauray, 2014; Bless, Higson-Smith & Kagee, 2006). The study used reflective questions to collect self-reported data, from individuals as key-informants of value-system actors, which was quantitatively-coded for analysis. Mixed sampling was carried out of sixtyeight Kenya leather industry actors involving a census of members of an industry association as a sampling frame, and snowballing of other industry roles. Fiftyeight members of the Leather Articles Entrepreneurs Association (LAEA) operating from Nairobi and its environs and 10 associated industry actors were studied. Fifty-two responses were found to be valid for analysis achieving a 76% response rate. Players in different roles such as processors, delivery agents, secondary delivery agents, industry network associations, regulators and research agents were included (Hansen et al. 2015). Indicator items were adapted from

Bolton and Lane (2012) and the Carland Entrepreneurial Index as applied by Amstrong and Hird (2009) for calculated risk-taking, while financial and non-financial measures used by various scholars were adopted (Santos & Barito, 2012; Ming & Yang, 2009; Al-Ansari, 2014; Stephan *et. al.* 2015). Face validity of the measurement variables and research instrument was established by consulting nine doctorate scholars in entrepreneurship using the Delphi technique. Data collection involved use of questionnaires administered to value-system enterprise leaders as key informants using

both drop-and-pick plus interview methods by the researcher or an assistant (Kothari & Gaurav, 2014). Micro and Small Enterprises (MSE's) clustered around Kariokor market (Mwinyihija, 2015; Hansen *et al.*, 2015) were used for a pilot study (n=17). Instrument reliability was further tested where study variables with a Cronbach's alpha coefficient of at least 0.7 and above (Garson, 2012) were considered reliable. Calculated risk-taking had five indicator items with an overall reliability index of 0.700 as shown in Table 2.1. Performance had nine indicator items with an index of 0.717 as shown in Table 2.2.

Table 2.1: Reliability Results for Calculated Risk-taking Construct during the Pilot Study

Construct	Items	Cronbach's Alpha if Item Deleted	Overall Cronbach's Alpha	Comment
Calculated Risk-taking	Affinity for Bold Action	0.550	0.700	Reliable
	Willingness to Invest	0.730		
	Willingness to Borrow	0.529		
	Tendency to Take Risks	0.653		
	Considering Costs vs. Benefits	0.727		

Overall Cronbach's alpha for all five items of the calculated risk-taking construct on the main study was 0.676 showing that the instrument continued to be reliable.

Table 2.2: Reliability Results for Performance Construct during the Pilot Study

Construct	Items	Cronbach's Alpha if Item Deleted	Overall Cronbach's Alpha	Comment
Performance	Change in Net Profit	0.604	0.717	Reliable
	Change in Sales Turn-over	0.697		
	Change in Market Share	0.617		
	Change in Production Quantities	0.611		
	Change in Productivity	0.656		
	Change in Product Variety	0.619		
	Change in Operating Expenses	0.851		
	Change in Product Defects	0.764		
	Change in Customer Complaints	0.645		

Overall Cronbach's alpha for all nine items of the performance construct in the main study was 0.807, showing that the instrument continued to be reliable.

### 3.0 Research Findings

The Kenyan Micro and Small Enterprises Act of 2012 (RoK, 2012) identifies microenterprises as those with a turnover of up to Ksh. 500,000; small enterprises as those with a turnover between Ksh. 500,000 to Ksh. 5 million. By virtue of turnover, 67.3 % of the respondents' businesses could be considered micro and small enterprises.

### 3.1 Demographic Statistics

### 3.1.1 Venture Role in Industry

Results on the businesses' value-system role indicated that Majority 65.3% of the firms studied were in processing, 19.2 % were in delivery, 5.8% were producers and 3.8% were industry networking association, 1.9% were regulators and 3.8% in research support. Venture role in the industry is an indication of the businesses' value-system role and results are presented in Table 3.1

.

**Table 3.1: Distribution of Respondents across Value-system Roles** 

Respondent Value- system Role	Number of Respondents	Percent	Participants
Producer	3	5.8%	Tanners in Ruai and Sagana
Delivery Agents	10	19.2%	MSE's in Nairobi and Thika being suppliers of leather to manufacturers (primary) and some retailers of shoes (secondary)
Processing	34	65.3%	Leather article manufacturers in Nairobi CBD, Ngara and Thika
Industry Networking Support / Association	2	3.8%	LAEA officials and Cobblers Association
Policy and Regulatory Support	1	1.9%	KLDC
Research Support	2	3.8%	KIRDI, TPCSI

# **3.2 Descriptive Statistics for the Study** Variables

# **3.2.1 Descriptive Statistics for Calculated Risk-taking**

The Calculated Risk-taking scale consisted of five items. Each scale was rated on a five-point Likert type scale ranging from 1 for "Strongly Disagree" to 5 denoting "Strongly agree". Average scale ratings ranged from 2.94 to 4.12 as shown in Table 3.2. This indicated that the respondents believed that

they exhibited high levels of Calculated Risk-taking. The highest mean rating was 4.12 for the statement "Willingness to Invest" (SD= 0.983, n=52). The statement with the lowest mean rating of 2.94 was "Willingness to Borrow" (SD=1.178, n=52). Amongst the study variables, Calculated Risk-taking had the lowest mean score of 3.6. The average scale total was 3.6 (SD =1.070.) which was above average indicating that on average, the respondents had high levels of Calculated Risk-taking.

Table 3.2: Responses for Calculated Risk-taking

Description	Strongly	Disagree	Neutral	Agree	Strongly	Mean	Std.
	Disagree (%)	(%)	(%)	(%)	Agree (%)		Deviation
Affinity for Bold Action	12	10	21	44	13	3.38	1.191
Willingness to Invest	2	4	19	31	44	4.12	.983
Willingness to Borrow	8	37	21	23	12	2.94	1.178
Tendency to Take Risks	4	15	23	38	19	3.54	1.093
Considering Costs vs. Benefits	0	8	13	42	37	4.08	.904
Calculated Risk- taking						3.6	1.070

# **3.2.2 Descriptive Statistics for Performance of Value-system Actors**

The performance scale consisted of nine items. Six initial measurement scales were rated on a five-point Likert type scale ranging from 1 for "Large Decrease" to 5 denoting "Large Increase". Ratings for subsequent three items – on business expenses, product defects and customer complaints – were given inverted scores ranging from 1 denoting "Large Increase" to 5 denoting "Large Decrease" on a scale of unfavourable to favaourable performance on the measured indicator. Average scale ratings ranged from 2.19 to 4.00 as shown in Table 3.3. This

indicated that the respondents reported that their firms exhibited high levels of innovation. The highest mean rating was 4.00 for the statement "Change in Productivity" (SD= 0.970, n=52). The statement with the lowest mean rating of 2.19 was "Change in Product Defects" (SD= 1.085, n=52). The average scale total was 3.47 (SD =0.647) which was a high rating indicating that on average, the respondents reported that their firms had high levels of performance. This was especially the case with increasing productivity (75% reporting a small to large increase in productivity) and least with reducing product defects (68% reported small to large decrease in defects).

**Table 3.3: Responses for Performance of Value-System Actors** 

Description	Large Decrease (%)	Small Decrease (%)	No Change (%)	Small Increase (%)	Large Increase (%)	Mean	Std. Deviation
Change in Net Profit	6	10	10	52	23	3.77	1.096
Change in Sales Turn-over	4	15	6	52	23	3.75	1.100
Change in Market Share	4	6	10	58	23	3.90	.955
Change in Production Quantities	8	6	12	40	35	3.88	1.182
Change in Productivity	2	6	17	40	35	4.00	.970
Change in Product Variety	2	6	15	54	23	3.90	.891
Change in Operating Expenses	4	15	23	35	23	3.58	1.126
Change in Product Defects	31	37	17	13	2	2.19	1.085
Change in Customer Complaints	27	37	23	12	2	2.25	1.046
Performance						3.47	.647

# **3.3 Factor Analysis for the Study Variables**

Factor analysis was performed using the Principal Component Analysis (PCA) with Promax rotation for convergent and discriminant validity of the constructs. This involved an iterative process in which items that had cross-loadings above 0.3 were progressively withdrawn from the analysis and those above 0.5 were retained. The data

showed the study indicator items showed an acceptable initial Kaiser criterion value  $\ge 1$  and above a cut-off threshold of 0.6 (Garson, 2012; Kaiser, 1974).

### 3.3.1 Factor Analysis for the Calculated Risk-taking Variable

As shown in Tables 3.4, the study revealed that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the independent calculated risk-taking variable was 0.667 which was above 0.6 (Kaiser, 1974) threshold. This meant that the sample was

adequate for factor analysis. The Chi-Square value for Bartlett's Test of Sphericity was 52.004 with degrees 6 of freedom and *p*-value less than 0.05 indicating suitability of data for structure detection (Bartlett, 1954). As shown in Tables 3.5, 3.6 and 3.7 calculated risk-taking converged as one variable which explained 56.499% of the total variance. Calculated risk-taking comprised four items, namely Raffinity, Rinvest, Rtendency and Rbenefit, whose factor loadings ranged ranged from 0.649 to 0.829.

Table 3.4: KMO and Bartlett's Test for Calculated Risk-taking

Statistic	Value				
Kaiser-Meyer-Olkin Measure of Sa	.667				
Bartlett's Test of Sphericity	Approx. Chi-Square	52.004			
	Df	6			
	Sig.	.000			

The extraction communalities for the retained items measuring the performance construct as shown on Table 3.5 were all greater than 0.5 indicating that the retained items fitted well with other items in the performance factor solution.

**Table 3.5: Communalities for Calculated Risk-taking** 

	Initial	Extraction
Affinity for Bold Action	1.000	.504
Willingness to Invest	1.000	.648
Tendency to Take Risks	1.000	.687
Considering Costs vs. Benefits	1.000	.421

Extraction Method: Principal Component Analysis.

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One factor was able to explain 56.499% of the total variance in the study data as indicated in Table 3.6. The factor imputed attained eigenvalues in the initial solution greater or equal to 1.0.

Table 3.6: Total Variance Explained for Calculated Risk-taking

	Initial Eigenvalues				Extraction Sums of Squared Loadings			
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %		
1	2.260	56.499	56.499	2.260	56.499	56.499		
2	.926	23.144	79.644					
3	.438	10.959	90.603					
4	.376	9.397	100.000					

Extraction Method: Principal Component Analysis.

The pattern matrix for calculated risk-taking showed one component was extracted comprising four items as shown in Table 3.7.

Table 3.7: Component Matrix for Calculated Risk-taking

### Component Matrix<sup>a</sup>

	Component
	1
Affinity for Bold Action	.710
Willingness to Invest	.805
Tendency to Take Risks	.829
Considering Costs vs. Benefits	.649

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

### **3.3.2 Factor Analysis for the Performance** Variable

Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the dependent performance variable was 0.796 which was above the 0.5 threshold for factor analysis as shown in Table 3.8. Bartlett's Test of Sphericity was 325.913 to 36 and *p*-value was within the

Pgs 244-262

threshold for structure detection (Bartlett, 1954).

Nine performance indicator items discriminated into two sub-scales which were able to explain a total of 71.853% of the variance in the study data. The pattern matrix showed the first component had six items with positively stated outcome measures (BusPerformSales, BusPerformQuantity, BusPerformProfit, BusPerformProductivity,

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BusPerformShare and BuPerformVariety) whose factor loadings ranged from 0.620 to 0.950. The second component had three items with undesirable outcomes as proxies of performance positive measures (BusPerformDefects,

**BusPerformComplaints** and BusPerformExpenses) whose loadings ranged from 0.632 to 0.894. Tables 3.9, 3.10 and 3.11 summarize results of the factor analysis.

Table 3.8: KMO and Bartlett's Test for Performance

Statistics	Value			
Kaiser-Meyer-Olkin Measure of S	ampling Adequacy.	.796		
Bartlett's Test of Sphericity	Approx. Chi-Square	325.913		
	Df	36		
	Sig.	.000		

The extraction communalities for the retained items measuring the performance construct as shown on Table 3.9 were all greater than the 0.5 cut-off threshold, indicating that the

retained items fitted well with other items in the performance factor solution (Yong & Pearce, 2013).

**Table 3.9: Communalities for Performance** 

	Initial	Extraction
Change in Net Profit	1.000	.782
Change in Sales Turn-over	1.000	.905
Change in Market Share	1.000	.685
Change in Production Quantities	1.000	.875
Change in Productivity	1.000	.665
Change in Product Variety	1.000	.396
Change in Operating Expenses	1.000	.488
Change in Product Defects	1.000	.849
Change in Customer Complaints	1.000	.822

Extraction Method: Principal Component Analysis.

**Table 3.10: Total Variance Explained for Performance** 

				_			Rotation Sums of
				Extracti	on Sums of	Squared	Squared Loadings <sup>a</sup>
	]	Initial Eigenv	values		Loadings		
Compo	)	% of	Cumulative		% of	Cumulativ	
nent	Total	Variance	%	Total	Variance	e %	Total
1	4.499	49.991	49.991	4.499	49.991	49.991	4.487
2	1.968	21.862	71.853	1.968	21.862	71.853	2.036
3	.798	8.867	80.720				
4	.557	6.194	86.913				
5	.434	4.819	91.732				
6	.344	3.820	95.552				
7	.205	2.279	97.831				
8	.133	1.475	99.307				
9	.062	.693	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

**Table 3.11: Component Matrix for Performance** 

	Component		
	1	2	
Change in Net Profit	.882		
Change in Sales Turn-over	.950		
Change in Market Share	.826		
Change in Production Quantities	.932		
Change in Productivity	.813		
Change in Product Variety	.620		
Change in Operating Expenses		.632	
Change in Product Defects		.894	
Change in Customer Complaints		.859	

Extraction Method: Principal Component Analysis.

The pattern matrix for business performance showed two components. One component from positively stated outcome measures (improvement in profit, sales, markets, quantity, productivity, and variety) the second with undesirable outcomes (business expenses, defects and customer complaints) as proxies of positive performance measures.

### 3.4. Hypothesis Test

Assumptions of normality, multi-collinearity and heteroscedasticity established suitability of the data for linear regression and statistical modeling. The following null hypothesis was formulated:

**H**<sub>0</sub>: Risk-taking propensity as an entrepreneurial orientation of value-system actors does not determine performance of the leather industry in Kenya.

**Ha**: Risk-taking propensity as an entrepreneurial orientation of value-system actors determines performance of the leather industry in Kenya.

Calculated risk-taking was regressed on performance and results obtained summarized in Table 3.12. The R-squared value was 0.212, meaning that the calculated risk taking was able to explain 21.2% variations in the performance of value systems in leather industry in Kenya while the rest are explained by the error term (F-statistic is 13.467 with a *p*-value of 0.001).

The regression equation obtained from this output is:

Performance = 2.406 + 0.434 Calculated Risk-taking

a. 2 components extracted.

The beta coefficient for Calculated Risk-taking was 0.461 indicating that a unit increase in calculated risk-taking would result in 46.1% increase in performance of value system actors in the leather industry in Kenya (t-statistic 3.670, *p*-value 0.001).

Therefore, at p<0.05 level of significance the null hypothesis is rejected implying that calculated risk-taking has a significant influence on performance of value system actors in the leather industry in Kenya.

Table 3.12: Relationship between Calculated Risk-taking and Performance of Value-system Actors

### **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.461ª	.212	.196	.77634

a. Predictors: (Constant), Calculated Risk-taking

### **ANOVA**<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	8.117	1	8.117	13.467	.001 <sup>b</sup>
1	Residual	30.136	50	.603		
	Total	38.252	51			

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		В	Std. Error	Beta		
	(Constant)	2.406	.448		5.376	.000
1	Calculated_Risk_takin g	.434	.118	.461	3.670	.001

a. Dependent Variable: Performance\_index

### 4.0. Conclusion

The study concluded that there is a statistically significant positive relationship between calculated risk-taking and performance of value-system actors in the leather industry in Kenya. Calculated risk-taking is established as a uni-dimensional

construct comprising four indicators, namely Affinity for Bold Action, Willingness to Invest, Tendency to Take Risks and Considering Costs vs. Benefits. The relationship between calculated risk-taking and performance of value-system actors is summarized in a conceptual model as shown in Figure 4.1.



Figure 4.1: Empirical Model Showing the Relationship between Calculated Risk-taking and Performance of Value-system Actors

A review of literature shows the results are in line with previous empirical studies. Bakar and Zainol (2015) observed that risk-taking has positive relationship with SME performance in Nigeria. Dai, Maksimov, Gilbert and Fernhaber (2014) observed that moderate risk-taking has a positive influence on SME internationalization. Poutziouris (2010) found that risk-taking intensity positively correlates with business sales performance in UK family firms.

This study therefore provided empirical evidence showing that calculated risk-taking as an entrepreneurial orientation of value-system actors in Kenya's leather industry is a significant determinant of their ventures' performance. Further, the uni-or multi-dimensionality of performance as a variable may be determined by the wording of questions in the research instrument.

This study affirms the continued importance of research in calculated risk-taking as a cognitive dimension of entrepreneurship. It shows that practicing entrepreneurs should have a disposition towards taking calculated risks for their ventures to be entrepreneurial and achieve superior performance. Thus, policy makers should enhance taking of calculated risks if entrepreneurship is to realize its social and economic benefits. Using Kenya's leather industry, this study contributes to growing academic and policy interest in applying an ecosystem perspective to the understanding and development of entrepreneurship. Further cross-sectional studies could be undertaken in different contexts to affirm or dispute findings and conclusions made here about Kenya's leather industry.

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