FIRM RESILIENCE TO AN ECONOMIC CRISIS AMONG MICRO AND SMALL ENTERPRISES IN EMERGING ECONOMIES: A RESPONSE TO EFFECTS OF COVID 19

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Abstract: **In December of 2019, the world was hit by a deadly virus-Covid 19. To contain its spread, many countries locked down economies which resulted into an economic crisis. This has created challenges for micro and small enterprises triggering disruptions which pose threats to business resilience. It was conceptualized that alliance orientation mediated by competitive advantage promotes firm resilience. Using structural equations modeling, responses from 308 business operators from Uganda owning micro and small enterprises under alliances where analyzed. Results from the study indicated that there is a positive relationship between alliance orientation and competitive advantage of a firm. Additionally findings revealed that there is a positive relationship between competitive advantage and firm resilience. The study findings also indicated that competitive advantage plays a positive mediating role on the relationship between alliance orientation and firm resilience. However study findings indicated that alliance orientation doesn't directly influence on firm resilience.**

Keywords: **Covid 19, economic crisis, firm resilience, alliance orientation, competitive advantage.**

1. INTRODUCTION

Background

In December of 2019, the world was hit by a deadly virus-Covid 19. Countries recorded surging numbers of patients and deaths which had implications on government expenditure [27]. To contain the spread, many countries locked down economies which resulted into closure of businesses [22]. Business closure created challenges for Micro and Small Enterprises (MSEs) triggering disruptions in operations which endangers business survival [33]. [3] Noted that MSEs face challenges of coping and adapting to disruptions brought about by unforeseen circumstances which impact on business performance. [32] Noted that every year 26% of Micro enterprises close business in emerging economies within the first year of operation. With the advent of the pandemic, the situation undoubtedly is expected to be worse for micro enterprises since most businesses have spent the largest part of the first half of 2020 without operating. [31] Observed that during periods of economic crisis, small enterprises face unprecedented levels of weak cash flow and less equity reserves and due to their nature in terms of structure and organization, such firms may lack strategies that drive resilience of businesses against shocks. Amidst the economic crisis, it is expected that when economies are reopened, MSEs may not stand the pressure which comes from a period of economic recovery and this may force firms to windup business. Therefore there is need to devise mechanisms which foster resilience of MSEs to economic shocks. This paper investigated the relationship between alliance orientation and firm resilience among MSEs mediated by competitive advantage.

2. THEORETICAL AND LITERATURE REVIEW

Dynamic capabilities theory

The theory relates to the capabilities of a firm to adapt to the changing organizational environment within which it operates [28]. According to the theory, an organization should use its competences to create short term competitive positions which can later be turned into a long-term competitive advantage [10]. The theory relates to the firm's capacity to integrate, build and reconfigure a firm's competencies which eventually leads to resilience of a firm against a dynamic environment. From the position of the theory, it is conceptualized that when a firm creates strategic alliances, it can promote the competitive position of a business and finally its resilience to shocks.

Relationship between alliance orientation and firm resilience

Alliance orientation refers to the inclination of firms to work together [16] while firm resilience relates to the capacity of a business to withstand shocks which disrupt business operations. There is no firm engaged in business which is self-reliant [8]. This necessitates firms to collaborate among themselves by choosing to create alliances so as to earn benefits which come with mutual cooperation [19]. Through alliances firms pool resources together which enables businesses constrained with resources to operate leading to firm resilience [16]. However, [17] noted that business alliances are prone to promoting monopoly power and because of this a firm may fail instead of being resilient.

H1: There is a significant relationship between alliance orientation and firm resilience.

Relationship between alliance orientation and competitive advantage

Alliances among firms enable businesses to thrive through access to complementary resources which they wouldn't have got once they choose to exist in isolation [2]. By creating alliances, business owners can have access to opportunities of upgrading skills through coordinated activities [15]. Armed with knowledge from alliances, entrepreneurs become innovative. However [35] noted that some companies within an association may not offer any positive contribution to the alliance which eventually fails the objective of alliances.

H2: There is a significant relationship between alliance orientation and completive advantage.

Relationship between competitive advantage and firm resilience

Competitive advantage relates to the leverage that a firm has over other players in the business [30]. For firms to be resilient, it's important to devise means which enable a business to be unaffected by shocks from an economic crisis [9]. A firm can achieve competitive advantage through strategies of cost leadership and differentiation [30]. Cost reduction enables a firm to sell products at a reduced price which raises profits and creates a competitive edge of a firm leading to its resilience against shocks [23].

H3: There is a significant relationship between competitive advantage and firm's resilience

The mediating effect of competitive advantage on the relationship between alliance orientation and firm resilience

It was pointed out by [26] that firm's competitiveness is dependent on the forces of alliances created which offer platforms for coordination and learning from shared experiences. Once allied firms are competitive, businesses can be resilient against shocks and survive amidst a crisis [5]. However, it has been noted that firms which cooperate with an aim of enhancing performance face a practical problem of competition among themselves [14].

H4: There is a significant mediating role of competitive advantage on the relationship between alliance orientation and firm resilience.

3. METHODS

The study was carried out from Uganda and the population consisted of micro and small enterprise businesses under associations and coalitions within the capital city of Kampala. According to Uganda Bureau of Statistics (2016), micro enterprises are those businesses whose total assets do not exceed Uganda shillings 10 million while small enterprises are defined with total assets between 10 million but not exceeding Uganda shillings 100 million. The sample was derived from records of Kampala Capital City Authority (KACCA) on micro and small businesses classified and registered under association of restaurants with a population of 556 businesses, allied metal fabricators with a population of 324 businesses, pharmaceutical traders association with a population of 672 businesses, allied electronic equipment traders

with a population of 473 businesses, Balikudembe market traders association with a membership of 1,254 businesses and stationery traders association with a membership of 584 businesses. The total population from the associations' considered is 3,863. These groups of businesses were considered appropriate for the study since the aim of the investigation was to examine how far alliances among firms impact on competitiveness of firms and ultimately resilience to economic shocks. With a total population of 3,863 businesses, 1,531 are micro enterprises, 1,364 are small enterprises while 968 where medium enterprises. Since the study is about micro and small enterprises, a total population of 2,895 of both micro and small enterprises was used in the study. Using Morgan and Kregjcie table, a sample size of 338 of both micro and small enterprises was derived. Two stage sampling was used where by at the first stage, businesses where stratified into the six registered business associations. Within each association, businesses where classified into micro and small enterprises. At the second stage, proportionate and simple random sampling was applied. Micro enterprises accounted for a proportionate sample size of 178 while small enterprises accounted for a proportionate sample size of 160. The unit of analysis was micro and small enterprises while the unit of inquiry was managers or owner managers of micro and small enterprises. The chairperson of Kampala Capital City Traders Association (KACITA) was included in the sample as a focal person from whom qualitative data will be obtained.

Data collection

Two instruments where used to collect data and these include the structured questionnaire tool and a semi structured questionnaire. The structured questionnaire was divided into two parts separately where by the first part consisted of general information and items measuring the independent, mediator and control variables while the second part measured the dependent variable. The questionnaire was supplied in two phases. The first part of the questionnaire was supplied to the respondents and after they had been returned the second part of the questionnaire was rolled out basing on the numbers assigned to each respondent. This was done to minimize on common response bias. An interview was carried out with the chairman KACITA so as to obtain in-depth analysis on the phenomenon under study.

Measures

The study variables included-alliance orientation, competitive advantage and firm resilience. All the three variables where measured with constructs derived from past studies which were modified to fit the context of the study. Alliance orientation was measured based on alliance coordination and alliance learning [26]. Competitive advantage was measured based on cost leadership and differentiability [24]. Firm resilience was operationalized based on four items which measure the ability for a firm to cope and adapt to shocks [1]. To enrich the findings, control of capital and age of the firm were included. Raw data was examined using SPSS package and it was normally distributed and free from outliers. It was discovered that 4.2% of data was missing at random which according to [11] such data can be replaced. Linear interpolation method of data replacement was used to replace missing data [13].

Measurement properties

To test the properties of instruments, confirmatory factor analysis was performed on the measurement models for each variable and results are given in table I and II:

Table I: Confirmatory factor analysis

Item		CR	AVE	Cronbach
Competitive advantage				0.76
Differentiation	0.65-0.85	0.71	0.60	
Cost leadership	0.75-0.87	0.85	0.66	
Alliance orientation				0.76
Coordination	0.80-0.85	0.81	0.68	
Alliance learning	0.60-0.65	0.60	0.52	
Firm resilience				0.75
Adaptive to shocks	0.50-0.80	0.76	0.51	
Coping with shocks	0.45-0.87	0.75	0.46	

According [13], for a measurement instrument to be valid, its factor loading should be at least 0.5 or higher. Almost all items achieved the minimum factor loading save for one item measuring firm resilience whose factor loading was 0.426.

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Such an item was dropped from the next step of structural equation modeling. Construct reliability (CR) was determined so as to examine reliability of constructs. According to [13] a construct should have a CR value of at least 0.6 or higher, ideally 0.7. By observing results as indicated from table1 and table II, almost all constructs scored 0.7 and above save for one construct of alliance learning which scored 0.60. Such a construct was retained since as observed by [12] a construct is still reliable as long as construct reliability value is 0.6 and above. To further examine validity of instruments, average variance extracted was analyzed. According to [21] a construct should have AVE at a minimum of 0.5 or higher. However, it was observed by [12] that even if AVE is less than 0.5, but CR is higher than 0.6, convergent validity of the construct is still adequate. Almost all constructs achieved the minimum threshold save for coping with shocks whose AVE was less than 0.5. The construct was retained since its CR was above 0.6. [13] Recommends examining for discriminant validity by obtaining the difference between squared correlations and average variance extracted. For constructs to look different, average variance extracted should be higher than the squared correlations and from this study, all constructs achieved the limits of discriminant validity. Further still, constructs were examined for internal consistency basing on Cronbach's alpha. All constructs achieved the minimum threshold of 0.7 as indicated in table I.

Table II: Item measurement properties

ITEM	Loading
Alliance orientation	
Al1 Our activities across different alliances are well coordinated	0.83
Al2 We systematically coordinate our strategies across different alliances	0.81
Al3 We have processes to systematically transfer knowledge across different alliances	0.51
Al4 We conduct periodic reviews of our alliances to understand what we are doing right and were we are going wrong	0.65
Al5 We periodically collect and analyze field experiences from our alliances	0.48
Al6 We modify our alliance related procedures as we learn from experience	0.65
Competitive advantage	
CS2 The firm distinguishes itself from rivalry by the quality of its production	0.67
Cs3 The firm is always ahead in the timely production or delivery of services	0.80
Cs4 During service delivery, the firm always asks clients whether they are satisfied with services offered	0.79
Cs5 The firm puts a special emphasis on cost reduction on production and services offered	0.87
	0.77
Firm resilience	
Fr1 We are able to provide a quick response to the disruptions brought about by the economic crisis	0.50
Fr2 The firm is able to adapt to disruptions brought about by the economic crisis	0.82
Fr3 The firm is able to cope with changes brought about by the economic crisis	0.87
Fr4 We are able to maintain high situational awareness at all times	0.43

4. RESULTS

Demographic characteristics

Out of the 338 respondents sampled, 308 retuned the questionnaire giving a response rate of 91%. Out of the 308 respondents, 177 where from micro enterprise accounting for 57.5% while 131 respondents where from small enterprise accounting for 42.5% participation rate. In terms of age of the enterprise, most businesses which are 176 have operated for less than 10 years accounting for 57% while very few businesses which are 18 had operated for more than 15 years which accounted 6%. Most businesses where owned by females accounting for 164 which is 53.2%. Male controlled business accounted for 144 (46.8%). According to the education level, most of the respondents with a frequency of 94(30.4%) had A level certificate, 89(28.9%) of the respondents had O level certificate, 47(15.3%) of the respondents had no certificate. 78(25.3%) had certificates above A level education.

The main purpose of this paper was to explain the relationship between alliance orientation and firm resilience mediated by competitive advantage with a specific focus on micro and small enterprises. To achieve this objective, structural equations modeling (SEM) technique was adopted for analysis and the results are shown in table III and Fig. I.

Table III: Regression results (SEM)

			Estimate	S.E.	C.R.	P	Significance
Comp	<---	Allac	.752	.095	7.900	***	Supported
Resil	<---	Comp	1.190	.159	7.462	***	Supported
Resil	<---	Allac	-.296	.139	-2.131	.033	Not supported

Comp = Competitive advantage, Allac = Alliance orientation, Resil = Firm resilience

A step by step method was followed while examining the relationship among variables in the study. At first alliance orientation was related to competitive advantage, secondly alliance orientation was related to firm resilience and thirdly firm resilience was regressed on competitive advantage. All the three regression models failed to achieve the goodness of fit with capital and age included as control variables. However when age and capital where dropped from the three models, data fitted with ease and the models achieved the minimum threshold of goodness of fit. The next step was to introduce the interaction term to examine the mediating effect of competitive advantage. Bootstrapping was performed on two competing models and the resultant model in Fig. I was chosen since it had the lowest mean discrepancy and it had a sound theoretical and empirical background. Almost all fit indexes achieved the minimum threshold as indicated in table IV save for the probability value which was less than 0.05. As noted by [13], insufficiency of goodness of fit index associated with the chi square can be accepted as long as CFI and TLI achieve a minimum of 0.95 while RMSEA is below 0.08. By inspecting table IV, the model derived from structural equations achieves the goodness of fit minimum threshold.

Alliance orientation and competitive advantage

As indicated in table III there is a positive significant relationship between alliance orientation and competitive advantage. It is estimated that whenever firms create alliances, there is a magnitude of 0.75 (75%) likelihood for a firm to be competitive. According to dynamic capabilities theory, a firm can leverage its competitiveness in the market by adopting strategies which enhance its current operations [28]. Strategies in form of alliance coordination provide a platform for collective learning on how to cut costs but also enhance the innovative capacity of the firm [7], [37]. From an interview with the chairman of KACITA, he noted that being in an alliance makes it easier to receive credit from banks. Such resources enable businesses to be competitive by improving on quality of services.

Relationship between competitive advantage and firm resilience

As indicated in table III, unit increase in the competitiveness of the firm results into a magnitude of 1.2 which is an increase of 120% likelihood of a business to be resilient against shocks from an economy. According to Dynamic capabilities theory, an organization should use its competencies to create short term competitive positions which will result into resilience of firms during turbulent periods [28]. According to [6], it was indicated that firms can cope with shocks once they implement cost minimization policies and create a differentiation strategy in their business operations

Relationship between alliance orientation and firm resilience

As shown in table III, the relationship is insignificant. This means that there is a high likelihood that business alliance does not directly influence firm resilience against shocks on the business. [17] Explained that business alliances are susceptible to promoting monopoly power and because of this alliances may not directly influence resilience against shocks especially if allied firms are different in size and have different goals. From an interview with the chairman KACITA, it was noted that some alliances lack clear goals of which without goals, alliances may fail to bear fruits.

Mediating effect of competitive advantage on the relationship between alliance orientation and firm resilience

From table IV it can be observed that there is a positive mediating effect of competitive advantage on the relationship between alliance orientation and firm resilience. It is estimated that a unit increase in business alliance influences firm resilience through firm competitiveness by 89.1%. By confidence bounds of 0.524-0.942 the coefficient of 0.891(0.753x1.19) was found to be significant. According to the dynamic capabilities theory, when a firm uses its ability to integrate, build and reconfigure its competencies and competitiveness, it can adapt to the changing environment it operates in [10], [28].

Table IV: Model fit

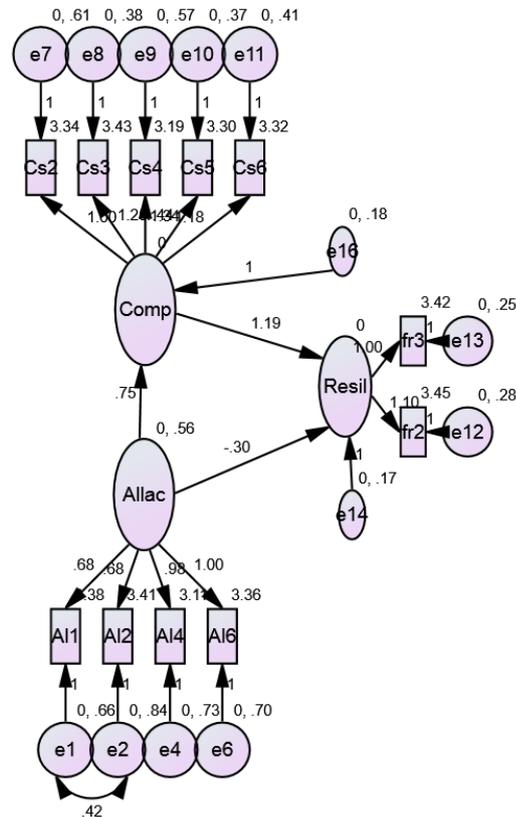| Item	χ^2	χ^2/df	Pr.	NFI	IFI	TLI	CFI	RMSEA
Cut off points	≥ 0.5	≤ 5	≥ 0.05	≥ 0.95	≥ 0.95	≥ 0.95	≥ 0.95	≤ 0.08
SEM results	81.7	2.01	0.00	0.95	0.97	0.96	0.97	0.058

Fig. I: Structural equation model

5. CONCLUSIONS AND IMPLICATIONS

Study findings indicate that there is a positive relationship between alliance orientation and competitive advantage among firms. Findings also indicated that there is a positive relationship between competitive advantage and firm resilience. By a firm engaging in low cost operations and producing unique and differentiated products, it creates a competitive edge in the market which enables a business to be resilient and eventually survive during turbulent times. Findings from the study indicate that business alliance does not directly influence firm resilience. It was however found out from the study that alliance orientation positively influences firm resilience through competitive advantage. Based on the findings, micro and small business operators should create alliances among themselves to foster firm resilience against shocks from an economic crisis. By creating alliances, firms should cooperate and coordinate activities among themselves which will enable businesses access complimentary resources. Managers should use alliance platforms to learn from each other by acquiring skills and knowledge within the associations created. However for alliances to foster resilience amidst an economic crisis, managers should adopt a competitive agenda whereby through alliances, they should search for cost minimizing strategies and also promote uniqueness in service delivery and production.

Limitations and areas of further research

The study was carried out from Uganda, an emerging economy where due to the structure of the economy findings from such a study may not fully reflect perspectives of business owners and effect of shocks on businesses from developed economies. Therefor there is need for such a study to be extended to developed economies

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