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Effect of Internal and External Failure Attributions on Growth Orientation of Survival-Focused Micro-Entrepreneurs in Nairobi, Kenya

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Abstract **Original Research Article**

Micro-entrepreneurs are viewed as instruments for driving economic growth. Despite their importance, they have continued to operate under resource constrained conditions. This situation has led micro-entrepreneurs to face frequent failures, inability to scale up and 90% of this group remains survival-focused. Research on failure attributions indicates that micro-entrepreneurs attribute positive outcomes to internal factors and negative outcomes to external factors. Internal and external failure attributions, though having effect on growth of micro-entrepreneurs have not been tested on growth intentions of resource limited micro-entrepreneurs. The overall objective of this study was to examine the effect of internal and external failure attributions on growth orientation of survival-focused micro-entrepreneurs in the slums of Nairobi. The population comprised of 1612 survival-focused micro-entrepreneurs operating in the slums of Nairobi. Quantitative questionnaires with (N=138) were collected. Reliability of questionnaires was tested on pilot data targeting eight respondents. Content validity of questionnaires was achieved through literature reviews and Factor analysis was used to access construct validity. Principal axis factoring found 5 factors each for both internal and external failure attributions with Cronbach alpha above the required 0.70. Stepwise model path established that external failure attributions uncontrollable external events, low financial independence and internal failure attributions intentional events were fit in explaining variability in micro-entrepreneurs' growth orientation. The model explained 35.2 % of the variation in growth orientation. Therefore, it is important to take into account that internal and external failure attributions plays significant role on the growth orientation of survival-focused micro-entrepreneurs. It is worth noting that the survival situation of survival-focused micro-entrepreneurs is not an indicator for inability to grow but a trigger. It is recommended that micro-entrepreneurs acceptance of liability would be a prerequisite for growth.

Keywords: Internal attributions, External attributions, Growth Orientation, Micro-entrepreneurs.

INTRODUCTION

Attributions play a significant role in entrepreneurship [1]. Individuals are particularly likely to make attribution judgments after experiencing failure, as it represents a case where outcomes did not meet expectations [1]. As a result of unexpected failures, individuals are thought to typically attribute failures to external factors in order to maintain a positive self-image [2, 3] and successes to internal factor [4]. In this case, micro-entrepreneurs encounter negative emotions and embark on behavioral reactions that will reduce their stress levels. Failure attributions literature shows that micro-entrepreneurs attribute positive outcomes to internal factors and negative outcomes to external factors. Research on venture growth has increased though a coherent theory of entrepreneurial growth is still lacking [5]. The emphasis has been on performance. For example, Penrose [6] viewed growth as increase in quantity (high sales) or an increase in quality arising as a result of a process. The aspect of entrepreneurial planned growth has been neglected. Entrepreneurial growth is a multidimensional and complicated phenomenon that requires careful planning and reflection on the part of an entrepreneur [7]. One better way to understand growth is to get knowledge as to how entrepreneurs identify future growth opportunities. The overall objective of this study was to investigate the effect of internal and external failure attributions on growth orientation of survival-focused micro-entrepreneurs in Nairobi, Kenya.

MATERIALS AND METHODS

Quantitative research design using exploratory factor analysis was used in this study. The effect of internal and external failure attributions on growth

orientation of survival-focused micro-entrepreneurs was established using this design.

Sampling

The study targeted a population of 284 survival-focused micro-entrepreneurs in the slums of Nairobi, Kenya. A sample of 138 survival-focused micro-entrepreneurs was selected. Critical case purposive sampling method was used to select the sample to allow the researcher capture survival-focused micro-entrepreneurs from the slums in Kenya's capital.

Instruments

Primary data was collected through self-developed questionnaires. The questionnaires included background information of the micro-entrepreneur which included their ages, business type, number of micro-enterprises in operation, employees if any and number of failure events experienced. Internal and external failure attributions consisted of 40 items each while the growth orientation questionnaire consisted of 36 items. Pilot testing was conducted on (8) participants from the sample to validate the applicability of scales. Participants were asked to indicate the extent to which they agreed or disagreed with the statements by choosing one of the responses ranging from: strongly disagree=1, disagree=2, partly agree=3, agree=4, and strongly agree=5. The reliability coefficient for internal failure attributions was 0.65 and for external failure attributions was 0.68. Thus, there was some reliability in the scales but did not meet the 0.7 threshold required hence the need to extract factors.

Data analysis

Exploratory factor analysis using Principal Axis Factoring extraction method was used to establish the least minimum number of factors which could explain the correlation of a set of variables. After extraction, the number of factors to retain for rotation was determined through direct oblimin rotation. Oblimin is an oblique rotation yielding factors that are correlated and it is unlikely that variables dealing with human behaviors can be uncorrelated [8].

RESULTS

Characteristics of the sample Population

A total of 138 survival-focused micro-entrepreneurs participated in the study; 133 were returned giving an overall response rate of 96 %. Out of the 133 questionnaires received, 3 were rejected as incomplete hence providing a net response rate of 94 %. Table 1 presents the demographics of the participants. The population consisted of largely male micro-entrepreneurs, 73 males (56%) and 43 females (44%) micro-entrepreneurs participated in the study. Males were more than female. Majority of the participants 70% were between ages 17-22 years. These results are consistent with [9] who studied micro-entrepreneurs in India found that a majority of survivalists' micro-entrepreneurs were young females. Table 1 also shows that majority (60%) of survival-focused micro-entrepreneurs operated between 2-3 businesses. These results conform to entrepreneurs in informal economies [10] who found micro-entrepreneurs to have operated between three to four ventures as a result of frequent business failures.

In addition, 85 % of survival-focused micro-entrepreneurs operate and manage their business operations on their own. They have not employed any workers as a result of their inability to hire. Various studies of micro-entrepreneurs in least developed countries showed a similar pattern to the findings in table 1. For example, it has been demonstrated that women entrepreneurs in Zimbabwe operating under resource limited conditions rarely hire staff but receive the help of family members in their small enterprises [11].

Table-1: Demographics of participants

Demographic variable	Frequency	Percentage
Gender		
Male	73	56
Female	57	44
Age		
17-22	91	70
23-28	28	22
Above 28 years	11	8
No of Buss previously operated		
Less than 2 businesses	6	5
2-3	79	60
Above 3 businesses	45	35
No of employees		
None	110	85
1-2	16	12
More than 2	4	3

Effect of Internal Failure Attributions on Growth Orientation of Survival-Focused Micro-entrepreneurs

The first objective tested the following hypothesis

Null Hypothesis H_0: Internal failure attributions have no statistically significant effect on growth orientation of survival-focused micro-entrepreneurs

Alternate Hypothesis H_1: Internal failure attributions have a statistically significant effect on growth orientation of survival-focused micro-entrepreneurs.

Effect of External Failure Attributions on Growth Orientation of Survival-Focused Micro-entrepreneurs

The second objective tested the following hypothesis

Null Hypothesis H_0: External failure attributions have no statistically significant effect on growth orientation of survival-focused micro-entrepreneurs

Alternate Hypothesis H_1: External failure attributions have a statistically significant effect on growth orientation of survival-focused micro-entrepreneurs.

Factor analysis

Sampling adequacy was determined using the Kaiser-Meyer-Olkin measure of sampling adequacy. KMO varies from 0 and 1, values closer to 1 are better and the value 0.6 is the suggested minimum. The Bartlett's Test of Sphericity is the test for the null hypothesis that the correlation matrix has an identity matrix [11]. Data is factorable when the Bartlett Test of Sphericity is significant ($p< .05$). If KMO > 0.6, the sample is adequate. KMO for internal failure attributions was 0.650 which indicated that the sample was adequate and qualified for factor analysis. Bartlett's Test of Sphericity: P-value (Sig.) of 0.01< .05), thus the factor analysis was valid. KMO for external failure attributions was 0.600 which indicated that the sample was adequate and qualified for factor analysis. Bartlett's Test of Sphericity: P-value (Sig.) of 0.01< .05), thus the factor analysis was valid. Both internal and external failure attributions indicated strong statistical evidence against the null hypothesis that there were correlations among variables. As $p<0.05$, the null hypothesis for internal and external failure attributions was rejected and alternate hypotheses accepted. This indicated there may be statistically significant interrelationship amongst the variables.

Determining the number of factors to retain was based on Cattell's Scree-plot tests. The scree plot test procedure indicated that the optimal number of internal failure attributions factors to be retained were twelve (12). The scree plot graphs the eigenvalue against each factor and only factors before the breaking point off the graph are retained [12]. This showed that after factor 12 the total variance accounts for smaller and smaller amounts. The scree plot established the optimal number of external attributions factors to retain were ten (10). This indicated that after factor 10 the total variance accounts for smaller and smaller amounts. Once the factors had been identified, the next step was to establish the pattern of loadings for ease of interpretation. The goal of rotation is to make the factor loading pattern much clearer [13]. Oblique direct oblimin rotation was used in this study. Oblimin is an oblique rotation yielding factors that are correlated and it is unlikely that factors dealing with human behaviors can be uncorrelated [14].

Instrument Reliability

To confirm the output of the factor analysis of external and internal failure attributions, reliability test was conducted for each factor. Thus, alpha test was performed for each factor. The output of this confirmatory analysis is summarized in the table 2 and 3. Factor scales for both internal and external failure attributions were analyzed for internal consistency reliability Cronbach alpha.

Table 2: Alpha Coefficients for internal failure attributions

Factors	No of Variables	Factor Name	Alpha Value
F1	3	Intentional Actions	0.95
F2	1	Not Retained	
F3	2	Lack Effort	0.90
F4	3	Personal Controllability	0.60
F5	2	Low Motivation	0.82
F6	3	Intentional Actions	0.29
F7	2	Low self-efficacy	0.79
F8	2	Lack Ability	0.62
F9	2	Lack Ability	0.44
F10	1	Not retained	
F11	3	Lack knowledge	0.83
F12	3	Low Learning Orientation	0.25

For internal failure attributions, Factor 2 and Factor 10 each had one item, hence internal consistency was not computed. The scales showing the threshold were employed for further analysis. Table 4 indicated that internal failure attributions factor 1, 3, 5, 7 and 11 had alpha coefficients above the required .70 and higher [8]. These factors were considered for multiple regressions.

Table 3: Alpha coefficient for external failure attributions

Factor	No of variables	Factor Name	Alpha Value
F1	3	Human and physical factors	0.647
F2	4	Misguidance by others	0.900
F3	4	Unique Circumstances	0.892
F4	6	Situational Factors	0.401
F5	2	Social Externalities	0.940
F6	2	Uncontrollable external events	0.827
F7	2	Low Financial Independence	0.808
F8	5	Interference of others	0.317
F9	3	Task Difficulty	0.679
F10	2	External Controllability	0.330

Table 3 showed that external failure attributions, factor 2,3,5,6 and 7 had alpha coefficients above the required .70 which were considered for multiple regressions.

Regression model 1: Relationship between growth orientation and internal failure attributions

To investigate the internal failure attributions only factors that were reliable in explaining the variability in growth orientation were included in the analysis. Table 3 indicated that Factor 1, 3, 5, 7 and 11 were reliable with alpha value above the required threshold of 0.70. Thus, a regression model was fitted for each of the five (5) factors. A summary of the p-values obtained for each regression are also shown in table 4.

Table 4: P-value for internal failure attribution factors

Factors	P-value
F1	0.02883
F3	0.00586
F5	0.9492
F7	0.1898
F11	0.6813

Table 4 showed Factor 1 was significant with a p-value= 0.02883 and Factor 3 with p-value =0.00586. Both factors were observed to have $p< 0.05$ hence rejecting the null hypothesis. Therefore, internal failure attributions 'intentional actions' and 'Lack of effort' have a statistically significant effect on micro-entrepreneurs' growth orientation.

Regression model 2: Relationship between growth orientation and external failure attributions

To investigate the external failure attributions, only factors that were reliable in explaining the variability in growth orientation were included in the analysis. Table 4 indicated that F2, F3, F5, F6 and F7 were reliable with alpha coefficients above the required threshold of 0.70. Thus, a regression model was fitted for each of these factors. A summary of the p-values obtained for each regression are also shown in table 5.

Table 5: P-value for external failure attribution factors

Factor	P-Value
2	0.06276
3	0.439
5	0.3181
6	0.03302
7	1.328e-07

Table 5 showed Factor 6 was significant with a p-value =0.03302 and Factor 7 was highly significant with p-value =1.328e-07**.** As the p-values were found to be less than 0.05 the null hypotheses was rejected. Therefore, 'Uncontrollable external events' and 'low financial independence' external failure attributions have a statistically significant effect on growth orientation of micro-entrepreneurs.

Stepwise regression model 3: Relationship between growth orientation, internal and external failure attributions

The factors found to be significant in relating with micro-entrepreneurs 'growth were put into one model. The objective was to find the combination of factors that yielded the best model that summarises the relationship between growth orientation, internal and external failure attributions variables. Therefore, stepwise regression was applied to fit regression model 1 and regression model 2.

Stepwise model path

Stepwise regression seeks to add and/or remove potential variables in the model and maintain those which have significant effect on the dependent variable [15].The objective is to select the best variables for the model. The Akaike Information Criteria (AIC) of the model is also computed and the model yielding the lowest AIC is retained. AIC is a measure of the relative quality of a statistical model [15]. The lower the AIC value, the better the model because it is less complex but still fit for the data.

Table-6: Stepwise model path for internal failure attribution F1, F3 and external failure attribution F6, F7

Initial model:
Growth orientation means= External Fail Att.F6+ External Fail Att.F7 + Internal Fail Att.F1+Internal Fail Att.F3
Final model:
Growth orientation means= External Fail Att.F6+ External Fail Att.F7 + Internal Fail Att.F1

Model	Step	Df	Deviance Residual	Df	Residual. Dev	AIC
1.				124	0.9851002	-622.7310
2.	Internal.F3	1	1.961166e-03	126	0.9871077	-626.4664

Table 6 showed that Factor 6 - 'Uncontrollable external events', Factor 7- 'low financial independence' external failure attributions and Factor 1 'intentional actions' internal failure attributions were found fit in explaining the variability in growth orientation. This model had the least AIC value. It is the model that explains the most variability while using fewer parameters.

Table-7: ANOVA for effect of internal failure attribution F1, external failure attribution F6 and F7

Model	Variable	Df	Sum of Squares	Mean Square	F value	Pr(>F)	Sig
	External Failure Attribution.F6	1	0.04731	0.047306	6.0384	0.01536	*
	External Failure Attribution.F7	1	0.23509	0.235090	30.0082	2.242e-07	***
	Internal Failure Attribution.F1	1	0.08153	0.081530	10.4069	0.00160	**
	Residuals	126	0.98711	0.007834			
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1							

Table 7reveals that since p-value <0.01, thus null hypothesis is rejected at 1 percent level of significance with regard to external failure attributions Factor 6 'Uncontrollable external events' (0.01536). In addition, in external failure attribution Factor 7 p=2.242e-07, p-value < 0.001 thus null hypothesis is rejected at 0.1 percent level of significance. In regard to internal failure attribution Factor 1 p=0.00160, p-value is less than 0.01, null hypothesis is rejected at 1 percent level of significance. Hence it is concluded that external failure attributions Factor6, Factor7 and internal failure attribution Factor1 has an effect on micro-entrepreneurs' growth orientation.

Table-8: Coefficients of Multiple Regressions

	Estimate	Std. Error	t-value	Pr (>|t|)	Sig
(Intercept)	4.901265	0.109437	44.786	<2e-16	***
External FailAtt.F6	-0.028200	0.020034	-1.408	0.1617	
External FailAtt.F7	0.057087	0.009614	5.938	2.63e-08	***
Internal FailAtt.F1	-0.071837	0.022268	-3.226	0.0016	**
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					
Residual standard error: 0.08851 on 126 degrees of freedom Multiple R-squared: 0.3694, Adjusted R-squared: 0.352 F-statistic: 15.48 on 3 and 126 DF, p-value: 1.235e-08					

To test the significance of each independent variable, t-test was performed to test the null hypothesis that the internal and external failure attributions has no effect on micro-entrepreneurs' growth orientation against the alternative hypothesis that internal and external failure attributions has an effect on the model.

T-test results in table 9 indicated that the multiple correlation coefficient for external failure

attributions is 0.594 and it measure the degree of effect of external failure attribution Factor7-on micro-entrepreneurs' growth orientation. The coefficient 0.594 indicates that the effect of external failure attribution Factor 7-'low financial independence' is strong and positive.

The multiple regression model was significant (F (3, 126) =15.48, p-value = 1.235e-08). The model explains 35.2% of the variation in growth orientation.

The multiple regression equation is

Growth = 4.9013 – 0.0282*External Fail Attribution F6 + 0.0571*External Fail Attribution F7 – 0.0718*Internal Fail Attribution F1

Table 8 indicates that external failure attribution Factor 6 'uncontrollable external events' is -0.0282 represents the partial effect of external failure attributions F6 on growth orientation, holding the other factors constant. The estimated negative sign is an indication that growth orientation would decrease by -0.0282 for every unit increase in F6-uncontrollable external events. External failure attribution Factor 7 'low financial independence' is 0.0571 representing a partial effect on growth orientation, after taking into account the effect of external failure attribution Factor 6. The estimated positive sign implies that micro-entrepreneurs' growth orientation would increase by 0.0571 for every unit increase in F7- 'low financial independence'. Internal failure attribution F1-'intentional actions' is -0.0718 representing a partial effect on growth orientation holding other factors constant. The estimated negative sign is an indication that micro-entrepreneurs' growth orientation would decrease by -0.0718 for every unit increase in F1-'intetntional actions'.

Discussions and Conclusions

Majority of the participants 70% were the youth between ages 17-22. A worth noticing fact about survival-focused micro-entrepreneurs from resource limited backgrounds is that they are young. The reason could be that most of them drop out from school due to early pregnancies, lack of educational financial support and lack of employment. Venturing into business remains their only option. Similar findings were observed [9] that 90% of necessity micro-entrepreneurs, operating under resource limited conditions in India were young females.

The study found that survival-focused micro-entrepreneurs take responsibility on themselves when they believe the failures are as a result of their own choices –'intentional actions'. However, our analysis shows that these actions decreases micro-entrepreneurs' growth chances. This could be due to lack of self – confidence in the early stages of their entrepreneurial life. During this period, micro-entrepreneurs harbor feelings of entrepreneurial incapability. However, this improves when they accept the situation and realize their competitors experience similar challenges. These findings agree with [16] that entrepreneurs who attribute failure to internal reasons grow and develop.

Another interesting finding was that external failure attributions with regard to low financial independence has effect on micro-entrepreneurs' growth orientation. The reason could be that financial aspect is a critical barrier to micro-entrepreneurs. As such, this requires micro-entrepreneurs to reflect and navigate on overcoming such critical barriers to their development. This finding is in tandem with [17] that entrepreneurs are in a situation to handle critical external challenges when they forethought about their actions. Secondly, attributions are motivated by psychological considerations [18]. Thus, for micro-entrepreneurs to overcome their challenges and grow, they need to avoid blaming themselves with the intention to move from survival status to growth orientation. Making external attributions provides them the confidence to move on. This finding is in support of past research, which found that avoidance strategy is a key ingredient of moving on after failure [19]. Additionally, external failure attributions in regard to uncontrollable events decrease growth chances of survival-focused micro-entrepreneurs. The reason could be that blaming uncontrollable factors influences micro-entrepreneurs to take hands off stance in dealing with ventures losses. These findings are in line with [17] who found that such factors lead to business failures.

Therefore, it is important to take into account that internal and external failure attributions plays significant role on the growth orientation of survival-focused micro-entrepreneurs. It is worth noting that survival situation of these micro-entrepreneurs is not an indicator for inability to grow. It is recommended that micro-entrepreneurs acceptance of liability would be a prerequisite for growth. The population of this study is limited to survival-focused micro-entrepreneurs hence limits its generalization.

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