International Journal of Scientific Research in Computer Science, Engineering and Information Technology
© 2020 IJSRCSEIT | Volume 6 | Issue 2 | ISSN : 2456-3307
DOI : https://doi.org/10.32628/CSEIT1206213

# Interplay Between Entrepreneurial Training, SME's Performance and Moderating Factors

**Richard Sarfo Gyasi[1], Cai Li[1], Isaac Gumah Akolgo[1], Yvonne Owusu-Ampomah[2]**
[1]School of Management Science and Engineering, Jiangsu University, 301 Xuefu Road, Zhenjiang, 212013, China, PR
[2]Department of Social Studies Education, University of Education, Winneba, Ghana
Corresponding Author: richbay8081@gmail.com

The research is financed by Soft Science of Zhenjiang City in Jiangsu province with Research name : Experience of Innovation-driven Evolution in Southern Jiangsu and its Enlightenment to High Level Development of Zhenjiang with Research number: RK2017008.

**ABSTRACT**
In developing countries such as Ghana, the economic landscape is changing, with a move from foreign direct investment to self-employment and entrepreneurship. There is growing acceptance that some elements of entrepreneurship can be taught and learned. Entrepreneurship is an important educational innovation that provides the impetus to learning about learning. Entrepreneurship and Education Training (EET) programmes are seen as a means to stimulate increased levels of economic activities. The study explored the relationship between entrepreneurial training interventions and performance of small scale automobile firms in Ghana. The study also evaluated the influence of entrepreneurial training interventions on the absorptive capacity of SME owners' in Ghana. Data was collected from small scale automobile business owners and managers in Kumasi Metropolis in the Ashanti Region of Ghana. The convenient sampling method was used to select eight hundred and ninety-six (896) respondents for the study. The data was analyzed meaningfully following the appropriate protocols by categorizing and coding. The Statistical Package for Social Science (SPSS) version 21.0, SMART PLS 3.2.8 and Microsoft Excel 2007 were used in analyzing the data. The study reveals that; there is a significant relationship between entrepreneurial training interventions and performance of small scale automobile firms in Ghana. The also revealed a significant relationship between the moderating variables and SME performance.
**Keywords :** SME'S, KMO Confirmatory factor analysis. Goodness of fit indexes. Composite Reliability Values, Entrepreneurship and Education Training

## I. INTRODUCTION

In this section of the study the moderating influence of entrepreneurial orientation and SME'S performance has been investigated. The second part of the study evaluates the moderating influence of internal factors and external environment on the relationship between absorptive capacity and SME's performance. In earlier sections of the paper, it is asserted that, absorptive capacity, entrepreneurial orientation, internal factors as well as external environment are all seen as moderators in the current study. Absorptive capacity can be categorized into three main domains. They are knowledge acquisition, knowledge assimilation and knowledge application. What it means here is that, an entrepreneur after undergoing entrepreneurial training must be able to receive and accept the information, be able to assimilate or internalize the information received before he can apply or transform that information. (Miller, 1983) noted that entrepreneurial orientation contains innovativeness, risk-taking and proactiveness as dimensions. What Miller means here is that, an entrepreneur needs to be innovative to always keep up with the dynamics of society. He should also know how to take calculated risk in the business he is doing. Proactive here means, he needs to be able to read into the future and make advance preparations before the unexpected happens in his business. There is another factor which is categorized as internal factors. According to (Oginni & Adesanya, 2013), they touted that, internal business environment is the environment where organization has control over and can be dictated by circumstances such as policy, personnel, capital and a host of others. (Lesáková, 2014) opines that, it is always a problem for SMEs to allocate either internal or external funds to their research and development activities as compared to larger multinational companies. SME owners need enough funds to keep them in operation after acquiring entrepreneurial training. Lack of funds will hinder their innovative ideas. (Nahm et al., 2003) indicated that, market position of SMEs is very robust therefore, owners of SMEs may face difficult competition from their competitors. (Lesáková, 2014) made it clear that, inadequate skilled personnel, low level of education and lack of information will minimize the significance of innovation in improving SME performance. Owners' and managers' of SMEs may not have any external control over the businesses they operate. Owners' and managers' of SMEs are faced with so many political problems which emanates from the environment they operate. Political environment is any national or international political factors that can affect the performance of SMEs positively or negatively (Wanjiru, 2015). Some political actions are planned to give benefits and protect SMEs. Such laws include patent laws, government subventions and product research incentives but in Ghana, political forces such as legislation, increase in taxation, instability of political systems and others affect SMEs (Akrofi, 2017). Economic factors also aid SMEs to make key decisions. In Ghana, some SMEs lack physical telecommunication infrastructure and high speed internet to compete globally (Dzisi & Ofosu, 2014). Based on the analyzed information above, the following hypotheses are formulated:

- **H4:** SME owners' entrepreneurial orientation significantly moderates the relationship between entrepreneurial training interventions and performance of small scale automobile firms in Ghana.
- **H5:** Internal factors moderate the relationship between absorptive capacity of owners of SME and performance of small scale automobile firms in Ghana.
- **H6:** External environment moderates the relationship between absorptive capacity of owners of SMEs and performance of small scale automobile firms in Ghana.

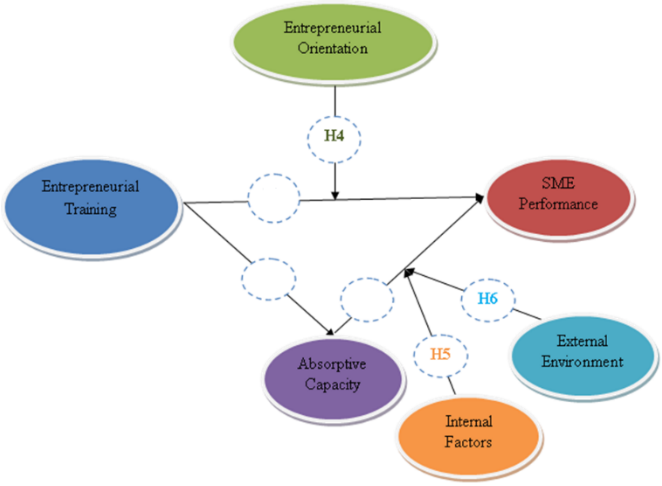


**Figure 1** : Conceptual Framework of Analysis

Figure 1 presents the framework of the interactions between entrepreneurial orientation and SME's performance as well as absorptive capacity, internal factors and external environment.

## II. METHODS AND MATERIAL

Data for this chapter was collected as part of the entire data collected for the studies. However, the only areas that is analyzed relates to the variables that affect the direct relationship between entrepreneurial orientation and SME's performance as well as absorptive capacity, internal factors and external environment. The first relates to how the questionnaires were designed. The constructs for entrepreneurial orientation were deduced from previous studies which have attempted to develop constructs for entrepreneurial orientation. The composite value of the four performances indicators was computed based on the responses. The study introduced dimensions used in measuring absorptive capacity. The combination of absorptive capacity, internal operations, worker behavior and organizational policy become more comprehensive in the study of knowledge acquisition and innovation. Thus, absorptive capacity refers not only to the behavior of employees, but also with the organization in general. This shows a more complete proposition than the results of which suggest that, absorptive capacity affects only the behavior of employees. The response scale for items measured was (5= Strongly Agree to 1= Strongly Disagree). It is necessary to recall that all the data was collected from small scale automobile business owners and managers in Kumasi Metropolis in the Ashanti Region of Ghana. The convenient sampling method was used to select eight hundred and ninety-six (896) respondents for the study. The choice of this method is for the fact that; these managers and owners operate on a tight schedule and as such it will be impossible for any rigorous sampling technique. The researcher made use of the structural equation model to assess the impact of entrepreneurial training on basic SME performance. Structural equation model is a multivariate statistical analysis technique that is used to analyze structural relationships. This technique is the combination of factor analysis and multiple regression analysis, and it is used to analyze the structural relationship between measured variables and latent constructs, (Taris, 2002). This method is preferred by the researcher because it estimates the multiple and interrelated dependence in a single analysis. Again it helped to test this study's hypothesis because it allows to test complex models for their compatibility with the data in their entirety, and allows to test specific assumptions about parameters (e. g., that they equal zero, or that they are identical to each other) for their compatibility with the data. In doing so, the variances and covariance of all the observed variables are factored systematically.

## III. RESULTS AND DISCUSSION

### 3.1 Descriptive Statistics

**Table 1 :** Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Entrepreneurial Training | 896 | 3.57 | 5.00 | 4.4133 | .495 |
| Absorptive Capacity | 896 | 3.20 | 4.80 | 4.20 | .393 |
| SME Performance | 896 | 3.00 | 4.80 | 3.95 | .506 |
| Entrepreneurial Orientation | 896 | 3.52 | 4.90 | 4.25 | .425 |
| External Environment | 896 | 2.7 | 5.00 | 3.75 | .704 |
| Internal Factors | 896 | 2.00 | 4.00 | 3.46 | .269 |
| Valid N (list wise) | 896 | | | | |

The information in table 4 presents a summary of the main descriptive trends of the main indicators used in this study. First section shows the number of respondents in each of the cases whereas the second and third section show the maximum and minimum response values. The means response values and the standard deviation values are the next important elements presented in the table. With regard to entrepreneurial training, the analysis shows that the response values ranged between a minimum of 3.57 and a maximum of 5. The mean response value was 4.4 with a standard deviation of 0.49. The skewness and kurtosis were within appropriate range of normal distribution.

About absorptive capacity, the analysis shows that the response values ranged between a minimum of 3.20 and a maximum of 4.80. The mean response value was 4.20 with a standard deviation of 0.393. The skewness and kurtosis were within appropriate range of normal distribution. Further, with respect to SME Performance, the analysis shows that the response values ranged between a minimum of 3.0 and a maximum of 4.8. The mean response value was 3.95 with a standard deviation of 0.506. The skewness and kurtosis were within appropriate range of normal distribution. Regarding entrepreneurial orientation, the analysis shows that the response values ranged between a minimum of 3.52 and a maximum of 4.9. The mean response value was 4.25 with a standard deviation of 0.425. The skewness and kurtosis were within appropriate range of normal distribution. With regard to external environment the analysis shows that the response values ranged between a minimum of 2.7 and a maximum of 5. The mean response value was 3.75 and the standard deviation was 0.704. The skewness and kurtosis values were within appropriate range to be considered as normally distributed. Finally, there is the descriptive information about internal factors. The analysis ranges from a minimum of 2 and a maximum of 4. The mean response value was 3.46 with a standard deviation of 0.269. The skewness and kurtosis were within appropriate range of normal distribution.

### 3.2 Test of Sampling Adequacy

**Table 2 :** KMO and Bartlett's Test

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .937 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2073.746 |
| | df | 528 |
| | Sig. | .000 |

The next set of test that was conducted was the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy. The importance of this test is that, it shows the extent to which the number of items in the sample can be considered adequate to make the inferences thereof. This is important because statistical samples must be significant. It must not be too small, relative to the population so that some moderate amount of generalizations can be inferred from the outcome. This contributes significantly to the validity of the findings that are made from the analysis. In this case the observed KMO value is 0.937. The general guidelines or benchmark as recommended by (Revelle) is that, any value in excess of 0.5 should be deemed sufficient or enough to support the adequacy of the sample. He further asserts that a test within the range of 0.7-0.8 is highly acceptable but values in excess of 0.9 are excellent. This means that the sample analyzed in this study met the highest criteria. This notwithstanding having a high KMO value does not mean that everything about the data is accurate. A second test known as the Bartlett's Test of Sphericity which is also shown in the table was conducted to validate the data. According to Xanthopoulos et al (2013) as cited in (Otoo, Zhiwen, Otoo, & Antwi, 2019) explains that, the role of the Bartlett's Test of Sphericity is to show the strength of the relationship that exists among the observed variables. This is to find out if the correlation matrix is an identity matrix or not. An identity matrix is the type of matrix where all the diagonal items have a value of 1 and then all the off diagonal items very close to 0. The goal is to reject the null assumption of the identity matrix. Therefore, Bartlett's star value test is significant (0.00), which is less than 0.05, which in effect means that the null hypothesis cannot be rejected. This means that the correlation matrix is not an identity matrix.

### 3.3 Exploratory Factor Analysis

**Table 3:** Communalities

| | Initial | Extraction |
|---|---|---|
| ET1 | 0.711 | 0.711 |
| ET2 | 0.586 | 0.586 |
| ET2 | 0.649 | 0.649 |
| AC1 | 0.725 | 0.725 |
| EE1 | 0.756 | 0.756 |
| EE2 | 0.719 | 0.719 |
| EE3 | 0.761 | 0.761 |
| EE4 | 0.743 | 0.743 |
| EE5 | 0.756 | 0.756 |
| EO1 | 0.731 | 0.731 |
| EO2 | 0.647 | 0.647 |
| EO3 | 0.707 | 0.707 |
| SMEP1 | 0.682 | 0.682 |
| SMEP2 | 0.772 | 0.772 |
| SMEP3 | 0.793 | 0.793 |
| SMEP4 | 0.618 | 0.618 |
| INF1 | 0.765 | 0.765 |
| INF2 | 0.765 | 0.765 |
| INF3 | 0.753 | 0.753 |
| INF4 | 0.770 | 0.770 |

Extraction Method: Principal Component Analysis.

The communalities are presented in table 3. In statistical analysis, communalities indicate the common variance that is shared by the factors with given variables. Statistician believes that, a higher communality value is an indication that a large amount of the variance in the variables has been extracted by the factor solution. For better measurement of factor analysis, communalities should be 0.4 or greater. The table has two main parts namely the maximum value of variance extracted which is 1 for each of the cases. The second part shows the actual extracted variance for each item or the proportion of variance that is explained by the variable. From the analysis all the extracted values are in excess of 0.4 and that outperforms the threshold of 0.4.

**Table 4 :** Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| ET1 | 18.750 | 56.820 | 56.820 | 18.750 | 56.820 | 56.820 | 8.605 | 26.078 | 18.750 |
| ET2 | 2.500 | 7.575 | 64.395 | 2.500 | 7.575 | 64.395 | 6.397 | 19.386 | 2.500 |
| ET2 | 2.047 | 6.204 | 70.598 | 2.047 | 6.204 | 70.598 | 4.952 | 15.005 | 2.047 |
| AC1 | 1.117 | 3.386 | 73.984 | 1.117 | 3.386 | 73.984 | 4.460 | 13.515 | 1.117 |
| EE1 | 0.937 | 2.841 | 76.824 | | | | | | 0.937 |
| EE2 | 0.760 | 2.303 | 79.127 | | | | | | 0.760 |
| EE3 | 0.654 | 1.980 | 81.108 | | | | | | 0.654 |
| EE4 | 0.646 | 1.958 | 83.066 | | | | | | 0.646 |
| EE5 | 0.547 | 1.658 | 84.724 | | | | | | 0.547 |
| EO1 | 0.444 | 1.344 | 86.068 | | | | | | 0.444 |
| EO2 | 0.312 | 0.946 | 87.013 | | | | | | 0.312 |
| EO3 | 0.293 | 0.888 | 87.901 | | | | | | 0.293 |
| SMEP1 | 0.286 | 0.867 | 88.768 | | | | | | 0.286 |
| SMEP2 | 0.249 | 0.752 | 89.520 | | | | | | 0.249 |
| SMEP3 | 0.209 | 0.633 | 90.826 | | | | | | 0.209 |
| SMEP4 | 0.168 | 0.511 | 91.336 | | | | | | 0.168 |
| INF1 | 0.146 | 0.443 | 91.779 | | | | | | 0.146 |
| INF2 | 0.139 | 0.422 | 92.200 | | | | | | 0.139 |
| INF3 | 0.124 | 0.375 | 92.576 | | | | | | 0.124 |
| INF4 | 0.087 | 0.263 | 92.840 | | | | | | 0.087 |

The information in table 4 is the total variance explained table with varying sections containing different but very essential information. Firstly, the Eigen value shows the number of extracted factors that sums up to the total number of items that are subjected to factor analysis. The next section shows the factors which have been extracted from the analysis together with the Eigen values. The Eigen value table is divided into three main sections i.e. Initial Eigen Values, Extracted Sums of Squared Loadings and Rotation of Sums of Squared Loadings. The table shows in the extracted sums of squared loadings that four factors have been extracted and they have a cumulative percentage of 78.6%. The first factors accounts for 60.395% of the variance whereas the second factor accounts for 68.447%. On the other hand, the third and fourth factors accounts for 75.041% and 78.640%

**Table 5** : Component Matrix

| | Component | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| ET1 | 0.673 | 0.216 | -0.470 | -0.069 |
| ET2 | 0.724 | 0.085 | -0.124 | -0.225 |
| ET2 | 0.774 | -0.024 | -0.103 | -0.229 |
| AC1 | 0.830 | -0.159 | 0.081 | 0.138 |
| EE1 | 0.846 | 0.001 | -0.084 | -0.222 |
| EE2 | 0.841 | 0.157 | -0.040 | 0.005 |
| EE3 | 0.843 | 0.011 | -0.057 | -0.253 |
| EE4 | 0.827 | 0.080 | 0.151 | -0.214 |
| EE5 | 0.792 | -0.353 | 0.141 | 0.016 |
| EO1 | 0.747 | -0.182 | 0.166 | -0.359 |
| EO2 | 0.789 | -0.110 | 0.155 | -0.043 |
| EO3 | 0.783 | 0.044 | 0.265 | -0.191 |
| SMEP1 | 0.680 | -0.069 | 0.411 | -0.244 |
| SMEP2 | 0.859 | -0.205 | 0.080 | -0.029 |
| SMEP3 | 0.844 | -0.303 | -0.040 | 0.066 |
| SMEP4 | 0.697 | -0.365 | -0.029 | 0.107 |
| INF1 | 0.851 | -0.198 | 0.022 | 0.137 |
| INF2 | 0.758 | -0.329 | 0.141 | 0.279 |
| INF3 | 0.815 | -0.254 | -0.107 | 0.170 |
| INF4 | 0.817 | -0.307 | 0.018 | 0.154 |

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Table 5 shows the specific loadings that were extracted under each of the four times as represented in the component matrix table. According to (Jolliffe, 2002), when the absolute value of the loading is high, it means that it contributes highly to the variable extracted. As a rule of thumb, items with factor loadings below 0.5 are suppressed as they are not of significant use for further analysis. This is the reason why even though all the items have an initial test that indicates good data for principal component analysis, a number of the factors were dropped from the final extracted variance. Table 6 indicates the acceptable number of final items and loadings used for the analysis.

**Table 6** : Items and Loadings

| VARIABLE | α | CR | AVE | FACTOR LOADING |
|---|---|---|---|---|
| **Entrepreneurial Education** | **.911** | **.687** | **.929** | |
| ET1 | | | | .892 |
| ET2 | | | | .923 |
| ET3 | | | | .781 |
| **Entrepreneurial Orientation** | .916 | .942 | .729 | .942 |
| EO1 | | | | .763 |
| EO2 | | | | .861 |
| EO3 | | | | .882 |
| EO4 | | | | .854 |
| EO5 | | | | .811 |
| **External Environment** | .907 | .939 | .720 | .963 |
| EE1 | | | | .852 |
| EE2 | | | | .844 |
| EE3 | | | | .871 |
| EE4 | | | | .802 |
| EE5 | | | | .743 |
| **Internal Factors** | .923 | .984 | .751 | .987 |
| IF1 | | | | .811 |
| IF2 | | | | .863 |
| IF3 | | | | .854 |
| IF4 | | | | .842 |
| **Absorptive Capacity** | **.911** | **.929** | **.687** | |
| AC | | | | .763 |
| **SME Performance** | **795** | **.848** | **.582** | |
| SMEP1 | | | | .764 |
| SMEP2 | | | | .781 |
| SMEP3 | | | | .734 |
| SMEP4 | | | | .773 |

### 3.4 Internal Consistency

**Table 7 :** Cronbach's Alpha

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| Entrepreneurial Training | 21.6143 | 21.116 | -.249 | .610 |
| Absorptive Capacity | 21.8276 | 19.128 | .275 | .617 |
| SME Performance | 22.0776 | 17.904 | .483 | .660 |
| Entrepreneurial Orientation | 21.7776 | 18.369 | .460 | .680 |
| External Environment | 22.2776 | 13.714 | .286 | .699 |
| Internal Factors | 20.5633 | 5.117 | .299 | .636 |

### 3.5 Test of Multicollinearity

**Table 8**

**Correlations**

| | | Entrepreneurial Training | Absorptive Capacity | SME Performance | Entrepreneurial Orientation | External Environment | Internal Factors |
|---|---|---|---|---|---|---|---|
| Entrepreneurial Training | Pearson Correlation | 1 | .472** | .703 | .201** | .246** | .251** |
| | Sig. (2-tailed) | | .000 | .027 | .000 | .000 | .000 |
| | N | 896 | 896 | 006 | 896 | 896 | 896 |
| Absorptive Capacity | Pearson Correlation | .472** | 1 | .517** | .552** | .128** | .078* |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 | .020 |
| | N | 896 | 896 | 896 | 896 | 896 | 896 |
| SME Performance | Pearson Correlation | .703 | .517** | 1 | .525** | .259** | .360** |
| | Sig. (2-tailed) | .027 | .000 | | .000 | .000 | .000 |
| | N | 896 | 896 | 896 | 896 | 896 | 896 |
| Entrepreneurial Orientation | Pearson Correlation | .201** | .052** | .025** | 1 | .315** | .321** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 | .000 |
| | N | 896 | 896 | 896 | 896 | 896 | 896 |
| External Environment | Pearson Correlation | .246** | .128** | .059** | .315** | 1 | .265** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | | .000 |
| | N | 896 | 896 | 896 | 896 | 896 | 896 |
| Internal Factors | Pearson Correlation | .251** | .078* | .360** | .321** | .265** | 1 |
| | Sig. (2-tailed) | .000 | .020 | .000 | .000 | .000 | |
| | N | 896 | 896 | 896 | 896 | 896 | 896 |

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

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

The analyzed information shows the correlation matrix which is one of the tests attributes for multicollinearity among the independent variables. In this case the results suggest that among the key independent variables, the levels of relationship are weak based on the threshold of 0.5 Pearson's product moment correlation coefficient.

### 3.6 Confirmatory Factor Analysis

The influential nature of Confirmatory factor analysis (CFA) as a statistical tool for probing the nature and relationships among latent constructs is highly regarded among researchers. This is due to the fact that, according to (Brown, 2014), it helps to measure the construct validity, identify method effects and helps in evaluating the factor invariance through time and groups. The use of Confirmatory Factor Analysis (CFA) continue to gain grounds in the psychological literature as a result of the believe researchers have in Structural Equation Model as a robust model specifically. In view of the key impact CFA makes in the measure development and due to the understanding that, having a tool that manages the measurement of variables effectively, it can be presumed to be paramount quantitatively simply because its role is crucial to the results a researcher reports. We sought to find out the relationship between the latent variables using SMART PLS 3.2.8. The model consisted of the latent variables entrepreneurial training, absorptive capacity, entrepreneurial orientation, external environment, internal factors and SME Performance. The final fit model is presented in figure 2.

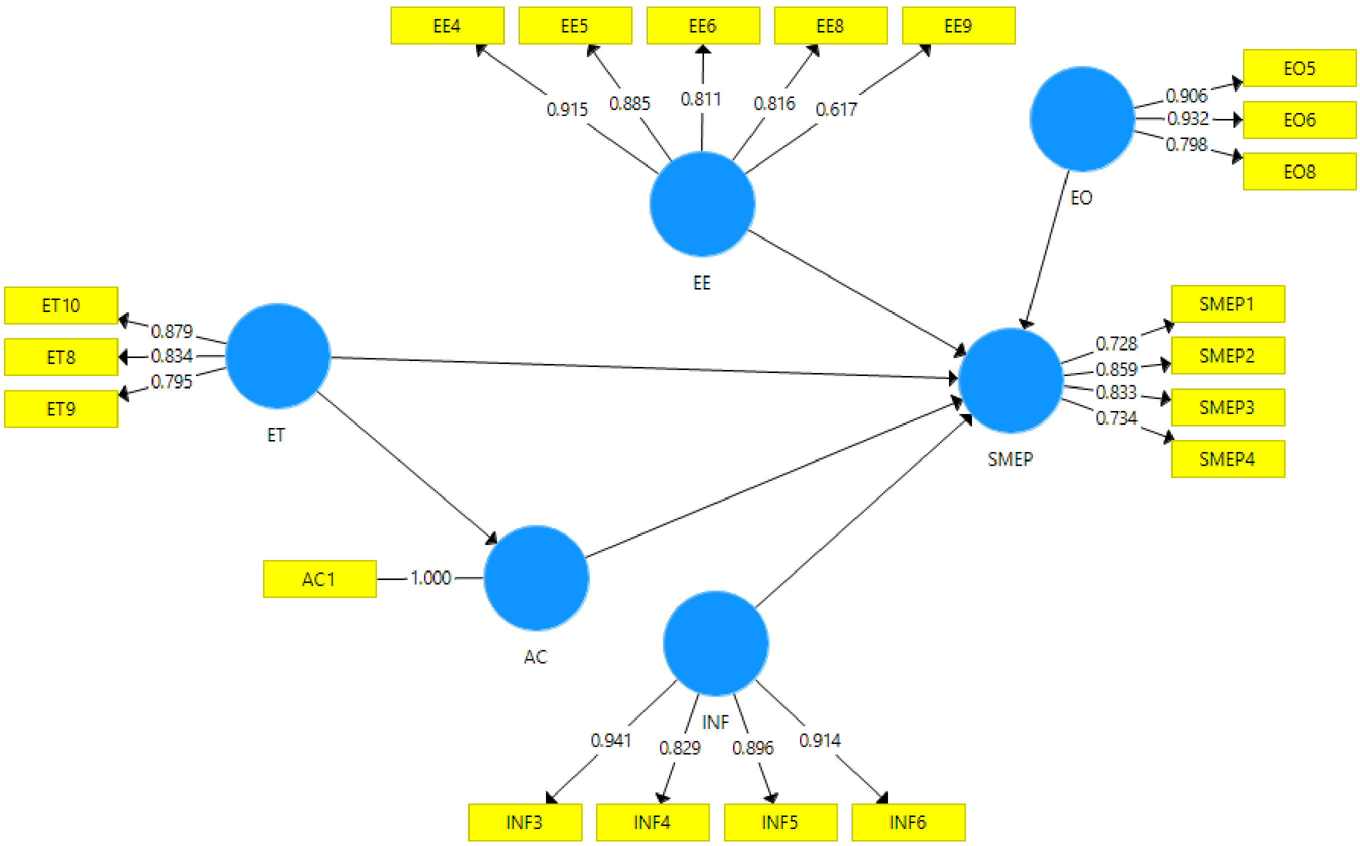


**Figure 2 :** The Final Fit Model of Structural Equation Model

**Table 9.** Goodness of fit indexes

| Measure | Estimate | Threshold | Interpretation |
|---|---|---|---|
| CMIN | 466.19 | -- | -- |
| DF | 309 | -- | -- |
| CMIN/DF | 1.509 | Between 1 and 3 | Excellent |

| | | | |
|---|---|---|---|
| CFI | 0.972 | >0.95 | Excellent |
| SRMR | 0.038 | <0.08 | Excellent |
| RMSEA | 0.034 | <0.06 | Excellent |
| PClose | 0.975 | >0.05 | Excellent |
| | Cutoff Criteria* | | |
| Measure | Terrible | Acceptable | Excellent |
| CMIN/DF | > 5 | > 3 | > 1 |
| CFI | <0.90 | <0.95 | >0.95 |
| SRMR | >0.10 | >0.08 | <0.08 |
| RMSEA | >0.08 | >0.06 | <0.06 |
| PClose | <0.01 | <0.05 | >0.05 |

**Table 10.** Model Fit Measures

| | CR | AVE | MSV | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Entrepreneurial Training | 0.821 | 0.641 | 0.002 | 0.784 | | | | | |
| Absorptive Capacity | 0.854 | 0.486 | 0.483 | 0.042 | 0.683 | | | | |
| SME Performance | 0.874 | 0.688 | 0.167 | 0.041 | -0.051 | 0.813 | | | |
| Entrepreneurial Orientation | 0.835 | 0.609 | 0.167 | -0.035 | 0.004 | 0.400 | 0.764 | | |
| External Environment | 0.791 | 0.466 | 0.180 | 0.022 | 0.415 | -0.036 | 0.016 | 0.668 | |
| Internal Factors | 0.729 | 0.495 | 0.483 | -0.001 | 0.681 | -0.078 | 0.040 | 0.389 | 0.690 |

Table 10 also shows the second measure of internal consistency using composite reliability and other model fit attributes. In this case, the Composite Reliability Values (CR) are higher than the threshold of 0.7. Convergent validity is acceptable as almost all factor loadings exceed the 0.60 benchmark. For all factors, the AVE was above 0.50. However, as this factor is minimally correlated with the other factors in the model, and because the reliability score (0.823) was greater than 0.700, we felt this was admissible ( i.e., while it is not especially strong internally, it is, at least, a reliable and distinct construct within our model). Fornell and Larcker (1981) suggest that, the square root of AVE in each latent variable can be used to establish discriminant validity, if this value is larger than other correlation values among the latent variables. The square roots of average variances extracted (AVEs) are shown on diagonal, in bold in the Table 10. The table indicates that discriminant validity is well established.

**Path Analysis and Moderating Effect of Entrepreneurial Orientation**

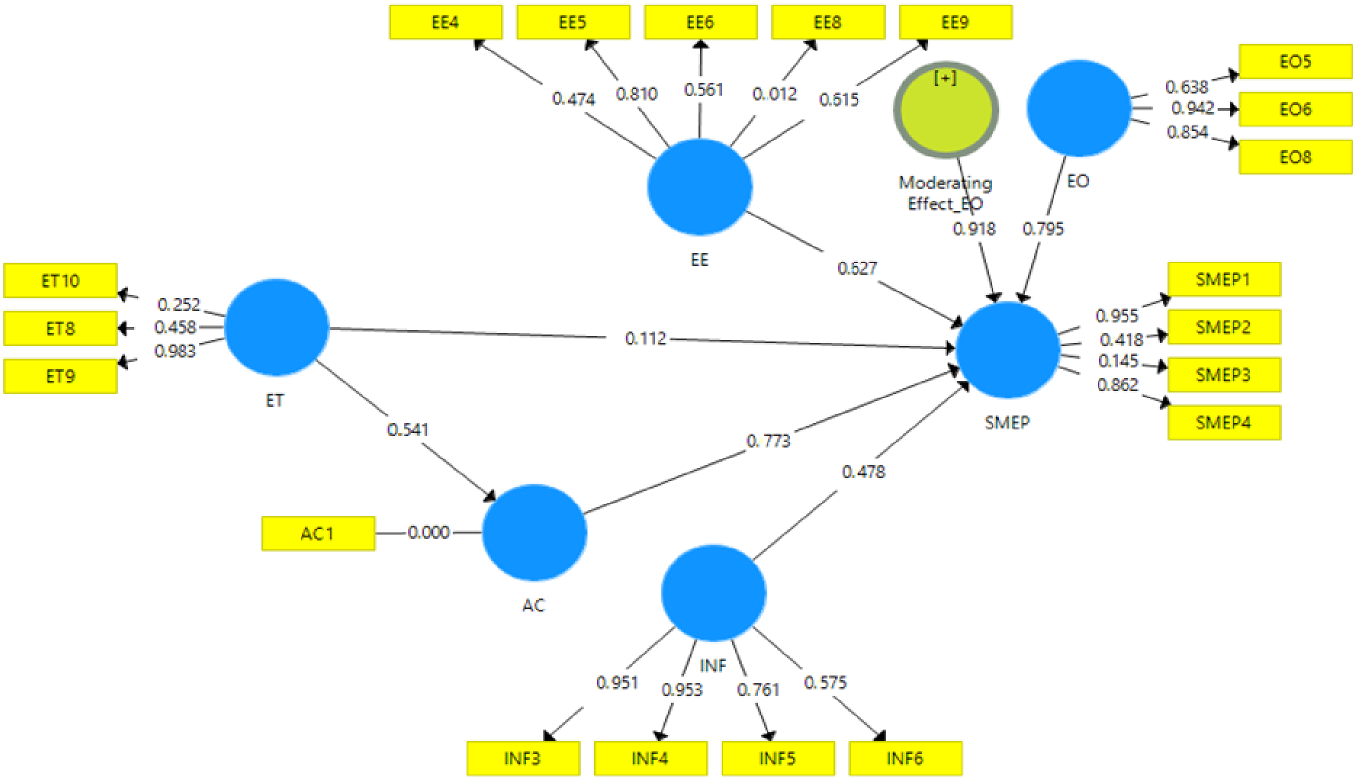


**Figure 3:** Path Analysis and Moderating Effect of Entrepreneurial Orientation

Figure 3 presents the first scenario of moderating interventions when the moderating effect of entrepreneurial orientation is imposed on the interaction between entrepreneurial training and SME performance. The path coefficient of the direct relationship between entrepreneurial training and SME's performance is 0.112 whereas the influence of the effect of entrepreneurial training on absorptive capacity is 0.541. The analysis further shows that the influence of the effect of absorptive capacity on SME's performance is 0.773 suggesting the presence of a partial moderation between the two relationships. The path coefficient value for the moderating influence of entrepreneurial orientation is 0.918 and this is statistically significant at 95% confidence interval. The implication of the above statement is that, innovativeness, risk-taking and proactiveness as dimensions of entrepreneurial orientation can speed up the pace at which automobile SMEs in the Ashanti Region of Ghana can potentially attain greater performance.

**Path Analysis and Moderating Effect of External Environment**

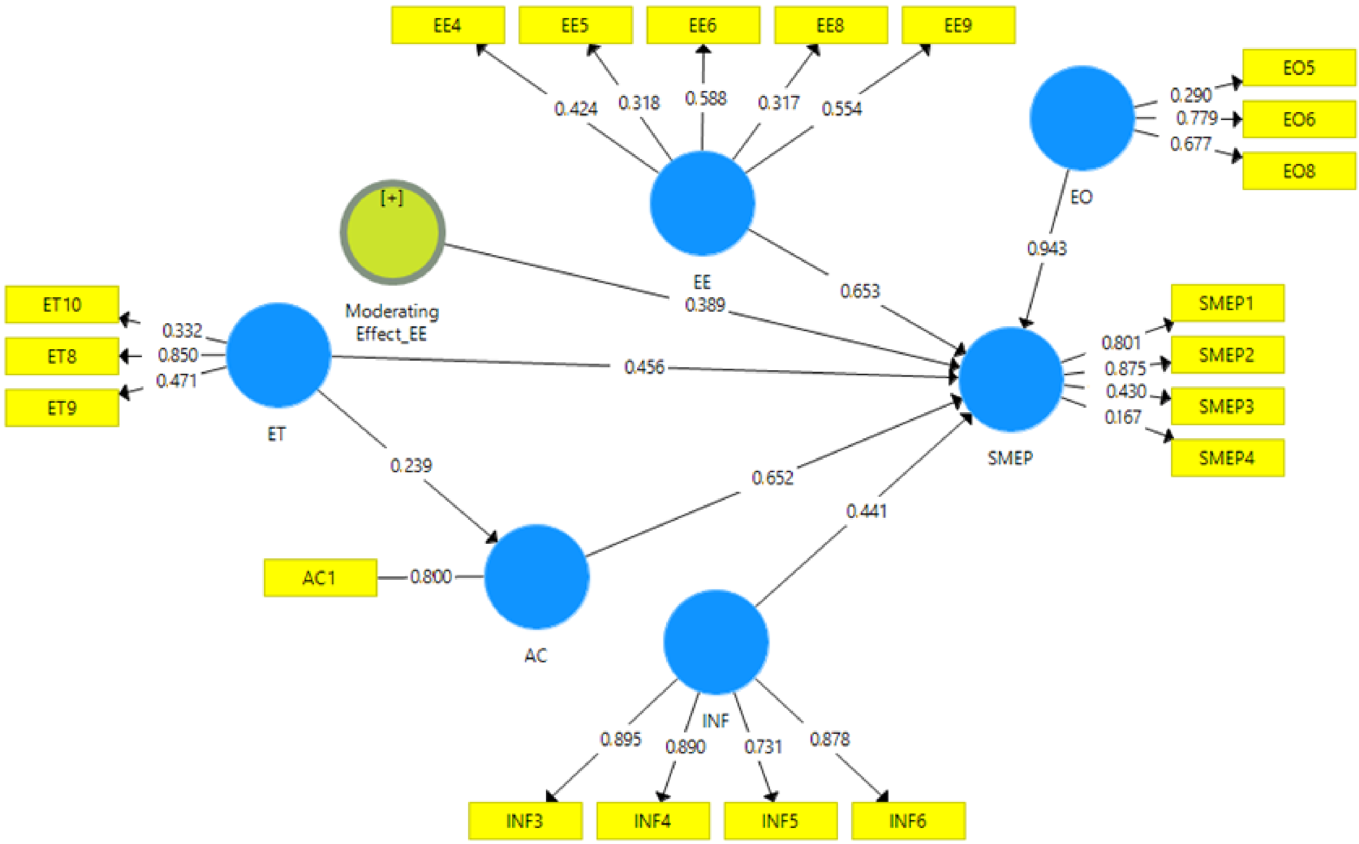


**Figure 4 :** Path Analysis and Moderating Effect of External Environment

In this section of the study the moderating effect of external factors are explored in the relationship between absorptive capacity and SME performance of automobile firms in Ghana. By external factors, it is believed that, owners' and managers' of SMEs may not have any external control over the businesses they operate. These are mainly the political, economic, socio-cultural, technological and environmental factors. Each of the five external factors shows strong positive association with the SME performance. The same trend is observed in the interplay between entrepreneurial training and SME performance. The path coefficient of the direct relationship between entrepreneurial training and SME's performance is 0.456 whereas the influence of the effect of entrepreneurial training on absorptive capacity is 0.239. Most importantly, the moderating effect of external factors between absorptive capacity and SME's performance had a path coefficient of 0.389 which is also statistically significant and positive. This implies that the external environment within which an organization operates can have a strong impact on whether the absorptive capacity of an organization can yield positive impact on the organization.

**Path Analysis and Moderating Effect of Internal Factors**

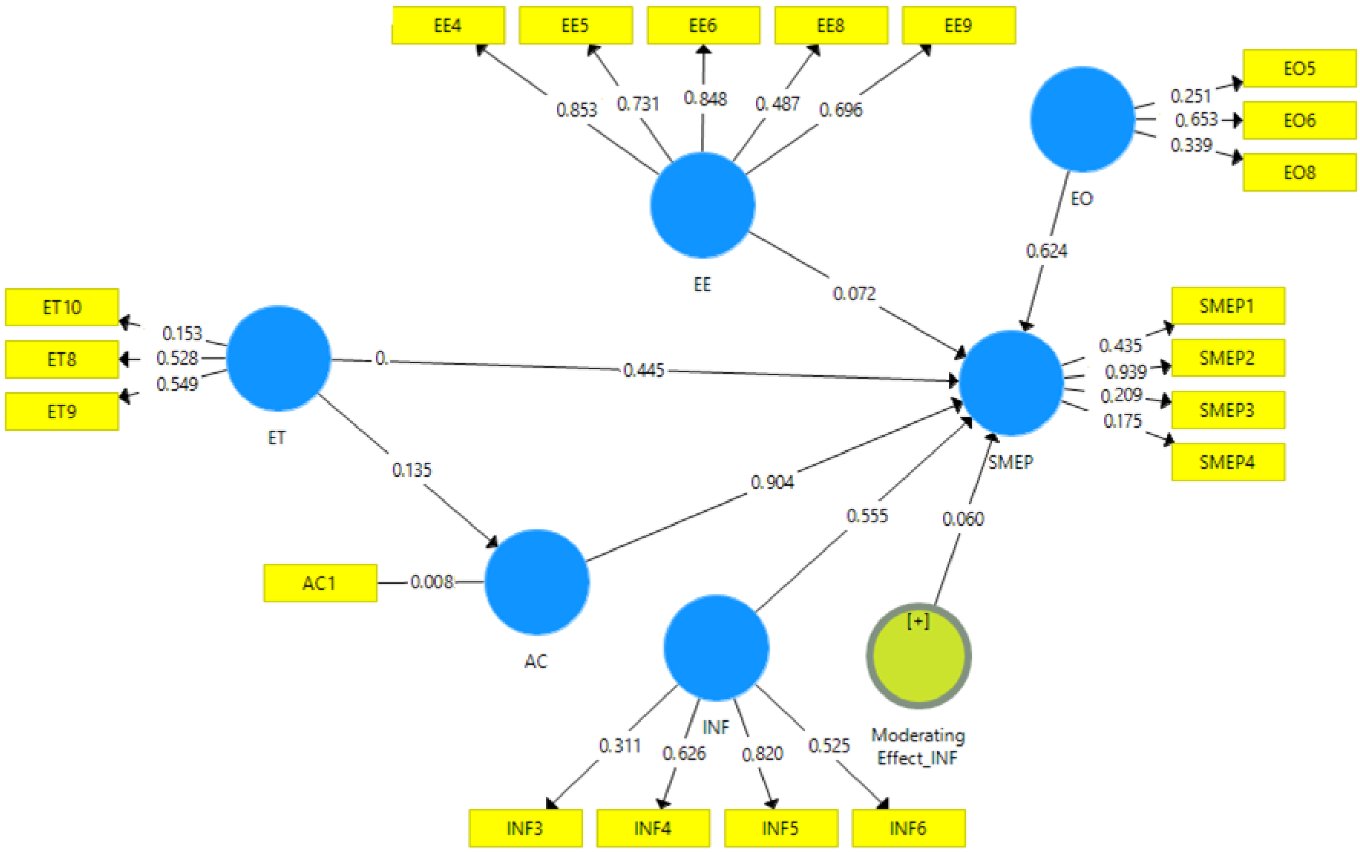


**Figure 5:** Path Analysis and Moderating Effect of Internal Factors

Internal factors are the next important factors that were explored in terms of their moderating influence on the relationship between absorptive capacity and SME performance. Internal factors refer to the environment where organization has control over and can be dictated by circumstances such as policy, personnel, capital and a host of others. The path coefficient of the direct relationship between entrepreneurial training and SME's performance is 0.445 whereas the influence of the effect of entrepreneurial training on absorptive capacity is 0.135. The analysis further shows that, the influence of the effect of absorptive capacity on SME's performance is 0.904 suggesting the presence of a partial moderation between the two relationships. Most importantly, the moderating effect of internal factors between absorptive capacity and SME's performance had a path coefficient of 0.060 which is also statistically significant and positive. This implies that the internal environment within which an organization operates can have a strong impact on whether the absorptive capacity of an organization can yield positive impact on the organization.

**Path Analysis of Composite Effect of Moderating Factors**

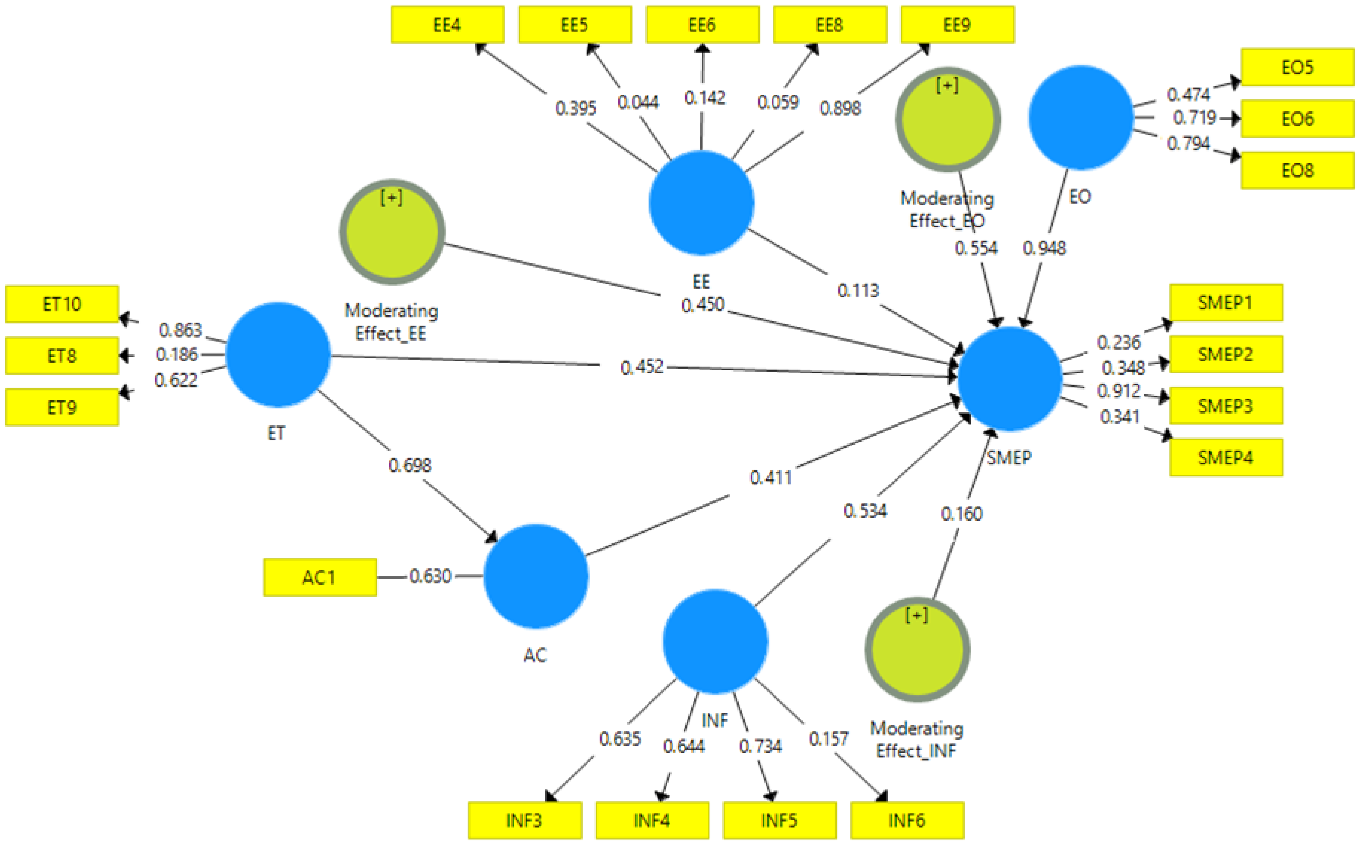


**Figure 6:** Path Analysis of Composite Effect of Moderating Factors

The composite moderating effect of the moderating variables is presented in figure 6. By composite moderating variables, the issue is to examine the effect of the three moderating factors (entrepreneurial orientation, external environmental and internal factors) on the relationship between entrepreneurial training and SME performance together instead of looking at them in isolation. In this case, the study seeks to explore whether the presence of each of the other factors influences the extent to which the moderating factors exert power on the direct relationship between entrepreneurial training and SME performance. In each of the cases, the moderating effects are positive and statistically significant even though with marginal changes in the statistical influence. Firstly, the path coefficient of the direct relationship between entrepreneurial training and SME's performance is 0.452 whereas the influence of the effect of entrepreneurial training on absorptive capacity is 0.698. The analysis further shows that, the influence of the effect of absorptive capacity on SME's performance is 0.411 suggesting the presence of a partial moderation between the two relationships. Next, the moderating effect of entrepreneurial orientation on the relationship between entrepreneurial training and SME performance of automobile businesses in Ghana is 0.554 whereas the moderating effect of external environment on the relationship between entrepreneurial training and SME performance of automobile businesses in Ghana is 0.450. Finally, the moderating effect of internal environment on the relationship between entrepreneurial training and SME performance of automobile businesses in Ghana is now 0.160 which is statistically significant at 95% significant level.

## REFERENCES


[1]. Akrofi, A. E. (2017). The impact of external business environment factors on performance of small & medium sized enterprises in the pharmaceutical industry in Kumasi Metropolis.

[2]. Brown, T. A. (2014). Confirmatory factor analysis for applied research: Guilford Publications.

[3]. Dzisi, S., & Ofosu, D. (2014). Marketing strategies and the performance of SMEs in Ghana. Marketing, 6(5), 102-111.

[4]. Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. Journal of Marketing Research, 382-388.

[5]. Janadari, M., Sri Ramalu, S., & Wei, C. (2016). Evaluation of measurment and structural model of the reflective model constructs in PLS–SEM.

[6]. Jolliffe, I. T. (2002). Springer series in statistics. Principal component analysis, 29.

[7]. Lesáková, Ľ. (2014). Evaluating innovations in small and medium enterprises in Slovakia. Procedia-Social and Behavioral Sciences, 110, 74-81.

[8]. Miller, D. (1983). The correlates of entrepreneurship in three types of firms. Management science, 29(7), 770-791.

[9]. Nahm, A. Y., Vonderembse, M. A., & Koufteros, X. A. (2003). The impact of organizational structure on time-based manufacturing and plant performance. Journal of operations management, 21(3), 281-306.

[10]. Oginni, B. O., & Adesanya, A. S. (2013). Business environmental factors: Implications on the survival and growth of business organisations in the manufacturing sector of Lagos Metropolis. Business and Management Research, 2(3), 146-155.

[11]. Otoo, A. A. A., Zhiwen, L., Otoo, C. O. A., & Antwi, M. O. (2019). Influence of Organisational Factors on E-Business Value and E-Commerce Adoption.

[12]. Revelle, W. KMO: Find the Kaiser, Meyer, Olkin Measure of Sampling Adequacy.

[13]. Taris, T. (2002). BM Byrne, Structural equation modeling with AMOS: Basic concepts, applications, and programming Mahwah NJ: Lawrence Erlbaum, 2001 0-8058-3322-6. European Journal of Work and Organizational Psychology, 11, 243-246.

[14]. Wanjiru, N. G. (2015). External environmental factors influencing China-Kenya trade: a case study of the ministry of foreign affairs and international trade and Chinese embassy in Kenya.



**Cite this article as :**

Richard Sarfo Gyasi, Cai Li, Isaac Gumah Akolgo, Yvonne Owusu-Ampomah, "Interplay Between Entrepreneurial Training, SME's Performance and Moderating Factors", International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), ISSN : 2456-3307, Volume 6 Issue 2, pp. 60-74, March-April 2020. Available at doi : https://doi.org/10.32628/CSEIT1206213
Journal URL : http://ijsrcseit.com/CSEIT1206213