Providing a Quantitative Model for Management of Entrepreneurial Marketing in the Microelectronics Industry

Farshad Hakemzadeh, Hossein Vazifehdoust, Farideh Haghshenas Kashani

Abstract

Nowadays, organizations that combine marketing and entrepreneurial activities act better in discovering and exploiting new opportunities of the market. One of the main advantages of the entrepreneurship concept in the marketing is its capability to respond to an ever-changing environment. When entrepreneurs are looking for new opportunities regarding limited resources, they must adopt an innovative approach to dealing with these uncertainties. This study aims to identify, prioritize and validate the components affecting entrepreneurship in marketing in the microelectronics industry. In this research, confirmatory factor analysis has been used to analyze the tools of study. Next, descriptive indicators of research variables (i.e. mean and standard deviation) have been reported. Then, structural equation method has been utilized in order to evaluate the causal relationships between variables. Finally, Friedman test has been applied to prioritize the research variables. The findings showed that 22% of employment variance, 31% of market performance variance, 28% of customer orientation variance, 46% of product marketing variance, 34% of marketability variance and 53% of entrepreneurial marketing variance can be explained by the variables of the research model. Also, the fit indices obtained for the tested model showed that the RMSEA index in the estimated model has an acceptable level with value of 0.064 and other fit indices such as CFI, GFI, NFI, and AGFI are equal to 0.97, 0.94, 0.95 and 0.92, respectively indicating good levels. These characteristics for goodness of fit confirm that the data of current study fits well with the factor structure of the model and hence the entrepreneurial marketing is valid and applicable in the microelectronics industry.

*Corresponding Author: Hossein Vazifehdoust
Email address: vazifehdoust@yahoo.com, (Farshad Hakemzadeh, Hossein Vazifehdoust, Farideh Haghshenas Kashani)
1. Introduction

Undoubtedly, the economic development in developed countries confirms that the economy is affected by entrepreneurship. Entrepreneurs have played a significant role in the economic development of these countries and underdeveloped countries have ignored its importance in economic development. Today, experts agree on the role of entrepreneurship in both economic and social development. The most important of such roles include collecting unfocused and stray savings of people and gathering capital, creating large-scale employment, causing balanced regional development, redistributing wealth, income and even political power fairly and increasing social benefits through the government [1]. Accordingly, the present study attempts to provide a model for entrepreneurial marketing in the microelectronics industry. Finally, the marketing management process consists of 5 steps as follows: The first step aims to identify the opportunities in the market. Analysis of macro marketing environment, competitive environment, suppliers and customers are some measures of this stage. The second step is to search and select target markets. The next step is to develop marketing strategies and plans. The final step is to organize marketing resources, including financial resources, human resources, organizational structure, implementation and control of marketing plans [6].

2. THEORETICAL FOUNDATIONS

According to the American Marketing Association (AMA) Board of Directors, Marketing is defined as the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society. On the other hand, entrepreneurship is a process that results in satisfaction or new demand. Entrepreneurship is the process of creating value through formation of a unique set of resources in order to take advantage of opportunities [4].

In addition, marketing and entrepreneurship have mutual relations with each other. Marketing provides many opportunities to study about entrepreneurship and entrepreneurship views the marketing as performance key in a company that can lead to innovation and creativity. Entrepreneurial marketing, as one of the new aspects of marketing, implements the same basic goals of marketing with higher quality [3 and 11]. Marketing and entrepreneurship are interrelated. If marketing is done properly, in turn, it increases the sales share of companies and creates profits and economic benefits for any dynamic and active organization. Entrepreneurial marketing, as one of the new aspects of marketing, implements the same basic goals of marketing with higher quality [3 and 11]. Entrepreneurial marketing plays a very important role in achieving sustainable competitive advantage through providing concepts, tools and infrastructures to fill the gap between innovation and market position [9]. In fact, entrepreneurial marketing is a concept that seeks to describe marketing processes and identify opportunities in a varying environment for small and medium-sized companies with limited resources [14]. Entrepreneurial marketing corresponds with marketing activities in small firms with limited resources relying on creative and unsophisticated approaches. It is also used to describe unplanned, nonlinear and visionary marketing actions taken by entrepreneurs [16]. Kraus et al. [12 have considered entrepreneurial marketing as organizational performance and a set of processes for creating value and delivering this value to the customer in order to manage relations with customer through ways that are beneficial for both company and stakeholders. Different researchers and scientists have studied different dimensions and components for each of them. For example, Mort
et al. [17] identified four main strategies for entrepreneurial marketing including opportunism, close relationships with customer, increase of resources and delivering innovative products considering dynamic needs of customer. On the other hand, Jones and Rowley [8] found a model for entrepreneurial marketing that includes customer orientation, entrepreneurial orientation, innovation orientation and marketing orientation components. Similarly, Morris et al. [16] have considered following dimensions for entrepreneurial marketing: being pioneer, risk-taking, innovation, opportunism and value creation from firms’ desire for entrepreneurship and leveraging resources and customer orientation from firms’ desire for marketing which have been used in many studies (Becherer et al [2]; Rezvani and Khazaei [20]).

Literature Review

Sarma et al. [21] have studied the effect of entrepreneurial marketing and business development on the business sustainability. The research was a descriptive survey. Structural equation model was used to analyze the data. The results showed that entrepreneurial marketing has a positive and significant effect on business development and business sustainability. Business development has a positive and significant effect on business sustainability. In their study, Rezvani and Khazaei [20] have evaluated the dimensions of entrepreneurial marketing according to the characteristics of institutions, i.e. age and size. The study aimed to find out how use of entrepreneurial marketing varies as a result of the age and size of higher education institutions. The results showed that there is a difference in the dimensions of entrepreneurial marketing based on the age and size of organizations.

Kilenthong et al. [9] have investigated the dimensions of entrepreneurial marketing. Based on the research literature, six factors were identified as the basic factors for entrepreneurial marketing behaviors including: growth orientation, opportunity orientation, customer focus, value creation through networks, informal market analysis and market proximity. Nikfarjam and Zarifi [18] have studied the effects of entrepreneurial marketing factors on small businesses using a descriptive-survey research method. The results showed that the five factors influencing entrepreneurship in marketing are: innovative approach, flexible marketing, resources, strategy and product. Miles et al. [15] have evaluated the impact of entrepreneurial marketing processes and entrepreneurial self-efficacy on community vulnerability, risk and resilience. The results confirmed the effects of entrepreneurial marketing processes and entrepreneurial self-efficacy on social vulnerability, risk and resilience. Kilenthong et al. [10] in a study examined the effect of firm age, firm size and firm’s on entrepreneurial behaviors in marketing. Structural equation model was used to analyze the data. The results showed that firm size and firm age affect entrepreneurship in marketing, but the position of firm’s managers does not affect entrepreneurship in marketing. Habibzadeh et al. [7] have identified and ranked the factors affecting entrepreneurial marketing to facilitate exports. 387 entrepreneurs in Tehran participated in the research. The results showed that the most important factors of entrepreneurship in export marketing are competitive intelligence, competitive advantage, external factors and internal factors. Lee [13] has investigated the alignment effect of entrepreneurial orientation and marketing orientation on firm performance in Taiwan. The results confirmed the alignment effect of entrepreneurship-marketing on firm performance. In a study done by Yang and Gabrielson [22], the entrepreneurial marketing of international high-tech business-to-business new ventures was studied. A qualitative study with entrepreneurs showed that the repetitive, incremental and creative nature of marketing processes and decisions plays an important role in entrepreneurship in the marketing of international companies with new technology and new business. Pan [19] studied international entrepreneurship tourism emphasizing on creating a competency model for international entrepreneurs based on grounded theory. This research was conducted through grounded theory. The results showed that professional knowledge of managers, language skills, international business knowledge, competencies of entrepreneurial managers, ability to identify the market, ability to integrate re-
sources, ability to overcome risks, ability to interact with community, ability to learn, personality, autonomy, innovation, change, desire for competition and the spirit of progress are the most important factors affecting entrepreneurship.

3. RESEARCH METHOD

Present study is a quantitative and applied research. At first, in order to enter into structural equations, research tools must be validated to determine the validity of the structure. Confirmatory factor analysis was applied to confirm each variable as well as their related indicators. Therefore, confirmatory analysis of research tools has been done firstly. In order to investigate the causal relationships among variables, the structural equation method has been used, secondly. Then, the descriptive indices of the research variables (i.e. mean and standard deviation) have been reported. Finally, Friedman test was utilized to prioritize the research variables. The extracted components of the model are as follows:

- Causal condition variables: pricing, resource management, technology, characteristics of entrepreneurial firm, product quality and intra-organizational capabilities
- Strategy variables: marketability, product marketing capability and customer orientation
- Background variables: social factors and specific nature of industry
- Intervening condition variables: financial resources and government policy making
- Outcome variables: employment and market performance

General structural equation model
This model is the combination of measurement and structural models in which both relationships between latent variables and observed variables (measurement model) and the relationships between latent variables (structural model) are considered.

An example of a general structural equation model and its solution:

- The relationship between the three latent variables \(m, p\) and \(g\) is investigated as follows:
- The external latent variable \(g, p, m\) is an independent variable that affects internal latent variable \(n\).
- To measure the variable \(m\), three observed index variables \(X_1, X_2\) and \(X_3\) have been used.
- To measure the variable \(p\), three observed index variables \(Y_1, Y_2\) and \(Y_3\) have been used.
- To measure the latent variable \(g\), three observed index variables \(Y_4, Y_5\) and \(Y_6\) have been used.
- The path coefficient between two latent dependent variables is shown by \(\beta\) and the path coefficient between the independent and dependent latent variables is show by \(\gamma\).
- The relationship between each latent variable and its corresponding observed variables is denoted by \(\lambda\) called the factor loading.
- \(\varepsilon\) represents the error (residual) for the observed internal variable
Δ δ represents the error (residual) for the observed external variable

ς represents the error variance (residual) for the internal latent variable used according to the model.

\[ n_t = \beta_1 + \beta_2 g_t + \beta_3 p_t + \varepsilon_{1t} \quad (1) \]

The model should be named according to the number of model parameters and the parameters should be entered into the model.

\[ n_t = \beta_{11} + \beta_{12} m_t + \beta_{13} p_t + \varepsilon_{2t} \quad (2) \]

\[ n_t = \left\{ \frac{(\beta_1 \beta_{13} - \beta_{11} \beta_3) + \beta_{13} \beta_2 g_t - \beta_3 \beta_{12} m_t - \beta_3 \beta_{14} n_{t-1} + (\beta_{13} \varepsilon_{1t} - \beta_3 \varepsilon_{2t})}{\beta_{13} - \beta_3} \right\} \quad (3) \]

\[ p_t = \left\{ \frac{(\beta_1 - \beta_{11}) + \beta_2 g_t - \beta_{12} m_t - \beta_{14} n_{t-1} + (\varepsilon_{1t} - \varepsilon_{2t})}{\beta_{13} - \beta_3} \right\} \quad (4) \]

By solving the above two equations simultaneously, the unknown parameters can be determined.

The following formulas are used to determine the optimal sample size in order to do structural equations:

\[ erf(x) = \frac{2}{\sqrt{\pi}} \int_{0}^{x} e^{-t^2} dt \quad (5) \]

\[ n = max(n_1, n_2) \quad (6) \]

Where:

\[ n_1 = \left[ 50(\frac{j}{k})^2 - 450(\frac{j}{k}) + 1100 \right] \]

\[ n_2 = \left[ \frac{1}{2H} \left( A(\frac{\pi}{6} - B + D) + H + \sqrt{(A(\frac{\pi}{6} - B + D)^2 + 4AH^2(\frac{\pi}{6} + \sqrt{A + 2B - C - 2D})} \right) \right] \]

\[ A = 1 - p^2 \]

\[ B = \arcsin(\frac{D}{2}) \]

\[ C = \arcsin() \]

\[ D = \frac{A}{\sqrt{3-A}} \]

\[ H = 1 - \beta \]

Where: \( j \) is the number of observed variables, \( k \) is the number of latent variables, \( \delta \) is the estimated Gini correlation for a normal random vector, \( \delta \) is the predicted effect size, \( \alpha \) is the type I modified error rate, \( \beta \) is the type II error rate and \( z \) is a standard score.

\[ F(x; \mu, \sigma^2) = \frac{1}{2} \left[ 1 + erf \left( \frac{x - \mu}{\sigma \sqrt{2}} \right) \right] \quad (7) \]

Where \( \mu, \sigma \) and \( erf \) are mean, standard deviation and error function, respectively. Now the same steps can be done using software.
The following absolute indicators can also be used to fit the mode. The first index: Root Mean Square Error of Approximation (RMSEA)

$$\sqrt{\frac{x^2 - df}{df(N - 1)}}$$ (8)

The second index: Goodness of Fit Index (GFI)

$$GFI = 1 - \frac{F(S, \Sigma(\theta))}{F(S, \Sigma(0))}$$ (9)

The third index: Adjusted Goodness of Fit Index (AGFI)

$$AGFI = 1 - \frac{K(K + 1)}{2d}(1 - gFI)$$ (9)

Confirmatory factor analysis of causal variables

Confirmatory factor analysis method was used to determine the validity of causal condition variables. In Fig.1, factor loadings have been reported. The values written on paths are factor loadings. All factor loadings are higher than 0.3.

According to the LISREL output in Table 1, the calculated \(2df\) value is 2.07; the value of \(2df\) less than 5 indicates the suitable fit of the model. The value of root mean square error of approximation (RMSEA) should be less than 0.08. In the presented model, the value of RMSEA is equal to 0.066. The values of GFI, AGFI, CFI and NFI indices should be higher than 0.9. In the studied model, this criterion is met. Therefore, the data of current study has a good fit with the factor structure of the scale indicating the accordance of the questions with the variables of causal conditions.

### Table 1: Fit indices of causal variables

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Estimation</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square to freedom ratio ((2df))</td>
<td>2.07</td>
<td>(2df &lt; 5)</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.066</td>
<td>RMSEA &lt; 0.08</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.93</td>
<td>GFI &gt; 0.9</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.91</td>
<td>AGFI &gt; 0.9</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.96</td>
<td>CFI &gt; 0.9</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.94</td>
<td>NFI &gt; 0.9</td>
</tr>
</tbody>
</table>

Confirmatory factor analysis of strategies

Confirmatory factor analysis method was used to determine the validity of the strategies. In Fig.2, factor loadings have been reported. The values written on paths are factor loadings. All factor loadings are higher than 0.3.

According to the LISREL output in Table 2, the calculated \(2df\) value is 1.80; the value of \(2df\) less than 5 indicates the suitable fit of the model. The value of root mean square error of approximation (RMSEA) should be less than 0.08. In the presented model, the value of RMSEA is equal to 0.057. The values of GFI, AGFI, CFI and NFI indices should be higher than 0.9. In the studied model, this criterion is met. Therefore, the data of current study has a good fit with the factor structure of the scale indicating the accordance of the questions with the variables of strategies.

Confirmatory factor analysis of background variables

Confirmatory factor analysis method was used to determine the validity of the background variables.
In Fig. 4, factor loadings have been reported. The values written on paths are factor loadings. All factor loadings are higher than 0.3.

According to the LISREL output in Table 3, the calculated $\chi^2/df$ value is 1.54; the value of $\chi^2/df$ less than 5 indicates the suitable fit of the model. The value of root mean square error of approximation (RMSEA) is 0.057, which is less than 0.08. The goodness of fit index (GFI) is 0.94, which is greater than 0.9. The adjusted goodness of fit index (AGFI) is 0.9, which is greater than 0.9. The comparative fit index (CFI) is 0.98, which is greater than 0.9. The normed fit index (NFI) is 0.97, which is greater than 0.9.

Table 2: Strategies for fitting strategies

<table>
<thead>
<tr>
<th>Characteristic</th>
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<th>Criterion</th>
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</thead>
<tbody>
<tr>
<td>Chi-square to freedom ratio ($\chi^2/df$)</td>
<td>1.80</td>
<td>$\chi^2/df &lt; 5$</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.057</td>
<td>$RMSEA &lt; 0.08$</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.94</td>
<td>$GFI &gt; 0.9$</td>
</tr>
<tr>
<td>Adjusted Fit Index (AGFI)</td>
<td>0.9</td>
<td>$AGFI &gt; 0.9$</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.98</td>
<td>$CFI &gt; 0.9$</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.97</td>
<td>$NFI &gt; 0.9$</td>
</tr>
</tbody>
</table>
Figure 2: Output of LISREL software for strategies

(RMSEA) should be less than 0.08. In the presented model, the value of RMSEA is equal to 0.047. The values of GFI, AGFI, CFI and NFI indices should be higher than 0.9. In the studied model, this criterion is met. Therefore, the data of current study has a good fit with the factor structure of the scale indicating the accordance of the questions with the variables of background conditions.

Table 3: Fit indices of the background variables

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Estimation</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square to freedom ratio ($^2df$)</td>
<td>1.54</td>
<td>$^2df &lt; 5$</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.047</td>
<td>RMSEA &lt; 0.08</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.96</td>
<td>GFI &gt; 0.9</td>
</tr>
<tr>
<td>Adjusted Fit Index (AGFI)</td>
<td>0.94</td>
<td>AGFI &gt; 0.9</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.99</td>
<td>CFI &gt; 0.9</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.98</td>
<td>NFI &gt; 0.9</td>
</tr>
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</table>

Confirmatory factor analysis of intervening factors
Confirmatory factor analysis was used to determine the validity of the intervening factors. In Fig.4, factor loadings have been reported. The values written on paths are factor loadings. All factor loadings are higher than 0.3.

Findings related to fit indices for intervening variable provided in Table 4 confirm that CFI, GFI,
NFI, RMR and RMSEA have an acceptable level and these goodness fit characteristics show that the data of this study has a good fit with the factor structure of this scale and this indicates the
alignment of questions with the intervening structure.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Estimation</th>
<th>Criterion</th>
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<tbody>
<tr>
<td>Chi-square to freedom ratio ($\chi^2_{df}$)</td>
<td>1.45</td>
<td>$\chi^2_{df} &lt; 5$</td>
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<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.043</td>
<td>RMSEA &lt; 0.08</td>
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<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.97</td>
<td>GFI &gt; 0.9</td>
</tr>
<tr>
<td>Adjusted Fit Index (AGFI)</td>
<td>0.96</td>
<td>AGFI &gt; 0.9</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>1</td>
<td>CFI &gt; 0.9</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.99</td>
<td>NFI &gt; 0.9</td>
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</table>

Confirmatory factor analysis of outcomes
Confirmatory factor analysis was used to determine the validity of the outcomes. In Fig.5, factor loadings have been reported. The values written on paths are factor loadings. All factor loadings are higher than 0.3.

Findings related to fit indices for outcome variable provided in Table 5 confirm that CFI, GFI, NFI, RMR and RMSEA have an acceptable level and these goodness fit characteristics show that the data of this study has a good fit with the factor structure of this scale and this indicates the alignment of questions with the outcome structure.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Estimation</th>
<th>Criterion</th>
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<tbody>
<tr>
<td>Chi-square to freedom ratio ($\chi^2_{df}$)</td>
<td>1.65</td>
<td>$\chi^2_{df} &lt; 5$</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.051</td>
<td>RMSEA &lt; 0.08</td>
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<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.95</td>
<td>GFI &gt; 0.9</td>
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<tr>
<td>Adjusted Fit Index (AGFI)</td>
<td>0.93</td>
<td>AGFI &gt; 0.9</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.99</td>
<td>CFI &gt; 0.9</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.98</td>
<td>NFI &gt; 0.9</td>
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</table>
Confirmatory factor analysis of entrepreneurial marketing

Confirmatory factor analysis method was used to determine the validity of entrepreneurial marketing. In Fig.6, factor loadings have been reported. The values written on paths are factor loadings. All factor loadings are higher than 0.3.
Findings related to fit indices for relationship with customer provided in Table 6 indicate that CFI, GFI, NFI, RMR and RMSEA has an acceptable level and these goodness fit characteristics show that the data of this study have a good fit with the factor structure of this scale and this indicates the alignment of questions with the entrepreneurial marketing structure.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Estimation</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square to freedom ratio ($\chi^2/df$)</td>
<td>0.12</td>
<td>$\chi^2/df &lt; 5$</td>
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<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.000</td>
<td>RMSEA &lt; 0.08</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>1</td>
<td>GFI &gt; 0.9</td>
</tr>
<tr>
<td>Adjusted Fit Index (AGFI)</td>
<td>1</td>
<td>AGFI &gt; 0.9</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>1</td>
<td>CFI &gt; 0.9</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>1</td>
<td>NFI &gt; 0.9</td>
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</table>

Testing research model

Fig. 7 shows the tested model with standardized values on each path. Red values indicate that the path is not significant. The rest of the coefficients are positive and significant.

Also, the t-coefficients of the tested model have been provided to evaluate the significance of the path coefficients. Notice that t-coefficients range between $-1.96$ and $2.58$ are significant at the 0.05 significance level and t-coefficients greater than $2.58$ are significant at the 0.01 significance level. The path coefficient results are expressed in the conclusion section.

4. CONCLUSION

This research was tested using structural equation model. The results of the model testing showed that the effect of customer orientation, product marketing capability and marketability on employment and market performance is positive and significant. The impact of financial resources on customer orientation, product marketing and marketability is negative and significant. The effect of the specific nature of the industry on customer orientation is not significant. The effect of the special nature of the industry on product marketing and marketability is negative and significant. The impact of government policy making on customer orientation, product marketing and marketability is positive and significant. The effect of government policy making on customer orientation, product marketing and marketability is positive and significant. The effect of social factors on customer orientation and marketability is positive and significant, but its effect on product marketing is not significant. The effect of entrepreneurial marketing on customer orientation, product marketing and marketability is positive and significant. The effect of pricing, technology factors, staff features, managers’ features, product quality and intra-organizational capability on entrepreneurial marketing
is positive and significant, but the effect of organizational features on entrepreneurial marketing is not significant. In addition, 22% of employment variance, 31% of market performance variance, 28% of customer orientation variance, 46% of product marketing variance, 34% of marketability variance and 53% of entrepreneurial marketing variance are explained by the variables of the research model. Also, the fit indices obtained for the tested model showed that the RMSEA index in the estimated model has an acceptable level with value of 0.064 and other fit indices such as CFI, GFI, NFI, and AGFI are equal to 0.97, 0.94, 0.95 and 0.92, respectively indicating good levels. These characteristics for goodness of fit confirm that the data of current study fits well with the factor structure of the model and hence the entrepreneurial marketing is valid and applicable in the microelectronics industry.

Friedman test was used to prioritize the components of the model. In this test, a score was assigned to each component affecting entrepreneurial marketing. The higher score obtained from the test indicates the higher priority. The results showed that the most important factors influencing product quality are pricing and entrepreneurial managers’ features. Then, resource management, intra-organizational capabilities, product marketing capabilities, customer orientation, financial resources, entrepreneurial staff features, social factors, marketability, government policy making, organizational features of entrepreneurial enterprise, technology factors and the specific nature of the industry are less important, respectively.

5. DISCUSSION

According to the findings, it can be shown that 1) Pricing has a positive and significant effect on entrepreneurial marketing. 2) Resource management has a positive and significant effect on entrepreneurial marketing. 3) Technology factors have a positive and significant effect on entrepreneurial marketing. 4) The entrepreneurial staff features have a positive and significant effect on entrepreneurial marketing. 5) The entrepreneurial managers’ features have a positive and significant effect on entrepreneurial marketing. 6) The quality of products has a positive and significant
effect on entrepreneurial marketing. 7) Intra-organizational features have a positive and significant effect on entrepreneurial marketing. 8) The special nature of industry has a negative and significant effect on product marketing and marketability but its effect on customer orientation is not significant. 9) Financial resources have a negative and significant effect on customer orientation, product marketing capability and marketability. 10) Government policy making has a positive and significant effect on customer orientation, product marketing capability and marketability. 11) Social factors have a positive and significant effect on customer orientation and marketability but its effect on product marketing capability is not significant. 12) Customer orientation has a positive and significant effect on employment and market performance. 13) Product marketing capability has a positive and significant effect on employment and market performance. 14) Marketability has a positive and significant effect on employment and market performance. These findings are in agreement with the results of researches done by Yang and Gabrielsson [22], Kilethong et al. [9], Nikfarjam and Zarifi [18], Miles et al. [20], Rezvani and Khazaee [21], Sarma et al.[21], Farahani, Shabani and Ghaffari [5] and Golabi et al. [6] and also the results do not differ significantly from other studies.

References


