

## Effect of Entrepreneurial Orientation and Marketing Capabilities on Greenhouse Businesses Performance in Jiroft County, Iran

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### ABSTRACT

The aim of this survey was to investigate the effect of entrepreneurial orientation and marketing capabilities on greenhouses businesses performance. The statistical population of the study consisted of all the greenhouse owners in Jiroft County (N= 1022). A sample size of 246 was selected using a stratified random sampling method (n= 246). Data was collected through a questionnaire. Content validity of the questionnaire was confirmed by a panel of experts. Construct validity and composite reliability of the research instrument were tested by estimating the measurement model and they were satisfactory after making the necessary corrections. The data were analyzed using Structural Equation Modeling technique. Results indicated that the total mean of the greenhouse businesses performance was at a level of lower than average and the customer performance had the highest average among the three dimensions of performance. Also, results showed that the two variables of entrepreneurial orientation ( $p$ -value= 0.001,  $\beta$ = 0.354) and marketing capabilities ( $p$ -value= 0.001,  $\beta$ = 0.501) had significant and positive effects on greenhouse businesses performance; accordingly, research hypotheses were supported. Based on the results of the study, planning and effort to improve and strengthen entrepreneurial orientation and marketing capabilities in greenhouses can considerably increase performance and sustain their activity in the competitive environment.

**Keywords:** Agribusiness, Customer performance, Financial performance, Structural Equation modeling technique.

### INTRODUCTION

Currently, dynamic business environment emphasizes on business performance (Zehir *et al.*, 2015) and firms need to closely understand and monitor the performance of their business to stay in the competition (Bayarcelik and Ozsahim, 2014). Generally, performance is deemed as the underlying index of business success in such a way that if a firm is able to identify the factors affecting performance, it will be able to

sustain its business activities in the competitive environment of the market (Lopez-Delgado and Dieguez-Soto, 2015). This issue is much more important in agribusinesses due to the facts that many of such businesses are at a nascent or emerging stage of the lifecycle (Zarafshani *et al.*, 2015), variety of variables affecting their performance and complexity of decision making process, being private businesses and greater competitiveness of their activity environments, different nature of their

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products and sale markets (Van Fleet *et al.*, 2014), and their risky business activities due to high fluctuations of climatic and economic conditions (Bagheri and Shabanali Fami, 2016). In this regard, Rezaei (2015) considers performance evaluation and proper understanding of the determinants affecting them as the main conditions for the survival and sustainability of agribusinesses. Meanwhile, the results of several studies suggest that due to the unique features of agribusinesses, especially the very diverse fields of their activities and extensiveness of market outlets, the two variables of Entrepreneurial Orientation (EO) and Marketing Capabilities (MCs) play the key roles in improving the performance of these businesses, while achieving a competitive advantage and excellence in an agribusiness will be very difficult without their strengthening and improvement (Mangeli, 2016).

Because of having a variety of climates, vast lands, and abundant sunshine, Iran is among the active countries in terms of cultivated area and agricultural production, especially greenhouse products (Rahbari *et al.*, 2013). Among the different regions of Iran, Jiroft County, located in southeastern Kerman Province with its geographically diverse environment and very remarkable capacity for producing agricultural products, has always been considered as one of the main agricultural hubs. Among the various farming systems in this county, greenhouse cultivation has had a special place with more than 1,050 hectares of greenhouse cultivation and about 172 tons of products, ranking the highest greenhouse cultivation area and the first place for producing greenhouse products in Iran, according to SKAJO (South of Kerman Agriculture-Jihad Organization, 2015). Despite the importance of greenhouse cultivation, the results of studies indicate that, regarding entrepreneurial development, greenhouse businesses generally in Iran and specifically in Jiroft County have encountered numerous obstacles in the policymaking, economic, infrastructure, and cultural fields. As a

results, the obstacles have caused the levels of EO of this type of business to be reduced to a large extent (Moradnejadi *et al.*, 2007). On the other hand, the surveys suggest that most greenhouse owners in this county have low MCs with a traditional marketing structure of business so that the customers' needs and expectations of the productions are not so much considered and the greenhouse owners do not follow appropriate pricing strategies and practices and marketing communications (Mangeli, 2016). Overall, such problems have lowered the financial and non-financial performance levels of greenhouse businesses in the county. Given the mentioned issues, the aim of this study was to investigate the effect of EO and MCs on greenhouses businesses performance in Jiroft County. Indeed, it should be stated that despite an increasing interest in research in the field of EO (Rauch *et al.*, 2009) and MCs (Theodosiou *et al.*, 2012), very few empirical studies have been conducted to date to study agribusiness performance (Katchova and Enlow, 2013) and, in particular, the relationship between EO and MCs with agribusiness performance (including greenhouses). Hence, this investigation and similar researches could somewhat fill the research gap in this area. On the other hand, although the relationship between the two variables of EO and MCs with performance has been assessed in the previous studies, the relationship between the variables and performance has been individually and separately evaluated and the concurrent relationships of those variables with each other have not yet been investigated in the form of an integrated model in those studies. This is an issue attempted to be considered in this research.

## MATERIALS AND METHODS

### Conceptual Framework and Development of Research Hypothesis

#### Firm Performance and Its Measurement Indicators

In a common definition, performance is considered as the accumulated results of all work activities in an organization (Robbins and Coulter, 2009). In other words, performance is an extensive concept and involves what a firm produces and the related areas. Regardless of how performance is defined, the obvious point is that performance measurement is a crucial element in improving business performance (Taticchi *et al.*, 2008). However, as performance is a multidimensional concept (Rauch *et al.*, 2009), several studies have employed numerous indicators to measure it (Zehir *et al.*, 2015). One of the most common measurement indicators is the use of operational (non-financial) and financial indicators (Venkatraman and Ramanujam, 1986). Financial measurement is associated with economic factors such as profitability and sales growth (Chiva and Alegre, 2009; Venkatraman and Ramanujam, 1986) and operational measurement is related to non-financial success factors in a firm, especially customer performance (Lee *et al.*, 2008). Another classification regarding performance measurement includes objective and subjective measurements (Zehir *et al.*, 2015; Dada and Watson, 2013). Objective measurement refers to quantitative measures that are in general the financial data and they come through the firm. However, subjective measurement depends on individuals' judgmental assessments and involves both financial and non-financial indicators (Gonzalez-Benito and Gonzalez-Benito, 2005). In the field of management, it is recommended to use subjective indicators because these facilitate the management of complex dimensions (Zehir *et al.*, 2015); and according to previous studies, they can accurately reflect a firm's financial measures (Lumpkin and Dess, 2001). Also, since the quantitative data related to financial performance of a firm have a sensitive nature and respondents are often reluctant to give these data (Walter *et al.*, 2006), they are very difficult to access (Zehir *et al.*, 2015).

### Entrepreneurial Orientation and Its Relationship with Firm Performance

Generally, EO is the tendency of a company to look for new market opportunities (Lumpkin and Dess, 1996) and it is a strategy-making process that characterizes a firm's entrepreneurship (Shan *et al.*, 2016) in terms of how much a firm behaves in decision-making methods and styles, product manufacture, provision of services and business practices in an entrepreneurial form (Covin and Lumpkin, 2011). Some experts have considered five dimensions of autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking (Lumpkin and Dess, 1996), but there is a greater consensus amongst researchers around the latter three dimensions (Wiklund and Shepherd, 2005). Accordingly, this study is focused on these three dimensions. The innovativeness dimension involves the search for novel, unusual, or creative solutions to challenges facing a firm. This includes the development of new products and services (Walter *et al.*, 2006). Risk-taking involves a firm's propensity to support projects in which the expected results are uncertain (Walter *et al.*, 2006). Proactiveness has been linked with aggressive posturing relative to the firm's competitors (Knight, 1997). It relates to efforts associated with being the first mover (Li *et al.*, 2009).

The concept of EO, regardless of the size and type of the business, is in close contact with all businesses (Knight, 1997) and numerous studies have shown that EO is a prerequisite to improve business performance (Rauch *et al.*, 2009; Dada and Watson, 2013). Due to this, in recent years, considerable empirical and theoretical attention has been focused on EO with the purpose of understanding the effect of entrepreneurial strategy-making processes on firm performance (Shan *et al.*, 2016). The results of empirical studies conducted on different firms in various countries indicated that firms with more EO have superior



performance (Hult *et al.*, 2003; Wiklund and Shepherd, 2003), although the empirical results are not altogether consistent. In fact, the study of the magnitude of the relationship between EO and performance has led to different results (Shan *et al.*, 2016). While most studies have found that businesses with stronger EO have better performance compared to other businesses with lower EO (Hult *et al.*, 2003; Wiklund and Shepherd, 2003), some studies have reported lower correlations between EO and performance (Lumpkin and Dess, 2001) and even in some studies no relationship has been observed between EO and performance (George *et al.*, 2001; Covin *et al.*, 1994). Therefore, the review of related literature suggests a considerable variation in the reported relationship between EO and performance. In total, as the results of the recent meta-analyses (Rauch *et al.*, 2009; Saeed *et al.*, 2014) have provided clear evidences, it can be concluded that the relationship between EO and performance is relatively strong and regardless of the firm characteristics and national context, EO leads to improved performance in the firm. According to these issues, the first hypothesis of this study was developed as following:

**Hypothesis 1:** EO has a positive and significant effect on greenhouse businesses performance.

### Marketing Capabilities and Its Relationship with Firm Performance

MCs refer to the integrative process of utilizing firm tangible and intangible resources in order to recognize the specific needs of customers, attain competitive product differentiation and to realize superior brand equity (Day, 1994). In general, the review of literatures suggests that MCs can be classified into two interrelated categories (Morgan *et al.*, 2009): capabilities related to individual processes of marketing such as product development and management, pricing, selling, marketing

communications, and management of marketing channels; and capabilities concerned with the processes of marketing strategy development and execution (Vorhies and Morgan, 2005). Both mentioned MCs as well as their composition are among the significant drivers of marketing effectiveness (Vorhies *et al.*, 2009). In fact, such capabilities may be rare, valuable, non-substitutable, and inimitable sources of advantages that can lead to superior firm performance (Vorhies and Morgan, 2005).

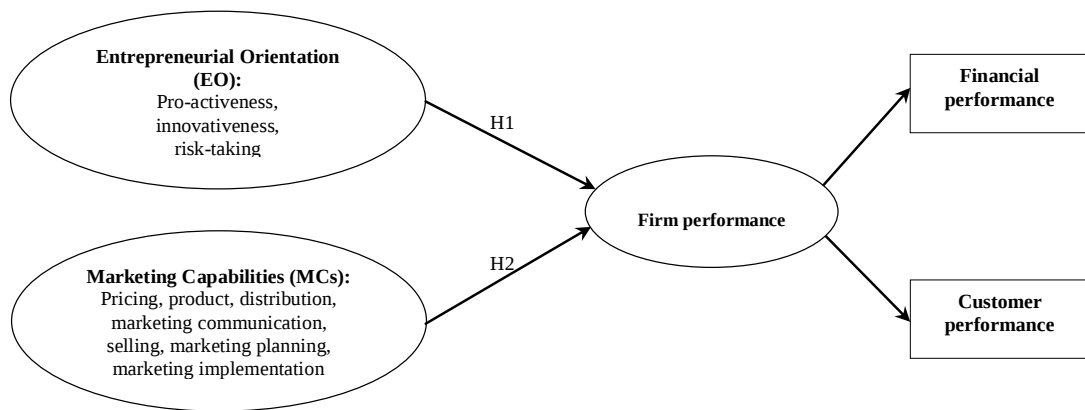
In recent years, the relationship between MCs and firm performance has been considered in numerous studies (Kamboja *et al.*, 2015; Vorhies *et al.*, 2009). Overall, the findings of these studies support a positive and significant relationship between MCs and firm performance (Krasnikov and Jayachandran, 2008). For example, Kamboja *et al.* (2015) in an investigation concluded that MCs affect a firm competitive advantage and, consequently, its performance. Silvia and Rajshekhar (2016) and Nath *et al.* (2010) in separate studies found that MCs significantly affect firm performance. Similarly, Morgan *et al.* (2009) and Ramaswami *et al.* (2009) in other investigations revealed that MCs were essential for performance and focus on strengthening them could considerably improve firm performance. According to the mentioned issues, the second hypothesis of this study was developed as follows:

**Hypothesis 2:** MCs have significant and positive effects on greenhouse businesses performance.

Based on the given discussion on firm performance and its relationship with EO and MCs, we propose the conceptual model shown in Figure 1.

### Study Location and Population

The statistical population of the study consisted of all the greenhouse owners of Jiroft County in Kerman Province (N= 1022). According to the Bartlett *et al.* (2001)



**Figure 1.** Research conceptual model and hypotheses.

Table, a sample of 246 respondents was selected from greenhouse owners in that county. Given the heterogeneous characteristics of the population among the strata (e.g. rural districts) and the disproportionate distribution of samples in different rural districts in the county, stratified random sampling method was used in order to have access to samples and complete the questionnaires (Table 1).

Data was collected through a semi-structured questionnaire composed of four parts of respondents profiles and questions related to measuring firm performance (financial and customer performance), EO,

and MCs. Table 2 presents a list of measurement items and their sources, response formats, and the method of measuring each part separately. Of course, it is noteworthy that since the context of this study was greenhouse business, some necessary modifications were applied to the questionnaires for adjusting the questions with the research field by taking into account the natures and specific features of agribusinesses, especially the greenhouses. To examine the validity of the questionnaire, face validity and construct validity (including convergent validity and discriminant validity) were used. The face

**Table 1.** The population and the number of samples assigned to each of the strata.

| Names of rural districts (Strata) | Number of population | Number of samples assigned to each of the strata |
|-----------------------------------|----------------------|--------------------------------------------------|
| Eslam Abad                        | 327                  | 76                                               |
| Halil                             | 295                  | 69                                               |
| Hosein Abad                       | 21                   | 5                                                |
| Boluk                             | 6                    | 2                                                |
| Rezvan                            | 374                  | 88                                               |
| Maskun                            | 26                   | 6                                                |
| Total                             | 1022                 | 246                                              |

**Table 2.** Ranking the performance components of the greenhouse businesses.

| Ranks | Components           | Mean (Out of 6) | Standard deviation |
|-------|----------------------|-----------------|--------------------|
| 1     | Customer performance | 3.28            | 1.176              |
| 2     | Profitability        | 2.63            | 1                  |
| 3     | Growth               | 2.43            | 1.066              |
| 4     | Total                | 2.78            | 1.08               |



validity of the questionnaire was examined and confirmed through comments given by faculty members and horticulture experts in the field of greenhouse. In terms of construct validity, convergent validity was examined via three different criteria including standardized factor loadings equal to or greater than 0.5, Average Variance Extracted (AVE) equal to or larger than 0.5, and Composite Reliability (CR) equal to or greater than 0.7 (Hair et al., 2010). Moreover, in order to test the discriminant validity based on the approach suggested by Hair et al. (2010), the AVE for each latent variable needs to be larger than the amount of Average Shared Squared Variance (ASV) and the Maximum Shared Squared Variance (MSV) among all latent variables in a measurement model. In addition to the validity of the instrument, CR was used to assess the reliability of the research instrument whose value for each latent variable must be greater than 0.7 (Hair et al., 2010). To evaluate the fit of the data, various indicators have been proposed by researchers (Byrne, 2010; Hair et al., 2010). In this study, these indicators included relative *Chi-square*, *IFI*, *GFI*, *CFI* and *RMSEA*. To test the research hypotheses in this study, a two-step procedure was used in the structural equation modeling. In the first step, measurement models of the research were estimated to evaluate the fit of the model and examine the validity and reliability of the research instrument. In the second step, the relationship between the variables and the test of the effect of constructs on each other was estimated based on the structural model. To analyze the data and estimate the measurement and structural models, the Graphic Software of AMOS<sub>20</sub> was employed.

## RESULTS

### Descriptive Results

The results of the research showed that the respondents' mean ages and work

experiences in the greenhouses were 36.93 and 4.98 years, respectively. In terms of ownership, 43% of the greenhouses were rental and 57% were owned. The results indicated that the mean number of the respondents' greenhouse halls was 3.07. According to the results, the average greenhouse area was 8665.96 m<sup>2</sup>. In terms of sale markets, the highest and lowest rates were related to the greenhouse owners that used to sell their products in the markets outside the province in the country (36.9%) and in the international markets (18.9%), respectively. Also, 28.7% of the respondents directly supplied their products to the markets, while most of them (76.5%) had an indirect supply. The results obtained from the research on ranking the performance components of the greenhouse businesses showed that, on the average, the components of customer performance and growth had the highest and lowest ranks, respectively. Additionally, the total mean of the greenhouse businesses performance was at a level lower than the average (Table 1).

### Measurement Models Estimation

In order to test the construct validity, reliability, and fit of the model, measurement models of the research including four separate models of financial performance, customer performance, EO, and MCs were estimated through the implementation of first-order confirmatory factor analysis. According to the results, after deleting five observed variables, the standardized loadings of other observed variables in the four measurement models were significant and greater than 0.5 (Table 2). Also, the values of AVE and CR calculated for all latent variables measured in the four measurement models were larger than 0.5 and 0.7, respectively (Table 1). Therefore, convergent validity and composite reliability of the research instrument were evident. The AVE's of all latent variables were larger than the MSV and ASV amounts in the four measurement

models, indicating satisfactory discriminant validity (Table 2).

As indicated in Table 4, various fit indices ranged from very good to excellent and all the four measurement models exhibited a good overall fit of the data.

### Structural Model Estimation

Prior to the implementation of the structural model, the two indices of Skewness and Kurtosis were applied for the multivariate normality test and the values

**Table 3.** Constructs, measurement items and reliability and validity tests.

| Latent and observed variables                                                                                                                      | Standardized loading | t-Value |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------|
| <b>Measurement model 1: Customer performance</b> (1= "Very low" and 5= "Very high")                                                                |                      |         |
| Customer performance (Lee <i>et al.</i> , 2008): CR= 0.862, AVE= 0.557, MSV= 0.213, ASV= 0.189                                                     |                      |         |
| Achieving customer satisfaction                                                                                                                    | 0.63                 | Fixed   |
| Keeping current customers                                                                                                                          | 0.89                 | 14.501  |
| Providing value for customers                                                                                                                      | 0.85                 | 12.188  |
| Attracting new customers                                                                                                                           | 0.64                 | 8.427   |
| Interacting with customers and effectively responding to their demands and needs                                                                   | 0.68                 | 8.901   |
| Encouraging customers to repeat purchase products (increasing customers' loyalty)                                                                  | Dropped              | -       |
| <b>Measurement model 2: Financial performance</b> (1= "Very low" and 5= "Very high")                                                               |                      |         |
| Growth (Venkatraman and Ramanujam, 1986; Chiva and Alegre, 2009; Li <i>et al.</i> , 2009): CR= 0.918, AVE= 0.791, MSV= 0.336, ASV= 0.274           |                      |         |
| Sales growth position relative to competition                                                                                                      | 0.93                 | Fixed   |
| Satisfaction with sales growth rate                                                                                                                | 0.94                 | 20.751  |
| Market share gains relative to competition                                                                                                         | 0.79                 | 14.003  |
| Profitability (Venkatraman and Ramanujam, 1986; Chiva and Alegre, 2009): CR= 0.924, AVE=0.753, MSV=0.336, ASV=0.189                                |                      |         |
| Satisfaction with return on firm investment                                                                                                        | 0.93                 | Fixed   |
| Net profit position relative to competition                                                                                                        | 0.75                 | 10.552  |
| Return on investment position relative to competition                                                                                              | 0.91                 | 13.784  |
| Financial liquidity position relative to competition                                                                                               | 0.87                 | 12.885  |
| <b>Measurement model 3: Entrepreneurial orientation</b> (1= "Strongly disagree," and 5= "Strongly agree")                                          |                      |         |
| Pro-activeness (Kreiser <i>et al.</i> , 2002): CR= 0.892, AVE= 0.679, MSV= 0.151, ASV= 0.140                                                       |                      |         |
| My business unit is often the first business to introduce new products and services.                                                               | 0.96                 | Fixed   |
| My business unit favors a strong emphasis on technological leadership                                                                              | 0.84                 | 17.711  |
| My business unit typically initiates actions to which competitors then respond.                                                                    | 0.82                 | 16.875  |
| My business unit typically seeks to avoid competitive clashes, preferring a "live-and-let live" posture                                            | 0.63                 | 10.443  |
| Innovativeness (Lumpkin and Dess, 1996): CR= 0.775, AVE= 0.534, MSV= 0.151, ASV= 0.099                                                             |                      |         |
| My business unit encourages people to think and behave in original and novel ways                                                                  | 0.76                 | Fixed   |
| My business unit is willing to try new ways of doing things and seek unusual, novel solutions                                                      | 0.73                 | 7.838   |
| My business unit actively responds to the adoption of "new ways of doing things" compared to our main competitors.                                 | 0.71                 | 7.132   |
| Risk-taking (Kreiser <i>et al.</i> , 2002): CR= 0.881, AVE= 0.718, MSV= 0.129, ASV= 0.088                                                          |                      |         |
| In general, my business unit have a strong proclivity for high risk projects                                                                       | 0.93                 | Fixed   |
| My business unit believe, owing to the nature of the environment, that bold, wide-ranging acts are necessary to achieve our firm objectives        | 0.96                 | 18.675  |
| When there is uncertainty, my business unit typically adopts a "wait-and-see" posture in order minimize the probability of making costly decisions | 0.61                 | 9.851   |

Table 3 Continued...



Table 3 Continued...

| Latent and observed variables                                                                                                                                                | Standardized loading | t-Value |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------|
| <b>Measurement model 4: Marketing capabilities</b> (1= "Not at all" and 7= "To a great extent")                                                                              |                      |         |
| Pricing capabilities (Morgan <i>et al.</i> , 2009): <i>CR</i> = 0.833, <i>AVE</i> = 0.625, <i>MSV</i> = 0.340, <i>ASV</i> = 0.139                                            |                      |         |
| Using pricing skills and systems to respond quickly to market changes                                                                                                        | 0.76                 | Fixed   |
| Knowledge of competitors' pricing tactics                                                                                                                                    | 0.80                 | 11.229  |
| Monitoring competitors' prices and price changes                                                                                                                             | 0.81                 | 11.284  |
| Product capabilities (Morgan <i>et al.</i> , 2009): <i>CR</i> = 0.894, <i>AVE</i> = 0.808, <i>MSV</i> = 0.340, <i>ASV</i> = 0.139                                            |                      |         |
| Improving quality of current products compared with the past                                                                                                                 | 0.92                 | Fixed   |
| Timely investment on making new products                                                                                                                                     | 0.88                 | 16.452  |
| Ensuring that product/service development efforts are responsive to customer needs                                                                                           | Dropped              | -       |
| Distribution capabilities (Morgan <i>et al.</i> , 2009): <i>CR</i> = 0.766, <i>AVE</i> = 0.523, <i>MSV</i> = 0.204, <i>ASV</i> = 0.088                                       |                      |         |
| Strength of relationships with distributors                                                                                                                                  | 0.74                 | fixed   |
| Attracting and retaining the best distributors                                                                                                                               | 0.73                 | 7.161   |
| Providing services support to products distributors and sales representatives                                                                                                | 0.70                 | 6.819   |
| Marketing communication capabilities (Morgan <i>et al.</i> , 2009; Vorhies and Morgan, 2005): <i>CR</i> = 0.862, <i>AVE</i> = 0.680, <i>MSV</i> = 0.338, <i>ASV</i> = 0.147  |                      |         |
| Developing and executing advertising programs                                                                                                                                | Dropped              | -       |
| Advertising management and creative skills                                                                                                                                   | 0.93                 | fixed   |
| Public relations skills                                                                                                                                                      | 0.85                 | 15.325  |
| Communicating effectively with customers and getting their feedbacks                                                                                                         | 0.67                 | 10.716  |
| Selling capabilities (Morgan <i>et al.</i> , 2009): <i>CR</i> = 0.729, <i>AVE</i> = 0.574, <i>MSV</i> = 0.394, <i>ASV</i> = 0.207                                            |                      |         |
| Familiarity with the principles and techniques of negotiation                                                                                                                | 0.72                 | fixed   |
| Analyzing past sales trends                                                                                                                                                  | Dropped              | -       |
| Sale and distribution management                                                                                                                                             | 0.79                 | 9.246   |
| Marketing planning capabilities (Morgan <i>et al.</i> , 2009): <i>CR</i> = 0.768, <i>AVE</i> = 0.534, <i>MSV</i> = 0.094, <i>ASV</i> = 0.053                                 |                      |         |
| Familiarity with marketing research to understand the needs and demands of customers and the strengths and weaknesses of competitors                                         | 0.90                 | fixed   |
| Marketing planning and effective selection of target market                                                                                                                  | 0.68                 | 8.563   |
| Developing creative marketing strategies                                                                                                                                     | 0.57                 | 6.770   |
| Marketing implementation capabilities (Morgan <i>et al.</i> , 2009; Vorhies and Morgan, 2005): <i>CR</i> = 0.743, <i>AVE</i> = 0.597, <i>MSV</i> = 0.394, <i>ASV</i> = 0.152 |                      |         |
| Allocating marketing resources effectively                                                                                                                                   | 0.88                 | fixed   |
| Organizing to deliver marketing programs effectively                                                                                                                         | 0.65                 | 7.055   |
| Executing marketing strategies quickly                                                                                                                                       | Dropped              | -       |

**Table 4.** Fit indices for the measurement models.

| Measurement models    | Fit indices |            |            |            |              |
|-----------------------|-------------|------------|------------|------------|--------------|
|                       | $\chi^2/df$ | <i>GFI</i> | <i>CFI</i> | <i>IFI</i> | <i>RMSEA</i> |
| Customer performance  | 1.610       | 0.987      | 0.993      | 0.993      | 0.056        |
| Financial performance | 1.812       | 0.971      | 0.991      | 0.991      | 0.065        |
| EO                    | 1.505       | 0.953      | 0.983      | 0.983      | 0.051        |
| MCs                   | 3.040       | 0.905      | 0.912      | 0.914      | 0.078        |

range between -0.421 and +0.358 and -0.801 and +0.512 were obtained, respectively. Accordingly, the data distribution was normal. The structural model of the study showed a direct relationship between the independent variables of EO and MCs and the dependent variable of greenhouse businesses performance. As indicated by the results of Table 4, based on the estimated amounts of the various fit indices, the structural model demonstrated a good fit to the data. Also, results showed a significant and positive relationship between EO ( $p$ -value= 0.001,  $\beta$ = 0.354) and MCs ( $p$ -value= 0.001,  $\beta$ = 0.501) with performance; accordingly, research hypotheses (1) and (2) were supported (Table 5). Also, according to the size of standardized coefficients, the effects of EO and MCs on performance can be regarded as moderately large. As Figure 2 indicates, the two variables of EO and MCs explain about 52 percent of the variances of greenhouse businesses performance.

DISCUSSION

The results of this study revealed that the first hypothesis was supported and EO had a significant and positive effect on greenhouse businesses performance. The results were consistent with the findings of numerous empirical studies such as Shan *et al.* (2016), Zehir *et al.* (2015), Saeed *et al.* (2014), Rauch *et al.* (2009), Wiklund and Shepherd (2003), and Hult *et al.* (2003). In this regard, Wiklund and Shepherd (2005) argued that firms adopting an entrepreneurial strategic posture and pursuing new solutions and risk-taking due to having a tendency to innovation will more likely generate and exploit new business opportunities and, therefore, they are elevated to greater performance. Risk-taking firms and pioneers in manufacturing new products are more dominant on the market, target the most profitable segments of the market, control the distribution

Table 5. Path estimates for structural model.

| Hypothesized paths | Unstandardize<br>d coefficient | Standard<br>Error | Standardize<br>d coefficient | t-<br>Value | Sig   | Hypoth<br>s test |
|--------------------|--------------------------------|-------------------|------------------------------|-------------|-------|------------------|
| EO→ Performance    | 0.671                          | 0.096             | 0.354                        | 6.989       | 0.001 | Support          |
| MCs→ Performance   | 0.812                          | 0.105             | 0.501                        | 7.733       | 0.001 | Support          |

Goodness-of-fit statistics:  $\chi^2/df$  = 2.141,  $GFI$ = 0.924,  $CFI$ = 0.932,  $IFI$ = 0.933,  $RMSEA$ = 0.067

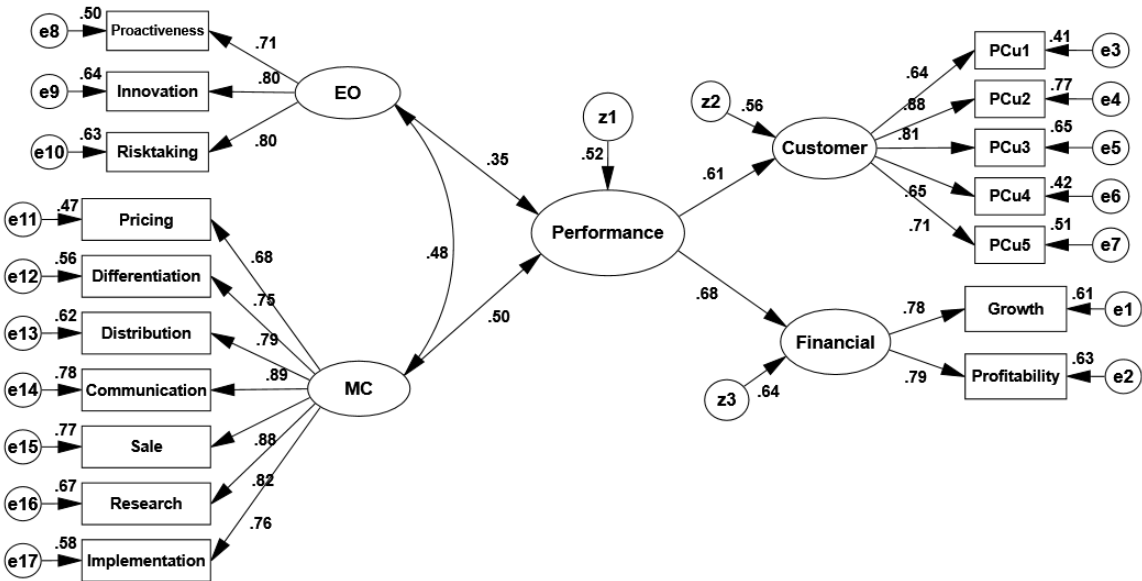


Figure 2. Final structural model with standardized estimates.



channels in the market, launch their products to the market as benchmarks (Zahra and Covin, 1995), and introduce themselves as technological leaders (Walter et al., 2006). Such measures, which significantly rejuvenate firms, increase the number of customers, market share (Zahra and Covin, 1995), and profitability (Walter et al., 2006) of the firm resulting in higher performance (Dada and Watson, 2013). Despite the importance of EO and its components, most greenhouse businesses in Jiroft County have low innovation levels, and the greenhouse owners have not been so much interested in using the new knowledge and technology to modify and improve their manufacturing practices or pioneer to test different innovative methods to produce new products (Mangeli, 2016). In addition to this, for various reasons, particularly low production and profitability levels of the greenhouses, lack of sufficient liquidity, capital, and funding, and weaknesses in providing the necessary supports from the government, many greenhouse owners in Jiroft County have had a low risk-taking level and been hardly willing to test and apply the ideas and projects of high risks and thus develop their businesses (SKAJO, 2015). In such circumstances, as Mangeli (2016) has emphasized, greenhouse owners prefer to perform their activities at a stable and peaceful condition instead of wishing to take a risk and innovation to earn more profits. Totally, the existence of such circumstances has caused the EO level of greenhouse businesses in Jiroft County to be low, an issue that has had a negative impact on business performance in the financial and customer aspects.

In terms of the second hypothesis, the results of the study suggested that MCs had a significant and positive effects on the greenhouse businesses performance in this county. These findings were consistent with the results of previous studies such as Kamboja et al. (2015), Nath et al. (2010), Ramaswami et al. (2009), and Vorhies et al. (2009). In this regard, Ahmed et al.

(2014) argued that MCs boost firms' sales level and increase their performance by helping to improve firms' understanding about the markets and customers as well as increasing the tendency of customers to buy the firms' products. Similarly, Theodosiou et al. (2012) emphasized that firms that maintain their MCs at a high level are in a better position to recognize and respond to existing and latent customer needs and establish long-term profitable customer relationships. Therefore, MCs can enhance the performance of firms in different ways; however, due to the traditional marketing structure, lack of familiarity with new marketing approaches, passive interactions of greenhouse owners with the market, and excessive interference of brokers, the MCs of greenhouse businesses in Jiroft County have largely declined. As revealed by the results of this study, more than three-quarters of the greenhouse owners supply their products to the market through brokers and do not have direct contact with customers, while this issue has led to lower profits for the greenhouse owners. Also, due to the lack of communication with customers and unawareness of their needs and expectations, one of the main problems of the greenhouse owners in Jiroft County is the lack of appropriate production according to market needs (SKAJO, 2015). Such problems are largely caused by weak MCs of the greenhouse owners and have reduced profitability and growth of greenhouse and, thus, leading to their low performance (Mangeli, 2016).

## CONCLUTIONS

In general, according to the results achieved and the aforementioned discussions, it can be stated that the greenhouse businesses in Jiroft County must have a deeper understanding of their performance and consider it in both financial and non-financial (customer) aspects. To achieve superior performance, they should strengthen their EO levels of businesses and enhance their MCs in different aspects.

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## تأثیر گرایش کارآفرینانه و قابلیت‌های بازاریابی بر عملکرد کسب و کارهای گلخانه-ای در شهرستان جیرفت، ایران

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### چکیده

هدف اصلی این تحقیق پیمایشی بررسی تأثیر گرایش کارآفرینانه و قابلیت‌های بازاریابی بر عملکرد کسب و کارهای گلخانه‌ای بود. جامعه آماری این تحقیق را ۱۰۲۲ نفر از گلخانه‌داران شهرستان جیرفت تشکیل دادند که یک نمونه ۲۴۶ نفری از آنان از طریق روش نمونه‌گیری طبقه‌ای با انتساب متناسب انتخاب شد. برای گردآوری داده‌ها از پرسشنامه استفاده شد. روایی محتوایی پرسشنامه با نظر پانلی از متخصصان مورد تأیید قرار گرفت و روایی سازه و پایایی ترکیبی ابزار تحقیق نیز از طریق برآورد مدل اندازه‌گیری و پس از انجام اصلاحات لازم به دست آمد. برای تجزیه و تحلیل داده‌ها از تکنیک چند متغیره مدل‌سازی معادلات ساختاری استفاده شد. نتایج تحقیق حاکی از آن بود که میانگین کل عملکرد کسب و کارهای گلخانه‌ای در سطح پایین‌تر از متوسط بوده و در بین سه مؤلفه مورد بررسی، عملکرد مشتری میانگین بالاتری داشت. همچنین، نتایج تحقیق نشان داد که دو متغیر گرایش کارآفرینانه ( $\beta=0/354$ ,  $p\text{-value}=0/001$ ) و قابلیت‌های بازاریابی ( $\beta=0/501$ ,  $p\text{-value}=0/001$ ) از اثر مثبت و معنی‌داری بر عملکرد کسب و کارهای گلخانه‌ای برخوردار بوده و بدین ترتیب، فرضیه‌های تحقیق مورد تأیید قرار گرفت. بر مبنای نتایج این تحقیق، برنامه‌ریزی و تلاش در راستای بهبود و تقویت سطح گرایش کارآفرینانه و قابلیت‌های بازاریابی در گلخانه‌ها می‌تواند به طور قابل توجهی منجر به افزایش عملکرد و پایداری‌تر شدن فعالیت آنها در محیط رقابتی شود.