

---

# Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Effect of Government's Role

<sup>1</sup>Melvin Mojikon, <sup>2</sup>Azizan Abdullah, <sup>3</sup>Sofian Shamsuddin

<sup>1</sup>Arshad Ayub Graduate Business School, Faculty of Business and Management,  
Universiti Teknologi MARA, Selangor, Malaysia

<sup>2</sup>Malaysian Academy of SME & Entrepreneurship Development, Universiti Teknologi MARA,  
Selangor, Malaysia

<sup>3</sup>Research and Industry Linkages, Universiti Teknologi MARA, Selangor, Malaysia

**Abstract** — Entrepreneurial Orientation (EO) has been defined as a strategic orientation method, which employed by firms to identify ways and in creating a specific set of opportunities through various decision-making skills and entrepreneurial practices. Hence, this study was conducted based on the phenomenon experienced by a number of manufacturing firms in Sabah, Malaysia, within the context of Small and Medium-Sized Enterprises (SMEs). The EO, moreover, was deemed as a multidimensional construct encompassing two dimensions, namely competitive aggressiveness and pro-activeness. The study took place in Sandakan which is situated in Sabah. Based on the attributes of EO consisting of competitive aggressiveness and pro-activeness, the results were statistically demonstrated a significant relationships with firm performance. Whereas the government, which usually plays an important role, as the moderator, portrayed an insignificant and non-influential role in strengthening the relationships between these two EO dimensions and firm performance.

**Keywords** – Entrepreneurial Orientation, Firm Performance, Government's Role, SMEs

---

## ARTICLE INFO

Received 1 November 2017

Received in revised form 5 December 2017

Accepted 20 December 2017

Published 30 December 2017

---

## I. Introduction

In relation to both developed and developing economies, the manufacturing sectors of Small and Medium-Sized Enterprises (SMEs) possess a vital role in the present business system. Krueger (2012) had posited that on a national level; particularly in regard to developing economies; an entrepreneurship concept, needs to address issues of threats and potential competition to the business as well as providing opportunities to allow for viable entrepreneurial operations and competitiveness. The success of the national industry is based on entrepreneurship. The importance of entrepreneurship can bring about a paradigm shift in the economic development of a country (Che Asnizah & Rohana, 2016).

Thus, SMEs ought to be watchful over the entrepreneurial practices, while still stressing on the effects upon the production of the firms, as well as the direction of the firms which can be detected excellently (Wiklund & Shepherd, 2003). Furthermore, SMEs especially in the manufacturing sectors in the Malaysian context is often the highlight of any discussion. Malaysian trading related to globalization and liberalization are some of the issues that contribute towards the increment of challenges faced by SMEs in the manufacturing sectors.

The vivid example can be seen in Sabah, which has been reported to have lower rates of establishment, as compared to the other states in the Peninsular. Sabah is in the eleventh position in the overall ranking of SMEs manufacturing sector population with only 1,382 small and medium-sized manufacturing firms. By viewing this an economic standpoint, SMEs possesses a vital advantage which allows them to enhance their performances by utilizing resources from sectors in both the state and national levels.

In the context of Sabah's SMEs' performance in the manufacturing sectors, all manufacturers are oriented towards managing their businesses. This is in regard to the context of their entrepreneurship acceptance in working toward the improvement of their firm performance. Better performing SMEs are open to EO and they have attempted to correlate their practices to EO to enhance their performances (Knight, 2012; Dess et al., 1997). Moreover, this is also supported by a study conducted by Zahra and Garvis (2000). This paper attempts to determine the significant relationship between two dimensions of EO (competitive aggressiveness and pro-activeness) and firm performance, and to examine the moderating effect of the government's role on the relationship between the two dimensions of EO and firm performance of SMEs' manufacturing firms in Sabah. Researchers focus on competitive aggressiveness and pro-activeness because these two dimensions of EO are less frequently investigated in the entrepreneurship literature and that they are distinct concepts with unique relationships to performance outcomes. Thus, investigating several EO dimensions at once may increase accuracy in the depiction of the EO construct (Lumpkin & Dess, 1996; Memili, Lumpkin & Dess, 2010).

## II. Research Context and Research Model

This paper constitutes part of a larger research which determines the significant relationship between EO and the firm performance, and scientifically intends to examine the moderating effect of the government's role on the relationship between EO and firm performance of small and medium-sized manufacturing firms in Sabah (see Figure 1).

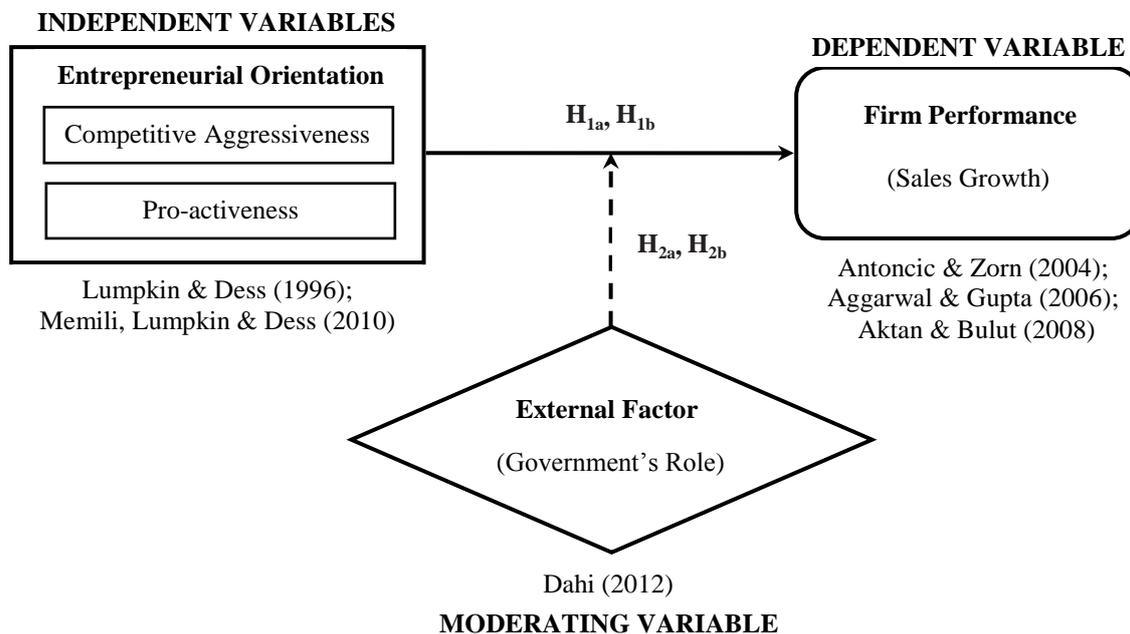


Figure 1: Research Model

EO (independent variables) is a firm-level strategic orientation that captures an organization's strategy-making practices, managerial philosophies, and firm behaviours, which are entrepreneurial in nature. EO has become one of the most established and researched constructs in the entrepreneurship literature (Lumpkin & Dess, 1996; Memili, Lumpkin & Dess, 2010). To be precise, a general commonality among past conceptualizations of EO is the inclusion of competitive aggressiveness and pro-activeness as the core defining aspects or dimensions of the orientation. Moreover, EO has been shown to be a strong predictor of firm performance (Lumpkin & Dess, 1996; Memili, Lumpkin & Dess, 2010). Reviews of the EO literature had

indicated that the majority of prior studies have adopted Lumpkin and Dess' perspectives of EO with the combination of competitive aggressiveness and pro-activeness.

As for the firm performance (dependent variable), it has been measured in terms of profitability of the firm and growth. The growth was measured by calculating the average number of employees' increment in the last three years together with the average growth sales in the past three years. Previous researchers had emphasized on sales growth as the common indicator of financial performance. Hence, the respondents measured the performance of the firm on sales growth for the last three years (Antoncic & Zorn, 2004; Aggarwal & Gupta, 2006; Aktan & Bulut, 2008).

On top of that, this study had been conducted by way of contributing to the improvement of the government's role as a moderator (moderating variable) based on the relationship between EO and firm performance. In this study, the government's role was incorporated as the moderator in order to determine if this construct played a significant role in strengthening the relationship of EO on performance (Dahi, 2012). The above discussion also led the authors to formulate the following hypotheses:

*Hypothesis<sub>1a</sub>: The competitive aggressiveness dimension of EO has a significant relationship with the firm performance of small and medium-sized manufacturing firms in Sabah.*

*Hypothesis<sub>1b</sub>: The pro-activeness dimension of EO has a significant relationship with the firm performance of small and medium-sized manufacturing firms in Sabah.*

*Hypothesis<sub>2a</sub>: The government's role is the moderate factor of the relationship between competitive aggressiveness and firm performance of small and medium-sized manufacturing firms in Sabah.*

*Hypothesis<sub>2b</sub>: The government's role is the moderate factor of the relationship between pro-activeness and firm performance of small and medium-sized manufacturing firms in Sabah.*

### **III. Research Method**

The unit of analysis in this study was pertaining to all small and medium-sized manufacturing firms in Sabah, Malaysia. The small and medium-sized manufacturing firms were mainly focused on the Sandakan Division in Sabah, consisting of one division and five districts namely, Sandakan, Beluran, Papar, Kinabatangan and Tongod.

This analysis applied Partial Least Squares-Structural Equation Modelling (PLS-SEM) techniques by using the SmartPLS 2.0 M3 software in order to investigate the relationship between the independent, dependent and moderating variables. Proportionate stratified random sampling was applied based on 65% (212 samples) as the stratum of 326 populations in the Sandakan Division of Sabah. In getting the primary data, self-administered questionnaire was the selected method for this analysis, in addition to the quantitative responses from the respondents which were based upon a 5-point of Likert-type scale reply.

### **IV. Data Collection**

212 self-administered questionnaires were used for data gathering from respondents. A multiple method of data collection was employed, whereby some questionnaires were mailed to the respondents, whilst some were e-mailed and personally administered. The process of distribution and collection of questionnaires was carried out over a period of three months. A total of 187 questionnaires was received and used for this analysis, which can be translated as an approximately 88.2% response rate.

### **V. Findings**

Construct validity testifies on how well the results were obtained from the use of the measurement that fit the theories along the designated test (Sekaran & Bougie, 2010). This can be assessed through convergent and discriminant validity. As such, if any, items which have a loading of higher than 0.5 on two or more factors, will be deemed to significant cross loadings. From Table 1 researchers can observe that all items measuring a particular construct were loaded highly on that construct and loaded lower on the other constructs, thus confirming construct validity.

Table 1: Loadings and Cross-Loading

	CA	FP	GR	PR
CA1	<b>0.752</b>	0.297	0.355	0.329
CA2	<b>0.884</b>	0.271	0.256	0.327
FP1	0.314	<b>0.721</b>	0.422	0.449
FP2	0.247	<b>0.685</b>	0.383	0.401
FP3	0.203	<b>0.731</b>	0.465	0.417
FP4	0.289	<b>0.746</b>	0.469	0.363
FP5	0.334	<b>0.777</b>	0.550	0.423
GR1	0.313	0.405	<b>0.682</b>	0.363
GR2	0.261	0.481	<b>0.769</b>	0.392
GR3	0.288	0.490	<b>0.735</b>	0.437
GR4	0.194	0.456	<b>0.717</b>	0.376
GR5	0.208	0.401	<b>0.685</b>	0.264
GR6	0.238	0.459	<b>0.712</b>	0.317
PR1	0.343	0.393	0.456	<b>0.694</b>
PR2	0.302	0.428	0.354	<b>0.722</b>
PR3	0.368	0.405	0.312	<b>0.796</b>

Bold values are loadings for items which are above the recommended value of 0.5

As suggested by Hair et al. (2010), researchers had used factor loadings, composite reliability, and the average variance extracted, to assess convergent validity. The loadings for all items exceeded the recommended value of 0.5 (Hair et al., 2010). Composite reliability values (see Table 2), which depicted the degree to which the construct indicators indicate the latent construct ranged from 0.782 to 0.878 which exceeded the recommended value of 0.6 (Hair et al., 2010). The average variance extracted (AVE) had measured the variance captured by the indicators which were seen as relative to the measurement error, and it should be greater than 0.50 in order to justify the construct (Barclay et al., 1995). The average variance which has been extracted, were in the range of 0.508 and 0.674.

Table 2: Results of Measurement Model

Model Constructs	Measurement Item	Loading	CR <sup>a</sup>	AVE <sup>b</sup>
Competitive Aggressiveness	CA1	0.739	0.804	0.674
	CA2	0.788		
Firm Performance	FP1	0.721	0.852	0.537
	FP2	0.685		
	FP3	0.731		
	FP4	0.746		
	FP5	0.777		
Government's Role	GR1	0.682	0.878	0.508
	GR2	0.769		
	GR3	0.735		
	GR4	0.717		
	GR5	0.685		
	GR6	0.712		
	GR7	0.684		
Pro-activeness	PR1	0.672	0.782	0.546
	PR2	0.768		
	PR3	0.746		

<sup>a</sup> Composite reliability (CR) = (square of the summation of the factor loadings)/{(square of the summation of the factor loadings)+(square of the summation of the error variances)}

<sup>b</sup> Average variance extracted (AVE) = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings)+(summation of the error variances)}

The discriminant validity of the measurements (the degree to which items differentiate among constructs or measure distinct concepts) was assessed by examining the correlations between the measured of potentially

overlapping constructs. Items should load more strongly upon their own constructs in the model, and the average variance shared between each construct, and its measurements which should be greater than the variance shared between the construct and other constructs (Compeau et al., 1999). As shown in Table 3, the squared correlations for each construct are less than the average variance extracted by the indicators measured thus indicating that the construct has adequate discriminant validity. In total, the measurement model demonstrated adequate convergent validity and discriminant validity.

Table 3: Discriminant Validity of Constructs

Constructs	CA	FP	GR	PR
<b>Competitive Aggressiveness</b>	<b>0.721</b>			
<b>Firm Performance</b>	0.380	<b>0.732</b>		
<b>Government's Role</b>	0.344	0.629	<b>0.713</b>	
<b>Pro-activeness</b>	0.461	0.561	0.511	<b>0.739</b>

Diagonals (in bold) represent the average variance extracted while the other entries represent the squared correlations

The validity of the hypotheses postulated, as well as the structural model, had been determined by assessing the path coefficient between two and three latent variables. Based on studies that had been conducted previously, the value of the path coefficients should be about 0.1 in order to explain a specific effect in the model (Hair et al., 2011; Wetzels et al., 2009). When the path coefficient was assessed in Table 4, it had been found that all of hypotheses are supported, with the exception of Hypothesis<sub>1a</sub>. Based on the analysis, the supported hypotheses had projected significant levels at about 0.01 and 0.05, containing expected sign directions (for instance, positive) and path coefficient beta value ( $\beta$ ) that ranged between 0.192 and 0.284.

Table 4: Path Coefficients, T-value, and Significant Level for All Hypothesized Paths

Hypothesis	Relationship	Coefficient	T-value	Significance Level	Results
<b>H<sub>1a</sub></b>	Competitive Aggressiveness -> Firm Performance	0.192	2.174*	0.05	Supported
<b>H<sub>1b</sub></b>	Pro-activeness -> Firm Performance	0.284	2.601**	0.01	Supported
<b>H<sub>2a</sub></b>	Competitive Aggressiveness Government's Role -> Firm Performance	-0.021	0.077	Insignificant	Not Supported
<b>H<sub>2b</sub></b>	Pro-activeness Government's Role -> Firm Performance	-0.011	0.533	Insignificant	Not Supported

\*\*p < 0.01, \*p < 0.05

Table 4 and Figure 2 shows the existence of a significant relationship between the performance of a firm (sales growth) coupled with competitive aggressiveness for small as well as medium-sized manufacturing firms in Sabah ( $\beta = 0.192$ ,  $t = 2.174$ ,  $p < 0.05$ ) was shown. Therefore, it can be inferred that Hypotheses<sub>1a</sub> has considerable support. Similarly, firm performance in small as well as medium-sized manufacturing firms in Sabah has been influenced constructively through competitive aggressiveness.

The outcomes in Table 4 and Figure 2 show that pro-activeness has a positive influence on the performance of a firm for small as well as medium-sized manufacturing firms in Sabah ( $\beta = 0.284$ ,  $t = 2.601$ ,  $p < 0.01$ ). There is support for Hypothesis<sub>1b</sub>, which confirms that firm performance (sales growth) is influenced extensively by a proactive nature within small as well as medium-sized manufacturing firms in Sabah.

As illustrated in Table 4 and Figure 3, the result obtained from the research indicated that the government's role does not play a considerable moderating role in the performance of the firm. Conversely, Hypothesis<sub>2a</sub> ( $\beta = -0.021$ ,  $t = 0.077$ , insignificant) and Hypothesis<sub>2b</sub> ( $\beta = -0.011$ ,  $t = 0.533$ , insignificant) do not have any support. Similarly, the government's role may not be moderated positively by the relationship between EO dimensions (i.e. competitive aggressiveness and pro-activeness) and performance of the firm within the small as well as medium-sized manufacturing firms in Sabah.

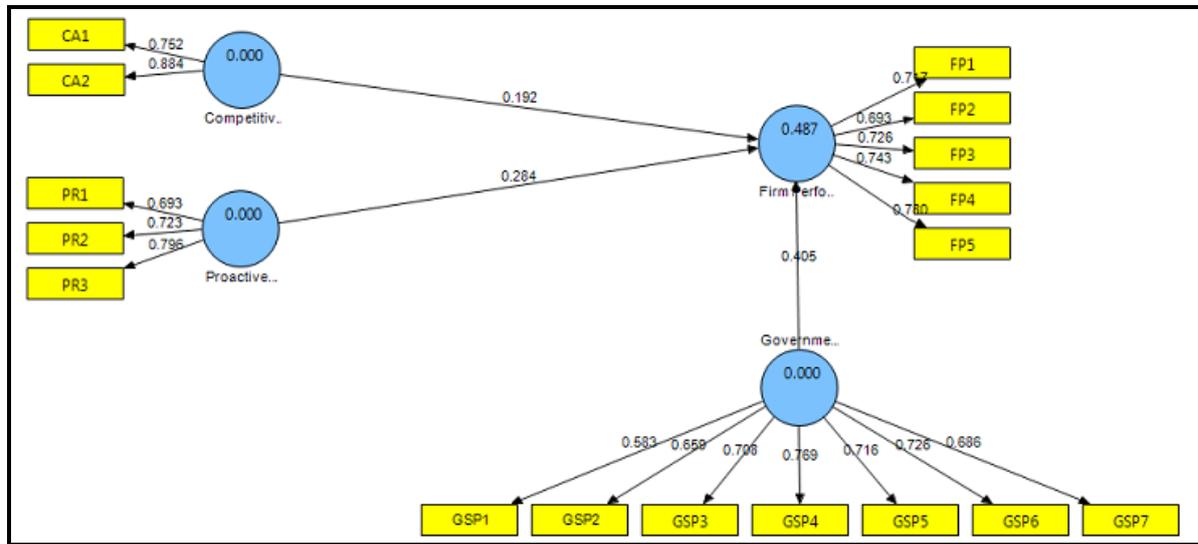


Figure 2: Results of the Path Analysis (Before the Existence of Moderator)

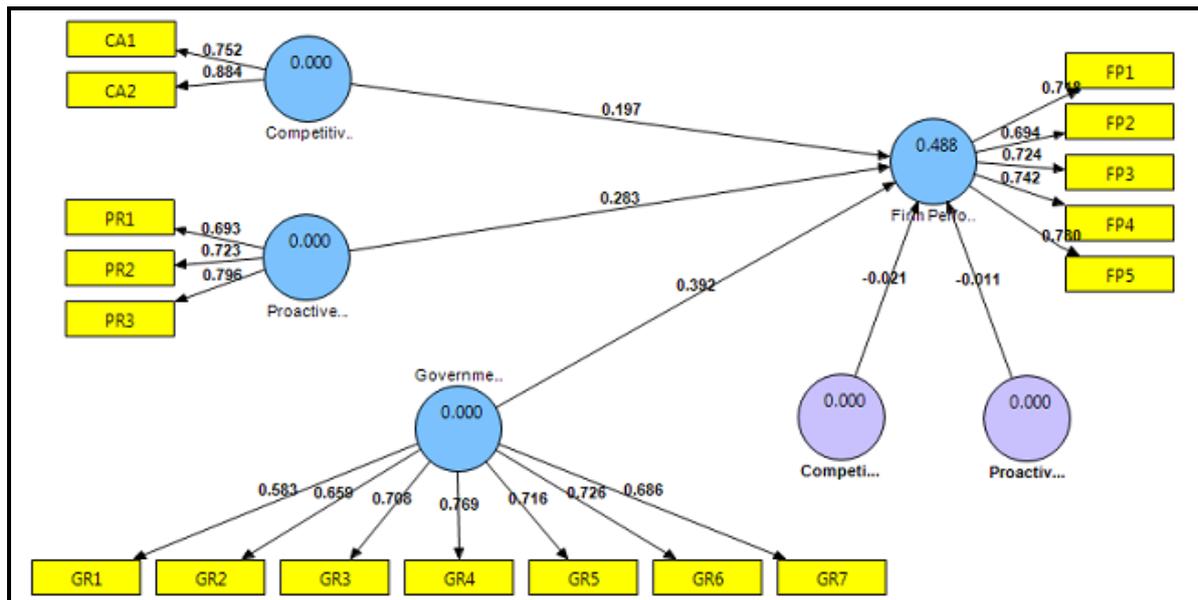


Figure 3: Results of the Path Analysis (After the Existence of Moderator)

**VI. Discussion and Conclusion**

The PLS-SEM analysis proved that the competitive aggressiveness and pro-activeness of SMEs displayed a considerable correlation with the performance of firms. This could be attributed to the notion that the large number of firms that took part in this study consisted of micro and small firms, thus such organizations are managed in an autocratic style for survival reasons (Coulthard, 2007). Throughout this view, it can be concluded that small as well as medium-sized manufacturing firms’ performance is largely influenced by the EO, thus the adoption of such elements in the process of strategic planning would enhance growth and firm survival.

It was revealed that the government had formulated policies aimed at developing EO in SMEs, yet during its implementation, it was not fully achieved because the bank that the government had selected prohibitive terms and conditions on loan application for small as well as medium-sized manufacturing firms in Sabah. A particular said term required the firms to have a collateral, which SMEs lacked, during the application of bank

loans. In view of this, it may be imperative to conclude that the government has been unable to oversee the relationship involving the EO and small as well as medium-sized manufacturing firms in Sabah. The finding is concurrent with the research conducted by Dahi (2012).

Interestingly, the government's role is not seen as a factor that has a significant effect on the prosperity of local SMEs that have attained a global status. Government's role is regarded as an ineffective factors in the

success of the firms. The issues that are mostly addressed by SMEs include absence of:

- 1) Informal consultation networks.
- 2) Local communication policies.
- 3) Recognition of opportunities that can enhance economic development.

Although the government provides these support, it seems like it is difficult for SMEs to access them. However, regardless of the inaccessibility of the government's role, SMEs still strive to become more successful.

Based on the test results, it can be confirmed and concluded that the government's role did not moderate the effect of the dimension of competitive aggressiveness and pro-activeness on the performance of a firm. This has proven that the government's role cannot be viewed as a moderating variable due to their zero effect on competitive aggressiveness and pro-activeness.

## References

- Aggarwal, N., & Gupta, M. (2006). Marketing performance measures: *Current Status in Indian Companies Decision*, 33(1), 47-74.
- Aktan, B., & Bulut, C. (2008). Financial Performance Impacts of Corporate Entrepreneurship in Emerging Markets: A Case of Turkey. *European Journal of Economics, Finance and Administrative Sciences*, 12.
- Antonicic, B., & Zorn, O. (2004). The mediating role of corporate entrepreneurship in the organizational support-performance relationship: an empirical examination. *Managing Global Transitions*, 2(1), 5-14.
- Barclay, D. W., Thompson, R., & Higgins, C. (1995). The partial least squares (PLS) approach to causal modeling: personal computer adoption and use an illustration. *Technol. Stud.*, 2(2), 285-309.
- Che Asnizah, O., & Rohana, N. (2016) "Assessing Sustainable Competitive Advantage in Relation with Intellectual Capital, Knowledge Management and Innovativeness in Women-Owned SMEs in Malaysia". *Journal of International Business, Economics and Entrepreneurship*, 1(1), 46-51.
- Chow, W. S., & Chan, L. S. (2008) Social network and shared goals in organizational knowledge sharing. *Inf. Manag.*, 45(7), 24-30.
- Compeau, D. R., Higgins, C. A., & Huff, S. (1999). Social cognitive theory and individual reactions to computing technology: a longitudinal-study. *MIS Q*, 23(2), 145-158.
- Coulthard, M. (2007). The Role of Entrepreneurial Orientation on Firm Performance and Potential Influence of relational Dynamism. *Journal of Global Business and Technology*, Spring 2007, 29-39.
- Dahi, E. (2012). Financial Challenges That Impede Increasing the Productivity of SMEs in Arab Region, *Journal of Contemporary Management* submitted on 12/July/2012.
- Dess, G. G., Lumpkin, G. T., & Covin, J. G. (1997). Entrepreneurial Strategy Making and Firm Performance: Tests of Contingency and Configurational Models. *Strategic Management Journal*, 18, 677-695.
- Fornell, C., & Larcker, D. F. (1981) Evaluating structural equation models with unobservable variables and measurement error. *J Mark Res*, 18(1), 39-50.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2011) *Multivariate data analysis*. Prentice-Hall, Upper Saddle River.
- Hughes, M., & Morgan R. E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. *Industrial Marketing Management*, 36, 651-661.
- Knight, G. (2012) Entrepreneurship and Marketing Strategy: The SMEs under Globalization. *Journal of International Marketing*, 8, 12-32.
- Krueger, N. F. (2012). The cognitive infrastructure of opportunity emergence. *Entrepreneurship Theory Practice*, 24(3), 5-23.

- Li, Y. H., Huang, J. W., & Tsai, M. T. (2009). Entrepreneurial Orientation and Firm Performance: The Role of Knowledge Creation Process. *Industrial Marketing Management*, 38(4), 440-449.
- Lumpkin, G., & Dess, G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance. *Academy of Management Review*, 21(1), 135-172.
- Memili, E., Lumpkin, G. T., & Dess, G. G. (2010). Entrepreneurial orientation: the driving force for corporate entrepreneurship. In Peter Mazzola & Franz W. Kellermanns (2010). *Handbook of Research on Strategy Process*, 335. Edward Edgar: Cheltenham, UK.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: a skill building approach*. Wiley, UK.
- Wetzels, M., Odekerken-Schroder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 33(1), 177-195.
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307-1314.
- Zahra, S. A., & Garvis, D. M. (2000). International Corporate Entrepreneurship and Firm Performance: The Moderating Effect of International Environmental Hostility. *Journal Business Venturing*, 15, 469-492.