

Market orientation level, organizational structure, and environmental context: Examine the Jaworski and Kohli framework

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Received:04/01/2021 Accepted:07/24/2021 Published: 12/30/2021

Abstract:

The purpose of this research is to examine the relationship among market-orientation strategies, organizational structure, and environmental uncertainty, depending on Jaworski and Kohli framework. Where, the market-orientation was studied through three strategies: generation of market intelligence, dissemination of the intelligence among the departments, response to the knowledge derived from the market intelligence. Organizational structure was studied through three dimensions: formalized, centralized, and specialized. The environmental uncertainty was studied through market turbulence and competitive Intensity. Where, the study was conducted by distribute a questionnaire on a group of Algerian enterprises. Where the results indicated that Algerian SMEs have adopted market-oriented strategies to some extent under organizational structures that are centralized and specialized. After factor analysis, we tested two hypotheses using structural equation modeling. We found that the environmental uncertainty have a significant impact on market-orientation strategies. As well as, centralization and specialization have also an impact on market-orientation strategies.

Key words: market orientation, organizational structure, environmental uncertainty.

JEL classificationcodes: M31

المخلص

الغرض من هذا البحث هو دراسة العلاقة بين استراتيجيات التوجه السوقي، الهيكل التنظيمي، وعدم اليقين البيئي، اعتمادًا على إطار عمل Jaworski and Kohli، حيث تمت دراسة التوجه السوقي من خلال ثلاث استراتيجيات: توليد معلومات السوق، نشر المعلومات الاستخبارية بين الأقسام، الاستجابة للمعرفة المستمدة من معلومات السوق. تمت دراسة الهيكل التنظيمي من خلال أبعاد الرسمية، المركزية، التخصص. تمت دراسة عدم اليقين البيئي من خلال اضطراب السوق وشدة المنافسة. أجريت الدراسة بتوزيع استبيان على مجموعة من المؤسسات الجزائرية، حيث أشارت النتائج إلى أن المؤسسات الجزائرية الصغيرة والمتوسطة تبنت استراتيجيات موجهة نحو السوق إلى حد ما في ظل هياكل تنظيمية مركزية ومتخصصة. و بعد التحليل العاملي، اختبرنا فرضيتين باستخدام تقنية النمذجة بالمعادلات الهيكلية. وجدنا أن عدم اليقين البيئي له تأثير كبير على استراتيجيات التوجه نحو السوق. بالإضافة إلى ذلك، فإن المركزية و التخصص لهما أيضًا تأثير على استراتيجيات التوجه السوقي.

الكلمات المفتاحية: التوجه السوقي، الهيكل التنظيمي، عدم اليقين البيئي.

تصنيف JEL: M31

How to cite this article by the APA method:

Fatima BOUHELAL, Lakhdar ADOUKA (2021), *The Algerian Approach To South-South Economic Cooperation And The Challenge Of Export Market orientation level, organizational structure, and environmental context: Examine the Jaworski and Kohli framework*, *Economic Researcher Review*, Volume 09 (Issue.02), Algeria: University of Skikda, pp168-181

1. Introduction

Jaworski and Kohli (1993) emphasized that recent years have witnessed a renewed emphasis on delivering superior quality products and services to customers. Because customer needs and expectations continually evolve over time (Jaworski & Kohli, 1993, p. 53), and providing consistently high quality products and services requires continuous tracking and response to changing market needs. During the 1990s, there was a renewal of academic in the marketing concepts and the market orientations of firms. The extant literature suggests that market orientation is an organization wide endeavor, where practice depends to a significant degree on the organization's management philosophy. Therefore, there have been two streams of research related to market orientation: The first stream according to Narver and Slater (1990) focused on the study of organizational and philosophical culture to assess the degree of companies' market orientation, which is what is known as the cultural perspective. (Narver & Slater, 1990, p. 21), (Kirca & al, 2005, p. 24). The second stream according to Jaworski and Kohli, (1990,1993), has focused on understanding how specific market-oriented activities are undertaken and the types of organizational systems that promote such activities, which is what is known as the behavioral perspective (Jaworski & Kohli, 1993, pp. 54-55), (Kuada & Buatsi, 2005, p. 58), (Kirca & al, 2005, p. 24), (Hwang & Norton, 2014, pp. 4-5).

Most studies have sought to understand market orientation and its impact on business performance, focusing on the study of Jaworski and Kohli (1993), Narver and Slater (1990) study also provided empirical support for the supposed relationship between market orientation and business performance, however, Kuada and Buatsi's (2005) study confirmed that firms in developed countries consider the market orientation to be a natural business philosophy for several reasons (Kuada & Buatsi, 2005, pp. 58-59): First, consumers in developed countries are sophisticated and conscious of their rights. Therefore, firms cannot afford to ignore the needs of these consumers if they want to stay competitive. Second, the intensity of competition among firms in these countries is high, and the supply of most products outstrips their demand at any given point. These conditions combine to encourage higher degrees of customer and competitor orientation. However, the concept and practice of market orientation also had a share in most developing countries, because the latter vary widely in their tempo of development.

Most studies came to explore the market orientation of firms and the impact of these orientations on their business performance. The objective of the current study is to review the Jaworski and Kohli's (1993) framework to explore the linkages among organizational variables and market-oriented behavior by identifying the importance of internal management functions in understanding the process of developing market-oriented behavior in Algerian enterprises. The study focuses on the internal determinants of market orientation in line with the results of some previous studies.

This article is organized as follows: First, review contemporary literature on market orientation to describe the theoretical framework that facilitates applied study. Determining the variables of the study, determining the sample, methods of data collection that we adopted in the study, and then presenting and discussing the results of the data analysis.

The present study, therefore, is based on the Jaworski and Kohli (1993) framework, which is an important basis for studying how are Algerian enterprises practice a market-oriented strategy, by trying to understand how extent generation of market intelligence, dissemination of the intelligence, response to the knowledge derived from the market intelligence. In addition, we attempt to examine the effect of organizational characteristics (Organizational Structure) on the market-oriented behavior of the Algerian enterprises in question, we also tried to consider the relationship of market orientation to environmental uncertainty, where we adopted in our referential point of view on variables (items) existing in framework of Jaworski and Kohli(1993).

2. Theoretical Framework.

The theoretical framework of the current study is studying the relationship among market-oriented strategies, environmental uncertainty and organizational structure; it is therefore based on

contingency theory on the one hand and the resource-based view on the other hand in strategic management theory. According to Barney (1991) and based on the theory of resources, the heterogeneity among firms in terms of resources makes them permanently associated with the perception and implementation of strategies that create value as a basis for interpreting the performance of these firms (Barney, 1991, pp. 100-101), in this regard, Theriou and al (2009) emphasize that competitive success is governed by the capability of organizations to develop new knowledge-based assets that create core competencies. Thus, critical input in production and primary source of value is knowledge. (Theriou & al, 2009, p. 179). Resource-based theory also points to the importance of interaction among the company's knowledge sources, this suggests that the market orientation and marketing capabilities of the firm may interact to enable the company to disseminate resources in its market environment better than its competitors (Morgan & al, 2009, pp. 910-911) .

Contingency theory includes contingency factors that define the characteristics of the organizational structure (Burns & Stalker, 1961, p. 125), and generally, determine structural variables (Child, 1972, p. 2). Where, organizational structure refers to a firm's conceptual and functional framework and its resource configuration (Hwang & Norton, 2014, p. 3), theorists Kohli and Jaworski (1990) have posited associations between market orientation and three dimensions of organizational structure: formalization, centralization, and specialization (Jaworski & Kohli, 1993, p. 56), (Hwang & Norton, 2014, p. 3) . Formalization is a degree to which behavior is limited to work rules, regulations, policies, and procedures. It is the degree to which an organization specifies a set of rules or codes to govern how work is conducted (Hernaus & al, 2013) . According to Jaworski and Kohli (1993), properly designed rules can facilitate market orientation rather than hindering it, it is also the formal rules and regulations which guide employees in discharging their responsibilities (Kuada & Buatsi, 2005, p. 67). According to Ugochi Austina. & al (2018), centralization refers to the concentration of decision-making authority at the upper levels of an organization. (Ugochi Austina. & al., 2018, p. 61). According to Jaworski and Kohli (1993), centralization is effective in small organizations that operate in relatively stable environments, but as organizations grow, the operational environment becomes complex. Here, we find that centralization constrains organizations' innovative capacity, customer orientation, and performance. Thus, improved and sustained market orientation may require coordinating structures that enhance management's ability to handle uncertainties in a rapidly changing environment, Conversely, decentralized structures permit flexibility and variety in the choice of knowledge acquisition methods and the interpretations that organizational members bring to the information generate (Kuada & Buatsi, 2005, p. 67) . According to Jaworski and Kohli, (1993), specialization refers to the number of departments into which organizational activities are segregated and compartmentalized (Jaworski & Kohli, 1993, p. 56).

Jaworski and Kohli, (1993) identified market-oriented organizations as the organizations that respond to customer needs and can meet their preferences well, therefore it has higher levels of performance. Market orientation essentially involves doing something new or different in response to market conditions; it may be viewed as a form of innovative behavior (Jaworski & Kohli, 1993, p. 57) .

Kohli and Jaworski (1990) define "market orientation" as constituting three components:

1. organization-wide generation of market intelligence pertaining to current and future customer needs;
2. Dissemination of the intelligence across departments of the organization;
3. organization wide responsiveness to the knowledge derived from the market intelligence (Jaworski & Kohli, 1993, p. 54), (Kuada & Buatsi, 2005, p. 62), (Hooley & al, 1999, p. 262).

The responsiveness component is defined as being composed of two sets of activities-response design (i.e., using market intelligence to develop plans) and response implementation (i.e., executing such plans). This definition focuses on specific behaviors and therefore facilitates operationalizing the market orientation construct (Jaworski & Kohli, 1993, p. 54).

The second stream of research that based on the work of Narver and Slater (1990), perceives market-oriented firms as follows:

1. Firms that are customer oriented (i.e., they gain intimate insight into customer needs and market service requirements);
2. Firms that are competitor oriented (i.e., they gain understanding of competitors' capabilities and market response patterns);
3. Firms that show a high level of interfunctional coordination (i.e., they coordinate the utilization of company resources to create superior customer value) (Narver & Slater, 1990, pp. 21-22), (Hooley & al, 1999, p. 262). Narver and Slater (1990) consider market orientation as an organizational culture that mobilizes the participation of all employees to create high value for its clients as well as high performance for itself. In a study of Dobni and Luffman (2000) they also considered market orientation as the culture that influences the way employees think and behave (Kuada & Buatsi, 2005, p. 63).

According to Lawrence and Lorsch, (1967), an organization is an active system which tends to reach out and order its otherwise overly complex surroundings so as to cope with them effectively, these environments can range from highly dynamic to extremely stable. Thus, different environments in which organizations are active are characterized by instability (Lawrence & Lorsch, 1967, pp. 4-5), so, we also find that the contingency factors include the complexity of external environment, which is the intensity of competition and market turbulence (the rate of change in customers and preferences composition) (Hwang & Norton, 2014, p. 5) , both Kohli and Jaworski, (1990), asserted that environmental instability from these two factors affects market orientation (market orientation probably is robust across various market contexts) (Hwang & Norton, 2014, p. 3), (Matsuno & Mentzer, 2000, p. 1). According to Lusch and Laczniak (1987), in highly competitive business environments, firms tend to increase their sensitivity and responsiveness to customer needs, thus, they are more market-oriented (Hwang & Norton, 2014, p. 3) . According to Jaworski and Kohli (1993), organizations operating in turbulence market are likely to continuously modify their products and services to meet changing customer preferences, so firms in the more turbulent markets are likely to be more market oriented, As for competitive Intensity, both Houston (1986) and Kohli and Jaworski (1990) have asserted that in the absence of competition, the organization may perform well even if not well market-oriented, but this does not prevent that market orientation is more important determinant under highly competitive conditions (Jaworski & Kohli, 1993, p. 57)

3. Review of literature and hypotheses

The researchers conducted several studies to test the validity of the Jaworski and Kohli (1993) framework in terms of market orientation. Were, the study of Zaltman, Duncan, and Holbek (1973) confirmed that formalization, specialization, and allocation may be inversely related to the generation and dissemination of market intelligence and the design of the organization's response but are positively related to response implementation (Jaworski & Kohli, 1993, p. 56) , (Hwang & Norton, 2014, p. 4). Stampfl (1978) has shown that formalization and centralization are inversely correlated with the organization's response (Jaworski & Kohli, 1993, p. 56) , (Hwang & Norton, 2014, p. 4). Deshpandé and Zaltman (1982) comphirmed that the more decentralized and less formalized firms are more likely to make greater (and perhaps better) use of the market research information. (Deshpandé & Zaltman, 1982, pp. 24-25) , Hwang and Norton (2014) hypothesized that each of the three dimensions of organizational structure (i.e., formalization, centralization, and specialization) negatively affects the intelligence generation and dissemination and response design MO behavioral strategies, but positively affects response implementation. (Hwang & Norton, 2014, p. 5).

The results of the Jaworski and Kohli (1993) study indicate that market orientation is linked to top management, top management risk aversion and interdepartmental conflict, centralization, formalization and specialization, reward system, market orientation is also linked to overall performance, organizational commitment to staff, and spirit of teamwork. Finally, researchers found

that the link between market orientation and performance is strong across environmental contexts characterized by a degree of market turbulence, competitive intensity, and technological turbulence (Jaworski & Kohli, 1993, pp. 58-64). The results of the Matsuno and Mentzer (2000) study indicated that there were moderating effects of business strategy type on strength of the relationship between market orientation and business performance (Matsuno & Mentzer, 2000, p. 1). Kirca and al. (2005), emphasized that market orientation can help firms to achieve sustained success through identify and satisfy customer needs more effectively than their competitors. (Kirca & al, 2005, p. 24). The results of the Kuada and Buatsi (2005) study indicate that Ghanaian firms are concerned with market orientation as the business philosophy. They also improve their understanding of customer needs (Kuada & Buatsi, 2005, pp. 69-84). Morgan, and al (2009) emphasized that market orientation has a direct impact on corporate assets return, and that marketing capabilities directly affect on assets return and corporate performance (Morgan & al, 2009, p. 909).

The results of the Hwang and Norton (2014) study indicate that market-oriented strategies have been adopted under organizational structures that are formalized and centralized, there are significant effects of formalization and specialization on market orientation strategies, they found also that two aspects of environmental uncertainty significantly affect market-orientation strategies (Hwang & Norton, 2014, pp. 4-12).

Under these studies we can formulate the following hypotheses:

Hypothesis 1: There is a significant effect of the organizational structure dimensions on behavioral strategies of market orientation.

Hypothesis 2: There is a significant effect of the two aspects of environmental uncertainty on the behavioral strategies of market orientation.

3. Empirical study

3.1. Sample identification and data collection

The data was collected personally by the questionnaire that was directed at a sample of managers and their assistants, the questionnaire was explained before it was answered to achieve the research objectives, where the questionnaire sent to a group of small and medium enterprises, including its departments and sections, at the level of seven states located in the north-west of Algeria according to the administrative division of the National Bureau of Statistics (Statistiques., (2012), p. 68) . A total of 160 questionnaires were distributed on the basis of the number of small and medium enterprises and the departments of the sample of the study randomly, 129 of them were retrieved, representing 80.62 % of all distributed forms.

We used modeling structural equations to analyze data. Relying on a group of previous research: Hwang & Norton. (2014); Küster & Vila. (2011); Morgan & al. (2009); Kuada & Buatsi. (2005); Han, & al. (1998).

3.2. Methodology

In order to identify the strategic variables that characterize the Algerian small and medium organizations, we focused on three variables: the market-orientation through three strategies: generation of market intelligence, dissemination of the intelligence among the departments, response to the knowledge derived from the market intelligence. The second variable is organizational structure through formalized, centralized, and specialized dimensions. The last variable is environmental uncertainty through market turbulence and competitive Intensity. These variables were measured based on the items derived from the Jaworski and Kohli (1993) study.

To measure the items of these variables, we used Likert scale of five degree to measure response intensity according to the following coding: from strongly disagree (1) to strongly agree (5) (Brown, (2011), pp. 10-14).

The reliability of each scale was estimated by calculating the Cronbach alpha Coefficient, which are acceptable in management and behavioral studies if they exceed the levels recommended by Nunnally (1978) (value of 0.70 or greater) (Rothbard & Edwards, (2003), p. 713). According to Hwang (2005), Schuessler (1971) considers that the Cronbach alpha coefficient is good if it has a value greater than (0.60) (Hwang, (2005)., pp. 127-135).

3.3. Results

a. Reliability analysis of items

We used the Cronbach alpha coefficient to measure the reliability of items that measure study variables, which included four dimensions of market orientation strategies (generation of market intelligence, dissemination of the intelligence among the departments, response to the knowledge derived from the market intelligence (Response design, Response implementation)), three dimensions of organizational structure (formalization, centralization and specialization), environmental uncertainty was measured by market turbulence and competitive intensity. The results are listed in Table (1), where we found the value of Cronbach alpha acceptable and statistically significant according to Nunnally (1978) study.

Table (1): Reliability test results

| Study Variable s Test | Market Orientation Strategies | | | | Organizational Structure | | | Environmental uncertainty | |
|---------------------------------|-----------------------------------|-----------------------------------|-----------------|-------------------------|--------------------------|----------------|----------------|---------------------------|-----------------------|
| | Generation of market Intelligence | Dissemination of the Intelligence | Response Design | Response Implementation | Formalization | Centralization | Specialization | Market Turbulence | Competitive Intensity |
| Cronbach Alpha | 0,947 | 0,935 | 0,829 | 0,725 | 0,880 | 0,659 | 0,631 | 0,811 | 0,893 |

Source: Prepared by the researcher based on SPSS20 outputs

Through the Table (1), we note that the results of the Cronbach alpha test matches to the minimum Cronbach alpha acceptable in the management and behavioral studies.

3.5.Factor analysis

To test the validity of the scale, we conducted exploratory and confirmatory factor analysis for scales used in the study.

a. Construct reliability by exploratory factor analysis

The exploratory factor analysis reduces data size and abstraction and reduces many variables to a small number of factors based on the coefficient of correlation between variables. The analysis of the study variables by factor analysis is based on a number of assumptions that are considered as conditions for accepting the results:

- The existence of a sufficient number of correlations statistically significant in the rotation matrix.
- The value (KMO*) should not be less than 60% to fit the sample.
- Bartlett's Test of Sphericity** should not be less than one.
- The value of the accumulated contributions of the items should be more than 50%.
- Eigen values are not less than one.

Exploratory factor analysis with varimax rotation was performed on the data for four Market Orientation strategies, the three dimensions of organizational structure, and the two aspects of environmental uncertainty to extract the relevant latent variables. Where:

A suitable exploratory factor analysis was found with the KMO sample accuracy by 85.6% for market orientation, 79.2% for organizational structure and 85.4% for environmental instability. The value of the Bartlett test was statistically significant at (0.05), where the number of these factors is determined by those that have the Eigen Value greater than or equal to one to select the extracted factors.

b. Exploratory factors analysis of market-oriented variable***

The Statistical Analysis Program (SPSS) was used to conduct the exploratory factors analysis of Market-oriented variable. Table (2) shows the process of exploratory analysis consisting of a

* The KMO test determines if the factors represent the statements appropriately and should be between 0.5 and 1

** The objective of the Bartlett's test is to determine the matrix of correlations and the overall significance of all links. The significance of this test should be less than 0.05

*** From the Q1 statement to the Q31 statement.

number of statements (the total numbers are 31 items). According to the results of factors analysis, items 6, 17, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 were excluded to become 19 items instead of 31 items.

Table (2) : Exploratory factors analysis of market-oriented variable

| Items | Factors | | |
|-------|---------|-------|-------|
| | 1 | 2 | 3 |
| Q1 | , 906 | | |
| Q2 | , 906 | | |
| Q3 | , 901 | | |
| Q4 | , 811 | | |
| Q5 | , 818 | | |
| Q7 | , 843 | | |
| Q8 | , 715 | | |
| Q9 | , 863 | | |
| Q10 | | , 955 | |
| Q11 | | , 729 | |
| Q12 | | , 772 | |
| Q13 | | , 960 | |
| Q14 | | , 850 | |
| Q15 | | , 751 | |
| Q16 | | , 792 | |
| Q18 | | | , 978 |
| Q19 | | | , 786 |
| Q20 | | | , 791 |
| Q21 | | | , 915 |

| | | |
|--|---------------------------|----------|
| % Accumulaties | | 77,922 |
| Precision measurement of Kaiser-Meyer-Olkin sampling | | ,856 |
| Bartlett Sphericity Test | Approximate chi-square | 3174,187 |
| | df | 171 |
| | Signification of Bartlett | 0,000 |

Source: Prepared by the researcher based on SPSS20 outputs

The results revealed three factors of the Market-oriented by 77,922 of the variance. Factor 1 (generation of market intelligence) included 8 items with a loading value from 0, 715 to 0, 906. Factor 2 (dissemination of the intelligence) included 7 items with a load value from 0, 729 to 0, 960. Factor 3 (Response Design) included 4 items with a load value from 0, 786 to 0, 978. Factor 4 (Response Implementation: include 7 items) was deleted because the factorial matrix after rotation did not include high loading values. Through these results 12 items were deleted. (Note the table (2)).

c. Exploratory factors analysis of organizational structure variable *

The Statistical Analysis Program (SPSS) was also used to conduct the exploratory analysis of organizational structure variable. Table (3) shows the process of exploratory analysis consisting of a number of statements (the total numbers are 18 items). According to the results of the analysis, items 37, 41, 42, 43, 44, 45, 46 were excluded to become 11 items instead of 18 items.

Table (3) . Exploratory factors analysis of organizational structure variable

| Items | Factors | | |
|-------|---------|---|-------|
| | 1 | 2 | 3 |
| Q32 | , 741 | | |
| Q33 | , 632 | | |
| Q34 | , 869 | | |
| Q35 | , 849 | | |
| Q36 | , 820 | | |
| Q38 | | | , 537 |
| Q39 | | | , 765 |

* From the Q32 statement to the Q49 statement.

| | | | |
|-----|--|-------|-------|
| Q40 | | | , 552 |
| Q47 | | , 640 | |
| Q48 | | , 975 | |
| Q49 | | , 662 | |

| | | |
|--|---------------------------|---------|
| % Accumulaties | | 60,359 |
| Precision measurement of Kaiser-Meyer-Olkin sampling | | ,792 |
| Bartlett Sphericity Test | Approximate chi-square | 718,427 |
| | df | 55 |
| | Signification of Bartlett | 0,000 |

Source: Prepared by the researcher based on SPSS20 outputs

The results revealed three factors of organizational structure by 60,359 of the variance. Factor 1 (Formalization) included 5 items with a loading value from 0, 632 to 0, 869. Factor 2 (Specialization) included 3 items with a load value from 0, 640 to 0, 975. Factor 3 (Centralization) included 3 items with a load value from 0, 537 to 0, 765. Through these results 7 items were deleted. (Note the table (3)).

d. Exploratory factors analysis of environmental uncertainty variable *

The Statistical Analysis Program (SPSS) was also used to conduct the exploratory analysis of environmental uncertainty variable. Table (4) shows the process of exploratory analysis consisting of a number of statements (the total numbers are 11 items). According to the results of the analysis, items 54, 55 were excluded to become 9 items instead of 11 items.

Table (4) . Exploratory factors analysis of environmental uncertainty variable

| Items | Factors | |
|-------|---------|-------|
| | 1 | 2 |
| Q50 | | , 684 |
| Q51 | | , 661 |
| Q52 | | , 933 |
| Q53 | | , 725 |
| Q56 | , 668 | |
| Q57 | , 839 | |
| Q58 | , 710 | |
| Q59 | , 717 | |
| Q60 | , 811 | |

| | | |
|--|---------------------------|---------|
| % Accumulaties | | 63,469 |
| Precision measurement of Kaiser-Meyer-Olkin sampling | | ,854 |
| Bartlett Sphericity Test | Approximate chi-square | 686,623 |
| | df | 36 |
| | Signification of Bartlett | 0,000 |

Source: Prepared by the researcher based on SPSS20 outputs

The results revealed two factors of environmental uncertainty by 63,469 of the variance. Factor 1 (Competitive Intensity) included 5 items with a load value from 0, 668 to 0, 839. Factor 2 (Market Turbulence) included 4 items with a loading value from 0, 661 to 0, 933. Through these results 2 items were deleted. (Note the table (4)).

e. Construct reliability by confirmatory factor analysis

This method is based on the Amos.v21 statistical program. In light of the assumption that the heterogeneity matrix of the variables involved in the analysis and the matrix is assumed by the model,

* From the Q50 statement to the Q60 statement.

many indicators of the quality of this conformance are produced and the assumed model of data is accepted or rejected. With conformity quality indicators **, are as follows:

4-2-1- Overall fit of the measurement model

The overall fit of the measurement model was assessed by six goodness-of-fit measures (chi square, chi square/degrees of freedom ratio, standardized root mean square residual, root mean square error of approximation, goodness-of-fit index, and goodness-of-fit index adjusted for the degrees of freedom), As well as through other indicators. Note the test results in Table (5).

Table (5). goodness-of-fit indexes of model

| Goodness-of- fit indexes | index value | The ideal range of the index |
|-------------------------------------|--|---|
| The probability ratio of chi square | chi square= 265.343 df= 154 P-value= 0.000 | As small as possible Preferably zero |
| chi square/degrees of freedom | 1.723 | 1 < NC < 5 Preferably 1 < NC < 3 |
| GFI | 0.843 | 0 < GFI < 1 preferably greater than 0.95 |
| AGFI | 0.786 | 0 < AGFI < 1 preferably greater than 0.90 |
| RMSEA | 0.075 | 0,05 ≤ RMSEA < 0,08 Preferably less or equal to 0.05 |
| IFI | 0.929 | 0 < IFI < 1 preferably greater than 0.95 |
| NFI | 0.847 | 0 < NFI < 1 preferably greater than 0.90 |
| CFI | 0.928 | 0 < CFI < 1 preferably greater than 0.95 |
| TLI | 0.911 | 0 < TLI < 1 preferably greater than 0.95 |
| AIC | 377.343 | As small as possible compared to a previous model |
| ECVI | 2.948 | As small as possible compared to a previous model |
| SRMR | 0.079 | Preferably smaller than 0.08 |

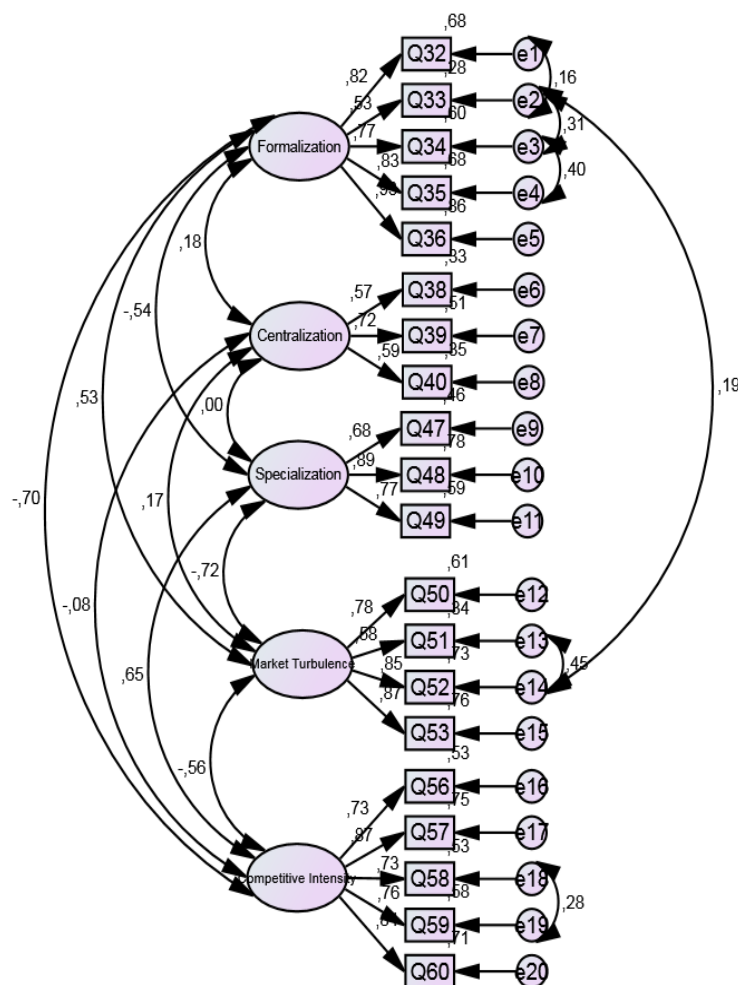
Source: Prepared by the researcher based on Amos.v21 outputs.

Based on a study of Hwang & Norton. (2014); Küster & Vila. (2011); Morgan & al. (2009); Kuada & Buatsi. (2005); Han, & al. (1998).

Table (5) shows that all goodness-fit indexes are almost existing within the ideal range for each indicator, so the model is fairly good. Figure (1) shows the schematic diagram of the factor model paths after the first and second modification which we took from the results of the Amos statistical package.

** Means the extent to which the theoretical model matches the data.

Fit Indices:
 CMIN: 265,343
 DF : 154
 P : ,000
 CMIN/DF : 1,723
 CFI : ,928
 TLI : ,911
 RMSEA : ,075



Hypothesis testing and discussion of results

Evaluation of the structural model

The construction model is the model that shows a set of causal relationships among a set of observed and unobserved variables of each latent variable. Through our study we will try to study the effect of the organizational structure and environmental uncertainty's items on the behavioral strategies for market orientation of Algerian enterprises. Before examining the impact of these items, we will attempt to evaluate the overall or structural model through the goodness-of-fit indexes that shown in Table (6) below:

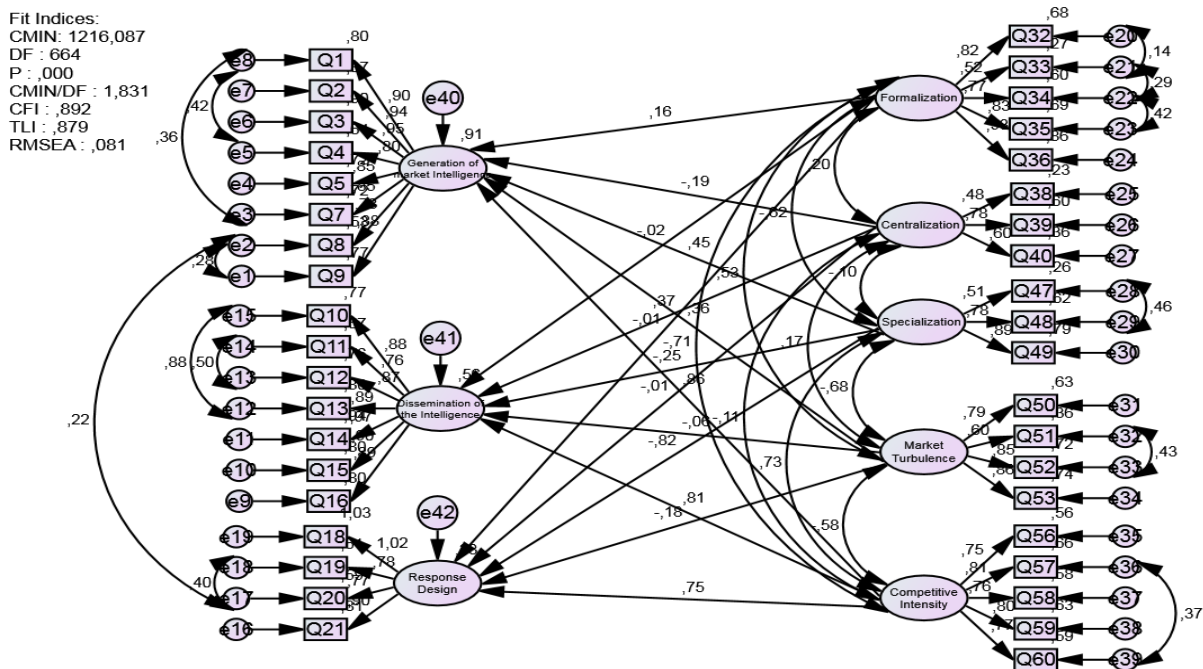
Table (6). Goodness-of-fit indexes of structural model of the impact of the organizational structure and environmental uncertainty on the behavioral strategies for market orientation of Algerian enterprises

| Goodness-of- fit indexes | index value | The ideal range of the index |
|-------------------------------------|---|---|
| The probability ratio of chi square | chi square= 1216.087 df= 664 P-value= 0.000 | As small as possible Preferably zero |
| chi square/degrees of freedom | 1.831 | 1 < NC < 5 Preferably 1 < NC < 3 |
| GFI | 0.710 | 0 < GFI < 1 preferably greater than 0.95 |
| AGFI | 0.660 | 0 < AGFI < 1 preferably greater than 0.90 |
| RMSEA | 0.081 | 0,05 ≤ RMSEA < 0,08 Preferably less or equal to 0.05 |
| IFI | 0.894 | 0 < IFI < 1 preferably greater than 0.95 |

| | | |
|------|----------|--|
| NFI | 0.792 | $0 < \text{NFI} < 1$ preferably greater than 0.90 |
| CFI | 0.892 | $0 < \text{CFI} < 1$ preferably greater than 0.95 |
| TLI | 0.879 | $0 < \text{TLI} < 1$ preferably greater than 0.95 |
| AIC | 1448.087 | As small as possible compared to a previous model |
| ECVI | 11.313 | As small as possible compared to a previous model |
| SRMR | 0.0875 | Preferably smaller than 0.08 |

Source: Prepared by the researcher based on Amos.v21 outputs.

Table (6) shows that the model has contained fairly good values for indicators, Figure (2) below shows the schematic diagram of the factor model paths after the first and second modification that we took from the results of the Amos statistical package.



5-2- Hypotheses testing

« organizational structure's components and environmental uncertainty components are positively affecting the behavioral strategies for market orientation of Algerian enterprises »

The hypotheses was tested using structural equation modeling (SEM) and modified data according to factor analysis. Structural equation modeling allows simultaneous testing the effects of external structures on the internal structures and the structures themselves on each other, as well as the relationships among the external structures. Our study included two external variables (organizational structure and environmental uncertainty), and one internal variable (market orientation strategies). The following table (7) shows the results of the structural equation modeling for the hypotheses test.

Table (7). Results of SEM estimation for hypotheses testing

| | | | Estimate | Standard error | Critical ratio | p value |
|---|------|-----------------------------------|---------------|----------------|----------------|-------------|
| F1 : Generation of market Intelligence | <--- | F4 : Formalization | ,163 | ,089 | 1,838 | ,066 |
| F2 : Dissemination of the Intelligence | <--- | F4 : Formalization | -,017 | ,127 | -,137 | ,891 |
| F3 : Response Design | <--- | F4 : Formalization | -,013 | ,132 | -,100 | ,920 |
| F1 : Generation of market Intelligence | <--- | F5 : Centralization | -,521 | ,194 | -2,692 | ,007 |
| F2 : Dissemination of the Intelligence | <--- | F5 : Centralization | 1,089 | ,327 | 3,333 | *** |
| F3 : Response Design | <--- | F5 : Centralization | -,020 | ,257 | -,077 | ,938 |
| F1 : Generation of market Intelligence | <--- | F6 : Specialization | 1,153 | ,323 | 3,569 | *** |
| F2 : Dissemination of the Intelligence | <--- | F6 : Specialization | -,674 | ,409 | -1,647 | ,100 |
| F3 : Response Design | <--- | F6 : Specialization | -2,016 | ,556 | -3,623 | *** |
| F1 : Generation of market Intelligence | <--- | F7 : Market Turbulence | ,413 | ,103 | 3,991 | *** |
| F2 : Dissemination of the Intelligence | <--- | F7 : Market Turbulence | -,068 | ,139 | -,490 | ,624 |
| F3 : Response Design | <--- | F7 : Market Turbulence | -,202 | ,148 | -1,366 | ,172 |
| F1 : Generation of market Intelligence | <--- | F8 : Competitive Intensity | 1,115 | ,164 | 6,784 | *** |
| F2 : Dissemination of the Intelligence | <--- | F8 : Competitive Intensity | 1,127 | ,218 | 5,175 | *** |
| F3 : Response Design | <--- | F8 : Competitive Intensity | ,944 | ,229 | 4,125 | *** |

*Significant at $p < .001$

Discussion of results

The results of structural equation modeling have supported the hypothesis in which it says that there is a significant effect of the organizational structure dimensions and the two aspects of environmental uncertainty on behavioral strategies of market orientation of the Algerian enterprises under study. Where, the centralization dimension has a negative impact on generation of market intelligence, where the path coefficient was in the equation of multiple regression (0,521) which is significant at the level of $p < 0.01$. This what Kuada and Buatsi, (2005) confirmed in his study that improved and sustained market orientation may require coordinating structures that enhance management's ability to handle uncertainties in a rapidly changing environment, conversely, decentralized structures permit flexibility and variety in the choice of knowledge acquisition methods and the interpretations that organizational members bring to the information generate. As well as, Zaltman and Holbek (1973), Stampfl (1978) confirmed that there is inversely correlated between centralization and generation of market intelligence, dissemination of the intelligence, and response design.

However, the impact of centralization on the dissemination of the intelligence was positive, where the path coefficient was in the equation of multiple regression (1,089) which is significant at the level of $p < 0.01$, such as what came in the study of Hwang and Norton, (2014).

Where, the specialization dimension has also a positive impact on generation of market intelligence, where the path coefficient was in the equation of multiple regression (1,153) which is significant at the level of $p < 0.01$. This what Hwang and Norton, (2014) confirmed in his study. But, specialization dimension has a negative impact on response design, where the path coefficient was in the equation of multiple regression (2,016) which is significant at the level of $p < 0.01$.

With regard to environmental uncertainty, with market turbulence and competitive intensity, it also has a positive impact on market-oriented strategies. Where, the aspect of market turbulence has a positive impact on generation of market intelligence, where the path coefficient was in the equation of multiple regression (0,413) which is significant at the level of $p < 0.01$. Where, Both Kohli and Jaworski, (1990), asserted that environmental uncertainty affects market orientation.

However, competitive intensity was have also a positive impact on generation of market intelligence, dissemination of the intelligence, and response design, by path coefficients which was in the equation of multiple regression (1,115), (1,127), (0,944) respectively, which are significant at the level of $p < 0.01$. This what came in the study of Lusch and Laczniak (1987), that the organizations that are in more competitive environments are more market-oriented. As well as, the study of Houston (1986) and Kohli and Jaworski (1990) have asserted that market orientation is more important determinant under highly competitive conditions.

III- Conclusions, contributions, and implications

We found that:

The centralization was had a negative impact on generation of market intelligence.

The centralization was had a positive impact on dissemination of the intelligence.

The specialization dimension was had also a positive impact on generation of market intelligence.

Specialization dimension was had a negative impact on response design.

The aspect of market turbulence was had a positive impact on generation of market intelligence.

Competitive intensity was had also a positive impact on generation of market intelligence, dissemination of the intelligence, and response design.

So, there is a significant impact of the organizational structure dimensions and the two aspects of environmental uncertainty on behavioral strategies of market orientation of the Algerian enterprises under study.

These results probably mean that the validity of the Jaworski and Kohli (1993) framework in terms of market orientation is existing, this supports the previous studies results.

The implications of this research relate to the possibility that many enterprises in Algeria can achieve higher levels of performance as well as a competitive advantage that will keep them active if they can adopt market-oriented strategic behavior.

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