

Investigating the Measurement Scale of Blue Ocean Strategy: A Structural Equation Modeling

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Abstract

This study aims to determine the construct validity of the Multi-dimensional Blue ocean strategy Scale within the telecommunication market in the Hashemite Kingdom of Jordan. The study involves a quantitative investigate approach via a questionnaire-based survey of all individuals working in the telecommunication market in the Hashemite Kingdom of Jordan which totalling about (1000) individuals. A total of (150) respondent returned questionnaires, of which (23) questionnaires were discarded due to the lack of some information. Thus, the total of (127) valid questionnaires was finally obtained. A Structural Equation Modeling was used through exploratory and Confirmatory factor analysis using Statistical Package for the Social Sciences and Amos Ver. 22 to evaluate construct validity. The study reveals that the blue ocean strategy constructs consisted multiple factors confirmed that the loadings for seventeen items were over (0.50). The study provides practical evidence for the testable scales that are both reliable and valid. This gives a new practical insight into blue ocean strategy philosophy. As to the managerial implications, blue ocean strategy dimensions cover most of the Initiatives used in the organizations which will affect the levels of excellence superiority on the long range. The study contributes to scientific assistance in business strategy domain. Furthermore, blue ocean strategy philosophy, validated through exploratory and confirmatory factor analysis, is a thorough and reliable measure considering the value of developing blue ocean strategy dimensions in the organizations, as well as the gap in business strategy literature that relevant to the development of a scale of blue ocean strategy dimensions.

Keywords: Blue Ocean Strategy, Structural Equation Modeling, Telecommunication Market and Jordan.

Introduction

Blue ocean strategy is the terminology of recent literature in the administrative domain, coined by Kim and Mauborgne (2005) which refer the means of discovering market positions that competitor's organizations did not reach. Global marketplace is facing intensive competition between different organizations (industrial or service) in their quest towards achieving superiority over competitors and gain market share.

Globalization resulted in opening new markets and to meet the demands of those markets, firms has increased production. However, due to intense competition, it has become difficult to keep hold of market share. Therefore, resulting in the reluctance of many industries to enter into the field of direct competition for fear of the effect on the entities economic seeking for adopting philosophical contents greatly contribute to the access to the state of freedom from competition and search for the case of exclusivity and market leadership based on creative thinking contexts for those in charge in planning activities. Current market conditions are providing opportunities to the firms that are highly competitive and dynamic. Thus, strategy formulation for attaining competitive advantage is a key to survival in global marketplace. To build a competitive advantage and superiority over competitors and looking for areas that are reached by the competition via the adoption of non-competitive strategy seeks to value creation that serves as the cornerstone of blue ocean strategy.

Business in service sector has increased rapidly (Khan, Khattak & Habib, 2017). The rapid growth of services sector is evident across the globe. Particularly, the telecommuting sector has become the need of every society (Ishaque, Tufail, & Habib, 2016). Thus, demand and supply are high. Similar to the rest of the world, Telecommunication sector in the Hashemite Kingdom of Jordan confront intense competition, which reflects the philosophy of red ocean strategy through compete in existing market space; beat the competition; exploit existing demand; make the value-cost trade-off and align the whole system of a firm's activities with its strategic choice of differentiation or low cost.

Objective of the Study

The aim of this study is to determine the construct validity of the Multi-dimensional Blue ocean strategy Scale within the telecommunication market in the Hashemite Kingdom of Jordan.

Significance of the Study

The significance of the current study stems from a great number of psychometrical instruments has been adopted directly in many studies, especially in the strategic management field. The significance of the current study stems from the lack of scale to measure blue ocean strategy on the Arab content.

Literature Review

According to the literature review about blue ocean strategy, it is clear that it focuses on strategic movement as a genuine source of innovation, compared with traditional strategic approach that focuses on the organization as a source of excellence, so the strategic movement in light of blue ocean strategy represents a source of excellence performance, which include a range of activities and decisions aimed to crystallize the performance and development of a large project work leading to new blue ocean.

This is what has led to the emergence of new areas in the market, its ability to generate innovations and new spaces in the market, which many organizations succeeded achieved in the production of inflammatory products and thus their success in creating a new value. So the blue ocean strategy requires from organizations find or invasion new markets were not known, in order to create the demand, find new investment opportunities in pursuit of survival, growth and bring benefits. This means that organizations do something different from what others are doing and produce something that has not previously produced; as well as, adaptation dramatically with the core values common for customers to form a new set of values without having any little competition (Yang, 2007).

Kim and Mauborgne (2005) explained that the urgent need to find and embrace the blue ocean strategy philosophy by organizations attributable to:

1. Rapid development in industrial production techniques.

2. An increasing number of industries and superiority the supply over demand.
3. Allowing suppliers to produce multiple types of unprecedented goods and services.
4. Global towards (globalization of markets and speed transfer information technology).
5. Difficult to predict economic fluctuations, environmental and social legislation in international business organizations environment.

Sheehan and Vaidyanathan (2009) stated that the achieving Blue Ocean strategy, Organizations must adopt a new brand, action framework, and a central diagnostic tool etc.

Features, a Blue Ocean strategy include originate an uncontested market space, rendering the competition irrelevant, creating and capturing new demand, abrogating the value-cost trade-off, and aligning a firm's activities with its strategic choice of differentiation or reduced cost (Kim & Mauborgne, 2005).

Kim and Mauborgne (2005: p.04) defined blue ocean strategy as unexploited market area, demand generate, and the chance for a greatly beneficial increase. Armstrong and Kotler (2005) indicate blue ocean strategy is the organization quest to understand the customer needs and desires, then design their strategy focusing on their customers, provide unique value to him, and build profitable relationships with him, without resorting to any little competition. Yang (2007) clarifies that the blue ocean strategy reflects the organizational philosophy to get a space market of competition.

Blue ocean strategy has a benefit in recognizing new visibly market (Madden, 2009). As well as, Sheehan and Vaidyanathan (2009) assert that blue ocean strategy facilitates executive to possess unparalleled worth for clients. Gandellini (2011) explained that blue ocean strategy refers to business are unclear markets that rivals yet have not got in. Finally, Kirfi, Ajadi and Aliyu (2013) confirmed that blue ocean strategy is formed in the region where an organization's actions favorably affect both cost structure and its value proposition to purchasers. Nicolas (2011) pinpoint the main objective of blue ocean strategy is to generate value innovation – minimize costs. Value innovation is the DNA of blue ocean strategy, as well as value innovation, is attainable only when organizations utility, cost and price structures are accurately associated.

Authors such as Morris (2007); Moyer (2006) explains that firm adopt blue ocean strategy philosophy help them to meet the challenge of competitive innovation, bring new products to market and achieve great advantages with their innovation. Aboujafari, Farhadnejad, Fakher, and Bagherzadeh (2013) demonstrate that in implementing blue ocean strategies, the managers in organizations must recognize the innovation to generate novel demand or a surrogate for clients of recent markets. Finally, the Ayub, et.al. (2013) study found extremely significant positive correlation among entrepreneurial orientation and blue ocean strategy, entrepreneurial orientation, knowledge creation process and blue ocean strategy. Kim and Mauborgne (2005) identify blue ocean strategy philosophy dimensions in four dimensions: Eliminate, Reduce, Raise and Create, as follows:

Eliminate, Business organizations seek to eliminate or exclude some of the activities that are not necessary for their work, that would lead to reducing costs to a minimum level, without affecting the levels of sales volume and quality. So it can be seen as the elimination of some of the processes that are unbeneficial or that do not serve the work, does not provide any benefit to the organization or to the productive process in order to increase the efficiency and effectiveness of the production process while maintaining the same volume of sales and profits, reduce the cost, in order to achieve the organization superiority over competitors with the need to possess complete information about resources and activities.

Reduce, Means reducing or decrease a quantity of the effort procedure that the organization regard needless, which in turn reflected on the reduction of costs and expenses that are not unwarranted, that contributes to reducing the costs with the stability of the profits realized. As though reduce some of the unnecessary and exaggerated services provided to customers, liquidation some of the useless ideas or

impossible to perform or decreasing all internally and externally applications harmful to the environment in order to achieved superiority over competitors.

Raise, intended to add some materials and procedures with the mastery to enhance and improve the characteristics of products offered to customers. Since the organization can grow rapidly when there is a significant expansion in certain performance objectives, which is usually the rate of sales growth or market share in a higher level of normal increase, thereby to increase the profits that reflect positively on their reputation, enabling it to attract new customers and staff highly qualified.

Create, it is one of the characteristics of contemporary organizations in the changing environments. It means transforming creative ideas into creative output useful or any idea, new practice, the new expression for an organization that adopted. Therefore, the creative organizations are to be able to innovation on the basis of complete and sophisticated or be able to develop new ways of working and offering creative solutions to the problems, so turn outputs to useful products or efficient working ways. It is necessary and essential to employee's creativity and to organization's ability to adapt new situations. Others indicate that they provide a new way to develop and manage the work, and the creator is that translates knowledge into new choices, develop systems and new practices that help the organization to produce better, in order to achieve customer satisfaction and providing the best value to him.

Study Design and Methodology

Study Approach

Empirical data were collected and analyzed through a quantitative approach. This approach was chosen because the current study was interested in testing the validity and discerning the suitability of the constructed evaluator model.

Study Method

Investigation research was considering the mainly suitable technique of measuring the quantitative data (Neuman, 2003). Leedy and Ormrod (2005) defined Investigation research as gathering of information about the subject of the object to be measured from the members of the study sample and analyzing their answers to series of questions that decide in advance.

Study Procedure

To gain the data from the study sample, Firstly, the researchers were Convenience sampling technique, which defines a statistical technique of illustration data by selecting people because of their availability or easy access (Welman, et.al., 2005). This technique was frequent until an exemplary sample had fulfilled the questionnaire. A copy of the questionnaire has been given to each responder in order to answer the questions on the questionnaire as best. Participation in the investigation was completely voluntary. All responses remain confidential and anonymous.

Statistical Tools and Data Analysis

This study adopts numerous statistical techniques. These statistics included descriptive tools such as mean and standard deviation as well as Cronbach's alpha, was used to determine the internal consistency (reliability). Reliability should be (0.70) or higher to indicate adequate internal consistency (Hair, et.al., 2006). A Structural Equation Modeling was used through exploratory and Confirmatory factor analysis using Statistical Package for the Social Sciences and Amos Ver. 22 to verify which questions are best to measure the various dimensions of Blue Ocean Strategy and which items could be removed from these scales and evaluate construct validity.

Study Population and Sample

The study population in the current study consisted of all individuals working in the telecommunication market in the Hashemite Kingdom of Jordan which totalling about (1000) individuals. A convenience sample comprising (150) respondents fulfilled the blue Ocean Strategy Scale. A total of (150) respondent returned questionnaires, of which (23) questionnaires were discarded due to the lack of some information. Thus, the total of (127) valid questionnaires was finally obtained. Table (1) set forth the personal data of the respondents. In the gender variable, (57%) of the study sample were male and (43%) were female. From the age consideration, the (41%) from the study sample aged from (30) to Less than (39) of the total sample. In the qualification variable, the results showed that (66%) from the study sample hold a bachelor's degree. Finally, respecting the experience years in cellular communications sector of the respondents was clarify in the table (1).

Scale Development & Validation

Through reviewing the literature review of blue ocean strategy and its dimensions, the researchers develop and formulate a set of questions (items) on uni dimension of Blue Ocean Strategy. The researcher's measure blue Ocean Strategy through (4) dimensions (Eliminate, Reduce, Raise and Create) as Kim and Mauborgne (2005) stated, with (5) items for each dimension on a five-point Likert-scale arrangement from "strongly disagree" (1) to "strongly agree" (5). The questionnaire was validating in two steps. In the primary step, the rough copy questionnaire was reviewed by (8) experts and academics specialist of in strategic management from the Jordanian universities. Following their revision from experts and academics some items were added based on their valuable recommendations. Some others were reformulated to become more accurate, and that is expected for the purpose of enhancing the research instrument. In the second step, the revised of the questionnaire was distributed to a group of (25) individual outside the study sample working at telecommunication market in the Hashemite Kingdom of Jordan. After that, the researchers calculate the reliability through Cronbach's alpha, and the results of the analysis for all construct were an acceptable level.

Table 1: Personal Data of the Respondents

Variables	Category	Frequency	Percentage
Gender	Male	73	57
	Female	54	43
Age	Less than 30 Years	39	31
	From 30 – >39	52	41
	From 39 – >48	23	18
	Above than 48	13	10
Qualification	BS	84	66
	High Diploma	7	06
	Master	31	24
	PhD	5	4
Experience Years in Cellular communications sector	5 Years or Less	17	13
	From 6 – 10 Years	36	28
	From 11 – 15 years	31	24
	16 Years More	43	34

Exploratory & Confirmatory Factor Analysis of Blue Ocean Strategy Dimensions

For the exploratory factor analysis, the rule recommended by Hair, et..al., (2006), says that for adequate sample size, it is essential to have between five to ten individuals for each instrument item. Blue Ocean Strategy had (20) items in its implementation edition, which would need at least (100) individuals. One

hundred and twenty-seven (127) individuals composed a sample that attended to exploratory and confirmatory validations.

Exploratory Factor Analysis of Blue Ocean Strategy Dimensions

Exploratory factor analysis was used to verify which questions are best to measure the various dimensions of Blue Ocean Strategy and which items could be removed from these scales. Therefore, exploratory factor analysis with varimax rotation (Kaiser) was conceded to evaluate the implicit factor structures of the measurement items. According to (Hair, et.al., 2006) the appropriate threshold value for judging the significance of factor loadings was (0.50).

Table 2: Descriptive Statistics, Exploratory Factor Analysis of Blue Ocean Strategy

	Construct	Mean	SD	Factor Loadings
Q1	Our Company seeking to eliminates all practices harmful to the environment and society	4.551	0.632	0.649
Q2	Our Company eliminates unnecessary procedures in the services delivery process	4.317	0.708	0.817
Q3	Our Company excluded some of the process that unbeneficial to customers	4.065	0.815	0.845
Q4	Our Company excluded the poor quality services	4.196	0.706	0.744
Q5	Our Company eliminates everything unnecessary in the services delivery process	4.056	0.762	0.647
	Eliminate Dimension (Cronbach's alpha = 0.845)	4.237	0.571	0.968
Q6	Our Company seeking to reduce unnecessary services	3.915	0.778	0.661
Q7	Our Company reduces the neutralization of competitive threats	4.215	0.687	0.798
Q8	Our Company reduces the time to deliver the services	3.981	0.629	0.832
Q9	Our Company seeking to reduces the operational costs	4.065	0.730	0.827
Q10	Our Company seeking to reduce waste and loss in the requirement of service production	3.934	0.768	0.729
	Reduce Dimension (Cronbach's alpha = 0.757)	4.022	0.513	0.959
Q11	Our Company Increase the profits via improving the quality of service provided	4.028	0.706	0.673
Q12	Our Company seeking to increase services distribution channels	4.018	0.788	0.656
Q13	Our Company seeking to increase the customer's trust via improving the quality of service provided	3.747	0.701	0.780
Q14	Our Company adds new procedures and methods Characterized by high ability and efficiency	3.742	0.648	0.861
Q15	Our Company seeking to rise and improve service performance efficiency	3.716	0.709	0.864
	Raise Dimension (Cronbach's alpha = 0.821)	3.850	0.543	0.931
Q16	Our Company undertook radical changes in the services delivery process	3.747	0.740	0.640
Q17	Our Company took the initiative to launch new services to	3.779	0.740	0.840

	meet the customer's needs			
Q18	Our Company conducted modification in the services delivery methods to customers	3.953	0.744	0.916
Q19	Our Company encourages Ideas proposed from employees	3.943	0.737	0.898
Q20	Our Company is a pioneer in using contemporary technology in the services delivery	3.934	0.755	0.783
Create Dimension (Cronbach's alpha = 0.773)		3.871	0.538	0.937
Blue Ocean Strategy Dimensions		3.995	0.393	NA

After conducting the exploratory factor analysis, all the items for blue Ocean Strategy were loaded on their proposed dimension. As shown in Table (1), the exploratory factor analysis for Blue Ocean Strategy yielded four factors with an eigenvalue greater than 1 (Eliminate, Reduce, Raise and Create) as Kim & Mauborgne (2005) stated. Further, an assessment of the measure for unidimensionality and internal consistency was conducted. Measure reliability was examined for internal consistency by computing Cronbach's alpha coefficient, indicating acceptable levels of reliability for all four dimensions. As shown in Table (2), all scales have reliability coefficients ranging from (0.757) to (0.845). Then, all reliability coefficients were above the threshold value (0.70) suggested by Hair, et.al., (2006), which suggests a high internal consistency among the items in each construct.

Confirmatory Factor Analysis of Blue Ocean Strategy Dimensions

As to dimensionality judgment, Byrne (2009) explained that in a CFA technique, a one-factor model should be tested before a multiple-factor model. So, in this study, Blue Ocean Strategy constructs are tested on (2) steps. First, Single factor. Second, First order confirmatory - multiple factors.

Confirmatory Factor Analysis of Blue Ocean Strategy Constructs – Single Factor

Accordingly, a confirmatory factor analysis technique is using to evaluate each factor of Blue Ocean Strategy, as presented follows:

Eliminate Dimension

Eliminate Dimension include five items and based on results of the confirmatory factor analysis as shown in figure 1, Eliminate constructs signify an excellent fit with chi-square value equal to ($\chi^2=10.245$), DF = 5 and $p < 0.000$. The minimum discrepancy χ^2/df ratio having a value of (2.049), which indicating ideal fit according to Arbuckle (2008) that emphasize the minimum discrepancy value should be less than a value (5). The goodness fit index "GFI" was (0.931), comparative fit index "CFI" was (0.940).

These values are getting close to value (1.0) where a value of (1.0) indicate ideal fit (Hair, et.al., 2006). The next set of fit statistics focus on the "RMSEA" which holding a value (0.015). Hair, et.al., (2006) emphasize that the root mean square error of approximation value must less than (0.08) which indicating ideal fit.

Respecting to factor loadings, the values are between (0.612) and (0.838), All values are considered good and in acceptable level at (0.001). Squared Multiple Correlations value are (0.381, 0.703, 0.595, 0.602, and 0.374) illustrate the percentage of variation in each item explained by the eliminate dimension. Therefore, from the results shown these five items developed can measure the construct "Eliminate Dimension".

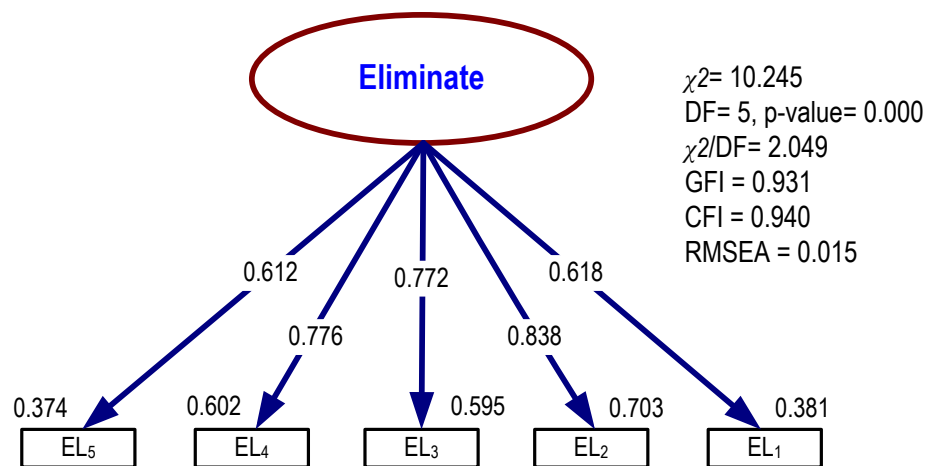


Figure 1. EL - Statistic results and factor loading

From results, the researchers found that all of items loadings were upper than (0.50) as Janssens, et.al., (2008) emphasize that the factor loading for each item must equal to or upper than (0.50). As well as, the value of the critical ratio (C.R.) for each item must be upper than (1.96), as shown in Table 3.

Table 3. Estimated values of Eliminate Dimension

Structural Relation			Standardized Regression Weight	Standard Error (S.E)	Critical ratio (C.R)	Squared Multiple Correlations	P value
EL	→	EL ₁	0.618	0.177	4.756	0.381	0.001
EL	→	EL ₂	0.838	0.219	6.045	0.703	0.001
EL	→	EL ₃	0.772	0.234	5.866	0.595	0.001
EL	→	EL ₄	0.776	0.196	5.888	0.602	0.001
EL	→	EL ₅	0.612	0.179	4.436	0.374	0.001

Reduce Dimension

Reduce Dimension include five items and based on results of the confirmatory factor analysis as shown in figure 1, Reduce constructs signify an excellent fit with chi-square value equal to ($\chi^2=11.696$), DF = 5 and $p < 0.000$. The minimum discrepancy χ^2/df ratio having a value of (2.339), which indicating ideal fit according to Arbuckle (2008) that emphasize the minimum discrepancy value should be less than a value (5).

The goodness fit index "GFI" was (0.937), comparative fit index "CFI" was (0.931). These values are getting close to value (1.0) where a value of (1.0) indicate ideal fit (Hair, et.al., 2006). The next set of fit statistics focus on the "RMSEA" which holding a value (0.016). Hair, et.al., (2006) emphasize that the root mean square error of approximation value must less than (0.08) which indicating ideal fit.

Respecting to factor loadings, the values are between (0.620) and (0.913), All values are considered good and in acceptable level at (0.001). Squared Multiple Correlations value are (0.419, 0.525, 0.833, 0.479 and 0.384) illustrate the percentage of variation in each item explained by the reduced dimension. Therefore, from the results shown these five items developed can measure the construct "Reduce Dimension".

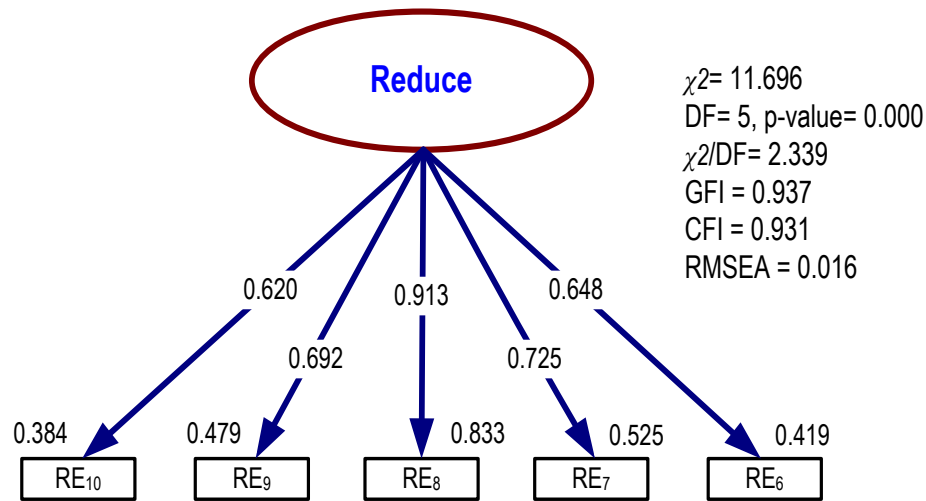


Figure 2. RE - Statistic results and factor loading

From results, the researchers found that all of items loadings were upper than (0.50) as Janssens, et.al., (2008) emphasize that the factor loading for each item must equal to or upper than (0.50). As well as, the value of the critical ratio (C.R.) for each item must be upper than (1.96), as shown in Table 4.

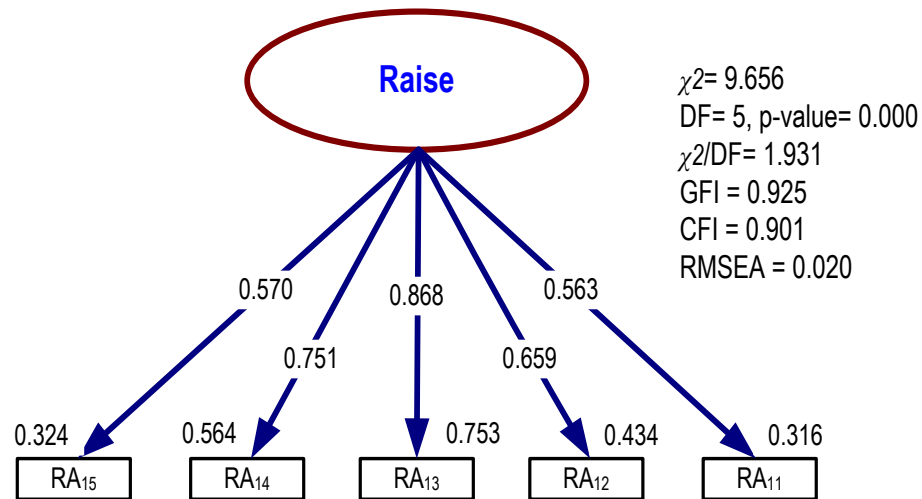
Table 4. Estimated values of Reduce Dimension

Structural Relation	Standardized Regression Weight	Standard Error (S.E)	Critical ratio (C.R)	Squared Multiple Correlations	P
RE → RE ₁₀	0.648	0.055	5.805	0.419	0.001
RE → RE ₇	0.725	0.036	6.281	0.525	0.001
RE → RE ₈	0.913	0.027	7.013	0.833	0.001
RE → RE ₉	0.692	0.046	5.872	0.479	0.001
RE → RE ₁₀	0.620	0.068	4.185	0.384	0.001

Raise Dimension

Raise Dimension to include five items and based on results of the confirmatory factor analysis as shown in figure 1, Raise constructs to signify an excellent fit with chi-square value equal to ($\chi^2=9.656$), DF = 5 and $p < 0.000$. The minimum discrepancy χ^2/df ratio having a value of (1.931), which indicating ideal fit according to Arbuckle (2008) that emphasize the minimum discrepancy value should be less than a value (5). The goodness fit index "GFI" was (0.925), comparative fit index "CFI" was (0.901). These values are getting close to value (1.0) where a value of (1.0) indicate ideal fit (Hair, et.al., 2006). The next set of fit statistics focus on the "RMSEA" which holding a value (0.020). Hair, et.al., (2006) emphasize that the root mean square error of approximation value must less than (0.08) which indicating ideal fit.

Respecting to factor loadings, the values are between (0.563) and (0.868), All values are considered good and in acceptable level at (0.001). Squared Multiple Correlations value are (0.316, 0.434, 0.753, 0.564 and 0.324) illustrate the percentage of variation in each item explained by the rise dimension. Therefore, from the results shown these five items developed can measure the construct "Raise Dimension".



From results, the researchers found that all of items loadings were upper than (0.50) as Janssens, et.al., (2008) emphasize that the factor loading for each item must equal to or upper than (0.50). As well as, the value of the critical ratio (C.R.) for each item must be upper than (1.96), as shown in Table 5.

Table 5. Estimated values of Raise Dimension

Structural Relation	Standardized Regression Weight	Standard Error (S.E)	Critical ratio (C.R)	Squared Multiple Correlations	P
RA → RA ₁₁	0.563	0.087	4.588	0.316	0.001
RA → RA ₁₂	0.659	0.037	5.874	0.434	0.001
RA → RA ₁₃	0.868	0.024	6.694	0.753	0.001
RA → RA ₁₄	0.751	0.027	6.473	0.564	0.001
RA → RA ₁₅	0.570	0.056	4.591	0.324	0.001

Create Dimension

Create Dimension include five items and based on results of the confirmatory factor analysis as shown in figure 1, Create constructs signify an excellent fit with chi-square value equal to ($\chi^2=12.883$), DF = 5 and $p < 0.000$. The minimum discrepancy χ^2/df ratio having a value of (2.576), which indicating ideal fit according to Arbuckle (2008) that emphasize the minimum discrepancy value should be less than a value (5). The goodness fit index “GFI” was (0.957), comparative fit index “CFI” was (0.921). These values are getting close to value (1.0) where a value of (1.0) indicate ideal fit (Hair, et.al., 2006). The next set of fit statistics focus on the “RMSEA” which holding a value (0.030). Hair, et.al., (2006) emphasize that the root mean square error of approximation value must less than (0.08) which indicating ideal fit.

Respecting to factor loadings, the values are between (0.659) and (0.945), All values are considered good and in acceptable level at (0.001). Squared Multiple Correlations value are (0.434, 0.476, 0.717, 0.893 and 0.627) illustrate the percentage of variation in each item explained by the create dimension. Therefore, from the results shown these five items developed can measure the construct “Create Dimension”.

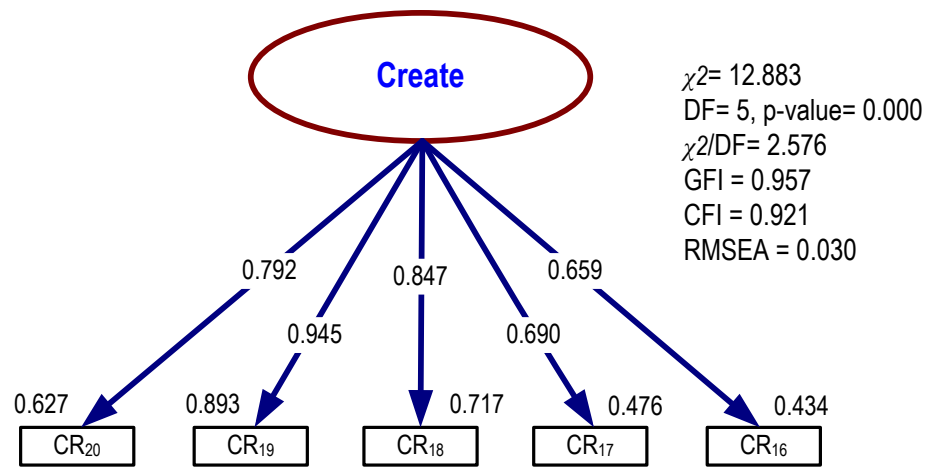


Figure 4. CR - Statistic results and factor loading

From results, the researchers found that all of items loadings were upper than (0.50) as Janssens, et.al., (2008) emphasize that the factor loading for each item must equal to or upper than (0.50). As well as, the value of the critical ratio (C.R.) for each item must be upper than (1.96), as shown in Table 6.

Table 6. Estimated values of Raise Dimension

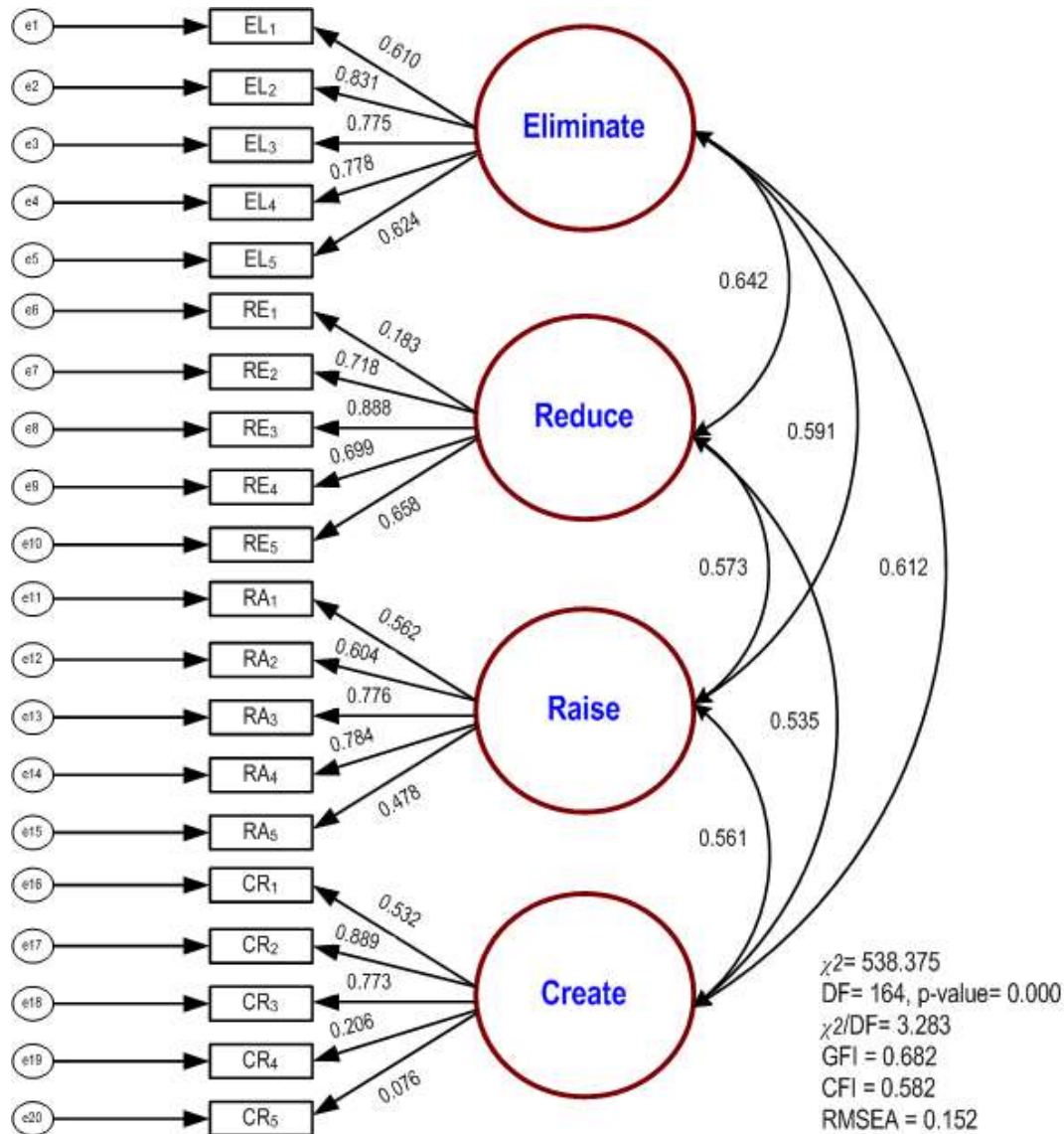
Structural Relation	Standardized Regression Weight	Standard Error (S.E)	Critical ratio (C.R)	Squared Multiple Correlations	P
CR → CR ₁₆	0.659	0.070	4.615	0.434	0.001
CR → CR ₁₇	0.690	0.072	5.137	0.476	0.001
CR → CR ₁₈	0.847	0.030	7.206	0.717	0.001
CR → CR ₁₉	0.945	0.027	7.251	0.893	0.001
CR → CR ₂₀	0.792	0.034	6.138	0.627	0.001

First Order Confirmatory Factor Analysis of Blue Ocean Strategy Constructs – Multiple Factor

This phase of analysis Includes testing the overall measurement model. Blue Ocean Strategy constructs are tested to assess constructs validity with multiple factors. The results again support the blue ocean strategy factors structure with four factors. The model of blue ocean strategy factors structure with four factors tested shown that blue ocean strategy factors structure is a four factors structure which includes of Eliminate (EL), Reduce (RE), Raise (RA) and Create (CR). The overall measurement model tested through combined data from telecommunication market employees (N=127). According to Kline (2011), values indicating ideal fit for overall measurement model are: χ^2/df ratio should be less than a value (5); “GFI” value upper than (0.90); “CFI” value upper than (0.90) and “RMSEA” value less than (0.08). The first order confirmatory factor analysis to overall measurement model result clarifies good fit as shown in Figure 5.

The chi-square value equal to ($\chi^2=538.375$), DF = 164 and $p < 0.000$. The minimum discrepancy χ^2/df ratio having a value of (3.283), which indicating good fit according to Arbuckle (2008) that emphasize the minimum discrepancy value should be less than a value (5). However, the goodness fit index “GFI” was (0.682), comparative fit index “CFI” was (0.582). These values are less than (0.90) which is unsatisfactory. The next set of fit statistics focus on the “RMSEA” which holding a value (0.152) which is higher than 0.08 indicating a poor fit.

Respecting to factor loadings, the values for the items (RA5; CR4 and CR5) is below than acceptable level (0.50) as Janssens, et.al., (2008) noted that the factor loading for each latent variable must be equal to or upper than (0.50). Based on this situation, it is suggested to remove these items, before running the analysis.



Modify the Blue Ocean Strategy model with four factors and (17) items showed a sufficient fit as clarify in Figure (6). The chi-square value equal to ($\chi^2=248.784$), $DF = 113$ and $p < 0.000$. The minimum discrepancy χ^2/df ratio having a value of (2.201), which indicating ideal fit according to Arbuckle (2008) that emphasize the minimum discrepancy value should be less than a value (5). The goodness fit index “GFI” was (0.927), comparative fit index “CFI” was (0.960). These values are getting close to value (1.0) where a value of (1.0) indicate ideal fit (Hair, et.al., 2006). The next set of fit statistics focus on the “RMSEA” which holding a value (0.014). Hair, et.al., (2006) emphasize that the root mean square error of approximation value must less than (0.08) which indicating ideal fit.

Respecting to factor loadings, the values are between (0.519) and (0.989), All values are considered good and upper than an acceptable level at (0.50) with p-value < 0.001. As a result, these four constructs are relevance to measure the blue ocean strategy.

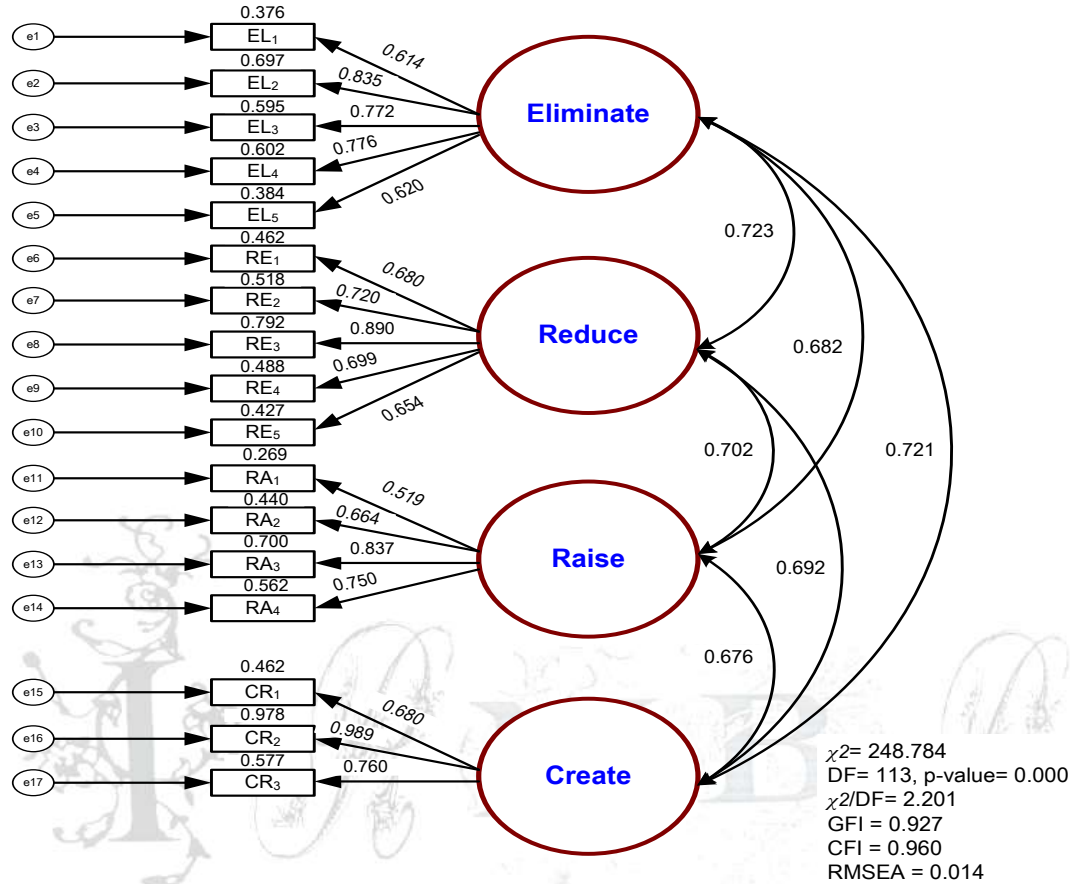


Figure 6. Modified Blue Ocean Strategy model with four factors

The reliability test was performed one more time to verify whether the Blue Ocean Strategy constructs are reliable. Reliability results as shown in the table (7) clarify that all construct were upper than the acceptable level as Hair, et..al., (2006) stated.

As well as, all items were within the agreeable level and thus confirmed the convergent validity by calculating the average variance extracted (AVE) and construct reliability by calculating the composite reliabilities (CR). Table (8) shows AVE and CR.

Table 7. Reliability analysis Results for measurement items (before and after refinement)

Construct (or factor)	Cronbach's alpha for items before refinement		Cronbach's alpha for items after refinement	
	No of items	Value	No of items	Value
Eliminate	5	0.845	5	0.873
Reduce	5	0.757	5	0.806
Raise	5	0.821	4	0.855
Create	5	0.773	3	0.791

Table 8. Average Variance Extracted and for measurement items

Construct	Factor Loadings	Squared Multiple Correlations (R ²)	1 - Squared Multiple Correlations (R ²)	Average Variance Extracted (AVE)*	Composite Reliability (CR)*
Eliminate					
EL1	0.614	0.376	0.624	0.747	0.874
EL2	0.835	0.687	0.313		
EL3	0.772	0.595	0.405		
EL4	0.776	0.602	0.398		
EL5	0.620	0.384	0.616		
Σ	3.617	2.644	2.356	-	-
Squared (R ²)	-	6.990	-	-	-
Σ Factor Loadings ²	13.082	-	-	-	-
Reduce					
RE1	0.680	0.462	0.538	0.757	0.851
RE2	0.720	0.518	0.482		
RE3	0.890	0.792	0.208		
RE4	0.699	0.488	0.512		
RE5	0.654	0.427	0.573		
Σ	3.643	2.687	2.313	-	-
Squared (R ²)	-	7.219	-	-	-
Σ Factor Loadings ²	13.271	-	-	-	-
Raise					
RA1	0.519	0.269	0.731	0.656	0.790
RA2	0.664	0.440	0.56		
RA3	0.837	0.700	0.300		
RA4	0.750	0.562	0.438		
Σ	2.77	1.971	2.029	-	-
Squared (R ²)	-	3.884	-	-	-
Σ Factor Loadings ²	7.672	-	-	-	-
Create					
CR1	0.680	0.462	0.538	0.805	0.857
CR2	0.989	0.978	0.022		
CR3	0.760	0.577	0.423		
Σ	2.429	2.017	0.983	-	-
Squared (R ²)	-	4.068	-	-	-
Σ Factor Loadings ²	5.900	-	-	-	-

* Average Variance Extracted (AVE) = $\Sigma (\text{Squared Multiple Correlations})^2 / \Sigma (\text{Squared Multiple Correlations})^2 + \Sigma (1 - \text{Squared Multiple Correlations})$.

* Composite Reliability (CR) = $\Sigma (\text{Factor Loading})^2 / \Sigma (\text{Factor Loading})^2 + \Sigma (1 - \text{Squared Multiple Correlations})$.

From the Table 8, the values of the Average Variance Extracted for constructs within the measurement model upper than (0.50) as recommended from Malhotra and Stanton (2004) who explained the Average Variance Extracted (AVE) must be upper than (0.50) to validate employing a construct. In addition,

composite reliability (CR) index for constructs within the measurement model must be upper than (0.70) that indicates satisfactory internal consistency as recommended from Hair, et.al., (2006).

Conclusions, Future Research and Managerial Implications

The present study aimed at the development and tests the Multi-dimensional of blue ocean strategy scale within the telecommunication market in the Hashemite Kingdom of Jordan. It was found as a result of exploratory factor analysis pursued as a part of validating blue ocean strategy scale within the Jordanian context, that blue ocean strategy had four dimensions (eliminate, reduce, raise and create) with (20) items. All the items for blue ocean strategy were loaded on their proposed dimension ranging from (0.640) to (0.968). Consequently, we postulated a four-factor model and tested it. The consequences of blue ocean strategy constructs – Single Factor confirmed dimensionality, so the four dimensions of Blue Ocean strategy were supported. Based on the confirmatory factor analysis of the four factors all of the standardized loadings for twenty items were over (0.50).

On the other hand, the results of confirmatory factor analysis for blue ocean strategy constructs – Multiple factors confirmed that the standardized loadings for seventeen items were over (0.50) as Janssens, et.al., (2008) explained that the loading for each latent variable must be equal to or upper than (0.50). This means that the final measurement model for good measure the blue ocean strategy consists of seventeen items divided into four dimensions as follows (eliminate dimension “five items”, reduce dimension “five items”, raise dimension “four items” and create dimension “three items”). Regarding the reliability test, the results confirmed that all construct were upper than the agreeable level as Hair, et.al., (2006) stated. Considering the results mentioned the researchers recommended investigating the final measurement model in another sector in the Hashemite Kingdom of Jordan.

The current study makes equally contributions scientific and practical. First, we discover the blue ocean strategy philosophy, present an apparent conceptualization of their dimensions, and then develop a conceptual model with the four dimensions. Second, we present practical evidence for the testable scales that are both reliable and valid. This gives an original practical foresight into blue ocean strategy philosophy. Third, the research contributes to scientific assistance in business strategy domain. Furthermore, blue ocean strategy philosophy, validated through exploratory and confirmatory factor analysis, is a thorough and reliable measure considering the value of developing blue ocean strategy dimensions in the organizations, as well as, the gap in business strategy literature that relevant to the development of a scale of blue ocean strategy dimensions. As to the managerial implications, blue ocean strategy dimensions cover most of the initiatives used in the organizations which will affect the levels of excellence superiority on the long range.

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