CHAOS IN THE BLUE OCEAN:
An Empirical Study Including Implication of Modern Management Theories in Turkey

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ABSTRACT

In this empirical study, whether Six Sigma, Blue Ocean, Crisis Management and Chaos Theories had effects upon business performances, and if available, the direction of these effects were tried to be determined. The research hypotheses were established upon the assumption that modern management approaches as the independent variables had positive effects upon the business performance as the dependent variable. In order to determine this, the sample was created, and after performing data collection upon a valid sample, the analyses were made and the research results were concluded. After various analyses, it was concluded that the current management theories had positive effects upon the business performance. It was revealed in our study that the chaos theory applications provided to have relatively positive results for the businesses in our country because of the fierce competition and environmental conditions' uncertainty rather than the developed countries.

Keywords: *Chaos Theory, Blue Ocean Strategy, Six Sigma, Crisis Management, Firm Performance*

INTRODUCTION
It can be noticed that the company managers avoid from fierce competitive environment through a rapid growth, and give more importance upon Blue Ocean Strategy to obtain a high profit ratio meeting the requests and needs of their customers in non-competitive markets. Namely, in blue oceans, the company managers foresee how a successful future strategy will be created avoiding from uncertainties and how those will rapidly be applied at a low cost. Especially in rapidly globalizing world markets that have gained a dynamic structure, it should not be forgotten that the firms adapting modern management models and including this into their process as application will get a unique competitive advantage.

The new generation approaches such as Chaos Theory and Blue Ocean Strategy offer different viewpoint to the solutions of problems and diversify the management models of organizations, and these provide competitive advantage for the companies. As it's well known the main goal of Blue Ocean strategy is increasing innovation of value. Chaos Theory is about complexity and irregularity of the strategic decisions in a dynamic environment. It's the one trying to understand the order within complexity from a linear understanding and targeting to find this. This theory emerges considering the fact that small effects will cause very big changes in future. It causes a new viewpoint searching for the uncertainty instead of linear economic theories proving absolute judgments through criticizing the economic understandings. Using these approaches for high management power and privileged institutional identity is no longer a choice but an obligation.

In this empirical study, scales were determined for analyzing what result Blue Ocean Strategy will reveal in case it is used with Chaos Theory in dynamic markets future of which cannot been foreseen. In this sense, crisis management and six sigma models were included into the study, and the effects all these current management models upon the business performance were analyzed to reach the answer of the research question. The obtained results were evaluated for both academicians and managers.

LITERATURE REVIEW
Six Sigma
During the last century, survival of firms has become harder within rapidly developing competitive conditions. It is not only adequate to meet the quality standards in order to leave the competitors behind as one of the things that should be performed, but also producing at a low cost gains importance. The understanding of Six Sigma creates the main idea in this environment, and introducing the product to the customers at a low cost has taken

its place within the sense of quality. The term of quality can be defined in Six Sigma philosophy as "to own the economic values targeted by customers and the supplier at every stage of work." In Six Sigma understanding, it is not adequate to make production in accordance with the standards, but releasing to the market at the lowest cost is the target. The tools and techniques in Six Sigma are very similar to prior approaches to total quality management, it provides an unique organizational structure (Girenes, 2006, 4-6; Schroeder et al., 2008, 536).

Quality management has continued its development with Six Sigma studies at the end of the process covering all sampling statistics, quality cost studies, statistical quality control studies, total quality management and zero error studies upon the success of control managements administered during the 2nd World War. The changes at products and services become prominent as the biggest obstacle against actualizing the customer satisfaction. These variabilities are called as standard deviation in statistics, and symbolized with the letter of sigma in Greek alphabet (Sevi, 2006, 4-6).It is necessary for the firms to make various regulations and researches and use improvement processes constantly in the world where competition has increased rapidly. One of the results of these researches was that the time and money spent by the firms to overcome these errors was more than the time and money that will be spent to prevent these. For that reason, the decrease at the rate of errors that will occur at the end of defective production and services prioritizing the quality will provide minimizing the factors that will increase the cost at the end of a defective production and service. Therefore, the firms should perform error reduction processes. In 1980s, the philosophy of Six Sigma speeded up its development through American Motorola firm's starting to perform Japan Quality understandings for reacquiring its competitive power. Six Sigma can be defined as management of problems depending of data instead of experiences, directing towards skipping optimization method instead of constant optimization process, and designing new products and processes. Zu et al. (2008; 631) identifies three practices that are critically associated with Six Sigma implementation. These practices are Six Sigma role structure, Six Sigma structured improvement procedure, and Six Sigma focus on metrics. During the practising process of Six Sigma, the effect of variability upon the production process is emphasized. The minority of the variability expresses the minority of error ratio, as well; and this means high quality. For that reason, the most important problem is variability. The distance of variability process to averages, namely the standard deviation (sigma), is expressed through measurements. For example, whereas 3 sigma expresses 2700 errors out of 1 million, 6 sigma expresses 3.4 errors in 1 million. Six Sigma is a breakthrough strategy that gathers improved metrics and a modern management philosophy to considerably reduce defects and errors, which are reflected on advancement of an organizations' market situation and enriches the profit line (Yavuz, 2006, 42-51; Yusr, 2011, 313-314).

Blue Ocean Strategy
The management theories can be categorized into two groups. The first group needs new approaches and strategies for change and progress. Neo-classical theory suggests change for increase at productivity. The second group discusses the relationships between people and work-flow, and tries to understand and express complicated organization relationships and develop decision-making strategies. The blue ocean is included into the first of these two groups. Kim and Mauborgne developed a strategy called as "Blue Ocean Strategy" that established upon creating new markets by differentiation and low cost techniques. Blue Ocean is a systematic approach on looking for a way out for the firms that are possible to lose competition. Moreover, it renders competition as meaningless through creating new market areas (Mirrahimi, 2013, 2-3). Rawabdeh et al. (2012, 391) points out The Blue Ocean strategy provides a new way of thinking without a clear structure for implementation, providing a new challenge to come up with systematic procedures and methodologies combining several approaches depending on creative linkage between Blue Ocean tools, supply chain studies, marketing and of course strategy planning. The first stage of the process of Blue Ocean is the looking across alternative industries. This follows to systematic patterns for reconstructing market boundaries to create Blue Oceans.

Table 1. Stages of Implementing Blue Ocean Strategy

Stage I: Current Situation Analysis	Stage II: Creating The Blue Ocean
Test the Current Ocean	Define fundamental changes
Develop Current Strategy Canvas (value Curve):	Implement the Four Action Framework (*Eliminate-Reduce-Raise-Create)*
Analyze Existing Market:	Test New Ideas for Blue Ocean
	Develop the modified Strategy canvas (value curve):

Reference: Rawabdeh et al. (2012, 395)

The strategy is a game plan designed for the firms. And the marketing strategy is a game plan designed by the marketer to provide higher profitability, increase sales and market share and protect the customers. The marketing strategy in which the firms with fierce competition are required to allocate big sources to attract the others' customers and spend too much on advertisement is called Red Ocean Strategy. The traditionally

preferred marketing strategy includes competing within the current market area. In Red Oceans, the market area is defined, and the competition rules are specific. The market area is crowded in terms of the competitors, and the potential opportunities are limited. The firms try to attract the customers of the other firms (Kumar and Gupta, 2010).

Table 2. The Difference between Red Ocean and Blue Ocean

Strategy of Red Ocean	Strategy of Blue Ocean
Compete in existing markets	Create uncontested market space
Beat the competition.	Make the competition irrelevant
Exploit existing demand.	Create and capture new demand .
Make the value-cost tradeoff	Break the value-cost tradeoff
It focuses on each selected activity and system of firms.	It gathers all activity and systems of firms in a common area, and presents with low cost.

Reference: (Kumar and Gupta, 2010, 5).

In contrast to Red Ocean Strategy, Blue Ocean Strategy, on the other hand, is a systematic approach targeting to create an area where no companies will compete in current and new markets. Blue Ocean will provide new opportunities to the firms creating uncompetitive market areas; however, struggling within the Red Ocean will be a fact that will always be faced by the firms (Kumar and Gupta, 2010).

Table 3. The Principles and Risks in Blue Ocean Approach

Blue Ocean Principles	Blue Ocean Risks
Market limits are recreated.	Research risk
Not numbers but the big picture is focused.	Planning risk
It is aimed to reach beyond the current demand.	Scale risk
Correct strategies are determined.	Business model risk
Organizational obstacles are overcome.	Organization risk
Strategy practitioners are built.	Management risk

Reference: (Kumar and Gupta, 2010, 5)

Crisis Management

The origin of the word "crisis" derives from the Greek word of "krisis" that means decision. It generally expresses the depression period and the hard time at a specific moment or period. Coombs (2007, 164) defines the crisis is a sudden and unexpected event that threatens to disrupt an organization's activities and poses both a financial and reputations threat. Pearson and Clair (1998, 60) describe the organizational crisis as a high impact event that threatens the viability of the organization and is characterized by ambiguity of cause, effect and means of resolution, as well as by a belief that decisions must be made swiftly. In business management, crisis expresses a situation that is not expected before but should be overcome. It is possible to list the basic characteristics of crisis (Öztürk, 2003, 4):

- The situation of crisis cannot be generally foreseen.
- Forecasting and prevention mechanisms of the firms are inconclusive.
- The crisis threatens the target and presence of the firms.
- There is no adequate time to overcome the crisis.
- The crisis requires immediate treatment.
- The crisis can cause disadvantages such as uncertainty, tension, anxiety and panic.
- The crisis can also affect the relevant third parties.
- It has not specific solution or formula. It can be re-experienced.
- The crisis can be turned into an opportunity.
- The firms overcoming the crisis successfully can reach to a healthier structure.

Unexpected crises can be strategically managed more effectively if an organization has a robust, enterprise-wide crisis management plan (Lockwood and SPHR, 2005). Crises as a general notion, often reduced to major events such as natural disasters, the collapse of financial empires, major terrorist attacks, political disputes, unprecedented diseases, etc., are traditionally perceived as exceptional situations (Roux-Dufort, 2007, 105). The sources of crisis can be categorized into two groups as internal and external (non-operating). The non-operating factors are listed as natural disasters, general economic uncertainty and fluctuations, technological improvements and innovations, socio-cultural factors, legal and political arrangements, fierce competition, and international environmental effect. And the internal factors are listed as uncertainty of top management, inadequacy at data collection and assessment, values, believes and attitudes of management, historical background and experiences of the business, and survival stage of the business. If the types of crisis the

businesses can encounter are determined on the basis of sources causing the crisis, those can be generally listed as raw material and service crisis, energy crisis, the crises created by the employees, natural disaster and accident crisis, competition crisis, economic crisis, and political crisis. The crisis management includes making decisions systematically, creating the teams that will make these decisions, and making new decisions accomplishing the results of applications. The crisis can sometimes be concluded with income and opportunities instead of losses. Impact of a major crisis can damage organizational reputation and financial performance. The points that should be taken into consideration while practising the crisis management are drawing up the required budget for crisis management, creating the required programs for continuous improvement and change, computerizing the information related to organization, employees and products, making the required preparations that will help for overcoming the crisis, creating a strategic emergency room, and decreasing the risk of product service and production process (Öztürk 2003, 26; Jacques, 2010).

Chaos Theory
The concept of chaos reminds of complexity, disorder, uncertainty, and anarchy; and also derived from the Greek word "Khaos" that means gap, slot, and illimitableness. And the scientific definition of chaos has been expressed as "an ordered disorder including similar shapes despite its irregular structure which cannot be foreseen" (Özcan, 2009, 35-37). Although chaos seems as the opposite of order, in fact, the opposite of order is complexity. Lorenz (1963) refers the chaos theory also know as "butterfly effect" in his experimental work (deterministic nonperiodic flow).

It propounds that just a small change in the initial conditions can drastically change the long-term behavior of a complex system or organization. Chaos can be defined as the sub-cluster of complexity. "Chaos Economy" as a branch of economy emerged in 1980s. It can be said that chaos has showed increase through new facts and problems emerged with globalization. Chaos approach is a new generation management model that can lead the firms in order to survive for a long time through some managerial capabilities as flexibility and swiftly responding in the dynamic sectors (Levy, 1994; Cvetek, 2010).

Management science is also interested in this new form of approaching reality and its developments. Chaos theory has received wide spread attention within complexity theory (Juarez, 2014). Organizations also are dynamic systems governed by nonlinear relationships. Complex dynamical systems are difficult to control. The complex systems may have multiple equilibria and the equilibria may be unstable (Thietart and Forgues, 1995; Helbing and Kirman, 2013). A complex system can be defined as a whole made up of a large number of interacting parts or agents which are each governed by some rule or force which relates their behavior in a given time period contingently to the states of other parts or agents (Maguire et al.,2011; 2). According to the chaos theory, the differences between old and new economic viewpoints can be listed as in the Table 3 (Kılıç, 2010, 61).

Table 4. The Differences between New and Old Economy

VARIANCE FACTOR	OLD ECONOMY	NEW ECONOMY
Production and Competition Area	National	Global
Type of Organization	Hierarchical-Bureaucratic	network
Production Organization	Mass production	On-time and flexible production
The Factor Determining Growth	Capital , Labour force	Innovation, Inventions and Information
The Factor Determining Technology	Mechanization	Digitalization
Source of Comparative Advantage	Economies of Scale, Low Cost	Economies of Scope, Innovation and Quality
Importance given to R&D	Low-Medium	High
Relationships with Other Firms	Acting as Unaccompanied	Cooperation, partnership, synergy, merging
Required Training	Related to Professional Diploma	Lifelong Learning
Purpose of Labour Force Policy	Full Employment	High Real Wage
Nature of Employment	Stabile	Full of Risks and Opportunities
Regulations	Command and Control	Flexible Depending upon Marketing Instruments
Human Capital	Production-Oriented	Customer-Oriented
Labour Force	Important	Less Important
Structure of Labour Force	Disqualified or expert at a specific field	Informed, experienced and multi-skilled, innovative, creative

| Assets | Professional assets, relatively important | Intangible assets, relatively important |
| Sectorial structure | Agriculture and industry sector-weighted | Service sector-weighted |

Reference:(Kılıç,2010,61).

The reason for this theory to be defined as Chaos is arisen from unpredictability of several inputs and changes, and its being complex to the extent that cannot be determined through the human intelligence and measurements. Moreover, the chaos theory has some assumptions as order causes disorder; there is an order in disorder, and order results from disorder (Kentirli, 2006). This management theory is the most useful as an analogy to structure persistent image problems and to raise questions about organizational control of public perceptions. It also includes complexity, uncertainty, plurality, open-endedness and organizational change notions (Murphy, 1996, 95).

THEORETICAL FORECASTING AND EMPIRICAL STUDY

The research model was based upon analysing how Six Sigma, Blue Ocean, Crisis Management, and Chaos Theory as the modern management theories affected the financial and growth performances of businesses in our country. This research question was developed in order to understand whether these theories had any effects. The businesses sometimes attempt to practise more than one of these theories at the same time in our world where competition has rapidly increased. In general, during the rest of the study, the hypotheses related to how these theories will affect firm performances will be presented, and then statistical analysis will be evaluated and interpreted.

With reference to the literature review, it was revealed that the management and strategies administered by the firms had effects upon the firm performance, and a great number of studies carried out on this have proved this fact. Because we analysed whether the management theories we discussed had effects upon the firm performance or not in this study, we will establish our hypothesis as below. Ho hypothesis as the basic one was established as;

H_o: Six Sigma, Blue Ocean, Crisis Management, and Chaos Theory concepts as the Modern Management Theories have directly and positively affect the firm performance.

With reference to this, the other hypotheses can be established as below ina way evaluating the financial and growth performances additionally:

$H1_a$: Six Sigma Theory directly and positively affects financial performance of the business.

$H1_b$: Six Sigma Theory directly and positively affects the growth performance of business.

$H2_a$: Blue Ocean Theory directly and positively affects the financial performance of the business.

$H2_b$: Blue Ocean Theory directly and positively affects the growth performance of the business.

$H3_a$: Crisis Management Theory directly and positively affects the financial performance of the business.

$H3_b$: Crisis Management Theory directly and positively affects the growth performance of the business.

$H4_a$: Chaos Management Theory directly and positively affects the financial performance of the business.

$H4_b$: Chaos Management Theory directly and positively affects the growth performance of the business.

In addition to these hypotheses, we can establish the hypotheses below to analyse the relationship between the general performances of the firms and these management theories;

H5a: Six Sigma Theory directly and positively affects the general performance of the business.

H5b: Blue Ocean Theory directly and positively affects the general performance of the business.

H5c: Crisis Management Theory directly and positively affects the general performance of the business.

H5d: Chaos Theory directly and positively affects the general performance of the business.

When the studies carried out in our country on modern management theories were analysed, no study analysing these four theories together could not be noticed. Because these theories are current, the studies that have been carried out in our country are generally based upon a specific sector or business. It was considered that these four theories will be beneficial in terms of proving the effects of these theories upon the firms in our country, and our theories were determined according to this.

The method used during the research, application, formation process of scales, sample selection, data collection, reliability and validity analyses of the scale, and testing of the research model will all be analysed in this section. The scales prepared as result of the researches carried out on business management literature were included into the study. The research was especially conducted on companies carrying on business in Marmara Region; and data were collected through e-mail from the other regions in order to create a more valid sample. But the data collected from the other regions were in minority; and moreover, the majority among the data of Marmara Region included Istanbul and Kocaeli Regions.

Reliability and validity analyses were performed in the research, and those expressed the decisive attitude emerged as result of the repetition of reliability measurements. The reliability was not alone adequate; therefore, validity analyses were also performed. And the validity expressed the level of accuracy and reflected the real differences in observed scale scores.

Table 5. Results of the Firstly-Performed Reliability Test as All Questions were Included

Reliability Analysis of Variables		
Variables	**Number of Question**	**Cronbach Alpha (α) Values**
Six Sigma	11	0.913
CrisisManagement	12	0.973
Blue Ocean	10	0.689
Chaos Theory	10	0.912
PerformanceMeasurement	12	0.970

In Table 5 above, the results of the reliability test that was firstly performed after inputting the questionnaires into computer were presented. When Cronbach values were analysed for testing the reliability, it was determined that Cronbach Alpha value of Blue Ocean variable was lower than the value of 0.700 that has been accepted in the literature, and 7-numbered variable in blue ocean scale was excluded from the analysis after determining to cause this. After exclusion of this variable, Cronbach Alpha value increased from 0.689 to 0.794. These values were presented in Table 7.

Table 6. The Results of the Reliability Test Performed after Excluding Blue-Ocean 7-Numbered Question

Reliability Analysis of Variables		
Variables	**Number of Question**	**Cronbach Alpha (α) Values**
Six Sigma	11	0.913
Crisis Management	12	0.973
Blue Ocean	9	0.794
Chaos Theory	10	0.912
Performance Measurement	12	0.970

In the research, after evaluating the reliability analysis of Six Sigma, Crisis Management, Blue Ocean, Chaos Theory, and performance factors variables, averages of the variables affecting each factor were found. Before performing the regression analysis, the correlation analysis providing us to test the relationship between each variable and the direction of this relationship was conducted.

Correlation shows the size and direction of the relationship between the two variables. The correlation coefficient proving this relationship takes a value between (-1) and (+1); whereas (-) mentions this relationship at a reverse direction, (0) value expresses no relationship. Moreover, Pearson Correlation analysis that is frequently used in social sciences was also performed in our research.

The results of the analysis were presented in Table 7. When the values here were analysed, it was determined that there was a linear positive relationship between our variables in the research and general performance, financial performance, and growth performance variables. When the values presented in the table and obtained as result of the correlation analysis were interpreted, it was primarily concluded that there was a strong relationship between growth performance, financial performance and the general performance of the businesses. The reason for this was firm managers' considering that financial and growth performance of the firms and the general performance depending upon these were all correlated with each other.

When we analysed the relationship between the variables except from the one between the performances, we determined that none of the absolute values between the independent variables were higher than the value of 0.800; and this proved that there was no multicollineriaty between the independent variables in our research.

Table 7. Average Standard Deviation Values and Correlation Coefficients Related to Factors

Factors	Six Sigma	Crisis Management	Blue Ocean	Chaos Theory	General Performance	Financial Performance	Growth Performance
Six Sigma	1						
Crisis Management	0.485**	1					
Blue Ocean	0.068	0.194**	1				

Chaos Theory	0.469**	0.304**	0.194**	1			
General Performance	0.329**	0.363**	0.417**	0.512**	1		
Financial Performance	0.307**	0.371**	0.414**	0.495**	0.965**	1	
Growth Performance	0.328**	0.330**	0.392**	0.494**	0.967**	0.886**	1
** One-to-one relationships between all variables included into the table were accepted as statistically significant at p<0.001 level.							

3.5. Regression Analyses

The regression analysis analyse the relationship between the independent variable and dependent variable; moreover, it also reveals the relationship of more than one independent variable upon the dependent variable through multiple regression analysis. As in all other analyses, SPSS 17 program was used in these analyses. In the tables that will be presented below, "R Square" (Coefficient of Determination) value represented how much the dependent variable was defined by the independent variables. "F" value in the tables represented the significance level of established statistics (p<0.001, p<0.01, or p<0.05).

Here, the effects of Blue Ocean, Six Sigma, Crisis Management and Chaos Theory upon the general performance of the business were analysed. As could be seen in the tables below, "R Square" had 0.394 value; and this proved that the independent variables could define the business general performance as our dependent variable at the rate of 39.4%. Moreover, when the tables below were analysed, these independent variables defined firm financial performances by 38% and firm growth performance by 36%.

Furthermore, it was noticed that F and p values were at an acceptable level for general performance, financial performance and growth performance (F = 36.095, p =0.00 in General Performance analysis; F=34.036, p=0.000 in Financial Performance analysis; F=30.888, p=0.000 in Growth Performance analysis). However, when the tables were analysed, Six Sigma and Crisis Management were noticed to be bigger than p<0.005 value as the acceptable p value. Besides, Beta values were analysed, and it was determined that Blue Ocean factor had 31% positive effect upon general performance, Chaos Theory had 34% positive effect upon general performance, Blue Ocean had 31% positive effect upon financial performance, Chaos Theory had 36% positive effect upon financial performance, Blue Ocean had 30% positive effect upon growth factor, and Chaos Theory had 36% positive effect upon the growth performance.

Table 8. The Effects of Modern Management Theories upon Firm General Performance Multiple Regression Analysis Results

The Effects of Modern Management Theories upon Firm General Performance Multiple Regression Analysis Results				
Model Summary				
Model	R	R Square	Corrected R Square	Standard Error of Estimation
1	,628[a]	,394	,383	1,05197
Independent Variables; Chaos Theory, Blue Ocean, Crisis Management, Six Sigma				
Coefficients[a]				
	Non-standardized coefficients		Standardizedcoefficients	
Model	B	Std. DeviationError	Beta	T	Sig.
1 (Constant)	,538	,459		1,171	,243
Six Sigma	,097	,096	,065	1,017	,310
Crisis Management	,102	,043	,143	2,357	,019
Blue Ocean	,277	,048	,313	5,791	,000
Chaos Theory	,434	,071	,372	6,124	,000
a. Dependent Variable: General Performance					

Table 9. The Effects of Modern Management Theories upon Firm Financial Performance Multiple Regression Analysis Results

The Effects of Modern Management Theories upon Firm Financial Performance Multiple Regression Analysis Results					
Model Summary					
Model	R	R Square	Corrected R Square		Standard Error of Estimation
1	,617ᵃ	,380	,369		1,08033
a. Independent Variables; Chaos Theory, Blue Ocean, Crisis Management, Six Sigma					

Coefficientsᵃ					
	Non-standardized coefficients		Standardized coefficients		
Model	B	Std. Deviation Error	Beta	t	Sig. B
1 (Constant)	,656	,472		1,392	,165
sigma	,056	,098	,037	,571	,569
Crisis	,123	,045	,171	2,770	,006
Blue	,278	,049	,309	5,656	,000
Chaos	,425	,073	,359	5,849	,000
a. Dependent Variable: Financial Performance					

Table 10. The Effects of Modern Management Theories upon Firm Growth Performance Multiple Regression Analysis Results

The Effects of Modern Management Theories upon Firm Growth Performance Multiple Regression Analysis Results					
Model Summary					
Model	R	R Square	Corrected R Square		Standard Error of Estimation
1	,598ᵃ	,358	,346		1,14309
a. Independent Variables; Chaos Theory, Blue Ocean, Crisis Management, Six Sigma					

Coefficientsᵃ					
	Non-standardizedcoefficients		Standardized coefficients		
Model	B	Std. Deviation Error	Beta	t	Sig. B
1 (Constant)	,419	,499		,839	,402
sigma	,138	,104	,088	1,333	,184
crisis	,081	,047	,108	1,720	,087
blue	,276	,052	,295	5,313	,000
chaos	,442	,077	,359	5,744	,000
a. Dependent Variable: Growth Performance					

The results related to the hypothesis subjected to the research model were presented in Table 11:

Table 11. The Table Related to Hypothesis

Research HypothesisAcceptance Table				
	Financial Performance		Growth Performance	
Independent Variables	Hypothesis	Result	Hypothesis	Result
Six Sigma	H1a	Not supported.	H1b	Not supported.
Crisis Management	H2a	**Supported.**	H2b	Not supported.
Blue Ocean	H3a	**Supported.**	H3b	**Supported.**
Chaos Theory	H4a	**Supported.**	H4b	**Supported.**
General Performance				
Independent Variables	Hypothesis		Result	
Six Sigma	H5a		Not supported.	
Crisis Management	H5b		**Supported.**	
Blue Ocean	H5c		**Supported.**	
Chaos Theory	H5d		**Supported.**	

CONCLUSION AND DISCUSSION

It is necessary for the businesses to follow the developing world conditions closely for maintaining their survival in rapidly increasing competitive conditions. What matters for the businesses is how management function is taken its form. Which criteria the businesses take into consideration directly effects their current and future situation. When the analysis results were analysed, the managers used these two approaches as basis while answering the questions included into Chaos Approach and Blue Ocean Approach scales. The obtained results surpassed the Six Sigma technique and Crisis Management Theory. Chaos and Blue Ocean Theories' being very popular in recent period and their being adapted by the company managers can be used as an argument for explaining this result. Taking place in a sector without any threats and competitors as the factors underlying the Blue Ocean Approach will render Six Sigma and Crisis Management factors inoperative. This obtained result is also closely correlated with a firm's creating its own order in a disordered and chaotic market environment and maintaining its activities reliably within these borders which are the basic rules of a Chaos Approach. To sum up, while each approach can affect the firm performance alone, only the statistical effect of two (Blue Ocean and Chaos Theory) upon the performance was revealed when those four approaches were all evaluated.

Figure 1. Research Model
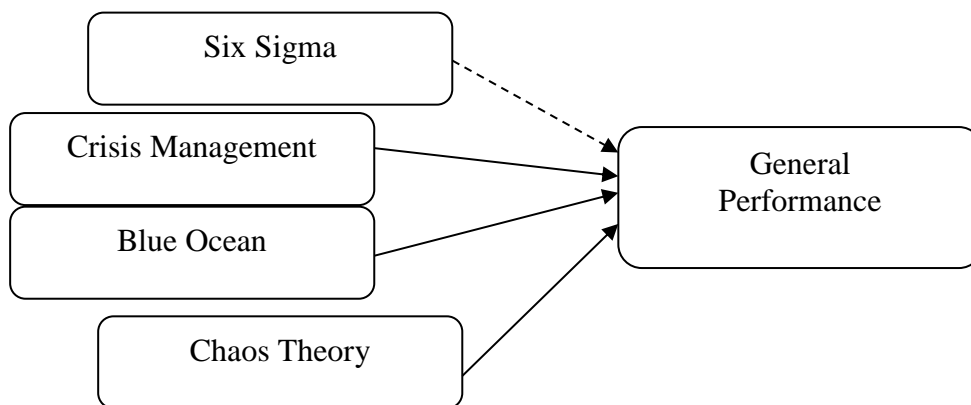
According to the results obtained from the analyses, a strong relationship between the performances of the firms and the management theories they perform was revealed. Especially the Chaos Theory surpassed the other theories; and moreover, the effects of other theirs were at a significant level. Furthermore, it was also determined during the research that the Blue Ocean Theory could not be exactly adapted by some of the business managers. Chaos and Blue Ocean theories are still too new concepts in Turkey. As a result of this, enough importance is not given to these techniques in Turkish companies. Six Sigma Approach have some difficulties during the installation of the main philosophy for the employees and top level management. That may be why it has no significant impact on the firm performance. At the same time, managers and shareholders

are noticed that to reach the main purpose of the companies can be actualized by these modern management theories. Managers are as successful as they can achieve the financial and growth targets that determined by the shareholders. Modern approaches are necessary to enrich and strength the core competency of companies. Theoretical and practical importance of modern management theories to sustain a firm's competitive advantage in a complex market is the key of the long-term success.

At last, this study has various limitations that should be kept in mind. Our data consisted of Turkish firms with a small sample size; caution must be applied, as the findings might not be transferable to global wide. It would be interesting further research might investigate the modern theories separately. Considerably more work will need to be done to determine the effects of these theories and their effects on firm's growth and financial performance.

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