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RESEARCH ARTICLE
Management and Organization

Interaction Between Objectıves of ISO 9000 Standards and Lean Management Targets: A Research in İzmir Province

ISO 9000 Standartlarının Amaçları ile Yalın Yönetim Hedefleri Arasındaki Etkileşim: İzmir İlinde Bir Araştırma

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ABSTRACT

The main objective of this research is to determine the interaction between the core objectives of the ISO 9000 Standards and the goals of lean management, within the framework of the perceptions of individuals involved in practice. In this context, the survey form was applied to 114 individuals with experience in quality management at 26 enterprises between January 2025 and February 2025. As a result of the research, seven items related to the core objectives of the ISO 9000 Standards were grouped under two factors: "value chain, HR perception, competitive advantage, and control systematics" and "strategic leadership integration, innovation creation, and quality standardization." The seven items related to the goals of lean management were grouped under two factors: "rationality, resource utilization, core activities, and value chain" and "strategic goals, dynamic innovativeness, behaviour, time management." All four factors were found to be highly significant based on the perceptions of the participants. In the context of structural equation modelling, it was found that the interaction between the core objectives of the ISO 9000 Standards and the goals of lean management is positively significant at a high level, although the interaction level is relatively low. In this regard, it can be emphasized that the interaction between the core objectives of the ISO 9000 Standards and the goals of lean management should also be examined integratedly in relation to other variables in practice.

Keywords: ISO 9000 Standards, Lean management, Goals

ÖZET

Bu araştırmanın temel amacı, ISO 9000 Standartlarının temel hedefleri ile yalın yönetimin hedeflerinin etkileşiminin uygulamada yer alan bireylerin algıları çerçevesinde belirlenmesidir. Bu kapsamda hazırlanan anket formu Ocak 2025 ve Şubat 2025 tarihleri arasında 26 adet işletmede kalite alanında deneyimi olan 114 bireye uygulanmıştır. Araştırmanın sonucunda ISO 9000 Standartlarının temel hedeflerine yönelik 7 madde "değer zinciri, İK algısı, rekabet üstünlüğü ve kontrol sistematiği" ve "stratejiklik-liderlik bütünleşmesi, inovatiflik yaratımı ve kalite standardizasyonu" ismi verilen iki faktör altında toplanmıştır. Yalın yönetimin hedeflerine yönelik 7 madde ise, "rasyonellik, kaynak kullanımı, temel faaliyetler ve değer zinciri" ve "stratejik hedefler, dinamik inovatiflik, davranış, zaman yönetimi" iki verilen iki faktör altında toplamıştır. Dört faktör de katılımcıların algıları çerçevesinde ileri düzeyde önemli bulunmuştur. Yapısal eşitlik modellemesi kapsamında ISO 9000 Standartlarının temel hedefleri ile yalın yönetimin hedeflerinin etkileşiminin pozitif yönde ileri düzeyde önemli olduğu bulunmuştur ancak etkileşim düzeyi düşük seviyededir. Bu çerçevede uygulamada ISO 9000 Standartlarının temel hedefleri ile yalın yönetimin hedeflerinin etkileşiminin diğer değişkenler açısından da bütünleşik olarak irdelenmesi gerektiği vurgulanabilir.

Anahtar Kelimeler: ISO 9000 Standartları, Yalın yönetim, Hedefler

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INTRODUCTION

ISO 9000 series is a frame that includes international standards about quality management system (QMS) and aims help for businesses to provide customer satisfaction, improve processes and increase productivity (Civcisa and Grislis, 2014: 1928-1929). ISO 9000 standard enables organizations to provide a continuous improvement describing main principals and terminology of quality management systems, supporting implementation of quality management system sense systematically and consistently.

ISO 9000 standard was published by International Standardization Organization (ISO) in 1987 and since then has been updated overhauling. The first version was constituted taking inspiration from quality requisites in defence industry and focused on production sector. A documentation and procedure- oriented structure was adopted in a revision performed in 1994. By the updating performed in 2000, process-based management sense has been emphasized much more and continuous improvement principles with customer satisfaction has been featured (Kesici, 2022: 24-25). 2008 version mostly focuses on small scale improvements and elimination of deficiencies in current businesses. Finally, with the major revision performed in 2015, risk-based approach has been focused, flexibility is developed and requirements related to process management have been strengthened (Bilgin, 2019: 21).

In today's competitive business world, organizations have to use sources effectively and focus on continuous improvement to gain a sustainable achievement. Lean management comes into prominence as a management

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philosophy that satisfies this requirement and aims to create value preventing wastage. Lean management that includes a human based approach aims to increase customer satisfaction and maximise business productivity eliminating redundant factors in the process (Tunçay,2024:2-4). Under this title, discussing description, importance, historical improvement process and objectives, strategic value for businesses will be explained.

Lean Management as a management philosophy aims to destroy the processes that do not create value for the businesses and to provide using sources productively. It aims to avoid wastage and satisfy needs of more individuals using less human power, less material and less time (Tunç,2016:32).

It aims continuous improvement focusing on the main reason of disruptions in processes. Lean management is a human-oriented management mentality that aims to be respectful against employees and customers, to add value them and satisfy the needs of employees as soon as possible (Graban, 2018:52). This management mentality aims to optimize processes with continuous improvement and employee participation. Lean Management is a system developed with the purpose of increasing competitive power of the businesses, providing customer satisfaction and lower the costs (Bruun and Mefford, 2004:247). Lean Management is a management philosophy which consists of common contributions of the famous researchers in their field like Frank and Frederick Taylor, W. Edwards Deming, Taiichi Ohno, James Womack and Daniel Jones. It is based on the idea f choosing the advantageous options for the organizations with common decision of the employees (Martino et.al., 2017:15).

LITERATURE ABSTRACT

General Scope And Maın Objectıves Of Iso 9000 Standards

Types of ISO 9000 Standards

ISO 9000 series consists of various standards include different quality management systems:

ISO 9000: Defines fundamental principles and terminology for quality management systems (Çakar and Serdar,2002:88).

ISO 9001: is a widely used standard which determines requirements of quality management systems. It helps organizations to increase customer satisfaction, to provide effective process management and continuous improvement (Dönen, 2021: 9).

ISO 9003: Within the frame of quality assurance models, defines quality management applications especially about control and test of the last products (Başer, 2022: 65).

ISO 9004: Provides guidance about improvement of quality management systems to provide sustainable successes of organizations (Keşkek, 2006: 6).

ISO 19011: Forms a methodologic frame about how internal and external audits would be runed providing guidance for control processes of quality management systems (Çakar and Serdar, 2002: 88).

Main Objectives of ISO 9000 Standards

The main objectives of ISO 9000 series are as follows:

Customer- Orientation: Providing the organizations to understand customer requirements and satisfy the expectations (Tanrıkulu,2010:10).

Process Approach: To determine, manage and continuous improvement of business processes.

Risk-based Thought: To determine risks and develop risk prevention approaches and to provide business continuity (Deysher, 2015: 8-13).

Continuous Improvement: To offer a systematic structure get organizations to analyse and develop their performances (Güldoğan, 2022: 48).

Evidence-based Decision Making: To encourage decision making processes based on data and analyses (Tanrıkulu,2010:15).

Relationship Management: To provide sustainable success relating with suppliers, customers and other shareholders (Benli, 2019: 46).

ISO 9000 series contributes to organizations to achieve sustainable successes and develop global competitiveness determining fundamental principles of quality management systems. Especially ISO 9001:2015 offers a structure which makes quality management more effective in modern business world with its principles like business-based

thought and continuous improvement. These standards provide a strategic frame towards developing both internal processes and increasing customer satisfaction (Karakaş and Savaş, 2019: 3519-3524).

DESCRIPTION, IMPORTANCE, OBJECTIVES AND IMPROVEMENT OF LEAN MANAGEMENT

Importance of Lean Management

Businesses need to be fast and flexible to remain standing in globalising markets. Lean Management, destroying unnecessary processes, helps organizations to increase productivity. Especially for the businesses in production, service and logistic sectors it provides cost advantage preventing source waste (Byrne, 2015:14). Besides, it strengthens decision making processes in the businesses increasing employee motivations and empowers organizational flexibility (Bakır,2022:27).

Lean Management focuses on each level of processes from order step to deliver step. The aim is to increase the business productivity destroying wastage and provide customer satisfaction (Ulhassan et.al., 2013:3). From this aspect, by some institutions it is regarded as a tool box that removes waste and speeds up the process (Bilgin,2023:5).

Lean Management Development Process

Essentials of Lean Management base on "Industry Within Industry" industry training program structured by United States of America (USA) war department in 1940s. This program includes effective and fair audit certificated course programs like business, education, quality, improvement. The USA achieved a significant rise with methods they practised and provided an integration between the qualified individuals prepared for army and uneducated workers (Clark et.al., 2013: 641).

The origin of Lean Management started with Toyota Production System (TPS) in Japan around the midst of 20th century. This system developed by Taiichi Ohno and Shigeo Shingo is based on the concept "prevent wastage" (muda). Success of TPS caused a global adoption of Lean Management. When it comes to1979, achievement of Japan production system attracted Womack and friends' attention. At the beginning of 1980s, Toyota Company governed by Japan managers moved ahead of opponents with less needs of everything, producing less impaired products using less time, less labour power, less material, lower production volume. Therefore, Womack et.al, called this system as lean management (Bilgin,2023:4).

Nowadays Lean Management is applied not only in production sector but also in many areas like health, education, public administration. Apart from developing technology and transition processes, scope of Lean Management applications has also been extended (Sumel,2023:27).

Objectives of Lean Management

Objectives of lean management can be listed as follows:

Removing wastage: Increase of productivity has been aimed with elimination of non-value adding processes (Şeker, 2016: 450). Lean management provides saving cost and time removing wastes and also aims getting employees to work in more productive and peaceful environment (Graban, 2018: 59).

Increasing Customer Value: products and services have been aimed to be developed for satisfying customer expectations in the best manner (Yangınlar and Bal, 2019:152).

Increasing Employee Participation: Active participation of employees is a critical factor for success of the organization. While the employees who are included into decision making processes contribute to business processes using abilities more effectively, this condition also increases their motivation (Bıkmaz, 2019: 423).

Reducing the costs: Profitability increase has been aimed via preventing redundant stocks, surplus and time loss (Bakır,2022:25).

Flexible and Rapid Management: A manner of management which can be adapted to changing market conditions and speeds up decision making processes is provided to be adopted (Arbós, 2002:169). Consequently, lean management is a management mentality that has to be adopted by the aim of providing sustainable competition advantage for modern businesses.

Practising lean management effectively is a factor that influences long term success of the businesses. Today's technology and increasing competition conditions make application of lean management more important in all sectors (Ghrayeb et.al, 2009:379).

FUNDAMENTAL OBJECTIVES OF ISO 9000 STANDARDS AND RESEARCHES WITHIN THE SCOPE OF LEAN MANAGEMENT TARGETS

ISO 9000 quality management systems and lean management philosophy are two important management approaches that aim increasing productivity in businesses, providing customer satisfaction, and developing processes. Under this title, scientific researches towards fundamental objectives of ISO 9000 and lean management targets will be discussed

Researches on Fundamental Objectives of ISO 9000

Process-oriented Management: It emphasises definition and continuous improvement of ISO 9000 processes. For example, the study performed by Garvin (1988) examined effects of quality management systems on process control in businesses (Değerli,2006:4-5).

Customer Satisfaction: Kotler and Keller (2012) analysed the benefits of quality standards towards satisfying customer expectations for businesses (Telli and Gök,2019:113).

Documentation and Standardization: Deming (1986) emphasised significance of documentation in quality management and he revealed that putting processes in writing reduces error rates (Kara,2013:6-9).

These researches show that ISO 9000 standards create positive effects on organizations and provide competitive advantage.

Researches on Objectives of Lean Management;

Lean management bases on the principles like removing wastage, optimising the processes and featuring value-driver activities. Studies performed on this direction can be discussed under the following titles:

Reducing Wastage: Womack and Jones (1996) revealed that Lean production processes increase business productivity minimizing redundant sourcing (Bilgin Sarı,2018:586-587).

Continuous Improvement (Kaizen): Imai (1986) analysed effectiveness of Kaizen practices in Japan businesses and discussed effect of lean management on quality (Ağın,2020:71).

Fast and Flexible Production: Ohno (1988) expressed that Toyota production system is based upon lean management principles and provides quick response to customer requirements (Akgün, 2015: 2).

Scientific researches conducted reveal that lean management philosophy provides productivity increases and low costs especially in production sector.

While lean management improving organizational performance with the fundamental principles like minimizing wastage, optimising processes and continuous improvement, it makes quality control processes more effective and productive working in integration with quality management systems.

This integration supports businesses to reach higher quality standards not only in production processes but also for their dispensation.

ISO 9000 standards and lean management feature as critical management approaches to guarantee sustainable successes of businesses. Literature studies show that these two systems carry complementary characteristics and when they are used together provide important benefits.

Future researches should examine integration of these two approaches at sectoral level in more detail and offer practical application samples.

INTERACTION BETWEEN FUNDAMENTAL OBJECTIVES OF ISO 9000 STANDARDS AND OBJECTIVES OF LEAN MANAGEMENT

Referential explanation will be made within the scope of 7+7 propositions content.

In today's competitive business world, achieving sustainable success is possible for organizations as long as they adopt quality- oriented management mentality and improve the processes continuously.

In this regard, ISO 9000 quality management system offers a global frame that aims increasing customer satisfaction, providing operational productivity and guarantee harmonization with international standards optimizing processes of the businesses (Hoyle, 2017: 54). On the other hand, lean management aims to increase productivity and competitiveness via removing wastage, effective resource utilization and simplifying processes (Ohno, 1996: 198).

Both management mentalities contribute to strengthen competitive advantage of businesses developing approaches based on process improvement, productivity and quality. However, studies about how ISO 9000 and lean management targets interact with each other and common effects on organizational processes reveal that these systems should be discussed in an integrated structure (Benli, 2019: 46).

In this study, in accordance with 7+7 propositions in survey data, the relation between ISO 9000 fundamental objectives of quality management system and principles of lean management has been examined.

Interaction between the main factors of ISO 9000 like value chain management, human resources perception, competitive advantage, control systematic, leadership and innovativeness and the elements of lean management like rationality, resource utilization, strategic objectives and time management will be discussed Within the scientific literature and environmental researches.

Propositions Included in the Survey within the scope of Fundamental Objectives of ISO 9000 Standards

Within the scope of propositions included in the survey, following titles related to objectives of ISO 9000 are discussed:

Value Chain Management: ISO 9000 aims to optimize whole processes of businesses in the direction of value creation principle. Management of processes requires a systematic approach to guarantee providing outputs in accordance with customer expectations (Hoyle, 2017: 54).

Sense of Human Resources: Quality management systems provide managing business processes more effectively encouraging employee participation. While engaging employees into decision making processes increases motivation, also supports adopting quality improvement activities (Bıkmaz, 2019: 423).

Competitive Advantage: Process management discipline provided by ISO 9000 supports organizations for increasing competitiveness in the market. Quality standardization, providing businesses to get competitive advantage in global markets, help them to reach the more powerful position (Benli, 2019: 46).

Control Systematic: ISO 9000 provides processes to be managed depend on measurability principle of the processes. Through performance measurement systems necessary improvement is performed detecting deviations in processes (Güldoğan, 2022: 48).

Integration of Strategy and Leadership: As quality management systems determine long-term strategies, also contribute to strengthen leadership and sense of management. Leadership effectiveness is a critical factor for success of quality management processes (Karakaş and Savaş, 2019: 3519-3524).

Creation of Innovativeness: ISO 9000, offering a structure which encourages process innovation, contribute businesses to get competitive advantage. Continuous improvement principle helps organizations to develop innovative solutions (Dönen, 2021: 9).

Quality Standardization: Quality management systems provide all business processes to be run in accordance with definite standards. Therefore, a strong quality culture settles in organization and long-term success of the business is guaranteed providing continuous improvement processes (Başer, 2022: 65).

Propositions Included in the Survey within the scope of Objectives of Lean Management

Lean Management aims make organizations work more productively in the direction of objections like reducing wastage, optimizing resource utilization and simplifying. Following titles have been discussed within the scope of lean management propositions take place in the survey:

Rationality and Resource Utilization: Lean management intends to help businesses to form a more productive structure reducing resource consumption. Creating maximum value using minimum resource constructs the base of lean management (Ohno, 1996: 198).

Simplifying in Basic Activities: While purifying from redundant stages reduces costs of the businesses, increases process continuity and speed (Womack & Jones, 2003: 45).

Value Chain and Process Management: Lean Management aims to optimize value stream making all processes customer oriented. This approach overlapping ISO 9000 provides purifying from factors which do not create value (Rother & Shook, 1999: 51).

Determining Strategic Objectives: Determining long-term objectives and forming processes according to these objectives has a critical importance (Toussaint et.al, 2013: 75).

Dynamic Innovativeness and Agility: Lean Management aims to adopt to market changes and create a flexible structure that supports innovativeness. With lean processes, organizations can create a culture which encourages innovativeness (Mahmud et.al, 2021: 3).

Behaviour and Changeover: Lean management providing employees to adopt lean thinking system, supports a productive changeover in the organization. Increasing employee participation is a determiner factor for success of lean management (Graban, 2018: 52).

Time Management and Process Accelerating: Reducing time waste and waiting periods, lean management provides making quick judgements and optimizing processes for businesses (Katayama & Bennett, 1996: 9).

ISO 9000 and Lean Management Interaction

Objectives of ISO 9000 and lean management make it possible for the businesses to develop quality and productivity-oriented management mentality. The common point of these two systems are as follows:

Continuous Improvement: While ISO 9000 provides continuous improvement of processes within the frame of quality management systems, lean management increases operational productivity adopting sense of daily improvement (Güldoğan, 2022: 48).

Data-based Decision Making: While ISO 9000 provides to manage processes measurably and as evidence-based, lean management aims to optimize processes with statistical data (Benli, 2019: 46).

Employee Participation and Changeover: Both ISO 9000 and lean management aim to increase productivity inside the organization encouraging employees participate in decision making processes

(Bıkmaz, 2019: 423).

ISO 9000 standards and lean management are two system that provide businesses to develop sense of quality and productivity-oriented management. While ISO 9000 provides sustainability of processes standardizing quality, lean management aims to optimize resource utilization reducing wastage.

These two approaches help organizations to develop competitiveness complementing each other. While ISO 9000 guarantee quality, lean management provide practising these processed more effectively and productively. Dealing these two senses of management as integrated by the businesses is a critical factor in terms of customer satisfaction.

RESEARCH

Purpose of the Research

Purpose of the research is determining the interaction between fundamental objectives of ISO 9000 Standards and lean management targets within the frame of participant individuals' perceptions.

Data Collection Tools

Survey form used in the research consists of three main chapters. In the first chapter socio-demographic variables like age, gender, educational statue, position (administrator, other), professional experience, in the second chapter by the aim of determining the interaction between fundamental objectives of ISO 9000 Standards and lean management targets within the frame of participant individuals' perceptions; the questions "What level have fundamental objectives of ISO 9000 standards been actualised?", "What level are the advantages lean management provide for the organization?" take place. In the third chapter 7 propositions about fundamental objectives of ISO 9000 standards and 7 propositions about main objectives of lean management have been included. Within the scope of 5 Likert scale, for statistic assessments, propositions are given weight value for strongly disagree 1, for disagree 2, for Neither agree nor disagree 3, for agree 4, for strongly agree 5.

Data Collection and Analysis

Survey is applied to 134 employees from several sectors between January 2025- February 2025. In the research one sample t test and correlation analysis have been included. Statistics are practised with SPSS and data gained have been interpreted in the lights of literature.

Main Hypotheses of the Research

Main hypotheses of the research are as follows:

H1: "Value chain, HR perception, competitive advantage and control superiority" factor has been perceived as important by the participants.

H2: "Strategy-leadership integration, innovativeness creation and quality standardization" factor has been perceived as important by the participants.

H3: "Rationality, resource utilization, main activities and value chain" factor has been perceived as important by the participants.

H4: "Strategic objectives, dynamic innovativeness, behaviour, time management" factor has been perceived as important by the participants.

H5: Fundamental objectives of ISO 9000 Standards and lean management has a positive interaction.

FINDINGS

Findings towards Socio-Demographic Variables

Participants' (n=114) age (min – max= 22-64) average and standard deviation is 46,5 ± 9,94. For female participants (n=51 44,7%) 46,43 ± 11,11 and for male participants (n=63, 55,3%) it is 46,7±8,97. Education statue distribution, licence is53,5 % (n=61) and postgraduate level is 44,7% (n=51). Participants are leader-positioned. Experience period distributions determined as 1- 9year experience 8,8 % (n=10), 10 years and over 91, 2% (n=104).

General Participant Perception towards Fundamental Objectives of ISO 9000 Standards and Legal Management Objectives

Participants have been posed questions about their general perceptions towards interaction between Fundamental objectives of ISO 9000 Standards and lean management targets. The question "What level have fundamental objectives of ISO 9000 standards been actualised?" mostly has been answered as high and very high (52%) by the participants (Table 1). On the other hand, the question "What level are the advantages provided by lean management for the organization?" has been posed to the participants and it is determined that the answers are mostly very high and high in positive direction (83 %). (Table 2). Accordingly, in spite of the fact that the process is compelling, adaptation and sustainability of the process is determined within the frame of participants perceives.

Table 1. Realisation level of ISO 9000 Standards fundamental objectives

	N	%
Very low	1	,9
Low	9	7,9
Medium	44	38,6
High	41	36,0
Very high	19	16,7
Total	114	100,0

Tablo 2: Level of advantages provided by lean management

	N	%
Very low	1	,9
Low	0	0
Medium	17	14,9
High	45	39,5
Very high	51	44,7
Total	114	100,0

Validity and Reliability Tests

Within the scope of 7 items towards fundamental objectives of ISO 9000 Standards, principal components analysis and factor analysis has been actualised. Kaiser-Meyer-Olkin Value (KMO=0,873), Bartlett globality test result (χ^2=734,352, Sd=21, p=0,000) and according to values diagonal matrix take (0,914-0,808) data set is decided to be proper for factor analysis. In consequence of factor analysis 7 items/propositions have been collected under two factors. Resultant factor's variance total hermeneutic level is 70,421 %. The first factor explains total variance at the level of 40,811% and the second factor at the level of 29,610 %. Cronbach Alpha value of resultant structure is 0,886 and internal consistency has been provided in the structure.

New resultant factors have been named according to propositions they include, f1: Value chain, HR perception, competitive advantage and control systematic, f2: Strategic-leadership integration, innovation creativity and quality standardization (Table3).

Table3. Validity and Reliability Findings towards Fundamental Objectives of ISO 9000 Standards

….. takes place among fundamental objectives of ISO 9000 Standards	Factor		Cronbach Alpha	
	1	2	General =,886	
Satisfying customer expectations within the scope of value chain	**,819**	-,004	,723	,793
Crating a common quality awareness and perception in human resource and reflecting this on the activities	**,798**	,074	,763	
Actualising a sustainable competitive advantage by the organization	**,660**	,396	,782	
Systemizing the control processes ideally	**,583**	,243	,745	
Presentation of strategic management and leadership processes systematically in integration	-,124	**,754**	,722	,737
Creating innovativeness-based process, product and service quality	,458	**,689**	,711	
Providing flexibility and dynamism-based standardization of quality	,447	**,677**	,706	

A factor analysis with core components has been preferred for the 7 items towards objectives of lean management. Kaiser-Meyer-Olkin Value (KMO=0,819), Bartlett globality test result (χ^2=753,175, Sd=21, p=0,000) and according to values diagonal matrix take (0,891-0,817) data set is decided to be proper for factor analysis. In consequence of factor analysis 7 items/propositions have been collected under two factors. Resultant factor's variance total hermeneutic level is 70,787%. The first factor explains total variance at the level of 35,748 % and the second factor at the level of 35,039 %. Cronbach Alpha value of resultant structure is 0,853 and internal consistency has been provided in the structure.

New resultant factors have been named according to propositions they include, f1: Rationality, resource utilization, main activities and value chain, f2: Strategic objectives, dynamic innovativeness, behaviour, time management (Table4).

Tablo 4. Validity and Reliability Findings towards Objectives of Lean Management

takes place among fundamental objectives of Lean Management	Factor		Cronbach Alpha	
	1	2	General =,853	
Increasing productivity and performance behaving rationally	**,884**	,086	,726	,789
Providing active and effective resource utilization	**,835**	,152	,726	
Exhibiting approaches within the scope of value chain focusing on basic activities	**,592**	,371	,733	
Sufficiency in behavioural dimension of HR (perception, attitude, expectation, focusing, motivation, job satisfaction etc.) towards the organization	,006	**,853**	,743	,747
Practicing sustainable innovativeness dynamically	,150	**,641**	,733	
Acting with a strategic tendency, effective and efficient access to all type of performances	,182	**,572**	,722	
Suggesting successful processes for time management	,359	**,494**	,707	

Items Within The Scope Of Factor And T Test Findings Towards The Factor

Two of the basic hypotheses of the research H_1, H_2, H_3 and H_4 have been accepted. According to this result, integration between "Value chain, HR perception, competitive advantage and control systematic" within the scope of ISO9000 Standards fundamental objectives and "Strategic-leadership, innovativeness creativity and quality standardization" have been perceived as important by the participants. Likewise, "Rationality, resource utilization, basic activities and value chain" which are in the scope of lean management and "Strategic objectives, dynamic innovativeness, behaviour, time management have also been perceived as important by the participants.

Table 5. One Sample T Test Findings Towards Factors

Factor	Average	Standard Deviation	T test Value=3	
			t	P
Value chain, HR perception, competitive advantage and control systematic (f1)	4,2259	,55051	23,776	,000
Strategy-leadership integration, innovativeness creation and quality standardization (f2)	3,9649	,61186	16,838	,000
Rationality, resource utilization, basic activities and value chain (f3)	4,2602	,54450	24,712	,000
Strategic objectives, dynamic innovativeness, behaviour, time management (f4)	4,1513	,48611	25,288	,000

As a result of equation analysis, as it observed in Table5, H_5 (the fundamental objectives of ISO 9000 standards and lean management targets have a positive interaction) has been accepted (Table6). Beta coefficient of the model (β=0,11) is low but important statistically (Table6). CMIN/DF= 0,064, GFI=0,999, NFI=0,999, RFI=0,997, CFI=0,999 and RMSEA=0,001 values show that harmony in the model is at high level (Figure 1). Starting from these findings, interaction between the fundamental objectives of ISO 9000 standards and lean management targets is positively significant but when it is low the subject is advised to be examined also in terms of other variables in integration. In other words, an approach from a wider perspective

will be a rational way relating many other variables to quality standard in an interactive frame in the organization (Table6).

Table 6. Structural Equation Findings of the Research

Factor	Way	Factor	β	Standard Error	Critical Rate	P	Result
ISO 9000 Fundamental Objectives	<-->	Lean management targets	,109	,027	4,010	,001	Acceptance

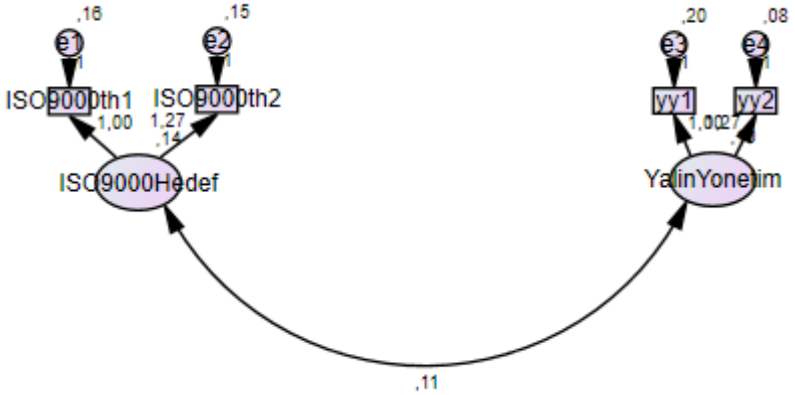

Figure 1. Structural Equation Model towards the interaction between the fundamental objectives of ISO 9000 Standards (ISO9000 Objective) and Lean management targets (Lean Management).

CONCLUSION

Analyses performed to understand how the interaction between the fundamental objectives of ISO 9000 Standards and lean management targets is formed in businesses show that both management mentalities include complement factors in terms of quality management, process optimization and productivity. However, results of structural equation reveal that this interaction is low in spite of making sense statistically.

In the factor analysis performed in the direction of survey data, it is determined that fundamental objectives of ISO 9000 Standards are collected under two basic factors as "chain value, human resources perception, competitive advantage and control systematic" and "strategy- leadership integration, innovativeness creation and quality standardization."

Likewise, objectives of lean management are formed in the frame of "Rationality, resource utilization, basic activities and" and "strategic objectives, dynamic innovativeness, behaviour and time management" factors. Whole of the factors have been evaluated as important by the participants. As a result of structural equation modelling performed by the aim of determining relation between ISO 9000 Standards and lean management targets, it is determined that two management mentality has a significant positive interaction but interaction level is low. (β=0,11, $p<0,05$). Fit indices of the model (CMIN/DF=0,064, GFI=0,999, NFI=0,999, RFI=0,997, CFI=0,999 and RMSEA=0,001) show a high level of match. However, low interaction level shows that the businesses cannot provide efficient integration about discussing ISO 9000 and lean management systems with an integrated perspective.

Researches show that the components of ISO 9000 Standards like quality management, process control and customer-orientation overlap the productivity, resource utilize and process optimization principles of lean management. Nevertheless, low interaction reveals that businesses deal these two management systems as independent processes and full integration cannot be provided. This condition emphasizes the necessity of adopting a common management approach by these two management systems.

The findings obtained show that the fundamental objectives of ISO 9000 Standards and lean management targets are complementary in businesses but in practice integration level remains limited.

It will be beneficent if future researches examine integrated effects of these two systems on businesses with larger samples and specific to sectors, evaluate practical progresses with comparative analyses and constitute more comprehensive models within the context of organizational variations.

REFERENCES

Ağın, K. (2020). Yönetimlerde Kaizen felsefesi. 19 Mayıs Sosyal Bilimler Dergisi, 1(1), 67-75.

Akgün, S. (2015). Sağlık hizmetlerinde yalın yönetim "5S" yaklaşımının uygulanması. Sağlık Akademisyenleri Dergisi, 2(1), 1-7.

Arbós, L. C. (2002). Design of a rapid response and high efficiency service by lean production principles: Methodology and evaluation of variability of performance. International Journal of Production Economics, 80(2), 169-183.

Bakır, B. (2022). Yalın yönetim anlayışının sağlık kurumu çalışanlarının motivasyon ve performans düzeylerine etkisi: Adana il sınırları içinde bir araştırma (Yüksek Lisans Tezi). Çağ Üniversitesi, Sosyal Bilimler Enstitüsü, İşletme Yönetimi Anabilim Dalı, Mersin.

Benli, G. (2019). ISO 9001-2015 Kalite Yönetim Sisteminin Şirket Sistemlerine Uygulanması (Enko Elektronik Uygulama Örneği) (Yüksek Lisans Tezi). Manisa Celâl Bayar Üniversitesi, Sosyal Bilimler Enstitüsü.

Başer, F. (2022). ISO 9000 Kalite Yönetim Sisteminin Rekabet Gücüne Etkisi ve Bir Uygulama. (Yüksek Lisans Tezi). Yalova Üniversitesi, Lisansüstü Eğitim Enstitüsü, İşletme Anabilim Dalı, İşletme Bilim Dalı.

Bıkmaz, Z. (2019). Hemşirelerin yalın yönetime ilişkin algı düzeyi ile örgütsel stres düzeyleri arasındaki ilişki. Current Debates on Social Sciences Human Studies, (3), 421-435.

Bilgin, E. (2019). ISO 9001: 2015 Kalite Yönetim Sisteminin Uygulamasının Üretim Yapan İşletmelerin Performansı Üzerine Etkileri: Öncesi Ve Sonrası (Yüksek Lisans Tezi). Türk Hava Kurumu Üniversitesi, Sosyal Bilimler Enstitüsü.

Bilgin, G. (2023). Hastanelerde yalın yönetim uygulamalarının çalışan memnuniyeti ile ilişkisi (Yüksek Lisans Tezi). Süleyman Demirel Üniversitesi, Sosyal Bilimler Enstitüsü, Sağlık Yönetimi Anabilim Dalı, Isparta.

Bilgin Sarı, E. (2018). Yalın üretim uygulamaları ve kazanımları. Uluslararası İktisadi ve İdari İncelemeler Dergisi - UİİİD-IJEAS, 17. UİK Özel Sayısı, 585-600.

Bruun, P. and Mefford, R. N. (2004). Lean production and the Internet. International Journal of Production Economics, 89(3), 247-260.

Byrne Art, Yalın Dönüşüm, Çev: Melis İnan, Optimist Yayınevi, İstanbul, 2015.

Clark, M.D., Silvester, K. and Knowles, S., (2013), "Lean Management Systems: Creating a Culture of Continuous Quality Improvement", J Clin Pathol, 66,638-643.

Civcisa, G. Ve Grislis, A. (2014). ISO/ TS 16949 Among Latvian Production Companies Focused On Automotive İndustry. Agronomy Research, 12(1), 255–262.

Çakar, T., ve Serdar, M. (2002). Kalite yönetim sistemleri. SAÜ Fen Bilimleri Enstitüsü Dergisi, 6(2), 45-60.

Değerli, Z. (2006). Toplam kalite yönetiminde istatistiksel süreç kontrolünün önemi ve bir işletme uygulaması (Yüksek Lisans Tezi). Akdeniz Üniversitesi, Sosyal Bilimler Enstitüsü, Antalya.

Deysher, B. (2015). A "Risk Based Thinking" model for ISO 9001:2015.

Dönen, F. (2021). Küçük Ve Orta Ölçekli İşletmelerde ISO 9001:2015 Kalite Yönetim Sistemi Uygulamalarının Değerlendirilmesi (Yüksek Lisans Tezi). Dokuz Eylül Üniversitesi, Sosyal Bilimler Enstitüsü, Toplam Kalite Yönetimi Anabilim Dalı.

Ghrayeb, O. Phojanamongkolkij, N. and Tan, B. A. (2009). A hybrid push/pull system in assemble-to-order manufacturing Manufacturing, 20(4), 379-387.

Graban, M., (2018), "Yalın Hastane", çev. Pınar Şengözer, İstanbul: Optimist Yayınları.

Güldoğan, A. (2022). ISO 9001 Kalite Yönetim Sistemine Sahip Olan İşletmelerde Sürekli İyileştirmenin Üretim Performansı Ve İşletme Performansına Etkisi: Konya Organize Sanayi Bölgesinde Bir Araştırma (Yüksek Lisans Tezi). Selçuk Üniversitesi, Endüstri Mühendisliği Anabilim Dalı.

Hoyle, D. (2017). ISO 9000 Quality Systems Handbook. Routledge.

Kara, M. B. (2013). İSO 9000 Kalite Yönetim Sistemi: Elektronik parça ithalatı yapan bir firmaya uygulanışı (Yüksek Lisans Tezi). İstanbul Ticaret Üniversitesi, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği Yüksek Lisans Programı, İstanbul.

Karakaş, Z. ve Savaş, H. (2019). "ISO 9001:2015 ile Ortaya Çıkan Farklılıkların İşletmelerin Bakış Açısıyla Değerlendirilmesi", Manas Sosyal Araştırmalar Dergisi, 8 (4): 3516-3532.

Katayama, H., & Bennett, D. (1996). Lean production in a changing competitive world: A Japanese perspective. International Journal of Operations & Production Management, 16(2), 8-23.

Kesici, B. (2022). ISO 9001:2015 Ve IATF 16949:2016 Kalite Yönetim Sistemi Standartlarının Firma Performansına Etkileri: Otomotiv Sektöründe Karşılaştırmalı Bir Analiz (Doktora Tezi). Düzce Üniversitesi, Mühendislik Fakültesi.

Keşkek, İ. (2026). Tedarikçi/Yapımcı Firmada ISO 9001:2000 Kalite Yönetim Belgelendirme Süreci (Yüksek Lisans Tezi). İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü.

Mahmud, T., Ahmed, S., & Islam, R. (2021). Lean Manufacturing: Principles, Applications, and Case Studies. Springer.

Martino, S. C., Shaller, D., Schlesinger, M., Parker, A. M., Rybowski, L., Grob, R. and Finucane, M. L., (2017), "CAHPS and Comments: How Closed-Ended Survey Questions and Narrative Accounts Interact in the Assessment of Patient experience", Journal of Patient Experience, 4(1), 37-45.

Ohno, T. (1996). The Toyota Production System: Beyond Large-Scale Production. Productivity Press.

Rother, M., & Shook, J. (1999). Learning to See: Value Stream Mapping to Add Value and Eliminate Muda. Lean Enterprise Institute.

Sumel, M. (2023). Bir yalın yönetim uygulaması olan yalın belediyecilik: Bursa Büyükşehir Belediyesi örneği (Yüksek Lisans Tezi). Bursa Uludağ Üniversitesi, Sosyal Bilimler Enstitüsü, Siyasal Bilimi ve Kamu Yönetimi Anabilim Dalı, Yönetim Bilimleri Bilim Dalı, Bursa.

Şeker, A. (2016). Yalın Üretim Sisteminde Kanban, Tek Parça Akışı ve U Tipi Yerleştirme Sistemleri. The Journal of Academic Social Science Studies, (50), 449-470.

Tanrıkulu, S. (2010). ISO 9000 kalite yönetim sisteminin işletmelerin kalite maliyetleri üzerine etkileri ve Kayseri'deki sanayi işletmelerinde bir uygulama (Yüksek Lisans Tezi). Erciyes Üniversitesi, Sosyal Bilimler Enstitüsü.

Telli, G., ve Gök, A. (2019). Omnikanal yönetimi ve müşteri memnuniyeti. Proceedings of the International Congress on Business and Marketing, 2019, Maltepe University, Istanbul, 13-14 June 2019.

Toussaint, J. S., Gerard, R. A., & Adams, E. (2013). On the Mend: Revolutionizing Healthcare to Save Lives and Transform the Industry. Lean Enterprise Institute.

Tunç, M. (2016). Kamu Kurumlarında Yalın Yönetim: Sosyal Güvenlik Kurumu (Sgk) Örneği. (Yüksek Lisans Tezi), Beykent Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Tunçay, C. (2024). Havacılık sektöründe yalın yönetim uygulamalarının oluşturduğu kriz ve riskler (Yüksek Lisans Tezi). İstanbul Gelişim Üniversitesi, Lisansüstü Eğitim Enstitüsü, Havacılık Yönetimi Anabilim Dalı, İstanbul.

Ulhassan, W., Von Thiele Schwarz, U., Thor, J. and Westerlund, H. (2014). "Interactions between lean management and the psychosocial work environment in a hospital setting–a multi-method study", BMC Health Services Research, 14(1), 1-11.

Yangınlar, G. ve Bal, N. (2019). Yalın yönetim ve yalın lojistik kavramlarının irdelenmesi. Stratejik ve Sosyal Araştırmalar Dergisi, 3(1), 151-161.

Womack, J. P., & Jones, D. T. (2003). Lean Thinking: Banish Waste and Create Wealth in Your Corporation. Simon & Schuster.