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Chapter 1

A RESEARCH ON THE EFFECT OF PERCEPTIONS OF TEACHERS REGARDING INNOVATION MANAGEMENT AND ENTREPRENEURSHIP ON ORGANIZATIONAL COMMITMENT IN PROJECT SCHOOLS

Özgür UYGUR[1]

1. INTRODUCTION

As a system, education has a complex structure and functioning. It consists of a whole set of ways and methods in which a wide variety of elements such as objectives, programs, administrators, teachers, students, parents, machinery and materials, buildings and facilities are used. While school principals and teachers are centrally located as an indispensable part of this whole, it has become more important for schools to operate a process for the information society as educational organizations in which different understandings are experienced with their dynamic processes.

There are many factors in schools that affect the commitment of teachers to the organization. Among these elements, the dimensions of innovation management and entrepreneurship in schools are thought to be directly or indirectly related to the competencies of school principals. The educational institutions (project schools), which have been in the education system since 2014 and implementing special programs and projects, are expected to carry out ideas, develop projects, plan, implement and evaluate them related to important areas such as social, economic, scientific, cultural and technological in line with the requirements of the 21st century. In line with this aim, It is possible to say that the effect of management and innovative entrepreneurship of school principals on the organizational commitment of the teachers working in project schools is extremely important.

Individuals who adopt systemic perspective and understanding must create areas of self-expression in mechanical, analog or digital processes. While it is

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inevitable for the individual to identify the concepts of creativity and innovation as a way of life in this sense, the environment, in which he or she resides, needs to experience innovative culture for a meaningful quality of life. While the concept of innovation, which has a sense for the future, is particularly a factor that affects the processes of development and change in society, it also forces the education system and institutions for change (Erdoğan, 2012: 2).

It is always possible that the competencies of school principals regarding innovation management will turn into an institutional reflection due to the responsibility they carry within the education system and the role they perform. The adoption and implementation of the innovative work by all the stakeholders in the educational institution will enable the school principal to strengthen the interaction and place an effective communication process in the institution. Therefore, the headmaster should be able to manage the organizational commitment processes and the configuration of the employees of the educational institution very well, plan and implement the work that is fundamental to it so that the objectives and goals of the institution can be accomplished.

Schools need to have a strong leader to succeed. This leader is the school principal. In other words, school principals play a key role in the success of the school whether it is a primary education or a secondary education institution (Yavuz, 2006). Students, teachers, parents, other school staff and stakeholders are expected to follow the way together towards the desired goal with the inspiration they get from school principals. In this process, it is aimed to work in a learning environment in which all the stakeholders in school, especially teachers, can realize themselves, share their experiences and produce new projects.

While it is common for school principals to show their entrepreneurship characteristics in achieving the goal of an innovative organizational structure, it should be noted that their influence on creating, supporting and implementing an innovative organizational culture is undeniably great. Therefore, while they benefit from different methods of education science in terms of being a model for the teacher group, they should also take the risk for the institution and show their entrepreneurial qualifications at the expected level. Because, how and to what extent teachers perceive the entrepreneurship qualifications of school principals, who are the leading actors of the institutions that educate people to the global competitive environment, is a very important issue.

2. CONCEPTUAL FRAMEWORK

Literature review has been done in this section. The conceptual framework is discussed under the headings of 'Innovation Management in Educational Institutions', 'Entrepreneurship of School Administrators' and 'Organizational Commitment in Educational Institutions'.

2.1. INNOVATION MANAGEMENT IN EDUCATIONAL INSTITUTIONS

Society and educational needs require diversity. Changes in the education system, such as the use of information and communication technologies, may allow the education process to be arranged according to the needs. Secondly, public institutions are under pressure just like in the labour market to increase efficiency, reduce spending and get the highest worth of the money spent. Thus, innovation is seen as an effective stimulus for these services. Thirdly, education should be relevant to society and national economy. It must make significant and necessary changes to adapt to the changing needs in the education sector. Finally, education is seen as a tool rather than a goal of promoting equality in most countries. Innovations also contribute to ensuring equality in the introduction and implementation of education (OECD, 2009).

The truth of the information society inevitably has an effect on social values, expectations and lifestyles. Schools are mentioned as institutions that will meet the expectations of societies and provide social transformation in line with contemporary developments (Bayrak and Terzi, 2004).

Schools, universities and other educational institutions will be able to provide better services to students and other stakeholders through information and communication technologies by preparing new programs. These new studies are being carried out to develop and improve the education service in one way or another and accordingly, innovations in education should be seen as 'developments (improvements)' (OECD, 2009). Collaboration, partnerships, the direct inclusion of teachers and students in innovation processes, the sympathy among school players, the expanded and content-specific learning types, sustainability, pedagogical practices as well as structural and continuous capacity-building efforts are the indicators of innovative schools (Musluoğlu, 2008).

According to Lander (1994), the innovation in education is planned and implemented to improve the work in schools and, above all, to improve the skills, knowledge and personal development of students. Innovations do not need to

be new to everyone, except those who participate for the first time. However, new programs and the possibilities of the training based on these programs are expressed as innovation.

Encouraging innovation in education systems will be possible through high levels of care and mechanisms to support innovation. Innovation is an original way, method, and procedure that leads to a better performance. Most schools feel to create innovation management skills to take extra advantage of innovation (Bubner, 2009). It is important to prepare procedures to eliminate the effect of the subordinate-upper chain and hierarchical differences between school administrator and teacher in the school environment. If innovation is being practised in the organizational structure, which is habitual and problematic in its routines, innovation may be very unlikely to succeed (Özdemir and Cemaloğlu, 2000).

In addition, innovation in education can be experienced as a different process due to both its nature and practitioners compared to other innovations in the public sector. Innovations in health and education are often compared. However, the innovations in education, in which traditional scientific knowledge is utilized, the differences between medical innovations where R&D plays an important role and the practitioner-oriented approach is more common, may be more important (OECD, 2009).

2.2. ENTREPRENEURSHIP OF SCHOOL ADMINISTRATORS

The rising values of the information society include rapid technology transformation, rapid change and innovation, interest in human resources, information-based organizations, the learning organizations, information people and the lifelong learning human model (Fındıkçı, 2001: 21). Schools are institutions that will enable to educate productive, researching, lifelong learning and development-loving individuals in the information society as learning and teaching organizations. The components and substructure of the schools must be sufficient to provide individual training services in the desired characteristics.It is important for the schools to create the facilities that will enable them to develop in accordance with today's conditions and their success in achieving this goal. In this respect, many studies have shown that one of the most important factors affecting the success of schools is the school administrators (Balcı, 2001).

The tasks of school administrators are to demonstrate the leadership characteristics that will protect and improve the existence of school, to carry

out technical work in order to ensure the order of bureaucratic work at school, and to integrate social functioning to carry out school-environment relations in a healthy way. In addition, school administrators must engage in the studies that will coordinate school staff and improve the quality of education in order to achieve the goals of school. The fact that the practices and studies carried out to increase the quality of education in our country in recent years are far from scientific studies have made schools only institutions that transmit information and prepare for the exams (Bayrak ve Terzi, 2004). The school administrators can find themselves in a series of specific patterns, tasks and responsibilities within this understanding of the quality of education. It can also interfere with the full realization of the social, political, economic and individual tasks of education. Along with the increase in the level of education, the decrease in the level of producing creative ideas and becoming entrepreneurs, and also the decrease in the entrepreneurship and innovation skills of the learners can be considered as some of the negative outcomes in the education system based on the researches (Konokman ve Yelken, 2014). This adverse situation is quite likely to occur with social learning. The fact that this situation may increase and decrease the existing innovation skill, as the duration of education increases, could be a problem due to the inability of this skill to find its area of utilization (due to the education system) and a decrease in the level of entrepreneurship (due to social learning). School administrators, who are expected to serve as educational leadership in taking the place of schools as a learning organization, are expected to become entrepreneurs and play the roles that will enable them to adopt this to school stakeholders through social learning. The creation of learning, independent, innovative and creative educational organisations will largely depend on school leaders who see that management is not just about using authority and power, but also requires hard work and responsibility (Özden, 1998: 9). In this respect, the school administrators can develop an understanding of education that will make more difference and grow with nurturing resources, rather than completing their duties with specific procedural and legal powers and maintaining the overall structure of the school. While it may be more beneficial for school administrators to pursue opportunities for school development and to create a school culture that adopts innovation as a principle, the presence of school administrators who adopt entrepreneurial behaviors and try to develop creativity skills can contribute significantly to educational organizations.

The educational entrepreneur process is a cycle that consists of approval, preparation, implementation and development stages and maintains

entrepreneurial mobility in line with the work to be done at these stages. School administrators are expected to show shared leadership as a requirement of their duties in initiating and executing this process. In the approval process, the school administrator first monitors the status of the school and in-school processes, analyzes it and creates a draft for planning the necessary steps. During the preparation process, school administrators can create a plan by attempting to get the ideas and thoughts which they have designed. In the implementation process, they demonstrate the role they want to perform by completing their preparations for the relevant persons, institutions or resources for the activity that they will attempt. In the development process they can add new ways or change paths to continue the venture cycle by creating a roadmap to sort the operations that will take the next attempt.

In the field of school management, it is clear that entrepreneurship will provide significant advantages in the process of effective school development. For example, it can be said that school administrators can engage in entrepreneurial behaviors such as improving education by working with environmental forces and factors that are their duties, and also developing educational programs by using their resources in the environment.

2.3. Organizational Commitment in Educational Institutions

Leadership is one of the most effective and important factors in developing teacher commitment in schools as an educational institution (Okçu, 2011: 43). It has been supported by researchs that there is an association between leadership styles and performance of school. In this process, the leadership characteristics that school administrators have and implement play an important role (Buluç, 2009). Therefore, school administrators should act with the awareness that they are in the most effective and critical position of the education system (Bennis ve Townsend, 2005). The effective school researchs from the past to the present include the following features that can be considered within the scope of the commitment of administrators and teachers to their organisations (Balcı, 1993: 56):

-     Teachers frequently and continuously talk about teaching practices.

-     School administrators and teachers constantly monitor the teachings of each other and evaluate their own teaching with these observations.

-     It can result in a series of combined actions which consist of planning, researching, evaluating and preparing teaching materials in collobaration with administrators and teachers.

The commitment of teachers to the school is directly related to the adoption of the aims and values of the school, the effort to achieve them and the desire to remain in the school (Celep, 2000). It is clear that school principals who play a role in these factors are important in building school commitments. The efficiency of schools and student achievement are associated with the multidimensional organizational commitment of teachers, and the high level of organizational commitment and productivity positively influence each other (Celep, 2000: 138).

Total commitment to the school can be achieved by eliminating a kind of opportunist approach. School administrators and teachers, who are fully committed to the school, are expected to sincerely perform the tasks that will ensure the development of the school and contribute to the school, and focus on the school-related work to be done in relation to the school even after school times. Increasing the organizational commitment of teachers who are primarily educational workers and all other stakeholders is an essential and important issue in schools that have an important role in social transformation efforts (Uğurlu ve Üstüner, 2011: 436).

3. BACKGROUND OF THE RESEARCH AND RECOMMENDED HYPOTHESES

It is seen that many researches related to innovation management have been done when the literature is examined. Below are examples of domestic and foreign researches on the subject.

Dibbon and Pollock (2007) investigated the processes of innovation in the schools where innovation is applied and how collaborative work affects institutional learning. As a result of their studies, they found that teachers and administrators took decisions in cooperation and this had a positive effect on institutional learning in a meaningful way in the schools where a culture of innovation was established. Smith et al. (2008) established a model based on the relationship between the factors affecting innovation management in their research, and it was concluded that organizational culture was related to all factors, affected all factors mutually and was influenced by all these factors. Argon and Özçelik (2008) found that while elementary school administrators found themselves very competent about the competence of managing change in their work related to their competence in managing change, the teachers found them moderately adequate, and the opinions of the teachers about the competence of their administrators to manage change differ significantly by gender and by task. In their study which

examined the contribution of organizational learning, knowledge creation and creativity to the innovation process in school, McCharen et al. (2011) stated that the most important factors contributing to the school reform and innovation process were the supporting learning culture, organizational knowledge creation and cooperation in the school, and it was concluded that although the supportive organizational learning culture in the school positively and significantly influenced creativity, organizational learning, and knowledge building practices, autonomy of teachers in their work had no meaningful impact on creativity and knowledge-building practices. Bülbül (2012) has determined that school administrators have a high level of beliefs on the competence in innovation management, and there is no statistically significant difference in the beliefs of innovation management of school administrators according to gender and level of education variables in the study which aims to determine the beliefs on the competence in innovation management of school administrators. In the research which examines the attitudes of secondary school administrators towards innovation management and draws attention to the problems they have faced in innovation process, Boydak et al. (2013) have concluded that the attitudes of the managers towards the necessity of innovation and the management of innovation are high and this attitude differs significantly only according to the level of education of the administrator. Koch et al. (2015) has concluded that both the dedication and support of administrators to work and the creativity of teachers has a strong effect on the success of innovation implemented in schools. Gilad-Hai and Somech (2016) have found that the level of organizational effectiveness, student achievement and social cohesion are higher in the schools where innovation studies are applied compared to the control group, while the levels of emotional conflict and tension are lower. Stevenson et al. (2016) have investigated how school administrators facilitate continuous professional development in their institutions. It has been concluded that the school administrator group studied in the research support the teachers who want to bring innovations to the classroom environment through technology-based and informal vocational learning styles during the innovation studies process.

When the literature is examined, it is seen that school administrators should have the ability to develop the vision and mission in accordance with the future of the school organization regarding the innovation management competencies, to improve the quality of education, to live the learning organization and individual philosophy at school, to configure team spirit, to transfer authority, to follow technological developments and to update themselves, to internalize a participatory and democratic management approach, to strengthen the school-

environment connection, to manage school resources efficiently, to establish a physically sufficient learning environment, to support the development of school staff, to manage evaluation processes in school, to become a teaching leader, to use social media effectively and to communicate effectively.

When the literature on entrepreneurship which is the second key concept of the study is analyzed, although it is seen that the researches are carried out mainly in private and public institutions, especially in business and profit-making companies, it is understood that in recent years more priority has been given to the researches in which the concept of entrepreneurship is associated with education. Pashiardis and Savvides (2011) aimed to show how school principals combined entrepreneurship and teaching with leadership traits in their efforts to build the learning capacity of their students. The framework of successful school leaders has been shaped according to the findings. The entrepreneurship of teachers in connection with the leadership styles exhibited by school principals was classified as 'semi-autonomous entrepreneurship facilitated by management style', 'loosely connected entrepreneurship that emerged with authoritarian management' and 'sponsored entrepreneurship formed by unifying/integrative management' in the research conducted by Eyal, Yosef-Hassidim (2012) on the effects of management styles of principals on sustainable entrepreneurship of teachers. Fayolle and Toutain (2013) stated that the concept of entrepreneurship is far beyond the idea which claims that entrepreneurship education given in vocational schools and university courses will increase entrepreneurship. Hörnqvist and Leffler (2014) tried to determine the meaning of entrepreneurship and school leadership that nurtures entrepreneurial behavior in the study on entrepreneurial school leader. Blake and Mestry (2014)examined the entrepreneurship approaches of school principals in school finance in the study on the entrepreneurship of school principals. In this study, it was seen that school principals did not comply with this situation even though they had the ability to increase entrepreneurial activities. Eyal (2014) also examined the relationship between network use and entrepreneurship of school principals in his study. It has been found that there is a relationship between the network use of school principals and their entrepreneurship. In line with this finding, it is stated that the intensive communication provided by the school principals with the network provides advantages for some entrepreneurial purposes. Sahin (2018) examined the relationship between the competencies of innovation management and entrepreneurship of secondary school administrators and tried to determine whether there was a significant difference between them depending on various variables. It was concluded that there

were no significant difference in the perceptions of secondary school teachers towards the competencies of innovation management of school administrators according to gender, age, marital status, branch, education level of teachers, while there were significant differences in the type of school and their professional seniority. Derin (2019) determined with the study entitled "Entrepreneurship Features of Administrators in Secondary Education Institutions" that the levels of perception regarding entrepreneurship of school administrators were high. The school administrators perceived themselves as entrepreneurs. There was no differentiation in the levels of perception regarding entrepreneurship of school administrators according to gender, branch, seniority in management and years of practical experience. However, it was observed that there was a differentiation in age and education level. It was also observed that the level of perception regarding entrepreneurship increased as the level of education increased.

There is a significant increase in the researches related to the field of education when we consider the recent researches on organizational commitment which is one of the key concepts of the research. In the study of the relationship between organizational commitment and emotional intelligence of preschool teachers by Shepherd-Osborne (2009), it was stated that there was a moderate relationship between emotional intelligence and job satisfaction, and that there was no significant relationship between the leadership styles of principals and the organizational commitment of preschool teachers. In the research to reveal the relationship between leadership practices of principals in public school and organizational commitment of teachers, Berck (2010) concluded that the leadership practices of school principals had a significant impact on school commitment. The relationship between the power styles of primary school principals and the organizational commitment of teachers was addressed by Sezgin and Koşar (2010), and it was stated that the personality and reward power of school principals were negatively correlated with adaptation commitment of teachers. It was stated that there was a positive relationship between transformational leadership and organizational commitment in the study conducted by Khasawneh et al. (2012) to reveal the relationship between the transformational leadership of administrators and the organizational commitment of the teachers in Vocational High School. Aydın et al. (2013), who tried to determine the effect of leadership styles of school principals on organizational commitment and job satisfaction of teachers, stated that transformational leadership had a positive effect on job satisfaction and organizational commitment of teachers, and that as the leadership behaviors of administrators moved from sustainability to transformational, the

organizational commitment of teachers and job satisfaction levels would also increase. The relationships between the influence tactics used by primary school administrators and the organizational commitment of teachers were examined by Koşar and Pehlivan (2020). As a result of the research, it was determined that the most effective tactics used by primary school administrators were "compliance with the rules" and the least effective tactics used were "response and personal attractiveness".

3.1. RELATIONSHIP BETWEEN INNOVATION AND ORGANIZATIONAL COMMITMENT

Organizational commitment is to adopt the objectives of the organization in which the individual works and demand to maintain his or her presence within that organization. (İnce ve Gül, 2005). Organizational commitment as a result of the relationship between the organization and the employee refers to the strength of the connection that the employee feels towards the organization he/she works for (Uygur, 2007: 72). Innovation, which is thought to be related to organizational commitment, is the main source of achieving competitive advantage for many organizations (Güleş and Bülbül 2004: 115). Martin and Nicholls (1987) claim that organizational commitment includes the following elements:

- To use all of the time in useful and creative works
- To pay attention to details
- To strive extra
- To do things in the best way and for the first time
- To be open and willing for innovations
- To put forward proposals
- To work in cooperation
- To develop skills and abilities
- To be confident and not to damage trust
- To be proud of the talents
- To be always open to development

'Using all of the time in useful and creative works', which is one of the elements of organizational commitment, have parallels with 'to influence their environment or allow them to create new circles' which is seen in people with high levels of innovation and 'to create sustainable new products, processes and services'. 'To strive extra' from the other elements of organizational commitment

coincides with 'to add value to the environment' which is seen in people with high level of innovation. 'To be open and willing for innovations' which is another element of organizational commitment and 'To attach values on ideas' which is seen in people with a high level of innovation support each other. In line with these explanations, the following hypotheses showing the relationship between organizational commitment and innovation have been proposed:

> *H1a: Input management, one of the dimensions of innovation management in schools, affects the adaptation dimension of organizational commitment.*
> *H1b: Input management, one of the dimensions of innovation management in schools, affects the identification dimension of organizational commitment.*
> *H1c: Input management, one of the dimensions of innovation management in schools, affects the internalization dimension of organizational commitment.*
> *H2a: Innovation strategy, one of the dimensions of innovation management in schools, affects the adaptation dimension of organizational commitment.*
> *H2b: Innovation strategy, one of the dimensions of innovation management in schools, affects the identification dimension of organizational commitment.*
> *H2c: Innovation strategy, one of the dimensions of innovation management in schools, affects the internalization dimension of organizational commitment.*
> *H3a: Organizational culture and structure, one of the dimensions of innovation management in schools, affect the adaptation dimension of organizational commitment.*
> *H3b: Organizational culture and structure, one of the dimensions of innovation management in schools, affect the identification dimension of organizational commitment.*
> *H3c: Organizational culture and structure, one of the dimensions of innovation management in schools, affect the internalization dimension of organizational commitment.*
> *H4a: Project management, one of the dimensions of innovation management in schools, affects the adaptation dimension of organizational commitment.*
> *H4b: Project management, one of the dimensions of innovation management in schools, affects the the identification dimension of organizational commitment.*
> *H4c: Project management, one of the dimensions of innovation management in schools, affects the internalization dimension of organizational commitment.*

3.2. RELATIONSHIP BETWEEN ENTREPRENEURSHIP AND ORGANIZATIONAL COMMITMENT

The studies on entrepreneurship started with the question "Why does a person become an entrepreneur?" and in later studies, it was concluded that the initiatives and the structures involved in these initiatives also interacted with the environment as open systems (Başar et al., 2013). Open systems constantly interact with their environment and continuously take inputs from the environment and transform them into changes and development as output (Hodgetts, 1975).

It can be said that entrepreneurship will gain strength through interaction in schools which is one of the open systems. According to the administrative mind structure, an entrepreneur; is a person who has the ability to plan, make decisions and communicate, manage and motivate employees and lead them as a team in cooperation (Naktiyok, 2004). The staff of entrepreneurial teachers and administrators in schools develop schools and learning environments and lead them to innovation. The presence of entrepreneurial school administrators in schools may increase the motivation of teachers to be entrepreneurs as well. In their study based on qualitative and quantitative studies examining entrepreneurial characteristics, Scott et al. (2003) listed the common characteristics as follows: As a result of quantitative studies; the need for success, risk-taking, orientation, tolerance for uncertainty, internal control focus, self-confidence, goals and setting goals and as a result of qualitative studies; independence, orientation and passion.

When the person characteristics mentioned in entrepreneurship are matched with the person indicators showing organizational commitment, they can be considered as goals and setting goals, adopting the goals and values of the organization with orientation and passion, making self-sacrifices for the organization, and feeling a strong desire to continue in the organization. The pleasure of success in entrepreneurship, which is the source of an implicit relationship, can be matched with the desire to accomplish the goals of the organization in organizational commitment. Independence, which is one of the characteristics of entrepreneurship, can be associated with the need for less control, control and discipline of the person with a high organizational commitment. On the other hand, when entrepreneurship is considered as the person who sees and creates opportunities (Çetindamar, 2002), parallelism can be achieved by considering the options as a value within the organization. In addition, showing the reliability and sincerity of employees in critical and special situations can be associated with being the focus of internal control which is an entrepreneurial feature.

The hypothesis, which argues that individuals with high organizational commitment will exhibit entrepreneurial characteristics, describes the relationship between these two concepts. It has been explained that there can be common and supporting features between the concept of organizational commitment and entrepreneurship in the line with the explanations stated above. It has been tried to be explained that these two concepts are related by comparing the characteristics which form the basis of organizational commitment and entrepreneurship concepts discussed in the literature. The following hypotheses based on these explanations have been proposed within the scope of the research:

> *H5a: Entrepreneurship competence of school principals affects the adaptation dimension of organizational commitment.*
>
> *H5b: Entrepreneurship competence of school principals affects the the identification dimension of organizational commitment.*
>
> *H5c: Entrepreneurship competence of school principals affects the internalization dimension of organizational commitment.*

3.3 SCOPE AND FUNCTIONING OF PROJECT SCHOOLS (PS)

School administration consists of services such as education and training services, student personality services, support services and it is implemented by the school management team, especially the school principal. The sc hool administration is authorized to carry out, organize and supervise the whole functioning of the school within the limits of the provisions of the national education legislation, the instruction programs and the orders of the senior management, and responsible for managing, evaluating and developing the school in accordance with its objectives (Demirtaş et al., 2007: 422). Project schools have a school management structure and functioning model in which teachers with high performance can work . In addition, the working period of a manager or teacher in project schools is limited to 4+4 years, two separate periods with the same title and 8 years in total. A significant difference, which distinguishes the school management structure and functioning of project schools from other schools, came into force with the law numbered 6528 of 14 March 2014 (Official Gazette, 2014). Although the assignments of teachers and administrators are made by the Minister of National Education, school principals are empowered on the education personnel to be chosen by sharing authority, which is accepted as an example of innovative practice in the current assignment process. While the authority sharing is the beginning of a new management model in school management structure and functioning, it is the first time in the Turkish Education System.

The concept of PS is considered as a new school management approach that has been developed in order to increase the academic success of students and to disseminate project-based learning processes (MEB, 2016). While it is believed that these schools should be carefully monitored with their own school management model within the education system and also with the prediction of potential for this model to make a significant difference over time, the seperation of them from other secondary schools is discussed as a critical question for policymakers and practitioners. As a result of the fact that the Ministry of Education has converted some of the secondary schools into PS, it has become more and more important to examine this situation due to the signals of the transition to "autonomous management" in the management structure, operation and practices of these schools, in addition, there are signs that there will be a new paradigm in school management structure and functioning in the Turkish Education System with this practice.

4. RESEARCH

In this research, it has been attempted to determine the views of administrators and teachers about the innovation of school principals in project schools, which is also known as educational institutions implementing special programs and projects, as well as the effect of sub-dimensions of the variables regarding entrepreneurship and innovation on organizational commitment of teachers. The purpose and importance of the research will be discussed in this section.

4.1 PURPOSE AND IMPORTANCE OF RESEARCH

The aim of this research is to determine to what extent the levels of organizational commitment of teachers working in educational institutions (Project Schools), which implements special programs and projects, are affected by the competencies of innovation management and entrepreneurship of school principals. For this purpose, answers to the following questions have been searched for:

- Is there a relationship between innovation management, the perception of entrepreneurship competence and organizational commitment?
- Does innovation management have an effect on organizational commitment?
- Does the perception of entrepreneurship competence have an effect on organizational commitment?

This study is important;

o   To determine to what extent the levels of organizational commitment of teachers in the project schools are affected by the competencies of innovation management and entrepreneurship of the school principals in terms of the healthy functioning of the processes of innovation management and entrepreneurship.

o   To solve the problems faced by the school principals assigned in the project schools regarding the innovation process, to use and develop the process efficiently and effectively, to take risks if necessary, to be able to manage the process in a competitive environment, to create networks that can show a solution-oriented approach, to provide an environment of trust where teachers and other staff can work with motivation, to enable timely and qualitative fulfillment of works and operations, to be able to adopt an attitude and behavior that transfers competencies to the school in order to achieve the desired goal and vision.

4.2. RESEARCH MODEL

In this research, it has been attempted to determine the views of administrators and teachers about the innovation of school principals in project schools, which is also known as educational institutions implementing special programs and projects, as well as the effect of sub-dimensions of the variables regarding entrepreneurship and innovation on organizational commitment of teachers. These objectives have been taken as the main criteria when the model of the research is determined. Descriptive research has been conducted to determine the levels of entrepreneurship, innovation and organizational commitment of school administrators with the sub- dimensions of these variables. The hypotheses proposed within the scope of this research are modeled as seen in Figure 1. describing the background of the research.
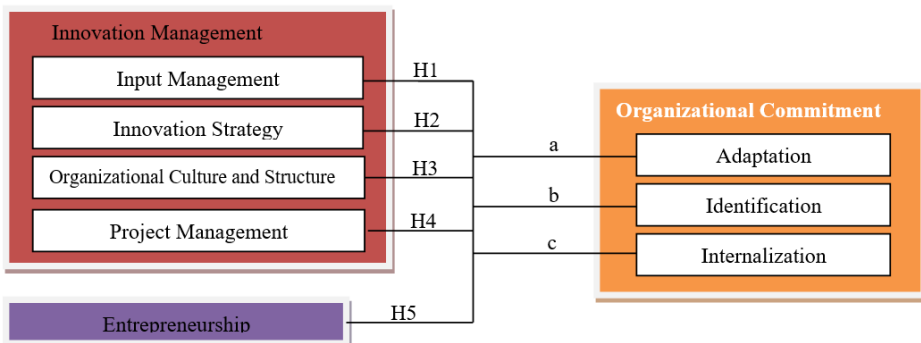

Figure 1. The Model Of The Research

A model which shows the relationship between innovation management and entrepreneurship and organizational commitment has been developed in line with the literature in the study. The model of the research includes four dimensions of innovation management and a dimension of entrepreneurship which are all considered to be fundamental. The model developed in the study is shown in Figure 1. In the model of the research, it is suggested that the variable of innovation management in schools affects the variable of organizational commitment with input management, innovation strategy, organizational culture and structure and project management dimensions, and entrepreneurship, which is the only dimension of the entrepreneurship variable. Organizational commitment (Adaptation, Identification and Internalization) constitutes the independent variables of the research, while innovation management (Input Management, Innovation Strategy, Organizational Culture and Structure and Project Management) and entrepreneurship (entrepreneurship) are dependent variables.

4.3. UNIVERSE AND SAMPLE

The universe of the research consists of 1135 teachers working in 20 Project schools affiliated to Antalya Provincial Directorate of National Education in the 2019-2020 academic year, while the sample consists of 434 teachers selected by random sampling. The acceptable margin of error in calculating the sample size was taken as 0.05 (5%), and the minimum sample size was calculated as 387 by using the formula according to the trust level of 95% (Anderson, 1990). The surveys were distributed to 473 teachers considering that the scales might not be returned in sufficient numbers, and 450 survey forms were used for the research after the incomplete and superficial ones were removed from the collected surveys. The data from 450 samples were evaluated in terms of extreme data and lost data in order to perform a reliable and accurate analysis of the data set, and 16 surveys with extreme data that violated the normal distribution were excluded from the analysis. In the lastest case, the research was held with the data set obtained from 434 teachers.

4.4. DATA COLLECTION TOOLS

The measurement tools in the literature were scanned in the research, and the suitable ones in terms of validity and reliability were determined. The survey form consisting of 2 parts was used to carry out the research. The first part of the survey

contains a personal information form designed by the researcher to obtain the personal and professional information of the teachers who form the sample group of the research.

'The Scale of Innovation Management in Schools' developed by Bülbül (2012) was used as a data collection tool. The confirmatory factor analysis of the scale was peformed within the scope of validity and reliability studies of the teacher form, and Cronbach-Alpha coefficients (0.966) were calculated. The data collected in the research were analyzed with the help of SPSS 20 statistical software package. 'The Scale of Organizational Commitment" developed by Balay (2000) was used to determine the perceptions of organizational commitment of teachers in order to determine the level of innovation of school principals. "The Scale of Entrepreneurship of School Administrator" developed by Köybaşı (2016) was also used as a data collection tool in the research. The confirmatory factor analysis of the scale was performed within the scope of validity and reliability studies of the teacher form, and Cronbach-Alpha coefficients (0.90) were calculated.

Quantitative analysis techniques were used to reach the sub-objectives of the research. SPSS 25.0 software and AMOS 21.0 software package were used to analyze the data collected from the participants. The lowest and highest scores, arithmetic mean and standard deviation taken from the scale were calculated in order to reveal the general distribution characteristics of the participants and to determine the levels of perception regarding innovation, organizational commitment and entrepreneurship of school administrators. Confirmatory Factor Analysis (CFA) was performed to test the structure validity of the scales. Exploratory Factor Analysis (EFA), which is widely used in scale development studies, is used to reduce the number of variables and to examine which factor structures the existing variables are collected under (Conway and Huffcut, 2003: 149).

4.5. FINDINGS

The findings and comments obtained in this research were analyzed according to the sub-problems of the research, which aims to determine to what extent the levels of organizational commitment of the teachers working in the educational institutions (Project Schools) which implement special programs and projects in the province of Antalya, are affected by the competencies of innovation management and entrepreneurship of school principals.

It is sufficient enough to perform hypothesis tests among the parametric tests because of the fact that the individual skewness and kurtosis values of the scales used in the study remain within the range of ± 1.5, and the sample is above 200 (Tabachnick and Fidell, 2013).

DEMOGRAPHIC FINDINGS OF THE PARTICIPANTS

The descriptive information, which shows the distribution of 434 teachers in the research sample according to their gender, age, educational status and branches, is presented under the title of the demographic characteristics of participants in Table 1.

Table 1. Frequency and Percentage Distributions of Demographic Features of Participants (Teachers in the Sample)							
Category	N	Percentage (%)	Demographic Features	Demographic Features	Category	N	Percentage (%)
Female	189	43,5	Gender	Job Title	Teacher	405	93,3
Male	245	56,5			Deputy Principal	23	5,3
23-35 Age Range	73	16,8	Age		Chief Deputy Principal	6	1,4
36-45 Age Range	231	53,2		Years of Practical Experience	0-2 Years	165	38,0
45+ Age Range	129	29,7			3-5 Years	145	33,4
Bachelor's Degree	339	78,1	Educational Level		6-8 Years	59	13,6
Master's Degree	95	21,9			8-10 Years	24	5,5
Arabic	3	0,7			10 Years and Over	41	9,4
Biology	19	4,4		Type of School	Science High School	153	35,3
Geography	25	5,8			Social Sciences High School	101	23,3
Religious Culture and Moral Knowledge	15	3,5			Anatolian High School	63	14,5
Philosophy	25	5,8			Anatolian Religious High School	117	27,0
Physics	33	7,6		Years of Working Experience	1-6 Years	33	7,6
English	53	12,2			7-12 Years	71	16,4
Chemistry	19	4,4	Branch		13-18 Years	109	25,1
Mathematics	66	15,2			19-24 Years	131	30,2
Vocational Courses	13	3,0			25 Years and Over	90	20,7
Guidance	13	3,0		Number of the Students at Present School	100-400	73	16,8
History	30	6,9			401-500	138	31,8
Turkish Language and Literature	60	13,8			501-600	161	37,1
Physical Education	21	4,8			601 and Over	62	14,3
Visual Arts	9	2,1					
Music	12	2,8		Number of the Students at Present School	10-30	96	22,1
German	13	3,0			31-39	79	18,2
Information Technology	5	1,2			40-49	157	36,2
					50 and Over	102	23,5

In table 1, it is seen that 56.5% (189) of the participants are female teachers and 43.5% (245) are male teachers; 16.8% (73) teachers are in the 23-35 age range, 53.2% (231) teachers are i the 36-45 age range and 29.7% (129%) of teachers are aged 45 and over. Considering the educational status of the participants, 339 (78.1%) teachers have bachelor's degrees, while 95 (21.9%) teachers have graduate degrees.

Looking at the distribution of the branches, teachers from 18 branches participated in the research: Arabic, Biology, Geography, Religious Culture and Moral Knowledge, Philosophy, Physics, English, Chemistry, Mathematics, Vocational Courses, Guidance, History, Turkish Language and Literature, Physical Education, Visual Arts, Music, German and Information Technologies. The distribution of the participants differs in terms of branch, seniority, tenure in the project school and the number of students in the school.

DESCRIPTIVE STATISTICS ON SCALES

The answers, which were given by the participants to the survey questions related to the scales used in the research, were discussed in detail at this stage. As a result of the answers given to the scale items of Innovation Management of School Principals, The Competence in Entrepreneurship of School Principals and Organizational Commitment of Teachers within the scope of the 5 point-Likert scale, the average results of the dimensions formed by the relevant items are given as a table; the average points given to each of the dimensions of the related scales are listed from high to low (1=highest).

Table 2. Descriptive Statistics Of The Dimensions Of The Scales				
Scales	**Dimensions**	**Rank**	**Avg.**	**S.D.**
Innovation Management in Schools	Input Management	2	4,0696	1,07176
	Innovation Strategy	1	4,0760	1,08597
	Organizational Culture and Structure	3	4,0492	1,11405
	Project Management	4	3,9550	1,07461
Entrepreneurship Competence	Entrepreneurship	1	4,3288	,76476
Organizational Commitment	Adaptation	1	4,4203	,57728
	Identification	3	3,9749	,94470
	Internalization	2	4,0279	,91933

N=434
Avg.= Average, S.D.= Standard Deviation

When the points given by the teachers to the dimensions of innovation management are analyzed in Table 2, it is seen that the highest point is given to the dimension of Innovation Strategy, secondly to the dimension of input management, thirdly to the dimension of organizational culture and structure, and lastly to the dimension of Project Management. However, it is also seen that the difference in points between the dimensions is quite small when the averages of the answers are examined. The scale of entrepreneurship competence, which is one dimension, has an average of 4.32. When the points given to the sub-dimensions of the organizational commitment scale are analyzed, it is seen that the highest point is given to the dimension of adaptation, secondly to the dimension of internalization, lastly to the dimension of identification.

FINDINGS AND EVALUATIONS OF INTERVARIABLE CORRELATIONS

Multiple correlation analysis was conducted to reveal the relation between innovation and entrepreneurship of school principals and their organizational commitment, and the findings were presented in Table 3.

Table 3. Correlation Analysis Results on Intervariable Relations									
Variable	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1.Organizational Commitment	,612**	,942**	,923**	,492**	,360**	,386**	,406**	,427**	,413**
2.Adaptation	1	,435**	,367**	,458**	,320**	,340**	,340**	,358**	,353**
3.Identification		1	,831**	,467**	,343**	,375**	,394**	,413**	,398**
4.Internalization			1	,364**	,273**	,288**	,312**	,330**	,316**
5.Entrepreneurship				1	,534**	,548**	,568**	,611**	,590**
6.Input Management					1	,950**	,938**	,904**	,961**
7.Innovation Strategy						1	,955**	,919**	,972**
8. Organisational Culture and Structure							1	,947**	,983**
9.Project Management								1	,979**
10.Innovation Management									1

N= 434; **p < 0.001

A positive significant relation is observed between all variables when the presence and direction of the relation between the variables are analyzed as a result of the correlation analysis. When the relations between the holistic structure of the scales used in the research are observed, there is a moderately significant positive relation between organizational commitment and entrepreneurship (r=,492; p<0.01) and innovation management (R=,413; p<0.01). However, the strongest positive relation is between the organizational commitment of teachers and the entrepreneurship competence of school principals. When the relation between organizational commitment and the scale dimensions of innovation management, which are considered as independent variables in this study, is evaluated, it is observed that the highest relation is between organizational commitment and project management (r=,427; p<0.01). The positive relation between organizational culture and structure and organizational commitment (r=,406; p<0.01), the positive relation between innovation strategy and organizational commitment (r=,386; p<0.01) and the positive relation between input management and organizational commitment (r =,306; p <0.01) follows this relation.

FINDINGS AND EVALUATIONS ON THE EFFECT OF THE VARIABLES

Multiple regression analysis was conducted to determine whether the perceptions of teachers on the level of innovation and entrepreneurship of school administrators were a significant predictor of organizational commitment of teachers. Multiple regression analysis is an analysis technique that allows the determination of the relation between one dependent variable and two or more independent variables (Tabachnick and Fidell, 2007). It was examined whether the assumptions required by regression analysis were met.

Since the effect of the variables of entrepreneurship and innovation on organizational commitment was examined in the research, innovation and entrepreneurship were taken as predictor variables and organizational commitment as dependent variable. As a result of the multivariate regression model, it is seen that the value of VIF, which is the maximum variance magnification factor, is less than 10. Furthermore, all the tolerance values, which were obtained as a result of the analysis, are higher than 0.2 which is the lowest limit. The results of these values show that there is no multiple correlation problem in the regression model.

Table 4. Regression Model Regarding the Effect of Entrepreneurship Competence on Organizational Commitment

	Dependent Variable Total Organizational Commitment			
Independent Variable	**β**	**S.E.**	**P**	**Regression Model Summary**
Competence in Entrepreneurship of School Principals	,458	,039	,000	R^2=,242; Adj. R^2=,240; F=138,051; DW=1,816; p=,000

	Dependent Variable Dimensions of Organizational Commitment								
	Adaptation			**Identification**			**Internalization**		
Independent Variables	**β**	**S.E.**	**P**	**β**	**S.E.**	**p**	**β**	**S.E.**	**p**
Competence in Entrepreneurship of School Principals	**,346**	**,032**	**,000**	**,577**	**,053**	**,000**	**,438**	**,054**	**,000**
Regression Model Summary	R^2=,210; Adj. R^2=,208; F=114,970; DW=1,935; p=,000			R^2=,218; Adj. R^2=,216; F=120,443; DW=1,820; p=,000			R^2=,133; Adj. R^2=,131; F=66,060; DW=1,887; p=,000		

While the competence in entrepreneurship of school principals is considered as an independent variable, organizational commitment and its sub-dimensions are considered as dependent variables.

When the findings are examined, it is seen that the model, which has been established to test the effect of competencies in entrepreneurship of school principals on organizational commitment, is statistically significant (F=138,052; p=.000). Accordingly, the levels of competence in entrepreneurship of school principals (β=,458; p=.000) have a positive and meaningful effect on the levels of organizational commitment of teachers. In addition, it is seen that the competencies in entrepreneurship of school principals explain 24% of the effect on organizational commitment of teachers (R^2=.240). Therefore, it can be mentioned that school principals also need to increase their own competence in entrepreneurship to work with teachers with higher organizational commitment.

When the results of models established with organizational commitment dimensions are examined, it is seen that the competencies in entrepreneurship of school principals have a positive significant effect on the levels of adaptation (F=114,970; β=,346; p=.000),identification (F=120,443; β=,577; p=.000) and

internalization (F=66,060; β=,438; p=.000) of teachers. Hence, the hypotheses of H5a, H5b and H5c are accepted. In addition, it is seen that the competencies in entrepreneurship of school principals account for 21% of the effect on adaptation of teachers (R^2=.208), 22% of the effect on identification of teachers with their institutions (R^2=.216), and 13% of the effect on internalization of teachers of their institutions (R^2=.131). When the findings obtained from the established models are evaluated together, the fact that teachers adapt to their institutions, internalize their institutions and identify with their institutions, that is to say, work with commitment in their schools, reveals the importance of their principals to be competent in entrepreneurship.

Table 5. Regression Model Regarding the Effect of Innovation Management and Its Dimensions on Organizational Commitment

Independent Variables	B	S.E.	P	Regression Model Summary
Dependent Variable **Total Organizational Commitment**				
Innovation Management	,278	,029	,000	R^2=,170; Adj. R^2=,168; F=88,589; DW=1,756; p=,000
Input Management	-,175	,098	,075	
Innovation Strategy	,048	,114	,674	R^2=,189; Adj. R^2=,182; F=25,022; DW=1,775; p=,000
Organizational Culture and Structure	,103	,120	,391	
Project Management	,295	,091	,001	

Independent Variable	Adaptation			Identification			Internalization		
Dependent Variable **The Dimensions of Organizational Commitment**									
	β	S.E.	P	β	S.E.	P	B	S.E.	p
Input Management	-0,66	,082	,424	**-,292**	**,131**	**,026**	-,154	,132	,246
Innovation Strategy	,101	0,95	,289	,108	,152	,477	-,059	,153	,701
Organizational Culture and Structure	-0,27	,101	,789	,156	,160	,330	,164	,162	,313
Project Management	**,184**	**,076**	**,016**	**,373**	**,121**	**,002**	**,315**	**,123**	**,011**
Regression Model Summary	R^2=,131; Adj. R^2=,123; F=16,158; DW=1,957; p=,000			R^2=,181; Adj. R^2=,173; F=23,643; DW=1,760; p=,000			R^2=,114; Adj. R^2=,106; F=13,856; DW=1,848; p=,000		

While total innovation management and the dimensions of innovation management are considered as independent variables, organizational commitment and its sub-dimensions are considered as dependent variables.

When the findings are examined, it appears that the model, which has been established to test the effect of innovation management on organizational commitment in schools, is statistically significant (F=88,589; p=.000). Accordingly, the studies on innovation management in schools (β=, 278; p=.000) has a positive and significant effect on the levels of organizational commitment of teachers. It is also seen that innovation management in schools accounts for 16% of the effect on organizational commitment of teachers (R2=.168). When the effect of the dimensions of innovation management on organizational commitment is examined, it is obeserved that only the project management dimension has a positively significant effect on organizational commitment (β=,295; F=25,022; p<0.05). The dimension of project management accounts for 18% of the change in organizational commitment of teachers (R2=.182). Therefore, it is important to create a process of successful innovation management and project management in schools to work with teachers with higher organizational commitment.

When the results of the models, which has been established with the dimensions of organizational commitment are examined, it is seen that project management, which is one of the innovation management dimensions, affects the levels of adaptation (F=16,158; β=,346; p<0.05) identification (F=23,643; β=,121; p<0.05) and internalization (F=13,856; β=,315; p<0.05) positively and significantly. Thus, the hypotheses of H4a, H4b and H4c have been supported as in Table 5. In addition, it is seen that project management accounts for the 12% of the effect on adaptation of teachers (R2=.123), 17% of the effect on identification of teachers with their institutions (R2=.173) and 10% of the effect on internalization of teachers of their institutions (R2=.106). It is also seen that the dimension of input management has a significant negative effect on the dimension of identification, which is one of the dimensions of organizational commitment (F=23,643; β=-,292; p<0,05). Thus, the H1b hypothesis has been accepted. It has been concluded that the other dimensions have no effect. Hence, the hypotheses of H1b, H1c, H2a, H2b, H2c, H3a, H3b and H3c have not been supported.

FINDINGS AND EVALUATIONS ON DIFFERENCE TESTS

In this part of the research, it has been examined whether demographic factors such as gender, age, educational status, branch, professional seniority, years of practical experience, number of students and teachers in the school and type of school make a difference in organizational commitment of teachers and the

perceptions of the competencies in innovation management and entrepreneurship of school principals.

Independent sample t-test and one-way analysis of variance (One-WayAnova) have been used to test whether there are differences between the groups of participants.

Table 6. Findings on the Variables of the Research in Terms of the Type of School						
Variable	**Type of School**	**N**	**Avg.**	**S.D.**	**p**	**Significant Difference**
Organizational Commitment	Science High School	153	4,1760	,69038	,060	No difference
	Social Sciences High School	101	4,2461	,61030		
	Anatolian High School	63	4,0284	,73411		
	Anatolian Religious High School	117	4,0204	,79178		
Entrepreneurship	Science High School	153	4,3011	,77975	,000	Anatolian HS.-Science HS. Anatolian HS.-Social Sciences HS. Anatolian HS.-Anatolian Religious HS. Social Sciences HS.- Science HS.
	Social Sciences High School	101	4,5721	,64575		
	Anatolian High School	63	3,8912	,80402		
	Anatolian Religious High School	117	4,3907	,72179		
Innovation Management	Science High School	153	3,9932	1,03809	,000	Anatolian HS.-Science HS. Anatolian HS.-Social Sciences HS. Anatolian HS - Anatolian Religious HS. Social Sciences HS.- Anatolian Religious HS. Social Sciences HS. - Science HS.
	Social Sciences High School	101	4,4540	,70654		
	Anatolian High School	63	3,4780	1,16750		
	Anatolian Religious High School	117	3,9706	1,13272		

N= 434; p<0,05
N=Sample Number; Avg.=Average; S.D.=Standard Deviation

When the findings obtained from the ANOVA test have been examined, there is no significant difference in the opinions of teachers working in different school types regarding their organizational commitment (p>0,05).

The perceptions of teachers on the competence in entrepreneurship of school principals (F=11,370; p=.000) and the perceptions on the innovation management in the school (F=12,160; p=.000) differ by type of schools. The results of the Tukey test have been examined to determine between which two groups these differences occur. When the perceptions of the competence in entrepreneurship have been examined according to the results of the Tukey test, it is seen that there is a significant difference between the perceptions of teachers in Anatolian High School on the competence in entrepreneurship of school principals (Avg.=3.89; S.S.=,80) and those in Science High School, Social Sciences High School and Anatolian Religious High Schools. In addition, the perceptions of teachers in Social Sciences High School on the competence in entrepreneurship (Avg.=4.57; SS=,64) and the perceptions of teachers in Science High School on the competence in entrepreneurship (Avg.=4.30; SS=,77) differ. When the results are evaluated together, the perceptions of the teachers in the Social Sciences High School on the competence in entrepreneurship are higher than those of the teachers in Science High Schools and Anatolian High Schools. The perceptions of teachers in Anatolian High Schools on entrepreneurship are lower than those of the teachers in Science High Schools and Anatolian Imam Hatip High Schools. When the perceptions of the teachers on innovation management have been examined according to the results of the Tukey test, it is seen that there is a significant difference between the perception of teachers in Anatolian High School on innovation management (Av.=3.47; S.S.=1.16) and those in Science High School, Social Sciences High School and Anatolian Relious High Schools. This finding is similar to the perceptions of the competence in entrepreneurship. In addition, there is a difference between the perceptions of teachers in Social Sciences High School on innovation management (Avg.=4,45; S.S.=,70) and those in Science High School (Avg.=3,99; S.S.=1,03) and Anatolian Relious High Schools (Avg.=3,97; S.S.=1,13). When the results are evaluated together, the teachers in the Social Sciences High School have higher perception of innovation management in schools than the teachers in Science High Schools, Anatolian High Schools and Anatolian Religious High Schools. The perceptions of the teachers in Anatolian High Schools on innovation management is lower than those of the teachers in Science High Schools and Anatolian Religious High Schools.

Table 7. Findings on the Variables of the Research in Terms of Age Distributions of Teachers						
Variable	**Type of School**	**N**	**Avg.**	**S.D.**	**P**	**Significant Difference**
Organizational Commitment	25-35 Years	73	3,9801	,76507	,126	No difference
	36-45 Years	231	4,1711	,67565		
	45 Years and over	129	4,1504	,72682		
Entrepreneurship	25-35 Years	73	4,2427	,72097	,017	36-45 Years – 45 Years and over
	36-45 Years	231	4,4286	,71298		
	45 Years and over	129	4,2071	,85266		
Innovation Management	25-35 Years	73	3,9163	1,03107	,001	36-45 Years – 45 Years and over
	36-45 Years	231	4,1922	,92931		
	45 Years and over	129	3,7717	1,23136		

N= 434; p<0,05

N=Sample Number; Avg.=Average; S.D.=Standard Deviation

When the findings obtained as a result of the ANOVA test are examined, there is no significant difference in the views of the teachers regarding organizational commitment according to different age ranges (p>0,05). Although it is not included in the table, it has been concluded that there is no significant difference when it is examined whether there is a difference in the opinions of teachers regarding the dimensions of organizational commitment (adaptation, internalization, identification).

The perceptions of the teachers on the competence in entrepreneurship of school principals (F=4,117; p=.017) and their perceptions of innovation management in their schools (F=7,412; p=.001) differ in terms of the age groups. The results of the Tukey test have been examined to determine between which two groups these differences occur. When the perceptions of the competence in entrepreneurship are observed according to the results of the Tukey test, it is seen that there is a difference between the perceptions of the teachers in the age range of 36-45 on the competence in entrepreneurship of school principals (Avg.=4,42; S.S.=,71) and those of the teachers aged 45 and over (Avg.=4,20; S.S.=,85). The perception on entrepreneurship of school principals does not differ between other age groups. The differential findings on innovation management are similar to the perception of entrepreneurship. When the perception differences of innovation management have been examined according to the results of the Tukey test, it is seen that there is a difference between the perception of the teachers in the

age range of 36-45 on innovation management (Avg.=4,42; S.S.=,71) and the perception of the teachers aged 45 and over (Avg.=4,20; S.S. =,85). The perception on innovation management does not differ between other age groups. When the results are evaluated together, the teachers in the age range of 36-45 have higher perceptions on entrepreneurship of school principals and perceptions on innovation management about their schools than those of the teachers aged 45 and over. On the other hand, the perceptions on the competence in entrepreneurship and innovation management do not change among the teachers in the age range of 25-35. Based on this, it can be mentioned that the teachers in the age range of 36-45 have higher perceptions that they find their school to be more entrepreneur and better at carrying out the innovation management process compared to the teachers aged 45 and over.

DIFFERENTIAL TEST FINDINGS ON THE VARIABLES OF THE RESEARCH IN TERMS OF THE OTHER DEMOGRAPHIC FEATURES OF TEACHERS

Independent sample t-test and ANOVA test have been conducted to test whether the perceptions on organizational commitment, innovation management and entrepreneurship of the teachers differ according to the demographic features such as gender, educational status, branch, professional seniority, years of practical experience, number of students and teachers in the school and job title. When the findings obtained from the analysis have been examined, it is observed that the levels of the perceptions on organizational commitment, innovation management and entrepreneurship do not differ significantly among these demographic groups.

5. Result

In the context of entrepreneurship and innovation, it is very important to provide the organizational culture and commitment adopted by both employees and business managers, who are the driving force in carrying out the activities in order to increase the level of using individual abilities of the employees of the organization. At this point, it can be said that management should have an understanding that can support employees in all kinds of issues and help them to put new ideas into practice and open their way (Demirel and Karadal, 2007).

Educational organizations created to serve the society must have a proactive understanding in line with the spirit of the 21st century in order to sustain their existence and fulfill their duties and obligations. In this regard, when the studies carried out to serve the purpose of educational organizations are examined, it is

seen that administrators in the upper layers of the bureaucracy, school principals and teachers have important duties.

There are many factors that affect the organizational commitment of teachers in schools which are educational organisations. In particular, the competencies of school principals are thought to be directly or indirectly linked to the elements of innovation management and entrepreneurship in schools. The educational institutions (project schools), which have been in our education system since 2014 and implementing special programs and projects, are expected to carry out ideas, develop projects, plan, implement and evaluate them related to important areas such as social, economic, scientific, cultural and technological in line with the needs of the age. The research conducted for this purpose has been concluded by determining to what extent the levels of organizational commitment of the teachers working in the educational institutions (Project Schools), which implement special programs and projects in the province of Antalya, are affected by the competencies in innovation management and entrepreneurship of school principals.

When the perceptions of the teachers in the project schools on innovation studies of the principals are examined, it has been determined that the dimension of strategy development and implementation, the dimension of providing inputs such as necessary information, tools and equipment, human, environment, method…etc., and the dimension of innovative organizational culture and structure are higher than the dimension of competence in managing Project studies. When the points given by teachers to the dimensions of '*Innovation Management*' are analyzed, it is seen that the highest point belongs to the dimension of 'Innovation Strategy', secondly to the dimension of 'Input management', thirdly to the dimension of 'Organizational Culture and Structure', and lastly to the dimension of 'Project Management'. However, when the averages of the answers are examined, it is seen that the difference in points between the dimensions is quite small. This ranking is in the form of innovation strategies, organizational culture and structure, project management and input management in the research of Göl and Bülbül (2012). While the ranking related to the sub-dimensions of innovation management is organizational culture and structure, project management, innovation strategies and input management in the research of Argon et al (2014), it is ranked as Organizational Culture and Structure', 'Innovation Strategy', 'Input Management' and 'Project Management' in the study of Ömür (2014). The teachers, who participated in the study of Karataş et al. (2015), consider their school principals to be most competent in the dimension

of 'Innovation Strategy', secondly in the dimension of 'Organizational Culture and Structure', thirdly in the dimension of 'Projet management' and lastly in the dimension of Input Management. The teachers participated in the survey of the study, in which it has been concluded that the school administrators in the secondary education have a high level of competence in innovation management according to the perceptions of the teachers, have stated that they consider their administrators to be competent in terms of organizational culture and structure, innovation strategy, project management and input management, respectively, Sahin (2018). According to the views of the teachers involved in Dönmez's (2018) research, while school principals put the most emphasis on organizational culture and structure in the context of innovation management, they also exhibit behaviors towards the preservation of culture and structure. Although the averages are close to each other in all the researches under this title, it can be said that the dimensions of innovation strategy and organizational culture and structure precede the dimensions of input management and project management. Even though the importance given to input management is the lowest in all the researches compared to other dimensions, the fact that the importance given to input management is at the forefront in this research, means that the research shows consistency with its own results. Accordinly, the teachers in the project schools consider the school principals to be successful in their competence to develop and implement strategies for innovation studies; to provide inputs such as necessary information, tools and equipment, human, environment, method… etc. and to manage the projects about the studies related to the dimensions of organizational culture and structure. In other words, the teachers consider the school principals to be competent in terms of finding ways, methods and techniques for the implementation of innovation and providing the necessary human and material resources according to the needs of the school. On the other hand, the school principals are expected to place special emphais on the dimensions of organizational culture and structure and project management. Creating a structure where creative ideas are accepted, internalizing a process that will be initiated with the concept of innovation as the cultural element of the organization, and coordinating innovation management processes in order to carry out different projects will ensure that each of the innovation management dimensions functions correctly.

The scale of the competence in 'entrepreneurship', which is one dimension, has an average of 4.32. The perceptions of teachers on the competence in entrepreneurship of school principals are at the level of "Stronly Agree". It shows

that school principals in project schools have an entrepreneurial spirit, are able to take risks, develop methods for competitive understanding, are able to be a role model in studies for new ideas, and take responsibility for maintaining their goals with the existence of the school. Pihie et al. (2014), it is stated that there is an important relation between the perceptions of teachers on entrepreneurial leadership practices of school principals and their perceptions of school innovation.

According to the answers given to the sub-dimensions of the '*organizational commitment*' scale, the highest point has been given to the 'adaptation' dimension, secondly the 'internalization' dimension and lastly the 'identification' dimension. Accordinly, it can be mentioned that teachers in the project schools are able to express themselves in terms of their working environments, duties and responsibilities and motivational factors related to their schools, and they are also working in an environment where they perform their duties and responsibilities easily and with a high motivation. In the research conducted by Köybaşı (2016), school administrators consider the sub-dimensions of organizational commitment scale as "internalization", "identification" and "adaptation", respectively. While the dimension of adaptation has been ranked first by the teachers in this research, it has been ranked last by the school administrators in the research conducted by Köybaşı (2016). This situation can be considered as an indication that school administrators and their teachers look at the concept of 'organizational commitment' differently.

According to the results of the multi-regression analysis, the competence in entrepreneurship of school principals influences the organizational commitment of teachers, while the adaptation and identification of teachers with the institution, and the internalization of the institution have led to a proportional ranking. The effect of innovation management of school principals on the organizational commitment of teachers is less than the effect of their competence in entrepreneurship. Only the dimension of "project management" has a positive meaningful effect on organizational commitment within the context of the effect of the dimensions of innovation management on organizational commitment.

It has been observed that the effect of innovation management and entrepreneurship on the organizational commitment of teachers do not differ significantly according to the demographic features of gender, educational status, branch, professional seniority, years of practical experience, number of students and teachers in the school. The fact that organizational commitment of teachers does not differ in any demographic element leads to the conclusion that school

principals use their competencies in innovation management according to the requirements and characteristics of the teachers in the school. In other words, school principals state that while they are conducting motivational organizational culture studies with their teachers, who are the most important stakeholders in fulfilling the vision and goals of the schools, the teachers have a sense that they are valued by the school principal in the sense of internalizing this process. Cansu (2019) has concluded that the innovativeness of school principals affects the organizational commitment of the teachers with a service period of 16 years and over, and thus the organizational commitment of the employees may increase as the working time in an institution increases. A result similar to this finding by Gürsel and Eröz (2017: 140) shows that as the organizational commitment of the employees of the organization increases, the perceptions on innovation management of the organizations they work for increase mutually. In the study titled as the opinions of teachers about the skills of innovation management of school administrators, Ömür (2014) states that the number of students and teachers at school, the type of school and the number of school administrators show a statistically significant difference while gender, age, seniority, years of practical experience, marital status and educational status do not differ significantly. Nayir (2013), who examined the level of organizational commitment of primary school administrators in terms of gender, branch, marital status, school type, seniority, education status, school size and the region of the school location, treats the scale of organizational commitment in three factors as commitment of adaptation, identification and internalization. In the adaptation dimension, the opinions of the administrators differ significantly according to the variables of gender, school type and size of the school. In the dimensions of identification and internalization, the opinions of the administrators differ significantly according to the variables of marital status, type of school, seniority, educational background, school size and the region of the school location. Şahin (2018) has concluded that the perceptions of the secondary school teachers on the competencies in innovation management of school administrators do not differ significantly according to gender, age, marital status, branch and educational status of the teachers, but differ in terms of type of school and professional seniority.

It has been concluded that there is a significant difference in the perception of the teachers in project schools on the competencies in innovation management of school principals according to their *age*. When the differences in the perception on innovation management are examined according to the findings of the research, it has been observed that there is a difference between the perceptions on innovation

management of teachers in the age range of 36-45 and those of the teachers aged 45 and over. There is no difference between other age groups regarding the perception on innovation management. When the findings are evaluated together, teachers in the age range of 36-45 have higher perceptions on innovation management for their schools than the teachers aged 45 and older. On the other hand, the perceptions on innovation management of teachers between the age range of 25-35 do not change compared to other age groups. Based on this, it can be mentioned that teachers in the age range of 36-45 have a higher perception that their schools conduct the process of innovation management better compared to the teachers aged 45 and over. Karataş et al. (2015) have concluded in their study that there is a significant difference in the views of the teachers according to their ages, and that the teachers in the age range of 41-60 consider the school administrators to be more competent in the dimension of "organizational culture and structure" compared to the teachers in the age range of 20-40. In his study, Göl (2012) has concluded that the teachers in the age range of 20-35 consider the school administrators to be less competent in creating an innovative organization, providing input for innovation, managing innovative projects and using innovation strategies effectively. The results obtained from the same variable in the referenced studies and the result obtained from this research support each other. From this point of view, it can be said that school principals are effective in innovation management in relation to the levels of experience and excitement of a teacher age group that falls between the concepts of " digital immigrant "and" digital native". The internal motivation factors of teachers in project schools, the harmony of principal and teacher team based on innovative basis, the unity of goals and experience can be considered as other factors that can be effective in achieving this result. In Aydın's study (2019), in which the perceptions on innovation of school principals were examined, a significant difference was found according to age. The studies that do not have parallels with the result of this research have been also identified. In the studies of Turhan (2009), Top (2011), Boydak et al. (2013) and Ömür (2014), there is no significant difference regarding the innovation management of school administrators according to the age variable.

It has been concluded that there is a significant difference in the perception of teachers in project schools on the competencies in innovation management of school principals according to the *type of the school*. When the results regarding the perceptions of the teachers on innovation management are evaluated together, it is seen that the teachers in Social Sciences High Schools have higher perceptions on innovation management than those of the teachers in Science High Schools,

Anatolian High Schools and Anatolian Religious High Schools. The perceptions of the teachers on innovation management in Anatolian High Schools are lower than those of the teachers in Science High Schools and Anatolian Religious High Schools. When the values obtained in this scale for school principals in Social Sciences High Schools are considered, it can be stated that they are seen as proactive leaders who care about innovation, encourage the production of new ideas, provide coordination in the process of innovation and contribute to the development of the school. Ömür (2014) has identified significant differences in the total score and all sub-dimensions of the Innovation Management scale in his study, in which he examined the views of the teachers on the skills of innovation management of administrators according to the variable of type of school. The difference in total scale score has been observed in the direction of Science and Anatolian High Schools between Science and Anatolian High Schools, in the direction of Anatolian Religious High Schools between Vocational High Schools and Anatolian Religious High Schools, and in the direction of Fine Arts High School between Vocational High Schools and Fine Arts High Schools. The difference in the sub-dimension of project management of the scale has been observed in the direction of Science and Anatolian High Schools between Science and Anatolian High Schools and Vocational High Schools, and in the direction of Anatolian Religious High Schools between Vocational High Schools and Anatolian Religious High Schools. The difference in the dimension of 'culture and structure' is only between Vocational High Schools and Anatolian Religious High Schools. It has been observed that the difference in the sub-dimension of 'innovation strategy' is in the direction of Science and Anatolian High Schools between Science and Anatolian High Schools and vocational high schools, and in the direction of Anatolian Religious High Schools between Vocational High Schools and Anatolian Religious High Schools. Finally, the difference in the dimension of 'input management' is in the direction of Science and Anatolian High Schools between Science and Anatolian High Schools and Vocational High Schools, in the direction of Anatolian Religious High Schools between Science and Anatolian High Schools and Anatolian Religious High Schools, in the direction of Anatolian Religious High Schools between Vocational High Schools and Anatolian Religious High Schools and between the Vocational High Schools and the Fine Frts High School. Karataş et al. (2015) have found a significant difference in the dimension of input management according to the variable of type of school in their research, in which they dealt with the behavior of innovation management of school administrators. This difference is between high school teachers and middle school

teachers. According to the research, the perceptions of high school teachers on input management behavior of school administrators are higher than those of middle school teachers. Şahin (2018) has found significant differences in the views of the teachers working in different institutions regarding the competencies in innovation management of secondary school administrators. The teachers working in general secondary education institutions and the teachers working in Religious High Schools consider their school administrators to be more competent in terms of innovation management compared to the teachers working in other institutions.

When we look at the sub-dimensions of innovation management, significant differences are obtained in each dimension (project management, organizational culture and structure, innovation strategy, input management) according to type of the institution in which secondary school teachers work. While the teachers in general secondary education institutions, Vocational and Technical Education Institutions and Religious High Schools consider their school administrators to be more competent in the sub-dimension of 'project management' compared to the teachers working in other institutions, the teachers in Religious High Schools think that their school administrators are more competent in the sub-dimension of 'organizational culture and structure' and 'innovation strategy' compared to the teachers working in other institutions. The teachers working in other educational institutions, except Science High Schools and Social Sciences High Schools, consider their school administrators to be more competent in the sub-dimension of ''input management' compared to the teachers working in other institutions. On the other hand, Social Sciences High Schools and Science High Schools are the schools which have the lowest average about all sub-dimensions of the competencies in innovation management of school administrators according to the views of the teachers. Aydın (2019) has stated that types of the school make a significant difference on the perceptions and visions of innovation. These results based on the same variable support the results of the research. However, in the study conducted by Dönmez (2018), it can also be mentioned that there is no significant difference in the perceptions of school administrators on innovation management according to the variable of type of school. In general, it can be said that the perceptions of the teachers in project schools on the competencies in innovation management are affected by a few demographic differences. This can be interpreted as that the perceptions of teachers on the competencies of innovation management could vary in different environments and at different stages of work life.

It has been concluded that there is a significant difference in the perception of the teachers in project schools on the competences of *entrepreneurship* of school principals according to their *ages*. When the findings of the research related to the competences in entrepreneurship are examined, it has been observed that there is a difference between the perceptions of teachers in the age range of 36-45 on the competence in entrepreneurship of school principals and the perceptions of teachers aged 45 and over. The perception on entrepreneurship of school principals does not differ among other age groups. Accordingly, it can be said that the teachers in the age range of 36-45 have a higher perception that their schools conduct the process of innovation management better compared to the teachers aged 45 and over, and that they consider their school more entrepreneurial.

In other words, it can be said that school principals are effective in the competence in entrepreneurship and innovation management in relation to the experience and excitement levels of a teacher age group which falls between the concepts of digital immigrant and digital native. The internal motivation factors of teachers in project schools, the harmony of the principal and teacher team which is based on innovative and entrepreneurial basis, and the unity of goals and experience can be considered as other factors that can be effective in achieving this result. Çelik (2013), who investigated the skills of entrepreneurship of school administrators based on the variable of teacher perceptions, has found significant differences in the dimensions of "uncertainty tolerance" and "achievement requirement". According to this data, it has been concluded that young teachers consider their school administrators to be more entrepreneurial compared to experienced teachers. In the study on entrepreneurship characteristics of administrators in secondary school institutions, Derin (2019) has observed that the age factor make a difference in entrepreneurship based on the data that the participants have represented normal distribution according to the age factor and they are mostly between the ages of 41 and 50. In the study examining the leadership and entrepreneurship characteristics of school administrators, Artık (2019) has found that the entrepreneurship skills of school administrators in the age groups "21-30", "31-40", "41-50" and "51-60" are significantly higher than those of the school administrators in the age group "61 and older". However, Şahin (2018) has concluded that there is no significant difference in the perceptions on the competencies in entrepreneurship of school administrators according to the age of secondary school. Şahin has also found that the teachers in the range of 36-45 years consider their school administrators to be more competent in only the

sub-dimension of innovation compared to the teachers in the age range of 46-55 years.

It has been concluded that there is a significant difference in the perception of the teachers in project schools on the *competence in entrepreneurship* of school principals according to *type of school*. When the results are evaluated together, it is seen that the teachers in Social Sciences High Schools have higher perceptions on the competence in entrepreneurship than those of the teachers in Science High Schools and Anatolian High Schools. The perceptions on entrepreneurship of teachers in Anatolian High Schools are lower than the teachers in Science High Schools and Anatolian Religious High Schools. Accordingly, it is possible to state the conclusions that the studies on social sciences as a specialization mostly have an indirect effect; a more entrepreneurial and innovative educational environment is provided by school principals; an environment, in which a social, dynamic, flexible and open communication can be experienced, is created by the school principal in Social Sciences High School as compared to other types of schools. Şahin (2018), who examined the perceptions of teachers working in secondary education on the competencies in entrepreneurship of school administrators according to the variable of the type of school, has stated that teachers in Religious High Schools consider their school administrators to be more competent in the sub-dimension of achievement requirement compared to teachers working in general secondary education institutions and Vocational Technical Education Institutions. However, in the study where the leadership and entrepreneurship characteristics of school administrators have been examined according to the variable of the type of school, Arık (2019) has found that the points obtained from the entrepreneurship scale do not differ significantly according to the type of school in which the school administrators work.

According to the views of the teachers, there is no significant relation between the type of school, in which school principals work, and the competencies in entrepreneurship. However, the points obtained from the entrepreneurship scale differ according to the quality of the school, in which school administrators work. According to the views of the teachers, the competencies in entrepreneurship of the administrators working in private schools are significantly higher. Another study, in which the self-efficacy belief of school administrators and the perception level of organizational commitment and entrepreneurship do not differ significantly according to the school type variable, has been conducted by Köybaşı (2016). In general, it can be said that the perceptions of teachers in project schools on the competencies in entrepreneurship of school principals are affected by a

few demographic differences. This can be interpreted as that the perceptions of teachers on the competencies in entrepreneurship of school principals could vary in different environments and at different stages of work life.

As a final stage regarding the research findings, multi-correlation analysis has been carried out to reveal the relation between the innovation and entrepreneurship of school principals and their organizational commitment, and the existence and direction of the relation between the variables have been examined in this way. It has been concluded that there is a moderately significant relation between all variables in a positive direction. Based on this result, it can be said that the school principals working in project schools in the province of Antalya have competencies in innovation management and entrepreneurship according to perceptions of the teachers. When an overall assessment of the findings has been made, it can be stated that as the perceptions of teachers on the competence in entrepreneurship of school principals increase, the commitment of the teachers to their schools (organizations) also increases.

To conclude, it is observed that managing innovation and providing functionality to entrepreneurship in schools, where dynamic processes are experienced, is directly related to the commitment of teachers in today's world where a sustainable competitive process is experienced. It is important for school principals to demonstrate their competence in creating an innovative organizational culture as **a proactive school principal**2 of the existing process. As **an organic school principal**3, this also helps them to create an environment that enables the processes of entrepreneurship to be experienced. In addition, as **a Kefir school principal**4, it is also considered to be productive in terms of conducting the learning process in a school where teachers feel confident while attaining the expected achievements; morale and motivation are felt at the highest level, and are valued as a part of the learning organization.

In the light of the findings and results obtained during the research process, the following suggestions can be presented to the **practitioners**:

Theoretical and practical seminars can be given to school principals about innovation, entrepreneurship and organizational commitment regarding how teachers can increase their motivation or contribute to this process. While the teachers, who exhibit a high level of commitment to their organisation and work with motivation, are encouraged with different meaningful positive reinforcements, the studies on processes of organizational commitment can be

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2   It is used as a metaphor by the Researcher.
3   It is used as a metaphor by the Researcher.
4   It is used as a metaphor by the Researcher.

carried out with the participation of all stakeholders in identifying the reasons leading to the current situation for teachers with low level of commitment and low motivation. It can be ensured that all relevant stakeholders are involved in the process and develop supportive ideas related to the process when planning to implement the processes of innovation management and entrepreneurship in all schools. Proactive decisions can be determined to experience the least problems with the plans which are made in light of the findings obtained from the objective performance measurement and evaluation system in order to monitor the efficiency of the process of innovation management and entrepreneurship in educational institutions (project schools) that implement special programs and projects. Contribution of all employees to the process can be provided as teams, groups and working groups by creating a horizontal-axis decision and implementation mechanism rather than creating a vertical hierarchical organizational culture in order to make the learning processes more efficient and effective, and to experience the least problems in practises in educational institutions (project schools) that implement special programs and projects. Organizational structures can be developed in the form of learning organizations rather than knowing and understanding organizations, not only in institutions which implement special programs and projects (project schools), but also in all other institutions, and ideas can also be exchanged with all project schools over networks at regular intervals. New supportive and developing opportunities and potentials can be offered to school administrators in their duties related to the management of schools thanks to the finding that participants perceive the competencies in innovation management and its sub-dimensions of their school administrators at the level of "highly agree". Trainings can be given to school administrators to increase social skills such as communication, empathy and cooperation, which are the sources of social interaction. School principals in educational institutions (project schools), which implement special programs and projects, can increase the commitment of teachers to their institutions by creating workshops with learning and experience areas, in which teachers can spend more time in their institutions and contribute to their professional development. It can be cooperated with universities, other public and private institutions and organizations in order to ensure the expansion of entrepreneurial school principals and teachers in the system in order to increase the quality of the work in project schools. The committees of entrepreneurial and innovative school principals can be established centrally and locally; and the studies, which provide maximum benefit in the system, can be done in order to make the legal and practical processes experienced by school principals in the

functioning of educational organizations effective and efficient in achieving the desired educational goals and objectives throughout the country.

In the light of the findings and results obtained during the research process, the following suggestions can be presented to the **researchers**:

The reasons for the differentiation in the perceptions of teachers on the competence in innovation management of school principals can be investigated according to the results of the research. Although the research covers educational institutions (project schools), which implements special programs and projects, it can also contribute to literature and practice by both changing the sample group on organizational commitment and the perceptions on the competence in entrepreneurship of school principals, and the perceptions on innovation management in schools and by conducting researches in other educational instutions. While steps are taken to make school management a profession, ideas can be developed to determine whether school management should be moved to a different dimension through the studies including innovative and entrepreneurial feature, and researches can also be done on this subject. New researches can be carried out in educational organizations by developing new scales on the concepts of innovation management and entrepreneurship. The relation of innovation management in educational organizations with the issues such as organizational justice, leadership, generational and motivation can be explored. This research has been conducted with the teachers who work in project schools. Similar study can be done with school principals who work in project schools.

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Chapter 2

THE COMPOSITION OF HOUSEHOLD WEALTH OVER THE LIFE CYCLE

Sümeyye YILDIZ[1]

INTRODUCTION

This study[2] presents several stylized facts on how households allocate wealth among asset classes, and how portfolio allocation changes over the life cycle. This study uses comprehensive household survey data from the United States to show that asset accumulation has an inverted-V shape over the lifecycle, whereas debt is front-loaded in working ages.

Households save for consumption smoothing purposes, to have precautionary savings for income and health uncertainty, or due to retirement or bequest motives. Although the motivation for saving is well understood in the literature, it is much less clear how and why households hold a particular type of portfolio that includes a variety of assets with different features. Some assets are more in liquid form, such that they have small or zero transaction costs in terms of pecuniary or time costs. Some assets are riskier, and their returns vary depending on the state of the economy. Some assets, such as housing, provide for the sheltering needs of human beings and are essential parts of household portfolios. In this regard, the roles of liquid and illiquid assets in saving purposes are different. Households usually accumulate liquid assets to buffer against negative income shocks such as unemployment or eligibility loss in a public support program, or expense shocks such as unexpected health expenses and increased consumer expenses due to moving, repair, and so on. On the other hand, illiquid assets are accumulated for long-term goals such as retirement or children's higher education expenses. The purpose of wealth accumulation changes with age. Households prioritize some needs early in life, such as housing, while others are more important later in life, such as health-related expenses.

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[2]   This study is based on a part in chapter 3 of my PhD dissertation.

The composition of wealth not only impacts the financial stability of individuals but also exerts influence over more extensive economic and social frameworks. For example wealth composition is found to be related to income inequality (Szymborska, 2019), consumption patterns (Guo & Hardin, 2014), impact of asset price shocks (Mian et al., 2013). As a result, understanding household wealth composition and its relationship to other economic and social factors can inform policy formulation and economic strategies aimed at mitigating inequality and enhancing economic resilience.

To address these concerns, this study first demonstrates the composition of wealth throughout the lifecycle. The analysis then shows a correlation between age and certain asset types. These findings indicate that asset accumulation has an inverted V-shape over the life cycle. This observation is not true when most liquid assets are considered. Older households prefer to hold their assets in liquid form, such as checking and savings accounts. On the other hand, home equity, other real estate, and annuity/IRA accounts sharply decumulate after retirement age 65. Old households' preference for liquid assets is also observed in the liquidity share of net wealth. The liquid-to-networth ratio has a U shape throughout the lifecycle, with a large flat region in the mid-ages. This share increases after retirement. On the other hand, home equity share in wealth declines after retirement. The debt is front-loaded in the lifecycle. Young households accumulate debt rapidly early in their working lives and then pay off their debt slowly throughout their remaining life. Age is positively correlated with debt and asset holdings as well as the probability of debt and probability of stock ownership. However, it is negatively correlated with liquid-to-assets, debt-to-assets, and stock-to-assets ratios.

This study contributes to economics and literature on household finance across various dimensions. To begin with, it employs data from the Panel Study of Income Dynamics (PSID) to examine wealth profiles. The existing literature predominantly relies upon data from the Survey of Consumer Finances (SCF) for investigating portfolio allocation and lifecycle asset composition due to the extensive array of wealth variables it includes. In contrast, PSID data also provide significant insights into wealth distribution and can be directly associated with household consumption and income metrics, which SCF data fail to encompass. Furthermore, the outcomes of this investigation act as a robustness validation for studies that utilize the SCF dataset. Additionally, this analysis utilizes econometric approaches to reveal the level of the relationship between age and household wealth indicators, taking into account variables such as household income, education, and other relevant factors that could shape household wealth.

Lastly, while SCF data typically oversample wealthy households, the PSID skews toward low-income and middle-income families. Thus, this study outlines how low- and middle-income households distribute their assets, which is predicted to differ significantly from the asset distribution of wealthy households. In this regard, the findings can guide tailored policy initiatives aimed at supporting economically disadvantaged households.

LITERATURE

This study complements the portfolio allocation literature in macroeconomics and household finance by providing recent features of household portfolio choices over the lifecycle. Savings are the main tools that individuals can use to self-insure against fluctuations in their earnings to sustain smooth consumption over time. Consumption smoothing over the life cycle is one of the key facts observed in the data. Many studies show that although earnings and wealth vary, consumption is relatively smooth. According to the Permanent Income Hypothesis (PIH) developed by Friedman (1957), an individual's consumption is determined by the present discounted value of lifetime income and not by income in each period. Similarly, the Life-Cycle Hypothesis (LCH) by Ando and Modigliani (1963) states that individuals save in the early periods of their lifetime based on their earnings in order to consume when they are retired so that they can maintain a stable lifestyle over their lives. One drawback of these models is that the coexistence of different types of assets has not been addressed. The literature on life-cycle asset allocation usually incorporates only one or two assets. However, households have several assets in their lives. The composition of household asset holdings is a topic of relatively recent literature, thanks to the detailed information in recent datasets. Among the studies that address household portfolio allocation, Poterba and Samwick (2001) analyze the relationship between age and the composition of household portfolios using data from the Survey of Consumer Finances (SCF). They found significant differences in asset accumulation between households of different ages and cohorts. They conclude that analyzing household wealth as identical savings is not supported by the data. They argue that institutional factors, asset liquidity, and investor tastes are important determinants of asset demand.

Another comprehensive household survey, the Panel Study of Income Dynamics (PSID), provides a unique panel dataset for various household-level variables. Wealth and savings are analyzed in the PSID sample by Bosworth and Anders (2008) for the 1984-2005 period. McCarthy (2004) provide a literature

review on household portfolio allocation by summarizing models and empirical facts from various countries. Similar to Poterba and Samwick (2001) and Bosworth and Anders (2008), this study empirically analyzes savings and portfolio allocation of households using PSID for the relatively more recent time periods 1999-2015.

Recently, Bricker et al. (2019) analyze household wealth composition trends in the United States and find that the concentration of asset ownership has progressively intensified over time, demonstrating that an overwhelming majority of the temporal variations in financial vulnerabilities within household balance sheets can be attributed to middle-income households, which predominantly allocate their assets towards residential properties and frequently represent the most significantly leveraged income demographic within the real estate market. Wolff (2016) and Wolff (2021) conduct an extensive examination of the trends pertaining to household wealth in the United States since 1962, demonstrating that the significant decline in residential property values during the Great Recession serves as an important factor in exacerbating the financial leverage of middle-class households. Although median household wealth exhibited partial recovery following the crisis, it had yet to attain the levels observed in 2007.

On the other hand, some studies focus on empirical evidence for specific types of assets or debt over the course of household life. Yilmazer and DeVaney (2005) analyze how different types of debt holdings vary over the life cycle. They find that the probability of possessing various categories of debt as well as the amount of each category of debt in relation to total assets diminishes with age.

DATA

The data used in this study are from the 1999-2015 waves of the Panel Study of Income Dynamics (PSID). Starting in 1968, the PSID collected data on demographics, employment, asset holdings, expenditures, and health factors of 5,000 U.S. households over their life course and their children (SRC sample). Later, more samples were added to represent the Latino population and lower-income levels (Latino and SEO samples). The survey initially collected data on food, childcare, and housing expenditures; however, after 1999, more comprehensive expenditure categories were added. The empirical analysis in this study incorporates all households, excluding the SEO and Latino samples.

The wealth variable used in this analysis is all assets net of debt, including home equity. Disposable income is calculated as the family unit federal taxable income minus federal, state, and social security taxes plus credits. Marginal

tax rates and variables in disposable income calculations were estimated using NBER's TAXSIM simulator. The observations of whether a household has a negative checking/saving account or negative stocks are dropped, possibly due to the imputation of wealth variables. All nominal variables are deflated to 2010 dollars using the CPI-U.

Results

DESCRIPTIVE RESULTS

The household networth has an inverted V-shape over the life cycle, as shown in Figure 1. Liquid assets in broad definition follow a similar pattern. Households accumulate assets over their lifetime until retirement and then start decumulating. Figure 2 plots liquid assets based on the two definitions. The broad definition of liquid assets for PSID data is the sum of checking/savings accounts, stocks, the value of vehicles, other assets, and annuity/IRA. The narrow definition of liquid assets is the sum of checking/saving accounts, stocks, and other assets. Figure 3 plots the checking/saving account balance over the life cycle as the most liquid asset type. As assets become more liquid, the decline after retirement reverses. These plots suggest that old households maintain their wealth in liquid forms; they consume and possibly liquidate their illiquid assets at retirement.

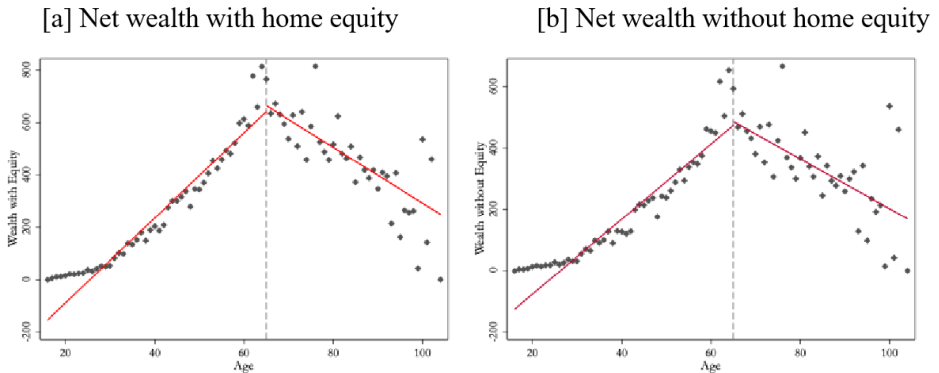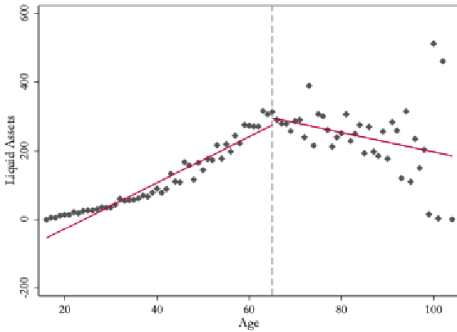[a] Net wealth with home equity   [b] Net wealth without home equity

Figure 1. Networth over the lifecycle

Notes: The figure plots the total household net wealth with and without home equity averaged over households against the age of the head of the household. The data are a pooled sample of PSID for waves from to 1999-2015. The amount was plotted in thousands 2010 dollars.

[a] Liquid Assets (broad)   [b] Liquid Assets (narrow)
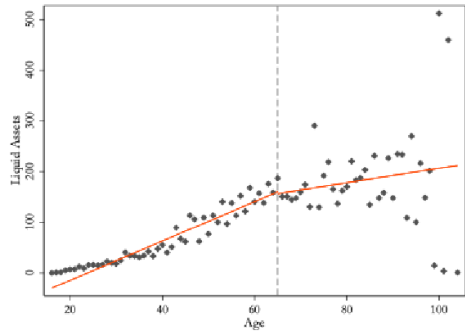
Figure 2. Liquid assets over the lifecycle
Notes: The figure plots the total household liquid assets averaged over households against the age of the household head. The data are a pooled sample of PSID for waves from to 1999-2015. The amount was plotted in thousands 2010 dollars. The broad definition of liquid assets for PSID data is the sum of checking/savings accounts, stocks, the value of vehicles, other assets, and annuity/IRA. The narrow definition of liquid assets is the sum of checking/saving accounts, stocks, and other assets.
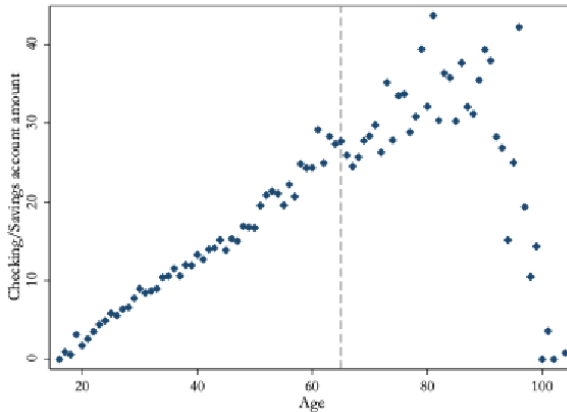
Figure 3. Ckecking and savings accounts
Notes: The figure plots household checking and savings account balance averaged over households against the age of the household head. The data are a pooled sample of PSID for waves from to 1999-2015. The amount was plotted in thousands 2010 dollars.

Figure 4 plots non-housing non-vehicle debt over the life cycle. The figure clearly shows that debt is front-loaded in a household's lifetime. Figures 5-7 plot the disaggregated assets over lifetime. An inverted V-shaped figure is observed in most asset types. Similar to the above observations for liquid assets, the inverted shape does not hold for stocks or other assets that include bonds that are more liquid than farms, businesses, housing, or vehicles.
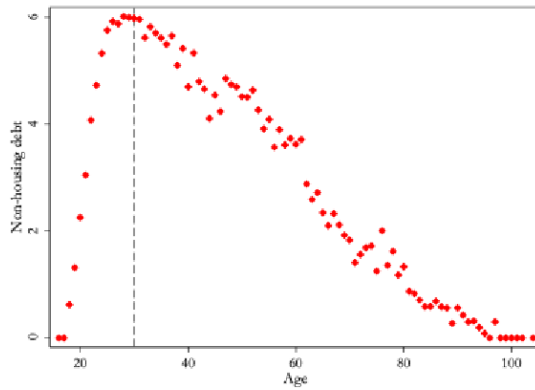
Figure 4. Debt excluding home mortgages and vehicle loans
Notes: The figure plots non-housing debt averaged over households against the age of the household head. The data are a pooled sample of PSID for waves from to 1999-2015. The amount was plotted in thousands 2010 dollars.

[a] Farm and Business value   [b] Value of vehicles

[c] Value of other assets
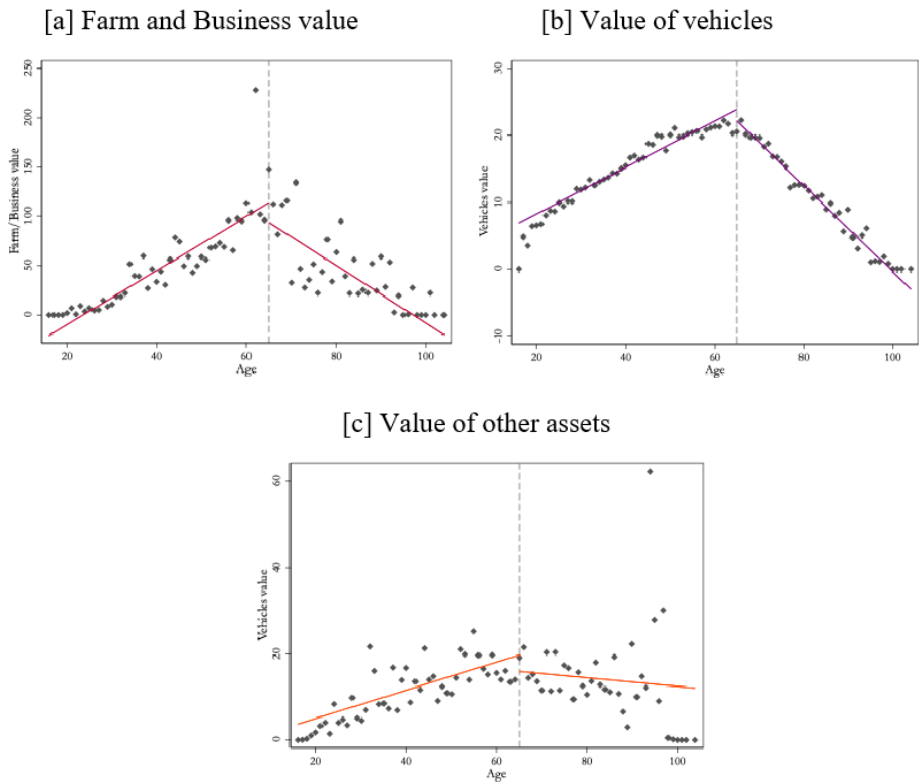
Figure 5. Farm/business value, other assets value
Notes: The figure plots the value of farm and business, value of vehicles, and value of other assets owned by the household averaged over households against the age of the head of the household.

[a] Home equity
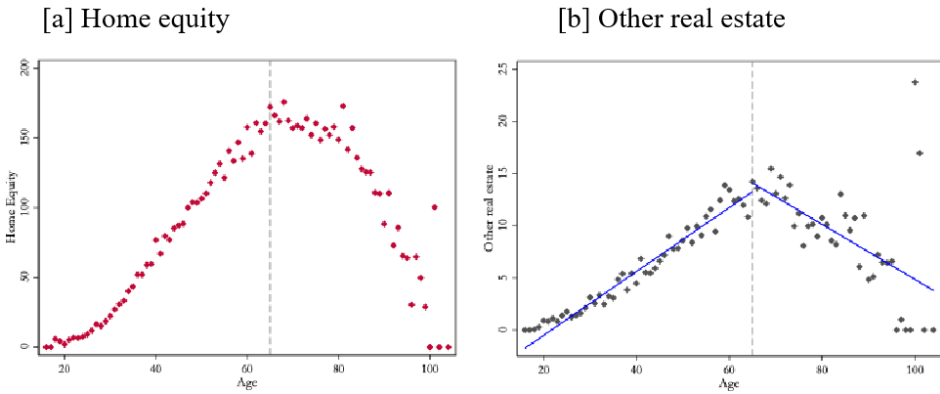
[b] Other real estate

Figure 6. Home equity and other real estate value
Notes: This figure plots the value of the home net of debt and other real estate owned by the
household averaged over households against the age of the head of the household.

[a] Annuity/IRA accounts
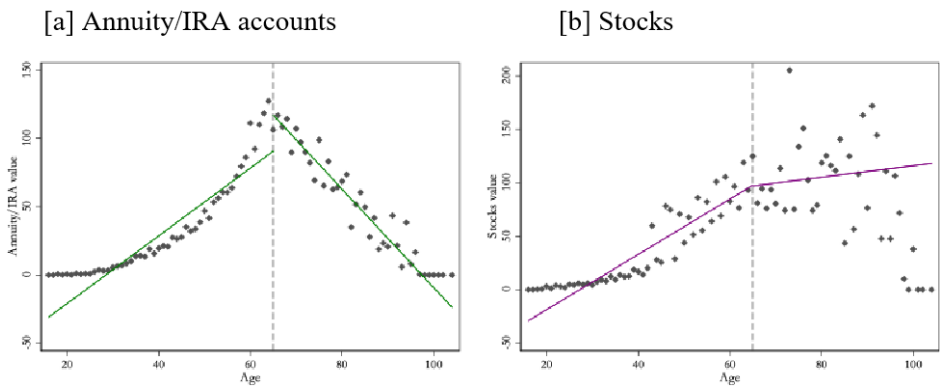
[b] Stocks

Figure 7. Annuity/IRA and stocks
Notes: The figure plots the value of annuity/IRA accounts and the value of stocks owned by the
household averaged over households against the age of the head of the household.

Figures 8-9 show how wealth grows relative to income during a lifetime. Assets relative to income increase over time until retirement. This is not surprising because wealth is a stock variable, whereas income is a flow variable. Even a constant saving rate increases the wealth-to-income ratio. At retirement, the ratio is mostly constant except for relatively liquid assets. This again shows old households' tendency to maintain wealth in liquid forms. On the other hand, the debt-to-income ratio declines throughout life, except for very young households until the age of 30. Households accumulate debt very rapidly early in life and then start paying off around 30s. Student loans may be the main contributors to this observation.

Figure 10 plots the share of liquid assets to networth over the lifecycle. The ratio is high for those in their 20s; early in working life. Then it declines and is almost constant for middle aged households. These are the ages at which households invest in housing, real estate, and business. The ratio increases after retirement, which is consistent with the findings in previous graphs that old households decumulate or deliquidate illiquid assets and keep liquid assets.

[a] Networth to income   [b] Nonhousing net wealth to income
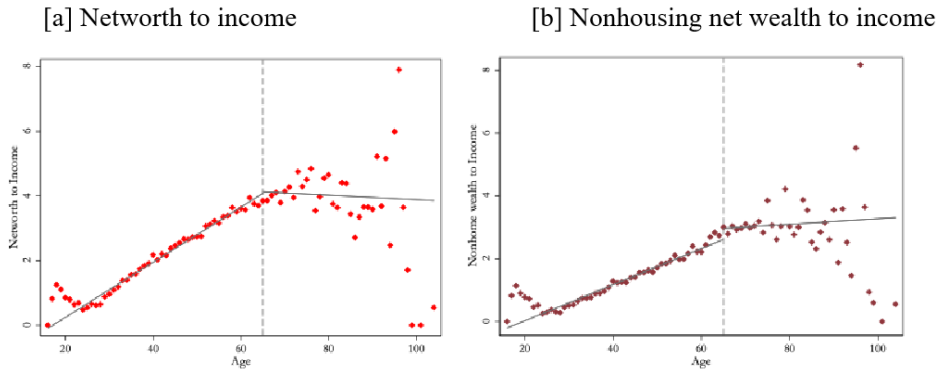
Figure 8. Net wealth to income ratio
Notes: The figure plots the networth-to-income ratio and non-housing wealth-to-income ratio against the age of the household head for households in the 1999-2015 waves of the PSID. Income is total income after taxes plus credit.

[a] Debt to Income   [b] Checking/Savings to Income
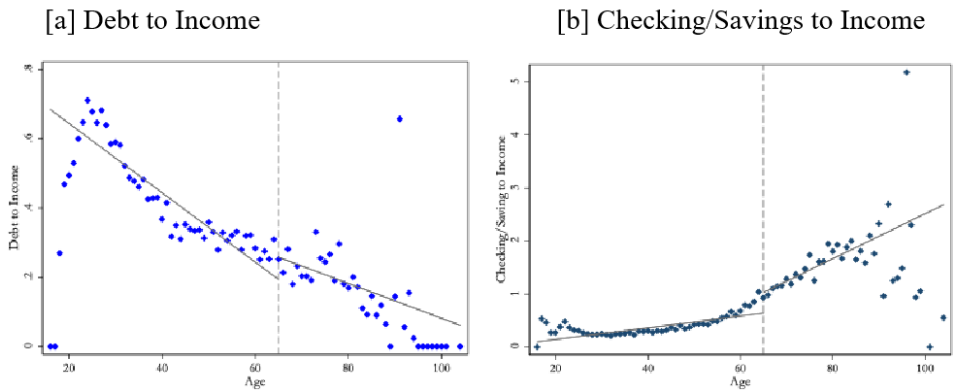
Figure 9. Debt and checking/savings to income ratio
Notes: The figure plots the debt-to-income ratio and checking/savings-to-income ratio against the age of the head of the household for households in 1999-2015 waves of PSID. Debt excludes residential mortgages and vehicle loans. Income is total income after taxes plus credit.

[a] Liquid assets to networth (broad) [b] Liquid assets to networth (narrow)
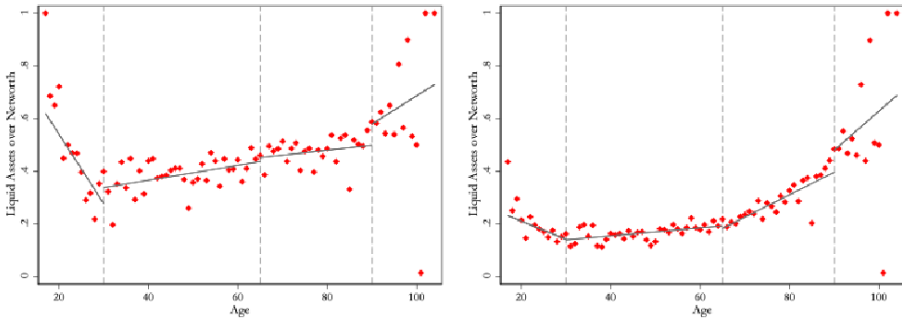
Figure 10. Liquid assets to networth over the lifecycle
Notes: The figure plots the ratio of liquid assets to networth against the age of the head of the household for households in the 1999-2015 waves of the PSID. The broad definition of liquid assets for PSID data is the sum of checking/savings accounts, stocks, the value of vehicles, other assets, and annuity/IRA. The narrow definition of liquid assets is the sum of checking/saving accounts, stocks, and other assets. Income is total income after taxes plus credit.
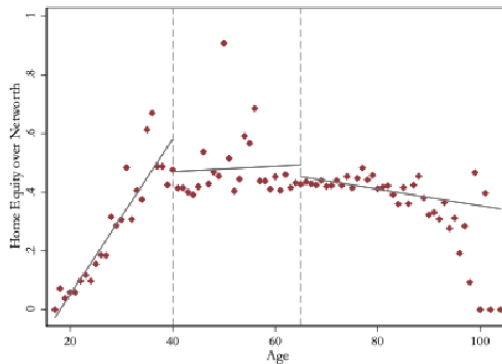
Figure 11. Home equity to networth
Notes: The figure plots the home equity share in net wealth against the age of the household head for households in the PSID.

[a] Debt to networth ratio

[b] Debt to networth ratio for debtors
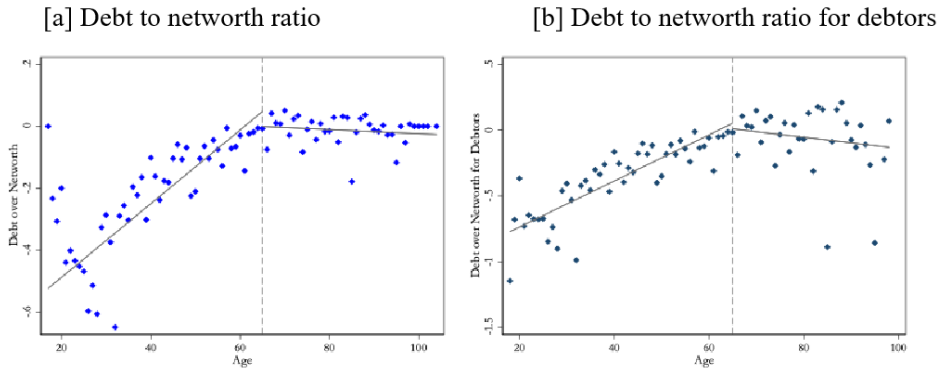
Figure 12. Debt share in networth over the lifecycle

Notes: The figure plots the debt-to-networth ratio against the age of the household head for households in the 1999-2015 waves of the PSID. Debt excludes residential mortgages and vehicle loans.

[a] Debt to networth ratio

[b] Debt to networth ratio for debtors
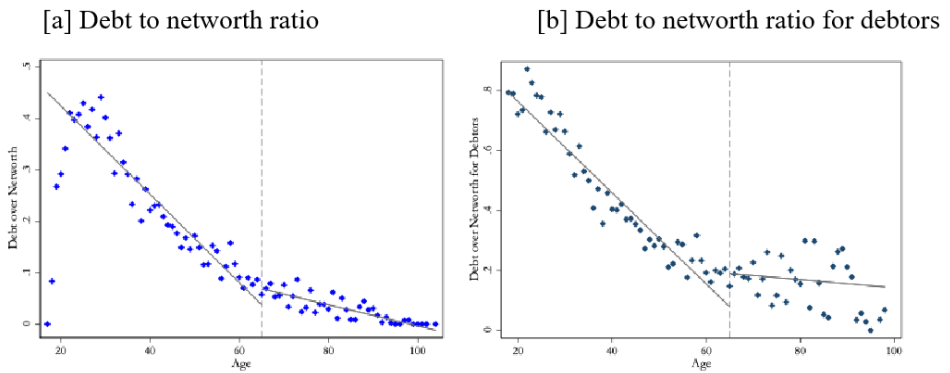
Figure 13. Debt share in networth for positive networth households

Notes: The figure plots the debt-to-networth ratio against the age of the household head for positive networth values for households in the 1999-2015 waves of the PSID. Debt excludes residential mortgages and vehicle loans.

Home equity share increases sharply early in working life, until the 40s, as shown in Figure 11. This is not surprising, since most households' biggest investments are in their houses. Figures 12 and 13 plot the debt share in the networth for all households and households with positive networth. The reversal of figures for positive networth households is due to the statistical averaging of negative and positive values. The negative ratio for negative networth households is higher than the positive values and dominates in simple averages. As households pay their debt over time, the negative average increases towards zero.

ECONOMETRIC ANALYSIS

This section complements the previous section by using econometric models. The log of debt, log of assets, log of networth, and log of liquid assets are regressed on a second-order polynomial of age, log of disposable income, interaction between income and age variable, several household level controls, year fixed effects, and state fixed effects by pooling all data from 1999 to 2015. For this part of the analysis, the debt variable includes the total net debt from all types of assets, and the asset variable is defined as the total net value of all asset types. For example, if business value minus business debt is negative, it is coded as net debt; if the value minus debt is positive, it is coded as net assets under the total net assets variable. Moreover, the sample is restricted to households with heads aged between 20 and 80 years.

Table 1 shows the regression results. Both the age and age squared coefficients are statistically significant at the 1% level in most cases. Because the model is nonlinear in age owing to the polynomial and interaction terms, the effect of age is better understood by its marginal effect. Table 1 presents the marginal effects of age on the dependent variables. The marginal effect of age is significantly negative on the amount of debt. This is in line with the descriptive figures. As households age, they pay off their debts. One year of aging corresponds to a 1.3 % decline in the log of debt holdings. On the other hand, the marginal effects of age on log assets, log networks, and log of liquid assets are significantly positive. One year of aging corresponds to a 5.9% increase in log net assets, a 5.6% increase in log networth, and a 4.5% increase in log of liquid assets.

Table 1: Pooled OLS regressions for levels				
	Log Debt		**Log Assets**	
	Coeff	**Marg Effect**	**Coeff**	**Marg Effect**
Age	0.039**	-0.013***		0.059***
	[0.016]	[0.002]		[0.002]
Age^2	-0.0005***		-0.0001	
	[0.0001]		[0.0001]	
Log Disp Income	0.126***		0.556***	
	[0.035]		[0.034]	
Log Disp Income x Age	-0.001		-0.003***	
	[0.001]		[0.001]	
Education	0.102***	0.102***	0.152***	0.152***
	[0.013]	[0.013]	[0.009]	[0.009]
Household size	0.053***		0.015	
	[0.015]		[0.018]	
Female	0.007	0.007	-0.173***	-0.173***
	[0.044]	[0.044]	[0.055]	[0.055]
Black	-0.028	-0.028	-0.603***	-0.603***
	[0.085]	[0.085]	[0.108]	[0.108]
Other Race	-0.075	-0.075	-0.213**	-0.213**
	[0.050]	[0.050]	[0.101]	[0.101]
Constant	5.305***		1.383***	
	[0.495]		[0.403]	
Observations	17321	17321	30177	30177
Num. of clusters	52		53	
Adjusted R^2	0.094		0.475	

Notes: Debt is defined as the total net debt from all kinds of assets, and assets are defined as the total net value of all asset types (see text). The regression includes marital status, year fixed effects, and state-fixed effects. Robust standard errors are clustered at the state level. The data are a pooled sample of PSID for waves from to 1999-2015. Nominal variables are used in thousands of 2010 dollars. The standard errors are shown in parentheses. * indicates significance at 10%, ** at 5%, and *** at 1% level.

Table 1: Pooled OLS regressions for levels (continued)				
	Log Networth		**Log Liquid Assets**	
	Coeff	**Marg Effect**	**Coeff**	**Marg Effect**
Age	0.099***	0.056***	0.028**	0.045***
	[0.012]	[0.002]	[0.014]	[0.001]
Age^2	-0.0001*		0.0003***	
	[0.0001]		[0.0001]	
Log Disp Income	0.529***		0.471***	
	[0.038]		[0.032]	
Log Disp Income x Age	-0.003***		-0.001	
	[0.001]		[0.001]	
Education	0.153***	0.153***	0.171***	0.171***
	[0.008]	[0.008]	[0.007]	[0.007]
Household size	-0.011		-0.045***	
	[0.017]		[0.014]	
Female	-0.156**	-0.156**	-0.223***	-0.223***
	[0.061]	[0.061]	[0.050]	[0.050]
Black	-0.574***	-0.574***	-0.588***	-0.588***
	[0.087]	[0.087]	[0.094]	[0.094]
Other Race	-0.236**	-0.236**	-0.279**	-0.279**
	[0.096]	[0.096]	[0.124]	[0.124]
Constant	1.648***		2.111***	
	[0.452]		[0.450]	
Observations	26010	26010	29966	29966
Num. of clusters	53		53	
Adjusted R^2	0.459		0.42	

Notes: Debt is defined as the total net debt from all kinds of assets, and assets are defined as the total net value of all asset types (see text). The regression includes marital status, year fixed effects, and state-fixed effects. Robust standard errors are clustered at the state level. The data are a pooled sample of PSID for waves from to 1999-2015. Nominal variables are used in thousands of 2010 dollars. The standard errors are shown in parentheses. * indicates significance at 10%, ** at 5%, and *** at 1% level.

A similar regression was performed to examine the change in the share of debt and assets over total assets. The dependent variables are the liquid assets to total net assets ratio, debt to total net assets ratio, and stocks to all net assets ratio. Stock ownership is analyzed separately in this section based on discussions in the literature. Stock holdings are associated with risky behavior, which is expected to be negatively correlated with age. However, stock ownership is positively correlated with total wealth, which is expected to increase with age.

Table 2 presents the regression results for the ratio specifications. The marginal effect of age on liquid-to-total net assets and debt-to-total net assets is negative and statistically significant at the 1% level. The debt-to-assets ratio rapidly declines with age. One year of aging is associated with a 42.3% decline in this ratio. The effect is also negative for the liquid asset ratio, albeit it is much smaller. However, the stock-to-assets ratio is positively associated with age; nevertheless, the effect is small in magnitude. Figure 14 plots the predicted effects of age on the ratios over time. The figures show a negative association of debt to total assets and liquid to total assets ratios and a positive association of stock to total net assets ratio with age.

Table 2: Pooled OLS regressions for ratios						
	Liquid/Assets		Debt/Assets		Stock/Assets	
	Coeff	Marg Effect	Coeff	Marg Effect	Coeff	Marg Effect
Age	-0.028***	-0.006***	-3.596	-0.423**	-0.002**	0.001***
	[0.003]	[0.000]	[2.418]	[0.178]	[0.001]	[0.000]
Age²	0.0001***		0.0016		0.0000***	
	[0.0000]		[0.0098]		[0.0000]	
Log Disp Income	-0.060***		-19.011*		0.006**	
	[0.007]		[10.282]		[0.003]	
Log Disp Income x Age	0.001***		0.303**		0	
	[0.000]		[0.145]		[0.000]	
Education	0.004	0.004	0.598	0.598	0.010***	0.010***
	[0.003]	[0.003]	[1.046]	[1.046]	[0.001]	[0.001]
Household size	-0.018***		-0.277		-0.003***	
	[0.004]		[1.312]		[0.001]	

Table 2: Pooled OLS regressions for ratios						
	Liquid/Assets		Debt/Assets		Stock/Assets	
	Coeff	Marg Effect	Coeff	Marg Effect	Coeff	Marg Effect
Female	-0.008	-0.008	22.918	22.918	-0.008**	-0.008**
	[0.015]	[0.015]	[20.916]	[20.916]	[0.004]	[0.004]
Black	0.032	0.032	93.251	93.251	-0.031***	-0.031***
	[0.023]	[0.023]	[97.217]	[97.217]	[0.005]	[0.005]
Other Race	-0.001	-0.001	-38.135**	-38.135**	-0.006	-0.006
	[0.012]	[0.012]	[17.927]	[17.927]	[0.006]	[0.006]
Constant	1.683***		176.825		-0.091***	
	[0.090]		[126.537]		[0.030]	
Observations	30177	30177	30177	30177	30177	30177
Num. of clusters	53		53		53	
Adjusted R^2	0.057		0.003		0.087	

Notes: Debt is defined as the total net debt from all kinds of assets, and assets are defined as the total net value of all asset types (see text). The regression includes marital status, year fixed effects, and state-fixed effects. Robust standard errors are clustered at the state level. The data are a pooled sample of PSID for waves from to 1999-2015. Nominal variables are used in thousands of 2010 dollars. The standard errors are shown in parentheses. * indicates significance at 10%, ** at 5%, and *** at 1% level.

Figure 14: *Linear predictions over age*
Notes: Linear predictions using regressions results for each age is drawn with its 95% confidence interval.

In the extensive margin, probit regressions are performed to investigate the association of the likelihood of debt or stock holding with age. Table 3 shows the regression results and marginal effect of age on the probabilities. Aging is linked to a lower likelihood of debt holdings and a higher likelihood of stock market participation. The effects are statistically significant at the 1% level. Figure 15 shows the predicted probabilities of debt holdings and stock ownership for different ages. As the figure clearly shows, the likelihood of debt holdings declines with age, and the probability of stock market participation increases with age.

Table 3: Probit estimation of debt holding and stock ownership				
	Prob(Debt)		**Prob(Stock)**	
	Coefficient	**Marginal Effect**	**Coefficient**	**Marginal Effect**
Age	0.028***	-0.007***	0.054***	0.004***
	[0.006]	[0.000]	[0.009]	[0.000]
Age^2	-0.0003***		0.0001*	
	[0.0001]		[0.0001]	
Log Disp Income	0.131***		0.451***	
	[0.020]		[0.043]	
Log Disp Income x Age	-0.002***		-0.005***	
	[0.000]		[0.001]	
Education	0.033***	0.012***	0.160***	0.041***
	[0.005]	[0.002]	[0.007]	[0.002]
Household size	0.012		-0.062***	
	[0.011]		[0.016]	
Female	0.230***	0.085***	-0.049	-0.012
	[0.044]	[0.016]	[0.041]	[0.011]
Black	-0.071	-0.026	-0.761***	-0.161***
	[0.075]	[0.028]	[0.089]	[0.014]
Other Race	-0.129**	-0.048**	-0.260***	-0.065***
	[0.051]	[0.019]	[0.071]	[0.017]
Constant	-2.151***		-7.740***	
	[0.263]		[0.405]	
Observations	31362	31362	31365	31365
Num. of clusters	52		53	
Log likelihood	-1049389.907		-733778.683	
Pseudo R^2	0.056		0.197	

Notes: Debt is defined as the total net debt from all kinds of assets, and assets are defined as the total net value of all asset types (see text). The regression includes marital status, year fixed effects, and state-fixed effects. Robust standard errors are clustered at the state level. The data are a pooled sample of PSID for waves from to 1999-2015. Nominal variables are used in thousands of 2010 dollars. The standard errors are shown in parentheses. * indicates significance at 10%, ** at 5%, and *** at 1% level.
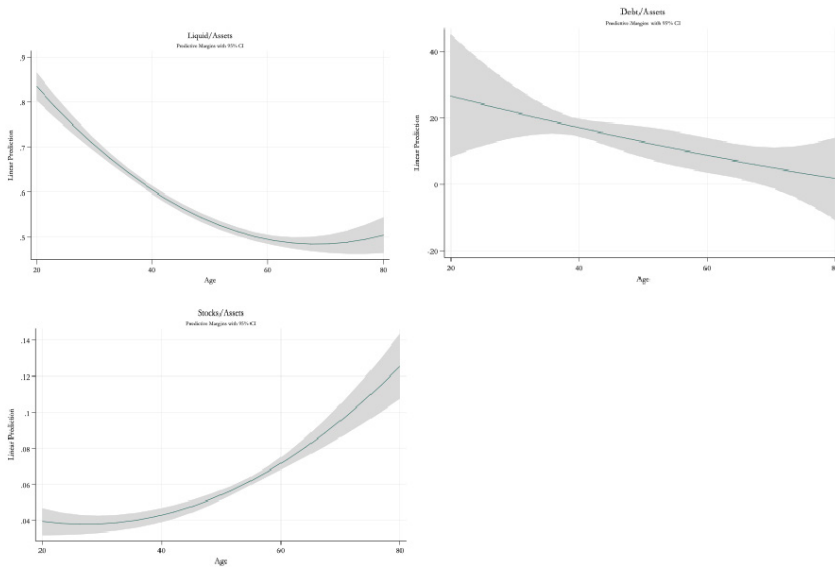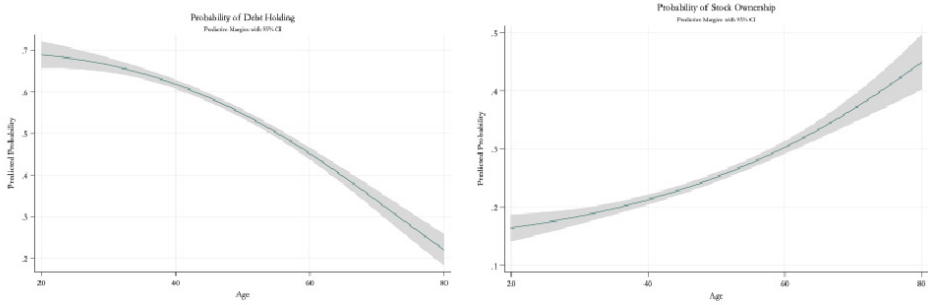
Figure 15: *Predicted probabilities over age*
Notes: Predicted probabilities using probit regressions results for each age is drawn with its 95% confidence interval.

CONCLUSION

This study explores the features of household portfolio allocation over the life cycle. Understanding the composition of household wealth is of great importance for a variety of reasons, including its impact on economic stability, consumption patterns, and social dynamics. The composition of wealth offers valuable insights into how resources are distributed within households, influencing financial decision-making and overall economic outcomes. This comprehension is crucial for policymakers, economists, and social scientists seeking to address economic inequalities and enhance financial systems. This study aims to contribute to the economic literature by presenting an overview of household wealth composition and exploring the correlation between wealth composition and age, with the goal of informing targeted policy interventions.

Empirical evidence suggests that asset accumulation exhibits an inverted V-shaped trajectory across the course of life. This assertion does not hold when liquid assets are considered. Elderly households demonstrate a marked preference for maintaining their assets in a liquid form compared to their overall net worth. Conversely, the components of home equity, additional real estate, and annuity/IRA accounts experience a significant decline in value after retirement. The ratio of liquid assets to net worth displays a U-shaped pattern throughout the life cycle, characterized by a substantial flat segment during the mid-life stages. The liquidity share exhibits an upward trend after retirement. By contrast, the proportion of home equity within total wealth diminishes after retirement, and debt accumulation is predominantly front-loaded within the lifecycle

framework. Younger households tend to accumulate debt at a rapid pace during the early phases of their professional careers and subsequently repay their debt gradually across the remainder of their lifespan. Age demonstrates a positive correlation with both debt and asset accumulation, as well as with the likelihood of incurring debt and the probability of stock ownership. However, it reveals a negative correlation between the ratio of liquid assets to total assets, debt to total assets, and stocks to total assets.

This study contributes to economics and household finance literature in several ways. First, it employs PSID data for wealth profiles. The literature mostly uses SCF data for portfolio allocation and life cycle asset composition because of its richness in terms of wealth variables. However, PSID data also provide useful insights into wealth allocation and can be directly linked to the consumption and income of households that SCF cannot offer. Moreover, the results of this study also provide a robustness check for studies that use the SCF dataset. Second, this study applies econometric methods to show the degree of association between age and household wealth indicators by controlling for household income, education, and other variables that may affect the composition of household wealth. Third, the SCF data oversample wealthy households, whereas the PSID oversample low- and middle-income families. Therefore, the current study provides a picture of low- and middle-income family asset allocation, which is likely to be very different from the picture of wealthy families. In this regard, the results can help targeted policies for poorer households.

The results of this study show that standard life-cycle models are not adequate for determining the distributional effects of monetary and fiscal policies. The standard model assumes that there are one or two assets. Moreover, the selection of assets is usually due to risk preference rather than age structure. (Poterba and Samwick, 2001). However, the results of this study show that households invest many different assets based on their age. This study complements Poterba and Samwick's (2001) findings using a more recent and different dataset.

This results indicate that monetary and fiscal policies should consider the age-related effects of wealth distribution. For example, high debt levels of young households can be considered when housing credit is provided. This study employs comprehensive wealth data from the United States, which is a developed country. Future work on developing countries will also help policymakers in these countries in more informed policy-making.

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Chapter 3

POLITICAL COMMUNICATION PROCESS IN TURKEY

Ümit ÖZEN[1]

INTRODUCTION

Political communication has become an integral part of modern democracies and is a crucial area in which interactions between political actors and voters are managed. Parties, politicians and other actors on the political stage develop various communication strategies to effectively convey their messages and influence voter behavior. This process ranges from traditional media tools to digital platforms, from face-to-face events to social media campaigns. Political communication in Turkey is constantly changing under the influence of social and political dynamics. The country's rich political history, coups, democratization efforts, media control and censorship have had a profound impact on political communication processes. In this context, the development of political communication is a reflection of the political climate and social changes in Turkey. The aim of this study is to comprehensively evaluate the process of political communication in Turkey. In this context, the theoretical foundations and historical development of political communication will be examined and current practices and strategies will be evaluated. In particular, the study focuses on the effects of the digitalization process and social media on political communication. Considering that political communication plays a crucial role in the healthy functioning of democratic processes, it is expected that the results of this study will make an important contribution to both academic literature and practice. Especially in countries with complex political and social structures such as Turkey, the development of effective political communication strategies is of great importance to increase democratic participation and help voters make informed decisions.

WHAT IS POLITICAL COMMUNICATION?

Political communication is a type of communication that manages the interactions of actors on the political stage with voters and with each other, ensuring the

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transmission of information, thoughts and messages. The concept of political communication emerged after the Second World War and has been used by many academic disciplines. In particular, the political scientist Harold D. Lasswel, the sociologist Paul F. Lazarsfeld and the social psychologists Kurt Lewin and Carol Hovland have conducted empirical research that illustrates the multidisciplinary nature of the field of communication. This concept plays a continuous and dynamic role not only in electoral periods, but also in political decision-making, the formulation of public policies and public participation in political processes. However, political communication governs the relationships between political parties, politicians, media, public opinion and voters and is a crucial factor in shaping these relationships (Alemdar and Köker, 2011). The basic elements of political communication include the content of the message, the mode of delivery, the target audience and the context of the communication. However, while the content of the message refers to the policies, promises and ideologies of political actors, the method of delivery includes various channels such as traditional media, social media, face-to-face events and advertising campaigns.

Ağaoğlu (2023) focused on the importance of political communication in local governments and how this process has evolved. The study examines how local governments use political communication in their public relations work and how this process has evolved. It highlights issues such as the ability of local governments to establish more effective communication with constituents and respond more quickly to their needs, thereby increasing political participation. It also details the variety and effectiveness of communication tools used in local government.

The theoretical foundations of political communication lie at the interface of disciplines such as communication science, political science, sociology and psychology. In addition, theories of public opinion formation explain how individuals and societies develop opinions on political issues and how these opinions spread (Arslan & Seçim, 2015). In this context, Walter Lippmann's concept of "public opinion" and Elisabeth Noelle-Neumann's theory of the "spiral of silence" are important references for understanding public opinion formation. Theories of media impact focus on how the media influence public opinion and political behavior. Agenda-setting theory, media framing and diffusion of innovations are important approaches in this area.

Alemdar and Köker (2011) analyzed how political parties in Turkey used their websites during the 2007-2011 parliamentary elections and what impact this

had. The study examined the websites of different political parties and compared their effectiveness in communicating with voters, promoting party platforms and ensuring voter turnout. The study shows that the role of the internet in political communication is increasing and that parties' strategies to reach voters via their websites have become more important.

TOOLS AND CHANNELS OF POLITICAL COMMUNICATION

The most general definition is: "Political communication is a particular form of power struggle between individuals or communities. From propaganda to gossip, from the relations between subordinates and superiors to the functioning of institutions of power, from the activities of interest groups to public relations, from the preparation of news for the press to TV panel discussions, from brainwashing to political advertising - all activities of political communication in a very broad spectrum are included in this field" (Çankaya, 2015: 13). Effective political communication requires the strategic use of various tools and channels. These tools and channels ensure that messages are conveyed to a wide audience and that voter participation in political processes is increased. The instruments and channels of political communication can be divided into different categories: traditional media, new media, personal communication and public relations. Traditional media are one of the oldest and most established instruments of political communication (Ateş, 2000). Media such as newspapers, magazines, radio and television play an important role in conveying political messages to a large audience. In this context, the internet, social media, blogs and digital news sites allow political actors to convey their messages directly and immediately. Moreover, face-to-face communication is one of the most direct and effective methods of political communication. Arslan and Seçim (2015) investigated the effects of Facebook as a political communication tool on voters' electoral decisions. Using the 2013 early parliamentary elections in the TRNC as an example, the study examined how social media platforms influence voter behavior and how they are used in the political communication process. The study shows that social media such as Facebook play an important role in the dissemination of political messages and the decision-making processes of voters.

Events such as political rallies, door-to-door campaigns, public meetings and public debates enable political actors to interact directly with voters. In general, face-to-face communication has major advantages. In this context, public relations and advertising are other strategically important tools in political

communication. Public relations campaigns manage the image of political actors and create a positive public perception (Aydın, 2021). Advertising, on the other hand, aims to reach large audiences with political messages and influence voter behavior. With all these, the tools and channels of political communication play a critical role in helping political actors achieve their goals. Traditional media, new media, face-to-face communication and public relations activities ensure the effective transmission of political messages and the establishment of strong ties with voters. The strategic use of these tools and channels is one of the key factors determining the success of political communication processes.

In his study, Ateş (2000) discusses the concept of propaganda in the context of political communication and presents methods for analyzing propaganda texts. The study focuses on the historical development of propaganda, its aims and how it is used in political processes. It also explains various methodological approaches for recognizing propaganda techniques and analyzing these texts. Ateş (2000) highlights the role and importance of propaganda in political communication by emphasizing the power of propaganda tools and messages to influence voters.

HISTORY OF POLITICAL COMMUNICATION IN TURKEY

Political communication in Turkey has developed in parallel with the political and social changes in the country. From the founding of the Republic to the present day, the instruments and methods of political communication have evolved according to the conditions of the time and technological developments. After the proclamation of the Republic, political communication in Turkey took place under one-party rule. During this period, the Republican People's Party (CHP) emerged as the sole political force and political communication was largely under the control of the state (Başoğlu, 2023). Press and radio organs were used to disseminate state policies and ideology. In this context, Atatürk's Nutuk is recognized as one of the most important political communication documents of the period. During the Unity Party period, the press was strictly controlled and censorship mechanisms were introduced.

In his master's thesis, Aydın (2021) examined the use of social media in political communication through the example of MPs in Turkey. The study investigated how MPs use social media platforms, how they interact with voters through these platforms and the role of social media in political communication. Aydın (2021) states that social media is an important tool in political campaigns and public relations and allows MPs to communicate directly with voters. The

study comprehensively analyzes the place and impact of social media in political communication strategies. State radio was used as a means of informing the public and disseminating state policies.

The transition to a multi-party system in 1946 was an important turning point in political communication in Turkey (Bostancı, 2014). In 1950, when the Democratic Party (DP) came to power, a competitive environment for political communication was created. During this period, freedom of the press was partially expanded and political parties and leaders had the opportunity to communicate more directly with the public through the media. Political communication was intensified in the 1950s and 1960s through rallies, radio broadcasts and newspapers. However, the introduction of television by TRT in 1968 marked the beginning of a new era of political communication.

In his master's thesis, Başoğlu (2023) examined the potential of using the metaverse in political communication. The study focuses on the opportunities offered by the metaverse and the threats it faces. It discusses innovative applications such as the use of the metaverse in political communication, virtual rallies and interaction with voters in virtual reality environments. Başoğlu (2023) emphasizes that the metaverse can herald a new era in political communication and that, in addition to the opportunities offered by this new platform, attention should also be paid to ethical and security issues.

In general, television has become an important tool for reaching a wide audience with political messages and for politicians to engage directly with the public. During this period, political advertisements and televised speeches by leaders played an important role in influencing voter behavior. The 1980 military coup had a profound impact on political communication in Turkey. In the post-coup period, the media was tightly controlled and press freedom was severely restricted (Çakır & Tufan, 2016). With the transition to democracy in the late 1980s, there was a revival of political communication. After Turgut Özal's Motherland Party (ANAP) came to power in 1983, new strategies and methods were used in political communication. Özal used television effectively to communicate directly with the public and influence public opinion. The proliferation of private television and radio stations in the 1990s increased diversity and competition in political communication. In addition, the 2000s were a time of radical change in political communication with digitalization and the widespread use of the internet.

Bostancı (2014) defines how political communication has evolved in the digital age and the concept of "Political Communication 2.0". The study focuses

on the innovations brought to political communication by the internet and social media platforms and the role of these platforms in political campaigns. Bostancı (2014) analyzes how digital tools and social media strategies make political communication more dynamic and interactive. This study shows how the digital age has transformed political communication and how traditional methods are integrated with digital.

POLITICAL COMMUNICATION FROM THE OTTOMAN PERIOD TO THE PRESENT

In general, political communication has changed considerably from the Ottoman Empire to modern Turkey. From the Ottoman period to the establishment of the Republic and the development of modern Turkey, the instruments and methods of political communication have changed according to the technological and social conditions of the time. In this context, political communication in the Ottoman Empire was mostly limited to the announcement of orders and edicts from the central authority (Davas, 2021). In the imperial period, the policies of the sultan and the state were communicated to the public through decrees, orders and official documents. During this period, the means of communication were quite limited and were mainly realized through written documents, ambassadors and kadis. Within this framework, the Sultan's orders, official policies and decisions of the state were announced in all provinces through edicts.

Çakır and Tufan (2016) examined the Instagram usage practices of political leaders in Turkey. The study analyzes the role of Instagram in the political communication process and how political leaders use this platform. The study examines how political leaders use Instagram to establish more personal and direct communication with their constituents and the impact of this use on voter behavior. Çakır and Tufan (2016) emphasize the importance of social media platforms in political communication and the effectiveness of these platforms in disseminating political messages. As the first official newspaper of the Ottoman Empire, Takvim-i Vekayi, which started to be published in 1831, was used to bring the official announcements and policies of the state to the public. In addition, ambassadors and kadis, the representatives of the central authority in the provinces, were responsible for sharing the state›s policies with the local population and ensuring their implementation (Demir, 2018). With the proclamation of the constitutional monarchy in 1908, political communication in the Ottoman Empire changed considerably. With the expansion of press freedom and the beginning of the multi-party-political system, political communication gained momentum.

With the Constitutional Monarchy II, newspapers became important platforms for political debate. Newspapers such as Tercüman-ı Hakikat, İkdam and Tanin were used to disseminate the views of political parties and groups.

In his master's thesis, Davas (2021) examined the use of social media as a political propaganda tool and its impact on the voting behavior of voters. The study investigated how social media is integrated with propaganda techniques and how this integration is reflected in voter decisions. Davas (2021) emphasizes the ability of social media to reach large masses quickly and its potential to influence voters. The study comprehensively analyzes the impact of propaganda activities via social media on voter behavior.

With the proclamation of the Republic in 1923, political communication in Turkey entered a new era. Under the one-party rule, political communication was mostly controlled by the state and used to spread the state ideology. In this context, the Republican People's Party (CHP) effectively used the press and broadcasting organs to spread the official policies and ideology of the state (Ekinci, 2014). Atatürk's Nutuk is one of the most important political communication documents of this period. The Turkish Radio and Television Corporation (TRT), established in 1927, became an important tool used to disseminate the policies of the state. In 1946, the transition to multi-party-political life led to a significant transformation in political communication in Turkey. When the Democratic Party (DP) came to power in 1950, a competitive environment in political communication emerged and media freedom expanded.

In his study, Demir (2018) has made a conceptual compilation by looking at the concept of political communication from a broad perspective. The study examines the definition, scope and historical development of political communication. It also provides information on various strategies, tools and methods used in political communication. Demir emphasizes how the process of political communication shapes the interactions between political actors and voters and how important this process is in democratic societies. By providing an overview of political communication studies, this compilation constitutes a basic reference source for research in this field.

The Democratic Party era was a time when freedom of the press was partially expanded and political parties communicated more directly with the public through the media. In this framework, the start of television broadcasts by TRT in 1968 marked the beginning of a new era of political communication. Television became an effective tool for reaching large masses with political messages. In the

2000s, political communication changed radically with the spread of digitalization and the internet (Genel & Sayar, 2019). In this context, social media platforms have enabled political actors to convey their messages directly and quickly. Platforms such as Twitter, Facebook, Instagram and YouTube now play a central role in political communication. In general, political parties and politicians used social media to interact with voters and carry out propaganda activities. With digitalization, advanced communication techniques such as data analysis and micro-targeting have been used.

In his study, Ekinci (2014) deals with the problems of scope and approach in political communication studies. The study discusses the different methodological approaches used in political communication research and the difficulties that these approaches entail. Furthermore, it emphasizes that the scope of political communication research should be broadened and more holistic approaches should be developed. Ekinci (2014) draws attention to the importance of looking at political communication research from a more systematic and interdisciplinary perspective.

REPUBLICAN PERIOD AND TRANSITION TO MULTI-PARTY LIFE

The proclamation of the Republic marked the beginning of a new era in terms of political communication in Turkey. In this period, political communication underwent significant transformations due to the state's modernization efforts, the ideological goals of the single-party rule and the transition to multi-party life (Güven, 2017). With the proclamation of the Republic in 1923, political communication in Turkey was largely controlled by the Republican People's Party (CHP). In this period, political communication tools and methods were used to spread the modernization projects of the state and Atatürk's reforms. The Nutuk, which was read by Mustafa Kemal Atatürk in 1927 and describes the process of the establishment of the Republic, is one of the most important documents of political communication. The Nutuk played an important role in disseminating the ideology of the Republic and creating the official narrative of the state. The establishment of the Turkish Radio and Television Corporation (TRT) in 1927 became an effective tool for communicating the policies and ideology of the state to the public.

Genel and Sayar (2019) examined how the topic of political communication is treated in academic journals published in Turkey and the importance of this topic. The study analyzes the extent to which political communication is covered

in academic literature in Turkey and the quality of research in this field. It also discusses the academic and practical contributions of political communication research. Genel and Sayar (2019) note that political communication studies in Turkey have become increasingly important and academic publications in this field have increased.

During the single party period, the press was kept under strict control and played a role supporting the policies of the state. Newspapers and magazines were used to spread the ideological goals of the CHP. The transition to multi-party-political life in 1946 was an important turning point in political communication in Turkey (Kalkan, 2007). In this period, political communication became more dynamic and diverse with the increase in political competition and the expansion of freedom of the press. The Democratic Party (DP), founded in 1946, became one of the most important actors in the transition to multi-party-political life. The DP succeeded in reaching large masses by using new and effective communication strategies in its propaganda activities. The partial expansion of freedom of the press in the 1950s enabled newspapers and magazines to become important platforms where political debates were conducted. This situation brought along the fact that newspapers became the most effective communication tool in political communication activities (Uztuğ, 1999: 28). The Democratic Party conveyed its messages to large masses through the press. TRT's television broadcasts at the end of the 1960s ushered in a new era in political communication. Television allowed political leaders to address the public directly and convey political messages visually. The 1960 military coup had a profound impact on political communication in Turkey.

Güven (2017) examines the transformation of the political communication process and the role of communication technologies in this process. The study examines the impact of new communication technologies on political participation and how these technologies are changing political communication strategies. Güven (2017) emphasizes the speed and effectiveness of the internet and social media platforms in disseminating political messages. In the post-coup period, the media was tightly controlled and press freedom was restricted, but the widespread use of television in the late 1960s created a new dynamic in political communication (Özçakır, 2021). After the 1960 military coup, press and broadcasting organizations were strictly controlled and operated under state supervision. During this period, political communication was mainly used to disseminate the official policies of the state.

The introduction of television broadcasts by TRT in 1968 marked the beginning

of a new era in political communication. Television became an effective tool for political messages to reach a wide audience. Televised speeches by political leaders played an important role in influencing voter behavior (Polat, 2000). Political communication in Turkey underwent significant changes and transformations in the period from the proclamation of the Republic to the transition to a multi-party system. Political communication, which was under state control during the single-party period, has become more competitive and dynamic with the transition to the multi-party system.

In his master's thesis, Kalkan (2007) evaluated the political communication processes and the tools used by CHP deputies in the 22nd Term (November 3, 2002- 2007). The study analyzes CHP MPs' political communication strategies, their use of media and their communication with voters. Kalkan (2007) analyzed in detail the effectiveness of the political communication tools used in this period and how the MPs used these tools. This study shows how political communication was conducted in a specific period and party and the effectiveness of the tools used.

POLITICAL COMMUNICATION STRATEGIES AND TACTICS

Political communication strategies and tactics are planned and systematic approaches that enable political parties, leaders and campaign managers to communicate effectively with voters and influence their voting behavior. For political communication strategies to be successful, the target audience must first be precisely defined. Factors such as demographic characteristics, social and economic status, political leanings and interests are taken into account to determine who the messages should be aimed at. Once the target audience is identified, effective messages should be created for that audience. Messages should generally be simple, clear and effective (Taşmurat, 2019).

Özçakır (2021) examined the use of Twitter by the leaders of the ruling party and the main opposition party in the context of new media and political communication. The study analyzes how the leaders communicate on Twitter, what kind of messages they share and what impact these messages have on public opinion. Özçakır (2021) highlights how social media platforms have improved the ability of politicians to communicate directly and immediately with voters. This study details the role and effectiveness of Twitter in political communication.

In this context, various tactics have been used in the implementation of political communication strategies. These tactics have ensured that messages

are conveyed effectively and the desired effect is created on the target audience (Torun & Torun, 2023). Political parties and leaders convey their messages to large masses through the media by organizing press releases and press conferences. These events were used to attract media attention and inform the public. In this framework, advertising campaigns on television, radio, newspapers and digital platforms are an effective method to attract and persuade voters. Advertisements usually contain short, striking and persuasive messages.

In his dissertation, Polat (2000) discusses a "generic example" (a methodology or exemplary model) in political communication and election research. The study discusses the effects of political communication processes in election periods and methodological approaches that can be used to analyze these processes. Polat (2000) aimed to measure the effects of political communication campaigns on voter behavior using a genetic experiment. This study makes theoretical and practical contributions to the field of political communication and election research and develops new methods for researchers.

The participation of political leaders in televised debates has a direct impact on voters. In this context, social media campaigns on platforms such as Twitter, Facebook, Instagram and YouTube have been used to reach a large audience and engage with voters. In this context, social media offers the opportunity for quick and direct communication. Creating and sharing effective content on social media is important to attract and inform voters (Yıldırım, 2012). Different types of content such as blog posts, videos, infographics and live broadcasts are used. Political communication strategies and tactics enable political parties and leaders to effectively communicate with voters and influence their voting behavior. In this context, elements such as audience analysis, message development, choice of communication channels and timing are the foundation of a successful political communication strategy. Tactics such as the use of media, social media strategies, face-to-face communication and public relations play a crucial role in the implementation of these strategies.

Taşmurat (2019) examined the political communication process and strategies for political messages in his study. The study analyzes how the messages communicated by political actors to voters are strategically constructed and what impact these messages have on voters. Taşmurat (2019) details the factors that should be considered for political messages to be effective and how message strategies should be planned. This study emphasizes the importance of messaging strategies in political communication and offers strategic approaches for political actors to be more effective in their communication processes.

CAMPAIGN MANAGEMENT AND MEDIA USE

Political campaigns are systematic and planned communication activities carried out by political parties and candidates to reach voters and gain support. Campaign management and media use are the most critical elements of this process. A successful campaign requires strategic planning, effective media use and continuous interaction with voters. Campaign strategy involves determining the objectives, target audience, messages and communication channels to be used. Strategic planning is a fundamental step for the success of the campaign. The target audience of the campaign is determined by taking into account criteria such as demographic characteristics, socioeconomic status and political tendencies (Yıldırım, 2012). In this framework, messages and communication tactics for the target audience are created based on this analysis. In this context, television plays an important role in political campaigns due to its capacity to reach large masses. Television commercials, leaders' speeches and political debate programs are effective tools to inform and persuade voters.

Torun and Torun (2023) examined the political communication race on YouTube through social media mining. The study focuses on analyzing political content published on YouTube and examining the impact of this content on voters. Social media mining techniques were used to analyze data such as the number of views, comments and likes on YouTube videos. Torun and Torun (2023) emphasize the role of YouTube in political communication and the impact of this platform on the success of political campaigns.

Digital ads published on websites and social media platforms make it easier to reach specific target groups. Micro-targeting and data analysis increase the effectiveness of digital advertising. The implementation of media strategies is a decisive factor in the success of a campaign (Ağaoğlu, 2023). Campaign management and media deployment play a crucial role in the success of political communication. Strategic planning, target group analysis, message development and effective use of media strategies are crucial elements for a successful campaign. The integration of traditional media and new media tools ensures that campaign messages reach a large audience and have the desired impact on voters.

Yıldırım (2012) examines political communication in the light of Habermas' theory of communicative action and using the example of the Ak Parti. The study deals with the basic concepts of the theory of communicative action and how this theory can be applied to political communication processes. Yıldırım (2012) analyzed the political communication strategies of the Ak Parti and evaluated

how the party acts in the context of the theory of communicative action. This study demonstrates the applicability of theoretical approaches in political communication and how the Ak Parti's political communication strategies can be analyzed within a theoretical framework.

Public Relations and Propaganda Techniques

Public relations and propaganda are important components of political communication strategies. These techniques enable political parties, leaders and campaigns to create a positive public image and gain support. In this context, public relations are the planned communication activities carried out to manage the public image of an organization or an individual and to create a positive perception. In political communication, public relations are used to establish an effective relationship with voters and to build trust (Alemdar & Köker, 2011). One of the most important elements of building trust in public relations is transparency. Political actors should communicate their activities and policies in an open and honest manner. The consistency of messages and actions ensures public trust and credibility. Political leaders should keep their promises and be consistent with what they say and do.

Yıldız (2021) examines the innovations that new media technologies bring to political communication. The study examines how social media platforms, digital media tools and other new technologies are used in political communication and how this use is changing political communication processes. Yıldız (2021) emphasizes that new media technologies increase the effectiveness of political campaigns, enable direct and rapid communication with voters and significantly increase the speed of dissemination of political messages. This study analyzes in detail the innovations that new media technologies have brought to political communication and the impact of these innovations on voter behavior.

Effective communication in public relations should go both ways. It is not only important to get messages across, but also to get feedback and take into account the views of the public. In this context, it is an important part of public relations to be prepared for potential crisis situations and to intervene quickly and effectively in times of crisis. Political parties and leaders make official statements to the media and the public through press releases (Arslan & Seçim, 2015). Press releases provide information about important events, policies and campaigns. Press conferences are events where political leaders interact face-to-face with the media and deliver their messages directly. These meetings are used to attract media attention and inform the public. Political actors reach the public through interviews and articles published in newspapers and magazines. These written

materials allow political leaders to convey their views in detail. Political parties and leaders contribute to society and build a positive image by participating in social responsibility projects.

These projects are an important part of the public relations strategy. Public relations and propaganda techniques are important tools for increasing the effectiveness of political communication and influencing public opinion. While public relations rely on principles such as transparency, consistency and effective communication to build trust and create a positive image, propaganda techniques rely more on strategies such as emotional appeal, repetition and polarization. The success of political campaigns and communication strategies in Turkey depends on how effectively these techniques are used (Ateş, 2000).

The Role and Impact of the Media

Many factors are important for coexistence with society (Çamiçi and Cerit, 2024), one of which is the media. The media is one of the most important tools of political communication and plays a crucial role in shaping public opinion in democratic societies. The media ensures the dissemination of political messages to large masses, informs and directs public opinion and provides a platform for political debates. The media inform the public about political developments, policies and leaders. News broadcasts, interviews and analysis help voters make informed decisions. The media sets the agenda by determining which issues are brought to the attention of the public (Aydın, 2021) The agenda-setting function determines which issues the public focuses on and discusses. In this context, the media shape public perception by presenting news and events from a certain perspective. Within this framework, the media monitor and criticize the actions of the government and other political actors. This function is important for political accountability and transparency. The media can be divided into two main categories: traditional media (television, radio, newspapers) and new media (social media, websites, blogs). Both types of media have different roles and impacts on political communication.

In general, the media play a crucial role in shaping public opinion by identifying which issues are important and putting them on the agenda. The issues that are put on the agenda by the media attract public attention and are at the center of social debates. The media shape people's political values, beliefs and behaviors (Başoğlu, 2023). Young generations acquire political knowledge and develop their political identity through the media. The media in Turkey has at times come under pressure from state control and censorship practices, but media diversity and press freedom are important to ensure a democratic environment in political

communication. In this context, social media has spread rapidly, especially among young voters, and has become an important medium for political communication.

Social media campaigns, political debates and interactive content have a strong influence on voters. In general, the media is used extensively during election campaigns in Turkey to convey the messages of political parties and leaders to a large audience. Television, radio and digital media play a crucial role during election campaigns (Bostancı, 2014). The media is an indispensable element of political communication and plays an important role in public information, awareness and political preferences. Traditional media and new media provide different functions and effects in political communication. The media in Turkey reflect the dynamic and ever-changing nature of political communication.

TRADITIONAL MEDIA: NEWSPAPER, RADIO, TELEVISION

The traditional media have been the most important instruments of political communication for many years. Newspapers, radio and television play an important role in conveying political messages, as they reach a large audience and are reliable sources of information. Newspapers inform the public through political news, articles and columns. In this context, voters get information about daily political developments, policies and the views of politicians from newspapers. Newspapers attract the public's attention by determining which issues are important. Within this framework, newspapers monitor the actions of governments and political actors through investigative journalism (Çakır & Tufan, 2016).

In general, in-depth investigations into corruption, irregularities and political scandals increase political accountability. In addition, radio is an important tool of political communication with its ability to reach a large audience and transmit information instantly. Radio keeps voters informed by broadcasting news and political developments quickly. News bulletins and live broadcasts provide instant information. Radio reaches a large mass due to its low cost and easy accessibility. In this context, radio is the most important source of information, especially in regions without television or internet access. Radio programs provide voters with information on political issues through political debates and interviews. These programs allow political leaders to communicate their views directly to the public.

With its audiovisual content and its ability to reach large masses, television is one of the most effective instruments of political communication. The role of television in political communication encompasses the functions of informing, educating and entertaining the audience. Television combines audiovisual

content to effectively convey political messages. Images and sounds increase the memorability of messages. Television increases the public visibility of political leaders. Politicians' televised speeches, interviews and discussion programs have a direct impact on voters (Davas, 2021).

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DIGITAL MEDIA AND THE RISE OF SOCIAL MEDIA

The rapid rise of digital and social media in recent years has revolutionized political communication. Alongside traditional media, digital platforms and social media are playing an increasingly important role in conveying political messages and shaping public opinion. Digital media encompasses platforms that enable the exchange of information and content via internet technologies (Demir, 2018). The use of digital media and technologies gives us access to inexpensive and easily accessible information (Çeviker & Ünlü, 2023). This type of media offers a fast flow of information, interactive content and broad access. Digital media enables the instant exchange of news and information. Online news sites and digital publications are important sources to follow current developments. Digital platforms allow users to comment on, share and discuss content. This interactive nature encourages active public participation.

Digital media offer information in a variety of formats such as text, video, audio and visual content. Digital platforms can use user data and algorithms to provide content and advertising for specific target groups. Within this framework, political campaigns can be made more effective and targeted through micro-targeting. Social media are digital platforms where users create, share and interact with content (Ekinci, 2014). Social media networks such as Facebook, Twitter, Instagram, YouTube and TikTok play a crucial role in political communication. Digital media and social media have brought about a significant change in political communication. In this context, digital media has increased the effectiveness of political communication with its features such as fast information flow, interactive

content and micro-targeting, while social media has made political communication more dynamic and interactive with its advantages such as direct interaction, viral spread, campaigning and mobility. In Turkey, digital media and social media are at the center of political campaigns and communication strategies, making political processes more transparent, participatory and effective.

ELECTION CAMPAIGNS AND POLITICAL COMMUNICATION IN TURKEY

Election campaigns in Turkey are one of the most intense and dynamic periods of political communication. Election campaigns are strategic communication activities carried out by political parties and leaders to gain support and votes through direct communication with voters. First, the historical development of election campaigns in Turkey parallels the development of the political system and communication technologies (Genel & Sayar, 2019). The one-party era, which lasted from 1923 to 1946, was a period in which election campaigns were run by a single political party, the Republican People's Party (CHP). During this period, election campaigns were mainly conducted under state control and for propaganda purposes. The transition to a multi-party system in 1946, the nature of election campaigns in Turkey changed radically. The Democratic Party (DP) and other opposition parties began to use new communication strategies and methods in their election campaigns. During this period, radio and newspapers became the most important means of communication in election campaigns. in 1960 and 1980, the military coups had a profound impact on election campaigns and political communication.

In both periods after the coup d'état, the media were strictly controlled, but with the democratization process, election campaigns were revived. The widespread use of television in the late 1960s increased the impact of election campaigns, and the spread of the internet and social media in the 2000s ushered in a new era of election campaigns (Güven, 2017). Parties such as the Justice and Development Party (AKP) have managed to reach large masses using the effective use of digital platforms and social media. Digital media has radically changed the dynamics of election campaigns. Analyzing target groups is crucial in election campaigns. Campaign messages and strategies are determined by taking into account the demographic characteristics, socio-economic status, political tendencies and interests of voters.

The success of election campaigns depends on the development of effective and persuasive messages. Messages should reflect the party's policies, promises and ideology. They should also be designed to appeal to the emotional and rational side of voters. Slogans increase the recognition value of campaign messages. In this context, the media are one of the most important means of communication in election campaigns (Kalkan, 2007). Traditional media (newspapers, radio, television) and digital media (websites, social media) are used strategically to deliver campaign messages to large masses. Television commercials, radio programs, newspaper ads and social media posts are used to interact directly with voters. Election campaigns in Turkey are the most intense and dynamic phases of political communication.

CASE STUDIES: PAST ELECTION CAMPAIGNS

Previous election campaigns provide valuable examples to understand how political communication strategies and tactics were implemented and how these strategies influenced election results. Many important election campaigns in Turkey are worth analyzing from the perspective of political communication. The 1950 parliamentary elections marked an important turning point in the transition to the multi-party-political system in Turkey and the victory of the Democratic Party (DP). In these elections, the poster "Enough is the word of the nation", which was frequently used by the DP, and the poster "I want your support for a Greater Turkey", which featured the photograph of Adnan Menderes, have gone down in the history of political communication in Turkey as election-deciding posters (Aktaş, 2004:70).

This simple and powerful message had a great impact on the electorate. The Democratic Party used radio broadcasts effectively to deliver its messages to large masses. It also built good relationships with the press and received wide newspaper coverage. This very successful Democratic Party slogan is still remembered and used today. During this period, the CHP's slogan "For a happy tomorrow, vote CHP", which was not eye-catching and powerful enough, was not successful at all (İşler, 2007:116). DP leaders interacted directly with voters by organizing large rallies and public meetings. These events were important to make the demands of the public heard and to build trust. In this context, the 1983 parliamentary elections were the first elections after the 1980 military coup and led to the victory of the Fatherland Party (ANAP).

The ANAP, led by Turgut Özal, attracted attention with its innovative campaign strategies. The ANAP stood out with its promises of economic reforms and a free market economy. The slogan of the "center pole" appealed to a broad spectrum of voters and was widely supported. The ANAP made effective use of television to communicate its campaign messages to a broad audience. Turgut Özal's televised speeches had a great impact on voters. The ANAP ran a modern election campaign by using professional campaign management and advertising techniques. This strategy strengthened the party's image.

The 2002 parliamentary elections were an important election in which the Justice and Development Party (AKP) came to power and reshaped the political map of Turkey. The AKP achieved a major victory through effective communication strategies and a strong connection with the public. The AKP campaign emphasized the issues of anti-corruption, economic reform and justice. The slogan "On your own, back to work" strengthened confidence in the party (Polat, 2000). In the 2002 elections, the AKP used social media and the Internet to reach young voters. This strategy helped the party to create a modern and dynamic image, with the charismatic leadership of Recep Tayyip Erdoğan at the center of the campaign. Erdoğan's direct interaction with the public through rallies and public meetings had a great impact on voters.

The 2018 parliamentary elections were the first elections after the transition to the presidential system in Turkey, and political alliances played an important role. The competition between the People's Alliance (AKP and MHP) and the National Alliance (CHP, İYİ Party, Felicity Party) increased the diversity of campaign strategies, with both alliances emphasizing messages of unity and solidarity in their campaigns. While the People's Alliance emphasized trust and stability, the National Alliance focused on democracy and justice. Both alliances reached a broad mass audience by effectively utilizing television and social media. Television advertisements, speeches by party leaders and social media campaigns had a major impact on voters. Previous election campaigns provide important clues as to how political communication strategies and tactics were implemented and how these strategies influenced the election results (Taşmurat, 2019). Different election campaigns in Turkey have achieved success at different times and under different political conditions through effective communication strategies and the use of media. These examples provide valuable insights for understanding the dynamic and ever-changing nature of political communication.

COMMUNICATION STRATEGIES OF POLITICAL PARTIES AND CANDIDATES

Political parties and candidates develop and implement various communication strategies in order to be successful in election campaigns. These strategies cover a broad spectrum, from analyzing the target group to developing messages, from using the media to PR activities. Political parties and candidates analyze the demographic characteristics, socio-economic status, political leanings and interests of voters and design their campaign messages and strategies according to this information. Demographic characteristics of voters such as age, gender, education level and income status are identified. This information is important to understand the needs and expectations of the target groups.

The lifestyle, values, beliefs and attitudes of the voters are assessed. This assessment helps to develop messages that appeal to the emotional and rational side of voters.

Analyzing voters by the regions in which they live provides information about local issues and expectations. Regional campaign strategies are designed in accordance with local dynamics. Political parties and candidates carefully develop the messages they want to convey to voters throughout the campaign. Within this framework, effective messages should be simple, understandable and memorable (Yıldırım, 2012). In addition, they should be designed to appeal to the emotional and rational side of voters. The communication strategies of political parties and candidates are the key elements that determine the success of election campaigns. Analyzing target groups, developing messages, using the media and public relations are the key components of an effective campaign. Political parties and candidates in Turkey use these strategies and tactics to reach voters and gain support. The successful implementation of these strategies is of great importance for the healthy functioning of democratic processes and for voters to make informed decisions (Yıldız, 2021).

Political Communication and Legal Regulations

Political communication is an important area that needs to be regulated and monitored for the healthy functioning of democratic processes. Political communication in Turkey is shaped by various legal regulations and legal frameworks (Ağaoğlu, 2023). The conduct of election campaigns and the regulation of political communication in Turkey are determined by various laws and regulations. These regulations aim to ensure that the electoral process takes place under fair, transparent and equal conditions. The organization and conduct

of elections in Turkey are governed by Law No. 298 on the Basic Provisions of Elections and Voter Registers. This law regulates issues such as the conduct of election campaigns, election propaganda and the security of elections.

The electoral law determines the rights and limits of political parties and candidates to conduct propaganda during the election period. The duration and type of propaganda activities, means and methods of propaganda are regulated in this law. The electoral law lays down the necessary measures to ensure that elections are conducted securely and that the electoral process is transparent. It deals with issues such as bans on election day, the security of ballot boxes and the announcement of election results. Law No. 2820 on Political Parties, which regulates the activities of political parties, sets out the rules that parties must follow in their establishment, organization, funding and election campaigns (Alemdar and Köker, 2011). In general, the financial resources and expenditures of political parties are regulated according to the principles of transparency and accountability. The sources of party income, donations and the control of expenditures are determined by this law. The ethical rules and limits that political parties must observe in their propaganda activities are determined by the Law on Political Parties. These rules are intended to ensure that the parties operate under fair competitive conditions.

The rise of digital media and social media has necessitated legal regulations in these areas. Digital platforms and social media play an important role in political communication and are therefore subject to various legal regulations. Law No. 5651 on the Regulation of Publications on the Internet and Combating Crimes Committed through these Publications regulates publications on the Internet. This law defines the responsibilities of content producers and platforms in digital media. The Internet Law ensures the accuracy, reliability and public interest of digital content (Arslan & Seçim, 2015). Regulations are issued to prevent misleading information, hate speech and illegal content. Within this framework, digital platforms are responsible for the content produced by users and must implement the necessary control and regulation mechanisms. Political communication in Turkey is shaped by various legal regulations and legal frameworks. Election laws, the law on political parties, media regulations and laws on digital media ensure, among other things, that election campaigns are conducted fairly and transparently. These legal regulations are of great importance for the healthy functioning of democratic processes and for voters to be able to make informed decisions. The legal framework of political communication in Turkey is constantly

updated and improved in order to protect democratic values and increase the credibility of political processes (Ateş, 2000).

ELECTORAL LAWS AND MEDIA REGULATIONS

The conduct of election campaigns and the regulation of political communication in Turkey are governed by various election laws and media regulations. These regulations are designed to ensure that the electoral process is fair, transparent and equal. The electoral law defines the rights and limits of political parties and candidates to conduct propaganda during the election period. Within this framework, propaganda activities are

The time frame, means and methods of propaganda are regulated by this law. According to the law, election propaganda must take place within a certain period before the election date and the use of propaganda means is subject to certain rules. The electoral law lays down the necessary measures to ensure that elections are conducted securely and that the electoral process is transparent.

Issues such as bans on election day, the security of ballot boxes and the announcement of election results are dealt with within this framework. Propaganda bans apply on election day and the security forces take the necessary measures during the election process (Aydın, 2021). The Radio and Television Supreme Council (RTÜK), which regulates and monitors radio and television broadcasts in Turkey, fulfills the task of supervising and regulating the media. The RTÜK is responsible for ensuring compliance with broadcasting principles and monitoring media content. RTÜK establishes broadcasting principles to ensure that radio and television broadcasts are impartial, objective and balanced. Within this framework, media organizations are obliged to broadcast in accordance with these principles during election periods.

Bans and restrictions on media broadcasts during election periods are supervised by RTÜK. Within this framework, issues such as the prohibition of propaganda on election day and the announcement of election results are regulated. On election day, the media is prohibited from broadcasting anything that could influence the election process (Başoğlu, 2023). The Press Law, which regulates print and online media in Turkey, sets the legal framework for press freedom and the responsibilities of the press. The Press Law regulates the rights and duties of journalists and media organizations. The Press Law guarantees the right of journalists to access information and freedom of the press. Freedom of the press is important for the healthy functioning of democratic processes (Bostancı,

2014). Freedom of the press ensures that the public has access to accurate and impartial information. The Press Law ensures that media content is regulated according to the principles of accuracy, honesty and consistency with the public interest. Press organizations and journalists must adhere to ethical rules.

In general, Law No. 5651 on the regulation of publications on the Internet and the fight against offences committed through these publications regulates publications on the Internet. It defines the responsibilities of content producers and platforms in digital media. The Internet Act ensures the accuracy, reliability and public interest of digital content. In general, regulations are put in place to prevent misleading information, hate speech and illegal content. Content producers are responsible for the content they publish (Çakır & Tufan, 2016). Digital platforms are responsible for the content produced by users and must introduce the necessary control and regulation mechanisms. Platforms must establish effective mechanisms to detect and remove illegal content. Election campaigns and political communication in Turkey are shaped by various legal regulations and legal frameworks. Election laws, media regulations and digital media laws ensure that election campaigns are conducted fairly and transparently. These legal regulations are of great importance for the healthy functioning of democratic processes and for voters to be able to make informed decisions. Overall, the legal framework for political communication in Turkey is constantly being updated and improved in order to protect democratic values and increase the credibility of political processes.

CONCLUSION

In conclusion, it can be stated in the context of this study that political communication in Turkey is of great from the Ottoman period to the present day, the instruments and methods of political communication have changed considerably. The era of unified parties, the transition to a multi-party system, military interventions and democratization processes were decisive for the development of political communication. This historical perspective forms a crucial basis for understanding today's political communication practices and dynamics.

In addition, success in political communication depends on the effective implementation of strategies such as audience analysis, message development, the use of media and interactive communication. By using these strategies in election campaigns, political parties and candidates can effectively communicate

with voters and gain support. Various election campaigns in Turkey have been characterized by successful communication strategies in different time periods and under different political conditions. The media plays a central role in political communication. In this context, political messages are conveyed to large masses and public opinion is formed through traditional media (newspapers, radio, television) and digital media (social media, websites). In this framework, the functions of the media - information, agenda-setting, framing and creating a public sphere - are crucial for the healthy functioning of democratic processes.

The rise of digital media and social media has revolutionized political communication. Social media platforms have fundamentally changed the nature of political communication by offering direct interaction, rapid information flow and wide reach. Digital media has made political campaigns more dynamic, interactive and targeted. The legal framework for political communication has ensured that election campaigns are conducted under fair, transparent and equal conditions. Election laws, media regulations and digital media laws are constantly updated and improved to protect democratic values and increase the credibility of political processes.

Political communication in Turkey, when analyzed in its historical and contemporary context, offers a rich field of research for understanding democratic processes and social dynamics. Political communication strategies and the use of the media enable political actors to communicate effectively with voters and increase democratic participation. Legal regulations ensure that political communication is conducted in a fair and transparent manner, which strengthens the credibility of democratic processes and social trust. Overall, this study provides a comprehensive framework for understanding the dynamics of the political communication process in Turkey and its impact on political and social processes.

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Chapter 4

THE GROWING IMPORTANCE OF GOLD RESERVES IN CENTRAL BANKS

Nida GÜNSAN[1]

INTRODUCTION

Gold was used as a currency until the 19th century, after which the gold standard was adopted. Before World War I, the world economy operated under the gold standard, and most countries' currencies were directly convertible into gold. In the mid-20th century, with the implementation of the gold exchange system, gold gained even more significance, and many central banks began to use it as a reserve asset. During the 1980s, due to the Cold War, the importance of gold in international reserves began to increase, prompting central banks to expand their gold reserves as a precautionary measure (Nural & Bulut, 2024; Mishkin, 2000).

Gold is considered a safe haven for countries during times of economic crisis. Although the gold standard was abandoned long ago, gold still retains its importance in international reserves today. During times of economic and political crises, gold serves as a secure investment instrument and provides protection against inflation. Factors driving central banks' demand for gold include the U.S.-China trade war, supply and demand shocks caused by the COVID-19 pandemic along with rising inflation, and global conflicts such as the Russia-Ukraine and Palestine-Israel wars. Geopolitical shifts, particularly the rise of the European Union and China's economic growth, have challenged the U.S.'s economic dominance post-World War I. Efforts by countries like China, Russia, and Iran to increase their global influence, initiatives like BRICS, and the growing gold reserves of central banks indicate potential changes in the role of the U.S. dollar in global monetary policies (Swiac, 2024). Economic fluctuations, uncertainties in foreign policy, and geopolitical tensions have heightened central banks' demand for gold.

The aim of this study is to examine the importance of gold, a geopolitical metal, in international reserves and the reasons behind the increasing demand for

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gold by central banks at a time when a new global order is taking shape. Although there are various theoretical and empirical studies in the literature on the increase in central banks' demand for gold, this study emphasises the importance of gold in the future of the global financial system. In this study, while investigating which countries have excess gold reserves and examining the reasons behind the increase in the demand for gold reserves of the central banks of the countries, an evaluation is made within a theoretical framework.

Literature Review

Özkaya (2012) found that during periods of economic crisis, demand for gold increases, leading to rising gold prices. Oktay et al. (2016) investigated the determinants of gold reserves in the central banks of G-7 countries. They concluded that the high economic growth of G-7 countries, along with increasing exports and services, is more likely to lead to an increase in gold reserves, which affects 64% of global net wealth.

Kodalak (2018) examined the impact of central bank gold reserves on monetary policy by focusing on Turkey and BRICS countries. The study found that gold reserves had no significant impact on the consumer price index (CPI)-based inflation variable in Turkey and BRICS countries. However, while the real effective exchange rate variable had no significant impact on Turkey, it was found to have a significant impact on BRICS countries.

Başar and Saraç (2021) stated that gold, being the most liquid asset, is the most reliable investment instrument during economic crises and wars. Arslanalp et al. (2023) explored the reasons behind 144 countries' desire to increase their gold reserves. They found that gold is viewed as protection against economic and geopolitical risks. As uncertainty in developed and developing economies increases, the share of gold in their markets also rises.

Ngo et al. (2024) studied the impact of geopolitical risks on national reserves in 108 countries between 1990 and 2021. The findings revealed that countries tend to strengthen their gold reserves during periods of increased geopolitical risk.

THE IMPORTANCE OF GOLD RESERVES IN INTERNATIONAL RESERVES

International reserves are assets controlled by a country's monetary authorities, which are accepted as convertible and used as international means of payment (TCMB, 2011). International reserves consist of convertible foreign currency, gold, Special Drawing Rights, and reserves at the International Monetary Fund

held by central banks (Bahami Oskooee & Brown, 2002). Reserves are an essential tool for monetary authorities to eliminate external payment imbalances. Economic difficulties refer to economic, political, and financial uncertainties and insecurities occurring globally (Ergün Tatar, 2021). Table 1 presents the countries with the highest gold production worldwide.

Table 1. Top Gold Producing Countries Worldwide	
Countries	Gold Production (Tons)
China	375
Russia	324,7
Australia	313,9
Canada	194,5
United States	172,7
Ghana	127
Peru	125,7
Indonesia	124,9
Mexico	124
Uzbekistan	110,8
Mali	101,7
Burkina Faso	96,2
South Africa	92,6
Brazil	86,7
Kazakhstan	81,9
Sudan	80,1
Guinea	63,5
Colombia	60,4
Bolivia	53,4
Tanzania	50,9
Zimbabwe	49,4
Ivory Coast	48
Democratic Republic of the Congo	44,5
Papua New Guinea	41,6
Argentina	41,4
Philippines	38,6
Nigeria	34,5
Chile	33,9
Türkiye	30,9

Table 1. Top Gold Producing Countries Worldwide (continued)	
Countries	Gold Production (Tons)
Venezuela	**30**
Kyrgyzstan	**29,3**
Suriname	**28,9**
Ecuador	**22,8**
Dominican Republic	**22,4**
Liberia	**21,3**
Senegal	**19,7**
Mongolia	**19,4**
Guyana	**16,2**
Madagaskar	**15,51**
Laos	**13,4**
Bulgaria	**9**
Finland	**8,5**
Sweden	**7,2**
New Zealand	**6**

Source: https://www.datapandas.org/ranking/gold-production-by-country#top (Accessed: 31.05.2024).

It is estimated that over the past two centuries, humankind has extracted approximately 86% of all the gold available above ground. Until the last decade of the 19th century, the top three gold-producing countries were the United States, Australia, and Russia. China, which produces more than 10% of all gold, currently tops the list. Gold production is one of the significant industries worldwide. Today, China leads the world in gold production, followed by Russia and Australia. In the future, the gold mining sector is expected to continue growing through the use of the latest technologies and new ethical business practices, including artificial intelligence and alternative extraction techniques, balancing economic development with environmental protection, and sustainable resource management (Filipenco, 2024).

Gold is a valuable asset with a bright yellow color, resistance to acids, natural occurrence in free form, and easy workability. Throughout history, it has been a symbol of wealth and power, retaining its value to this day (Demir et al., 2018). With the collapse of Bretton Woods, gold in the global financial system was replaced by the new reserve currency, the U.S. dollar. Due to changes in the IMF agreement in 1978 under U.S. pressure, no member country can peg its national

currency's value to gold. However, gold still remains a part of central banks' reserves today (Göksu, 2010). Table 2 presents the countries with the largest gold reserves globally.

Table 2. Countries with the Largest Gold Reserves Worldwide (2024)		
Countries	Gold Reserves (in tons)	Gold Reserves (in million USD)
United States	8,133.46	579,050.15
Germany	3,352.65	238,662.64
Italy	2,451.84	174,555.00
French	2,436.88	173,492.11
Russia	2,332.74	166,076.25
China	2,262.45	161,071.82
Switzerland	1,040.00	69,495.46
Japan	845.97	60,227.84
India	822.09	58,527.34
Netherlands	612.45	43,602.77
Turkey	570.30	40,601.81

Source: https://www.forbesindia.com/article/explainers/gold-reserves-by-country/90127/1 (Accessed: 31.05.2024).

THE CRITICAL IMPORTANCE OF GOLD

The critical importance of gold lies in its function of transferring wealth to the new system without losing value during periods of transformation in the global economy. The increased systemic risks of the 2010s have led to expectations and discussions regarding the transformation of the global economy, the financial system, and even the international monetary system. Countries with substantial gold reserves and production are expected to be least affected by any economic crisis or uncertainties (Kuzu & Kocaoğlu, 2024).

Among the top ten countries with the largest gold reserves in the world, the United States ranks first, followed by Germany, Italy, and France, respectively. Although the gold standard was abandoned more than 40 years ago, the United States still holds the largest gold reserves globally. This is because gold serves to protect currency value during economic crises. If the U.S. were to sell its vast amount of gold, it could cause significant market disruption. In such a scenario, the price of gold would drop substantially, potentially leading to the collapse of many large banks (Madison Trust Company, 2024).

Germany, which ranks second in global gold reserves, has a significant interest in gold due to the experience of German hyperinflation. After World War I, countries faced severe economic sanctions, leading to economic devastation in response to increasing debts. To finance its growing expenditures, Germany expanded its monetary base, resulting in hyperinflation. The economic problems were compounded by political tensions, which further accelerated inflation. By 1923, inflation had reached as high as 1 million percent, following a rapid rise in 1921 (Timur, 2022).

Italy ranks third with 2,451.84 tons of gold. The Eurozone crisis led some to call for the Italian government to sell part of its gold reserves to raise funds, but such plans never materialized. The country keeps more than 87% of its bullion at the Bank of Italy and in the United States. The remainder is divided between vaults in Switzerland and the United Kingdom. According to the central bank, gold is stored in different locations for historical reasons and to minimize risk (Rhinehart & Kvillhang, 2024).

France has the fourth largest gold reserves in the world, after the United States, Germany, and Italy. Under French law, the Banque de France is responsible for the safe storage and management of these reserves. It primarily stores the reserves in a secure vault known as Souterraine, located 27 meters underground, which won the International Underground Architecture Award in 1940. The size of France's gold reserves in ounces is published monthly on the Banque de France website. Gold is an important reserve asset that strengthens the Banque de France's balance sheet and ensures its credibility to perform its functions independently (Banque de France, 2024).

Russia is the fifth country with the largest gold reserves globally. Following the annexation of Crimea in 2014, Russia's interest in gold began to grow. The Crimea crisis, which followed the Cold War and took place between Russia and Europe, created tension in relations between Russia and Europe, but complete detachment was impossible for both sides due to their strong commercial ties. There is a significant exchange of ideas, technologies, standards, patents, and rules, many of which other countries would not offer. Moreover, Russia remains a key point for the European Union to access wider markets. With the annexation of Crimea, travel was restricted, and the assets of financial institutions were seized. Russian financial institutions' access to European capital markets has also been limited (Aras, 2017).

China is the sixth country with the largest gold reserves worldwide. China's interest in gold stems from its desire to diversify its reserves and reduce dependency

on the U.S. dollar-dominated financial system. Increased dependency on the dollar could lead to heightened U.S. sanctions against China due to geopolitical tensions and trade disputes. Thus, China aims to increase its gold reserves to boost the international use of the yuan (CryptoDNES, 2024).

Switzerland is a wealthy country with a per capita GDP well over $80,000, so it is natural for the Swiss to consume a lot of gold. A major financial hub, Switzerland had the highest ETF gold holdings (341 tons) as of the first quarter of 2024 and the highest per capita consumer demand (5.58 grams) compared to all other countries, including the United States (ForexSuggest, 2024).

India ranks ninth among the countries with the largest gold reserves worldwide. The Reserve Bank carried out one of the largest gold movements since 1991 by transferring 100 metric tons of gold from the United Kingdom to domestic vaults in the 2024 fiscal year. The country's total gold holdings reached 822 metric tons during the 2024 fiscal year, with a significant portion stored in foreign vaults, including the Bank of England. This move came at a time when concerns about the safety of overseas assets were increasing due to geopolitical tensions and the freezing of Russian assets by the West. Gold reserves are gold held by a country's central bank, serving as a backup for financial commitments and a store of value. Like other countries, India keeps some of its gold reserves in foreign vaults to diversify risk and facilitate international trade (NDTV, 2024).

In the Netherlands, gold reserves play an important role in reducing exchange rate risk and market volatility. The country places great importance on buying gold to expand its foreign reserves and mitigate the impact of any economic disruption (Núñez, 2024). The Netherlands' gold reserves were reported as $46.125 billion in May 2024, an increase from the previous figure of $45.376 billion in April 2024. The data on Dutch gold reserves is updated monthly, averaging $8.679 billion across 810 observations from December 1956 to May 2024. In May 2024, the reserves reached an all-time high of $46.125 billion, while the lowest level was recorded in September 1957 at $692.549 million (CEIC, 2024).

Japan's gold reserves constitute about 2% of its total reserves. The country had been regularly buying gold until the 9.0 magnitude earthquake it experienced in 2011, after which it stopped purchasing gold. To cope with the economic burden of the earthquake, Japan sold off part of its gold reserves and has continued to buy gold since (BullionByPost, 2024).

Turkey holds approximately 2% of the world's gold resources. Since gold production in Turkey does not meet domestic consumption, the country is among

the largest gold importers globally. From 2016 to 2022, Turkey ran an average annual foreign trade deficit of $7.1 billion for gold mines, which increased to $11 billion in 2022 (Ministry of Energy and Natural Resources, 2023). The reason Turkey ranks among the countries with the highest demand for gold is the Turkish people's interest in and trust in gold, along with the development of the Turkish jewelry sector (Aygün Alıcı & Köseoğlu, 2021).

Following the 2008 financial crisis, which highlighted the liquidity risk of the dollar, central banks' interest in gold increased. After the invasion of Ukraine in 2022, G7 countries froze Russia's $300 billion reserves, serving as a wake-up call for developing countries. In the absence of alternatives to the dollar, gold quickly became the means of protecting reserves from U.S. sanctions. Given the geopolitical context—including the war in Ukraine, tensions in the Red Sea, and conflicts in the Middle East—demand for the precious yellow metal by central banks in emerging markets is expected to remain high, which will be a determining factor for long-term price trends (Ostrum Asset Management, 2024).

The World Gold Council's first-quarter report for 2024 noted that Q1 gold demand (excluding OTC demand) fell by 5% year-on-year to 1,102 tons due to continued ETF outflows. Including over-the-counter purchases by investors, total gold demand rose by 3% year-on-year to 1,238 tons, marking the strongest first quarter since 2016. Central bank gold purchases showed no sign of slowing in the first quarter, with 290 tons (net) added to official assets, only part of which is currently reflected in IMF data. Demand for bars and coins remained flat at 312 tons compared to the previous quarter, indicating a 3% year-on-year increase. Global gold ETF holdings decreased by 114 tons. Quarterly outflows were observed in Europe and North America, slightly offset by inflows into products listed in Asia. Funds listed in the U.S. saw positive changes at the end of the quarter. Despite rising prices, the jewelry sector remained healthy. Global jewelry consumption stood at 479 tons, down just 2% year-on-year. Jewelry production increased by 1% year-on-year to 535 tons, leading to a stock accumulation of 56 tons during the quarter. Technology demand for gold rebounded by 10% year-on-year as the AI boom drove increased demand in the electronics sector (WGC, 2024).

Rapidly escalating geopolitical tensions and ongoing economic uncertainties have recently increased demand for gold. Despite rising gold prices, central banks continue to maintain their demand for gold (Foreks, 2024).

REASONS FOR CENTRAL BANKS' GOLD DEMAND

The gold reserves of the Central Bank consist of gold stored in its own vaults, gold held in foreign banks, and gold reserves kept at Borsa Istanbul (BIST). Some

of this gold meets international standards, while some does not. The Central Bank's gold reserves are recorded based on the price prevailing on the date of acquisition, and in subsequent periods, they are valued at fair value (Eğilmez, 2018). Central banks aim to increase their gold and foreign exchange reserves to intervene in markets and have influence over exchange rates and parities (Saraç & Bayhan, 2013: 399). According to Sümmeoğlu (2010), central banks demand gold for reasons such as defending against crises, providing collateral, maintaining the value of gold, having lower risk compared to other assets, diversifying reserves, and backing local currencies. Even though its price is determined by the market, gold's value as a physical asset is significant; it serves as a hedge against geopolitical, geoeconomic, and even security risks (Koziuk, 2021).

Unlike the dollar, gold is not under the sovereignty of any one country, which is a major factor in increasing countries' demand for it. Another factor is that during economic crises, while stock markets may quickly lose value, gold maintains its price. Central banks have held gold in their reserves as a monetary asset since the classical gold standard era due to people's psychological behaviors and attitudes, and it is expected that central banks will continue to increase their gold stocks in the future (Serin et al., 2018).

In January, central banks added 39 tons to global gold reserves. The leading gold-importing countries were Turkey and China. Six central banks regularly bought gold to increase their reserves (Gopaul, 2024):

- **Central Bank of Turkey** increased its official gold holdings by 12 tons, becoming the largest buyer. This increase helped bring its total gold holdings to 552 tons, which is only 6% below the all-time high of 587 tons reached in February 2023.
- **People's Bank of China** added 10 tons to its gold reserves, marking the 15th consecutive month of increase. Total gold holdings now stand at 2,245 tons, about 300 tons higher than at the end of October 2022, when the bank began reporting its gold purchases.
- **Reserve Bank of India** added approximately 9 tons to its gold reserves. India's gold holdings now total 812 tons.
- **National Bank of Kazakhstan** bought 6 tons of gold in January 2023, marking its first monthly purchase since January 2023.
- **Central Bank of Jordan** bought 3 tons of gold in January, for the second consecutive month, raising its total gold holdings to 75 tons.
- **Czech National Bank** made purchases of about 2 tons for the eleventh consecutive month. During this period, gold reserves increased from 12 tons to over 32 tons (+170%).

CONCLUSION

Gold is a versatile and valuable asset that continues to maintain its historical significance today. It is used in various sectors such as jewelry, healthcare, finance, and textiles, and also plays a crucial role in international trade. During periods of rising general price levels, gold gains importance as fiat currencies lose value. As a safe haven against high inflation, gold provides protection since it does not lose value in times of economic uncertainty and is not under the monopoly of any single country. In response to increasing political and economic uncertainties, central banks have been boosting their gold reserves to protect the value of their national currencies. The United States ranks first among the top ten countries with the largest gold reserves worldwide, followed by Germany, Italy, France, Russia, China, Switzerland, Japan, India, and the Netherlands. Other countries around the world are also continuing to increase their gold reserves due to economic and political uncertainties. For instance, Turkey ranks eleventh after these top ten countries in 2024. A significant increase has recently been observed in gold reserves, especially in developed economies. The U.S.'s gold reserves are equivalent to the combined gold reserves of Germany, Italy, and France. Although the U.S. still holds the largest gold reserves, the gap with other countries is narrowing. In a world economy made fragile by the ever-growing uncertainties in economic policies and global geopolitical risks, gold reserves hold critical importance.

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Chapter 5

THE RELATIONSHIP BETWEEN THE PERCEPTION OF TOXIC LEADERSHIP IN ORGANIZATIONS AND ORGANIZATIONAL CYNICISM*

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INTRODUCTION

Leaders play a significant role in achieving organizational goals through their knowledge and skills that bring employees together, guide them, and inspire them (Wolor et al., 2022). When a leader uses their power and charisma negatively on followers, the dark side of leadership emerges (Üngör, 2021). The dark side of leadership is a broad concept that includes negative leadership styles such as "little tyrant," "coercive leadership," "destructive leadership," "bad leadership," "abusive supervision," "narcissistic leadership," and "toxic leadership" (Uslu, 2021).

Toxic leadership is defined as a leadership approach that displays destructive behaviors, and due to inadequate individual qualities, causes lasting damage to followers, organizations, communities, and even nations. In this leadership process, the leader has a severe and enduring negative impact on their followers. Toxic leaders engage in unethical behavior toward their followers, sabotage them, and may escalate their behavior to criminal conduct due to their lack of leadership qualifications (Heppell, 2011).

It is uncertain when and under what conditions one will encounter toxic leaders. A leader perceived positively by some followers may be considered toxic by others. Toxic leaders vary depending on the character of the leader, their intentions, and the toxicity of the actions resulting from their decisions (Lipman-Blumen, 2005). This means that toxic behaviors, whether intentional or unintentional, exhibited under any leadership style can lead to toxic leadership (Krasikova, Green &

LeBreton, 2013). Toxic leaders bully their followers by belittling them. They abuse their rights, reprimand them, demand more work beyond their job descriptions, and hold them responsible for sacrifices (Schmidt, 2008). This situation causes disappointment for the leader's followers, leading to negative feelings toward the organization and the leader, and results in undesirable behaviors.

Negative attitudes and behaviors arising from disappointment lead to cynicism. Cynical attitudes towards the organization cause employees to lose faith in the organization and exhibit negative and demeaning behaviors influenced by their emotions (Kaya, Göncü & Erarslan, 2021). Elements such as failed change initiatives, stress resulting from excessive workload, insufficient response to individual expectations, organizational communication, decision-making, promotion issues, and the increasing complexity of the organizational structure contribute to organizational cynicism (Balay, Kaya & Cülha, 2013).

Correctly understanding toxic leadership and organizational cynicism by organizations and identifying their presence are of great importance for organizational continuity. However, the relationship between the Perception of Toxic Leadership and Organizational Cynicism has mostly been examined through studies conducted on public sector employees. These studies have concluded that there is a positive relationship between perceived toxic leadership and organizational cynicism (Demirel, 2015; İnce, 2018; Dobbs & Do, 2019; Küçük, 2020; Çankaya & Çiftçi, 2020; Eidipour et al., 2020; Elber Börü et al., 2020; Erdem, 2021; Kaya, Göncü & Erarslan, 2021; Hamzah, 2023; Karagöz, Yalçın & Köroğlu, 2024). A literature review reveals that there are limited studies investigating the relationship between the Perception of Toxic Leadership and Organizational Cynicism among private sector employees (Elber Börü et al., 2020). This study aims to contribute to the literature by examining the relationship between the Perception of Toxic Leadership and Organizational Cynicism in a private sector sample.

THE CONCEPT AND DIMENSIONS OF TOXIC LEADERSHIP

A toxic person is someone who manipulates others to make them feel inadequate and flawed, constantly controls others, lacks empathy, is inconsistent and indifferent, behaves selfishly with a focus on personal gain, continually finds flaws in others to make them feel bad, and emotionally exhausts them (Sarıgül, 2023). Toxic individuals exhibit inappropriate behavior towards those less powerful in their environment (Holloway, 2010), causing others around them to feel

exhausted, unhappy, and stressed (Ussolikhah et al., 2023).

It is quite challenging to create a comprehensive definition of toxic leadership behaviors because different leaders exhibit different types and intensities of toxicity, and their actions result in different kinds and levels of harm. Moreover, perceptions and attributions of leadership can vary; a toxic leader for one follower may be a hero to another (Mehta & Maheshwari, 2013). On the other hand, assertive and demanding leaders who might be considered toxic cannot always be categorized as such, just as sincere and moderate leaders may sometimes exhibit toxic behaviors (Reed, 2004).

Subordinates exposed to the toxic leadership process believe that the leader acts out of selfish motives and personal interests, rewarding employees who agree with them and reprimanding those who challenge their authority (Mehta & Maheshwari, 2014). Toxic leadership, where the leader seeks success through the destruction of others rather than elevating followers, and exhibits non-cooperative, discontented, and malicious behaviors to protect their position, can have devastating consequences for organizational health and cause severe physical and psychological harm to followers (Mehta & Maheshwari, 2013).

The destructive impact in organizations occurs through the presence of the toxic triangle, which consists of the leader, followers, and environmental factors. The leader is charismatic, personalizes power, is narcissistic, has a negative lifestyle, and supports a hate ideology. Followers are divided into two types: conformers and colluders. Conformers exhibit passive behavior due to unmet needs and immature personalities, whereas colluders believe they can express themselves more comfortably in an organization led by a leader whose worldview aligns with theirs. Environmental factors, the third element of the triangle, are conducive to instability, perceived threats, or external enemy perceptions. People who avoid uncertainty and support high power often coexist in such an environment (Padilla, Hogan & Kaiser, 2007).

First used by Whicker in 1986, the term toxic leader refers to someone with a well-hidden personal inadequacy, who is selfish, non-cooperative, discontented, a bully, a malicious implementer, and a street fighter. It is stated that toxic leaders are smart enough not to let followers realize they are being deceived, and they maintain their influence by adopting a combative stance to retain the power they have over followers rather than elevate them (Tavanti, 2011).

A toxic leader is an inflexible, arrogant, self-serving leader who negatively affects the organizational climate, disregards follower morale and well-being, and

engages in behavior aimed at impressing superiors (Reed, 2004). By poisoning creativity, enthusiasm, autonomy, and innovation in the organization (Wilson-Starks, 2003), toxic leaders cause damage through destructive behaviors and dysfunctional personal characteristics, affecting not only the individuals and groups they manage but also society at large, and even entire nations (Lipman-Blumen, 2005). The dark personality of a toxic leader causes followers to feel stressed, less empowered, and mentally burdened, which in turn makes them less willing to generate creative ideas within organizational activities, thereby negatively impacting organizational creative performance (Spain, Harms & LeBreton, 2014). The decline in the creative performance of organizations indirectly affects the national economy.

Toxic leaders are seen as "silent killers" who deliberately mislead their followers with false information and statements, impose unrealistic business targets, and eliminate a creative climate and healthy communication in the organization through bullying, harassment, and deception (Walton, 2007). In this way, they negatively affect followers without being noticed, giving the impression that everything is going well to those who oversee their leadership, thus concealing themselves. This situation makes it difficult to detect toxic leaders in organizations and fully understand the extent of followers' suffering (Reed & Olsen, 2010).

Initially, toxic leaders may charm their followers with their behaviors, but they eventually manipulate, mistreat, deprive them of their rights, weaken them, engage in unethical corruption and criminal activities, lie to their followers, misdiagnose issues and problems to mislead, prevent questioning of their decisions and actions, cause division among employees, and discredit potential successors to prolong and secure their authority (Lipman-Blumen, 2010). The features of toxic leaders can create a negative impact not only on the organization and its employees but also on compassionate leaders who understand the importance of a positive climate (Reed, 2004). Toxic leaders, within the culture of inequality they create, threaten the professional and/or personal safety of employees, expose them to physical and mental exhaustion, and cause a breakdown in self-respect and unethical behavior (Pelletier, 2010). The negative atmosphere caused by toxic leadership within the organization reduces job satisfaction, trust in the organization and leadership, and similar organizational outcomes, while increasing stress and turnover intentions (Reyhanoğlu & Akın, 2016), thereby reducing organizational performance by negatively affecting the ability of both superiors and subordinates to fulfill their duties (Milosevic, Maric & Lončar, 2019).

Schmidt (2008), a pioneer in measuring toxic leadership, examines toxic leadership under five dimensions: abusive supervision, authoritarian leadership, narcissism, self-promotion, and unpredictability:

Abusive Supervision: Refers to the perception of followers regarding the leader's hostile, verbal, and non-verbal repetitive behavior without physical contact, which continues until the leader-follower relationship ends or the leader changes their behavior (Tepper, 2000). Abusive supervision stemming from antecedents such as social learning, identity threat, and self-regulation disorder in leaders leads to negative behaviors in followers (Tepper, Simon & Park, 2017). The belief that followers reciprocate negative behaviors with negativity reflects not only on the leader but also on their behaviors towards the organization (Mitchell & Ambrose, 2007) and colleagues.

Authoritarian Leadership: Leadership that establishes authority and control over followers through strong pressure and demands unconditional obedience from them (Cheng et al., 2004). The authoritarian leader restricts followers' willingness to act independently and take initiatives concerning work order and goals, demanding complete compliance (Schmidt, 2008). They shape tasks assigned to followers according to their decisions, centralizing authority, and use reward and punishment power to maintain control over followers (Arıkan, 2001). Followers may exhibit a tendency to obey authority due to psychological and social reasons. Feeling powerless externally and fearing repercussions, followers may even align themselves with toxic leaders who they believe can satisfy them (Lipman-Blumen, 2005).

Narcissism: A personality trait characterized by believing oneself to have a grandiose image while belittling the abilities and efforts of others (Schmidt, 2008). Defined as a personality disorder that requires excessive admiration, but is exploitative, ruthless, and emotionally cold, narcissism is a major part of toxic leadership with its self-centered, egotistical traits (Rosenthal & Pittinsky, 2006; Fenlason & Doty, 2013). Narcissistic leaders are characterized by a sense of illegitimate authority and management needs, a lack of empathy, and projecting negativity onto others. They violate organizational policies and principles unjustly, seek to serve their interests, refuse to accept responsibility, dislike being questioned, and do not hesitate to abuse their power (Baloyi, 2020).

Self-Promotion: The behavior of trying to create the impression of being highly competent by boasting and acting arrogantly, especially in interpersonal interactions with people of higher status (Giacalone & Rosenfeld, 1986). Toxic

leaders maintain their image before superiors and continue to secure their support by owning successes, blaming others for failures, and doing whatever it takes to stand out beside top managers (Schmidt, 2008; Kırca, 2021).

Unpredictability: Involves displaying different behavior patterns that reflect dramatic changes in mood (Schmidt, 2008). The unpredictable behavior changes of toxic leaders cause ambiguity regarding when and where followers will be exposed to these behaviors and confusion about how to respond when faced with multiple different behavior types. For this reason, unpredictability is the most destructive of the five toxic leadership dimensions (Schmidt, 2014), making the organizational climate dependent on the leader's mood (Kırca, 2021).

THE CONCEPT AND DIMENSIONS OF ORGANIZATIONAL CYNICISM

Originally, cynicism emerged as a worldview in which an individual was hostile to cultural values, rejected the generally accepted definition of the world, and argued that the world was not truly worthy of respect. Over time, influenced by modernity, cynicism manifested itself as an opposition to the world, a refusal to form relationships, indifference to one's surroundings, and a tendency to alienation and isolation (Bewes, 1997). In its original sense 2500 years ago, cynics questioned, criticized, and challenged laws, traditions, and societal values, considering individual wisdom the highest virtue. Today, however, cynicism has become a concept inherently characterized by pessimism and distrust (Mantere & Martinsuo, 2001).

Cynicism can be addressed in two ways: as "general cynicism," which reflects personality traits formed by one's worldview from the moment of birth, and as "organizational cynicism," which focuses on organizational factors that lead to cynical behaviors (Erdoğan & Bedük, 2013). General cynicism is a negative feeling characterized by self-perceived inferiority, anger, and shame, resulting in dissatisfaction with social communication and leading individuals to perceive others as selfish, indifferent, and deceitful (Öndeş & İrmiş, 2018). Organizational cynicism refers to these feelings occurring within the context of the organization.

Organizational cynicism represents the belief of employees that the organization lacks integrity, negative feelings about the organization, and derogatory behaviors towards the organization arising from these beliefs and feelings (Brandes, 1997; Dean, Brandes & Dharwadkar, 1998). The lack of friendliness among employees, questioning the organization's honesty, and

feelings of dissatisfaction, hopelessness, and unrest exacerbate negative feelings about the organization (Durrah, Chaudhary & Gharib, 2019). Organizational Cynicism arises when employees develop "internal attributions" regarding the causes of change efforts and perceive that change is useless (Wanous, Reichers & Austin, 1994). In this context, Organizational Cynicism is a negative attitude that results from disappointments related to unmet employee expectations, leading to the belief that future attempts within the organization are destined to fail (Dean, 1995). Furthermore, the self-serving, mocking, deceitful, and exploitative practices of the organization's leaders and managers contribute to the formation of Organizational Cynicism (Mirvis & Kanter, 1991). Elements related to beliefs, emotions, and behaviors influence negative attitudes towards the organization. The reason why Organizational Cynicism is conceptualized as an attitude is that, unlike individual traits, beliefs, emotions, and behaviors can change depending on the situation (Thompson, Joseph et al., 2000).

Organizational Cynicism is rooted in predicting outcomes based on experiences and generalizing from multiple relationships to individual objects. The perception of a dishonest, unfair, and deceitful foundation in the organization over time (Johnson & O'Leary-Kelly, 2003) leads to employees' cognitive, emotional, and behavioral reactions (Bommer, Rich & Rubin, 2005). Organizational Cynicism is shaped by how organizational events are perceived within the framework of the organization's intangible values and how individuals respond to these perceptions (James, 2005). An employee who feels betrayed emotionally reacts by criticizing the organization as dishonest and insincere, displaying negative attitudes and behaviors such as mockery and condescension (Özler, Atalay & Şahin, 2010).

Organizational justice, organizational policies, and violations of psychological contracts are among the organizational factors that influence the development of Organizational Cynicism. Individual factors such as age, gender, education level, marital status, length of service, and hierarchy can also shape cynical beliefs, emotions, and behaviors (Alhas, 2022). Environmental factors, such as violations of social contracts, mass layoffs, and social irresponsibility, are also among the reasons for the emergence of Organizational Cynicism (Torun, 2016).

Organizational Cynicism is characterized by criticism, denigration, and negative emotions (Alhas & Seçkin, 2023). Cynical employees harbor negative feelings towards the organization, exploit organizational rules and principles, are skeptical about organizational interests due to distrust, are pessimistic about the organization's goals and objectives, and display condescending, mocking, and critical behaviors towards the organization (Kökalan, 2019). In this context,

Organizational Cynicism is addressed through its cognitive, affective, and behavioral dimensions (Dean et al., 1998):

Cognitive Dimension: Emerges when employees perceive an inconsistency between what they were promised by managers and what is delivered (Pfrombeck et al., 2020). Cognitive cynicism involves employees' beliefs that managers are unfair, lack honesty and sincerity, prioritize personal interests in their decisions over organizational interests, and are willing to sacrifice employees, betraying them (Kutanis & Çetinel, 2010). When an employee lacks faith in the goodwill of actions and motives within the organization, cognitive cynicism arises. Employees who believe that the organization and its managers always act in their own interests perceive the organization as dishonest (Naseer et al., 2020) and unjust, hindering change and innovation within the organization (Karcıoğlu & Naktiyok, 2015). Employees, believing that values such as fairness, honesty, and sincerity will be exploited, display cynical behaviors aligned with their organizational interests (Ceyhun, Malkoç & Arslan, 2017).

Affective Dimension: Is related to employees' cynical beliefs. Cynical beliefs lead to feelings such as tension, anger, and rage (Pfrombeck et al., 2020), as well as shame, contempt, and hatred (Kalağan, 2009). Employees attempting to manage emotional reactions may also deplete sources of motivation and organizational commitment (Kim et al., 2009). When employees assess the potential for harm, they are emotionally triggered and feel anger, disgust, and resentment. As a reaction, they avoid collaborating with managers, start questioning their circumstances, and adopt survival behaviors (Mishra & Spreitzer, 1998).

Behavioral Dimension: Relates to the tendency of employees to engage in negative actions as a reaction to cognitive and affective components (Naseer et al., 2020). It refers to the verbal or non-verbal behaviors of employees that involve criticism, pessimism, and humorous mockery, expressing emotions like anger, loss of respect, and shame towards the organization (Gündüz, 2023). Behavioral expressions may include non-verbal cues such as eye-rolling and disdainful looks, as well as verbal cues like sarcastic humor or bad-mouthing (Brandes & Das, 2006). Due to their pessimistic outlook on the organization's future (Pfrombeck et al., 2020), individuals within the organization engage in behaviors like ridiculing future attitudes, expressing condescending opinions, and using sarcastic humor (Yavuz & Bedük, 2016; İraz, Eryeşil & Fındık, 2012). This expression of emotions through behavior influences other individuals within the organization, bringing cynical employees together, and potentially creating a chaotic environment with destructive consequences for the organization (Tarakcı & Akın, 2017).

Organizational Cynicism, through its cognitive, affective, and behavioral dimensions, leads to negative outcomes both individually and organizationally (Ulukan, 2023). It causes stress among employees (Richardsen, Burke & Martinussen, 2006), negatively affects their social lives (Brandes, 1997), leads to burnout (İncesu, Yorulmaz & Evirgen, 2017), and prevents employees from engaging in their work (Maslach & Jackson, 1981). In the organization, it leads to decreased performance, reduced productivity, and significant financial losses (Richardsen, Burke & Martinussen, 2006). Organizational commitment (Rubin et al., 2009; Nafei & Kaifi, 2013; Uygungil & İşcan, 2018; Uçar & Ulusoy, 2023), job satisfaction (Karadağ, 2022; Türe & Bilge, 2019; İbrahimağaoğlu, 2019), and trust (Biswas & Kapil, 2017; Oğuzhan, 2020) decrease; burnout (Duman, Sak & Şahin Sak, 2020; Erkal & Naktiyok, 2021; Altamimi, Alsubaie & Nasaani, 2021), alienation (Kayaalp & Özdemir, 2020; Öz, 2020), and turnover intentions increase (Chiaburu et al., 2013; Uysal & Yıldız, 2014; Kıral, 2023).

RESEARCH METHOD

The purpose of this research is to examine the relationship between the Perception of Toxic Leadership and Organizational Cynicism among private sector employees. Within this main objective, it aims to investigate the levels of Toxic Leadership Perception and Organizational Cynicism among employees and to examine the explanatory effect of perceived toxic leadership on employees' cynical behaviors.

FUNDAMENTAL MODEL OF THE RESEARCH

Considering the main purpose of the research and assuming that the Perception of Toxic Leadership will lead to Organizational Cynicism, the research question is defined as follows: To what extent does the perception of toxic leadership among employees affect Organizational Cynicism? The research model is presented in Figure 1.

| Perception of Toxic Leadership | → | Organizational Cynicism |
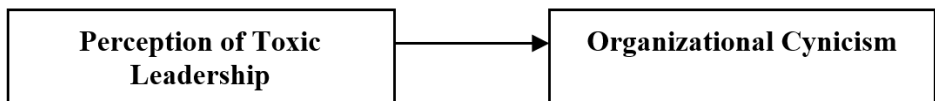
Figure 1. Research Model

POPULATION AND SAMPLE OF THE RESEARCH

The population of this research consists of 750 employees of a joint-stock company providing services in the energy distribution sector, with main offices and branches located in the centers and several districts of Denizli, Manisa, and İzmir. To maximize the response rate, an online survey was prepared using Google Forms and sent to 500 employees using a probabilistic sampling method (Kılıç, 2013). A total of 289 participants responded to the survey. At a 95% confidence level (Saruhan & Özdemirci, 2020), reaching 255 participants from a population of 750 is deemed sufficient for statistical analysis and interpretation of the results. Among the 289 survey forms, 271 were found suitable for statistical analysis.

SCALES USED IN THE RESEARCH

The survey created for this research includes 30 items from the Toxic Leadership Perception Scale and 13 items from the Organizational Cynicism Scale. To measure perceived toxic leadership, the "Toxic Leadership Scale," developed by Schmidt (2008) and adapted into Turkish by Kırca (2021) in her doctoral dissertation, was used. The Toxic Leadership Scale measures five dimensions—abusive supervision (7 items), authoritarianism (6 items), narcissism (5 items), self-promotion (5 items), and unpredictability (7 items)—using a five-point Likert scale. In the second section of the survey, Organizational Cynicism is measured using the "Organizational Cynicism Scale," originally created by Brandes in 1997 with 14 items and revised to 13 items by Brandes, Dharwadkar, and Dean in 1999, which was adapted into Turkish by Kalağan (2009). This Likert-type scale measures cognitive (5 items), affective (4 items), and behavioral (4 items) dimensions.

In the research, a five-point Likert scale was used, where (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree. Participants were asked to mark the option that most closely matched their thoughts about their supervisors/managers.

RELIABILITY AND FACTOR ANALYSES OF THE SCALES

The reliability of the Toxic Leadership Perception and Organizational Cynicism Scales was assessed using Cronbach's alpha and correlation coefficient analysis. To examine the construct validity of the scales used in the research, factor analysis was conducted. The suitability of the research data for factor analysis was determined using the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. For the data to be suitable for factor analysis, the KMO value should be greater than 0.50

(Williams, Onsman & Brown, 2010), and Bartlett's Test of Sphericity should have a p-value of less than 0.05 (Tobias & Carlson, 1969; Çolakoğlu & Büyükekşi, 2014). Varimax rotation was used to test the construct validity of both scales.

ANALYSES OF THE TOXIC LEADERSHIP PERCEPTION SCALE

The reliability analysis of the scale used in the research indicated a high reliability, with a Cronbach's alpha value of 0.941 (İnal et al., 2017). The Cronbach's alpha values for the dimensions of Toxic Leadership Perception are as follows: abusive supervision 0.868, authoritarianism 0.540, narcissism 0.864, self-promotion 0.894, and unpredictability 0.828.

The correlation coefficient is expected to range between -1.00 and +1.00, indicating the strength of the relationship. Based on the value of the correlation coefficient: between -1 and -0.7 represents a strong negative (-) relationship, -0.7 to -0.3 represents a moderate negative (-) relationship, -0.3 to 0 represents a weak negative (-) relationship, 0 to 0.3 represents a weak positive (+) relationship, 0.3 to 0.7 represents a moderate positive (+) relationship, and 0.7 to 1 represents a strong positive (+) relationship (Gürbüz & Şahin, 2018). The correlation coefficients of the items on the Toxic Leadership Perception Scale were examined, and the negative value of -0.095 for item 8 ("My manager controls how employees complete their tasks") required reverse coding, after which the analysis was repeated. In the new analysis, the correlation coefficients were calculated as follows: item 8 (0.095), item 13 ("My manager makes all decisions within the unit, whether important or not") (0.069), and item 30 ("My manager's enthusiasm affects employees' emotions") (0.081). Items 8, 13, and 30 were removed from the scale due to their low level of correlation. Similarly, Öztürk (2023), in her study, removed items 8, 13, and 30 from the toxic leadership scale due to their low explanatory power. After removing three items from the Perceived Toxic Leadership Scale, the Cronbach's alpha value was determined to be 0.958.

The factor analysis on the construct validity of the scale used in the research, conducted using "varimax rotation," resulted in a four-factor distribution in the component matrix. It is recommended that the difference between the highest loading value a given item receives in a factor and the next highest loading value be at least 0.10 (Cemaloğlu et al., 2012). Item 28 in the scale ("The approachability level of my manager varies") was removed from the scale due to a loading difference of less than 0.10 between two factors, and the factor analysis was repeated. The scale items were again grouped under four factors, and item 12 ("My manager is

very strict about institutional policies, even in special situations") showed similar values (<0.10) for factors 1 (0.381), 2 (0.422), and 3 (0.353), and was removed. After repeating the factor analysis, item 11 ("My manager ignores ideas that oppose his/her own") also showed similar values (<0.10) for factors 1 (0.323), 2 (0.359), and 3 (0.349) and was therefore removed. After the renewed factor analysis, the items on the Toxic Leadership Perception Scale were grouped under three factors (dimensions). The dimensions of abusive supervision and authoritarianism were combined, forming factor 1 with items "1, 2, 3, 4, 5, 6, 7, 9, 10." The dimensions of narcissism and self-promotion were combined, forming factor 2 with items "14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 29." The unpredictability dimension formed factor 3 with items "24, 25, 26, 27." The factor loadings and combined dimensions of the Toxic Leadership Perception Scale are shown in Table 1.

Table 1. Factor Analysis Results of the Toxic Leadership Perception Scale			
Toxic Leadership Perception	Factor Loadings		
	Subscales		
Item	Abusive Supervision and Authoritarianism	Narcissism and Self-Promotion	Unpredictability
Item 1	**0,7**		
Item 2	**0,67**		
Item 3	**0,663**		
Item 4	**0,656**		
Item 5	**0,645**		
Item 6	**0,575**		
Item 7	**0,571**		
Item 9	**0,532**		
Item 10	**0,493**		
Item 14		0,675	
Item 15		0,694	
Item 16		0,711	
Item 17		0,684	
Item 18		0,639	
Item 19		0,717	
Item 20		0,625	
Item 21		0,658	
Item 22		0,732	

Table 1. Factor Analysis Results of the Toxic Leadership Perception Scale (continued)			
Toxic Leadership Perception	Factor Loadings		
	Subscales		
Item	Abusive Supervision and Authoritarianism	Narcissism and Self-Promotion	Unpredictability
Item 29		0,586	
Item 24			0,825
Item 25			0,669
Item 26			0,662
Item 27			0,643

KMO: 0,948
Total Variance: 60,44%
Approx. Chi-Square: 4204,934 df: 276 Sig.: ,000

Considering that there is no statement with a factor loading below 0.30 in Table 1 (Yiğit, Bütüner & Dertlioğlu, 2008), the total variance explained is 60.44% (>50%) (Yaşlıoğlu, 2017), the KMO value of the scale is 0.948 (>0.50), and Bartlett's test of sphericity has a significance level of 0.000 (p<0.05), it can be said that the scale is valid.

The original Toxic Leadership Perception Scale used in this study included the dimensions of abusive supervision, authoritarianism, narcissism, self-promotion, and unpredictability (Schmidt, 2008). However, after the factor analysis conducted with the data of this research, the items related to abusive supervision and authoritarianism were grouped under a single factor, while the items related to narcissism and self-promotion were also grouped under a single factor. The unpredictability dimension remained as a single dimension, consistent with the literature. Therefore, in Table 1, Factor 1 is named "Abusive Supervision-Authoritarianism," Factor 2 is named "Narcissism-Self-Promotion," and Factor 3 is named "Unpredictability."

Although authoritarian leadership and abusive leadership are defined and conceptualized differently in theory, they are related and negatively affect employees (Pyc, Meltzer & Liu, 2017). The combination of abusive supervision and authoritarianism under one dimension is consistent with the definition of the System 1 (Exploitive Authoritarian) model developed by Likert. In this model, Exploitive Authoritarian leadership does not trust subordinates, makes them feel that they are not free to discuss work-related issues, and rarely seeks their

input in resolving work problems (Koçel, 2020). It is characterized by low levels of communication with subordinates and a leadership approach based on distrust, intimidation, threat, and punishment (Bakan & Bulut, 2004).

Similarly, the items for narcissism and self-promotion in the original scale were also grouped under a single dimension in this study. Narcissistic individuals tend to attract attention, expect admiration from those around them, and exhibit what they have in an exaggerated manner (Yıldırım, 2020). Narcissists are blatant in showcasing their superiority and seize every opportunity for positive external evaluations (Horvath & Morf, 2010). Their effort to appear strong outwardly, and being motivated by how others perceive them rather than their own perspective, explains the merging of narcissism and self-promotion into one dimension (Wallace & Baumeister, 2002).

A reliability analysis was conducted again for the statements excluded from the Toxic Leadership Perception Scale and the combined dimensions. It was found that the Cronbach's alpha values for the overall scale and its dimensions were between 0.80 and 1.00, indicating high reliability (Table 2).

Table 2. Reliability Analysis of the Toxic Leadership Perception		
Scale and sub scales	Item Count	Cronbach Alpha
Toxic Leadership Perception	24	,953
Abusive Supervision and Authoritarianism	9	,884
Narcissism and Self-Promotion	11	,927
Unpredictability	4	,886

To check the conformity of the Toxic Leadership Perception and the resulting subdimensions—abusive supervision and authoritarianism, narcissism and self-promotion, and unpredictability—to normal distribution, descriptive statistics were re-calculated. The skewness and kurtosis values obtained were found to be between "-1.00" and "+1.00" (Büyüköztürk, Çokluk & Köklü, 2011; Uysal & Kılıç, 2022), as shown in Table 3.

Table 3. Skewness and Kurtosis Coefficients of Toxic Leadership Perception		
Scale and sub scales	Skewness Coefficient	Kurtosis Coefficient
Toxic Leadership Perception	,278	-,495
Abusive Supervision and Authoritarianism	,384	-,622
Narcissism and Self-Promotion	,310	-,301
Unpredictability	,556	-,171

According to Table 3, the data exhibit a normal distribution. In this context, it has been decided to use parametric tests for the relationship analyses to be conducted in the study (Genç & Soysal, 2018).

ANALYSES OF THE ORGANIZATIONAL CYNICISM SCALE

The reliability analysis information for the Organizational Cynicism Scale used in the research is presented in Table 4. The Cronbach's alpha values for the Organizational Cynicism Scale and its subdimensions are between 0.80 and 1.00, indicating high reliability.

Table 4. Reliability Analysis of the Organizational Cynicism Scale		
Scale and sub scales	Madde Sayısı	Cronbach Alfa
Organizational Cynicism	13	,909
Cognitive	5	,885
Affective	4	,917
Behavioral	4	,774

The correlation coefficient for the Organizational Cynicism Scale was calculated, and since each item's value was between "-1.00" and "+1.00," no items were removed, and the analyses continued.

The validity of the Organizational Cynicism Scale used in the study was tested using factor analysis with the "varimax rotation" method. As a result, the component matrix grouped the items under three factors (dimensions), consistent with the literature (Dean, Brandes & Dharwadkar, 1998; Kalağan, 2009), as shown in Table 5.

Table 5. Factor Analysis Results of the Organizational Cynicism Scale			
Organizational Cynicism	Factor Loadings		
	Sub scales		
Items	Cognitive	Affective	Behavioral
Item 1	0,836		
Item 2	0,823		
Item 3	0,797		
Item 4	0,719		
Item 5	0,712		
Item 6		0,834	
Item 7		0,853	
Item 8		0,869	
Item 9		0,79	
Item 10			0,642
Item 11			0,666
Item 12			0,879
Item 13			0,55

KMO: **0,889**
Total Variance: **71,202%**
Approx. Chi-Square: **2237,056** df: **78** Sig.: **,000**

Considering that there are no items with a factor loading below 0.30 in the scale used in the research (Yiğit, Bütüner & Dertlioğlu, 2008), the KMO value is 0.889 (>0.60), Bartlett's test of sphericity has a significance level of 0.000 (p<0.05), and the three components explain a total variance of 71.202% (>50%), it can be concluded that the scale is valid.

Descriptive statistics were conducted to check the conformity of the Organizational Cynicism Scale data to a normal distribution; the skewness and kurtosis values are presented in Table 6.

Table 6. Skewness and Kurtosis Coefficients of Organizational Cynicism		
Scale and sub scales	Skewness Coefficient	Kurtosis Coefficient
Organizational Cynicism	**,264**	**-,229**
Cognitive	**,493**	**-,186**
Affective	**,515**	**-,087**
Behavioral	**,262**	**-,240**

The Organizational Cynicism data exhibit normal distribution, with values between -1.00 and +1.00. Therefore, parametric tests can be used for the relationship and difference analyses in the study (Genç & Soysal, 2018).

Detailed Research Model and Hypotheses for Toxic Leadership Perception and Organizational Cynicism

As indicated above, based on the factor analysis of the research data, Toxic Leadership Perception was structured under three dimensions: Abusive Supervision-Authoritarianism, Narcissism-Self-Promotion, and Unpredictability. Organizational Cynicism was grouped under Cognitive, Affective, and Behavioral dimensions. In line with the research objective and the reviewed literature, the Research Model (Figure 2) and Hypotheses, designed to test the explanatory effect of Perceived Toxic Leadership on cynical behaviors in the relationship between Toxic Leadership Perception and Organizational Cynicism, are presented below.
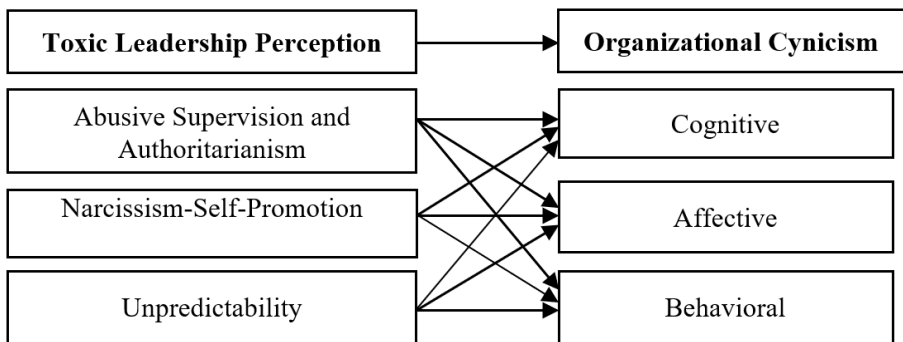

Figure 2. Research model

Many studies have shown a positive relationship between toxic leadership and cynicism (Erdem, 2021). In a study conducted by Rahmani, Ghanbari, and Ardalan (2022) on high school teachers in Iran's Khuzestan province, it was found that there is a positive and significant relationship between the Perception of

Toxic Leadership and Organizational Cynicism. Similarly, in a study by Abu El Dahab (2024) on employees of the Suez Canal Authority in Egypt, it was stated that Perceived Toxic Leadership directly affects Organizational Cynicism. Studies conducted by Demirel (2015), İnce (2018), and Karagöz, Yalçın, and Köroğlu (2024) on teachers also concluded that there is a positive relationship between the Perception of Toxic Leadership and Organizational Cynicism. According to the results of a study conducted by Dobbs and Do (2019) in the U.S. Army, there is also a positive relationship between Perceived Toxic Leadership and Organizational Cynicism.

H1: "Employees' Perception of Toxic Leadership significantly and positively predicts Organizational Cynicism."

In a study by Küçük (2020) on teachers in secondary schools in the province of Elazığ, a positive and moderate relationship was found between the subdimensions of toxic leadership and the subdimensions of Organizational Cynicism, and toxic leadership was identified as a predictor of Organizational Cynicism. According to a study conducted by Kaya, Göncü, and Erarslan (2021) on public sector employees, there is a relationship between toxic leadership and Organizational Cynicism, with the dimensions of toxic leadership having a greater impact on the cognitive and affective dimensions of Organizational Cynicism. In a study conducted by Hamzah (2023) on hospital employees, it was found that each dimension of toxic leadership has a significant positive impact on each dimension of Organizational Cynicism, with the dimensions of abusive supervision and narcissism having a greater impact on Organizational Cynicism.

H1a: "The abusive supervision-authoritarianism dimension of Perceived Toxic Leadership significantly and positively predicts the cognitive dimension of Organizational Cynicism."

H1b: "The abusive supervision-authoritarianism dimension of Perceived Toxic Leadership significantly and positively predicts the affective dimension of Organizational Cynicism."

H1c: "The abusive supervision-authoritarianism dimension of Perceived Toxic Leadership significantly and positively predicts the behavioral dimension of Organizational Cynicism."

H1d: "The narcissism-self-promotion dimension of Perceived Toxic Leadership significantly and positively predicts the cognitive dimension of Organizational Cynicism."

H1e: "The narcissism-self-promotion dimension of Perceived Toxic Leadership significantly and positively predicts the affective dimension of Organizational Cynicism."

H1f: "The narcissism-self-promotion dimension of Perceived Toxic Leadership significantly and positively predicts the behavioral dimension of Organizational Cynicism."

H1g: "The unpredictability dimension of Perceived Toxic Leadership significantly and positively predicts the cognitive dimension of Organizational Cynicism."

H1h: "The unpredictability dimension of Perceived Toxic Leadership significantly and positively predicts the affective dimension of Organizational Cynicism."

H1i: "The unpredictability dimension of Perceived Toxic Leadership significantly and positively predicts the behavioral dimension of Organizational Cynicism."

Descriptive Findings of Toxic Leadership Perception and Organizational Cynicism Variables

Table 7 presents the mean values ($\bar{x}$) and Standard Deviation (SD) values of the Toxic Leadership Perception and its subdimensions, as well as Organizational Cynicism and its subdimensions. The interval values for the scale item averages, calculated as (5-1/3=1.33), are specified as follows: 1-2.33 "Low," 2.34-3.66 "Moderate," and 3.67-5.00 "High" (McLeod, 2010).

Table 7. Mean and Standard Deviation Values of Variables		
	$\bar{x}$	S.S
Toxic Leadership Perception Scale	**1,9117**	**0,611843**
Abusive Supervision and Authoritarianism	**1,7409**	**0,60232**
Narcissism and Self-Promotion	**2,0248**	**0,69692**
Unpredictability	**1,9852**	**0,80953**
Organizational Cynicism Scale	**2,1235**	**0,66375**
Cognitive	**2,4470**	**0,93441**
Affective	**1,8173**	**0,69544**
Behavioral	**2,0258**	**0,69274**

When examining the mean values of the variables, it is observed that participants' levels of Toxic Leadership Perception and Organizational Cynicism are low, with Toxic Leadership Perception having an even lower average than Organizational Cynicism. The average values for all three dimensions of Toxic Leadership Perception are at a low level. The obtained results are consistent with the findings of other studies on the related topic in the literature (Çankaya & Çiftçi, 2020; Elber Börü et al., 2020; Bahadır & Kahveci, 2020; Küçük, 2020). The subdimensions of Toxic Leadership Perception, in order from highest to lowest mean, are Narcissism-Self-Promotion, Unpredictability, and Abusive Supervision-Authoritarianism. The low average value of cynicism among participants is consistent with the findings of Altınöz, Çöp, and Sığındı (2011), İnce (2018), and Çankaya and Çiftçi (2020). While the average value of cynicism is low, the value for Cognitive Cynicism is at a moderate level. The values for Affective and Behavioral Cynicism are low, with Affective Cynicism having the lowest value.

Correlation and Regression Analysis of Toxic Leadership Perception and Organizational Cynicism Variables

To test the hypotheses regarding the effect of Toxic Leadership Perception on Organizational Cynicism, it is necessary to first test the correlation between the variables and then conduct a regression analysis if there is a relationship between the variables. Pearson Correlation Analysis was used to test whether there is a significant relationship between participants' Perception of Toxic Leadership and its subdimensions and Organizational Cynicism and its subdimensions. The correlation coefficient ranges between "-1.00" and "+1.00." Based on the value of the correlation coefficient, the degree of relationship level is shown in Table 8. A p-value less than 0.05 indicates a significant relationship (Gürbüz & Şahin, 2018).

Table 8. Correlation Analysis		TLP	TLP-AA	TLA-NS	TLA-U	OC	OC-C	OC-A	OC-B
TLP	Pearson r	1							
TLP-AA	Pearson r	,893**	1						
TLA-NS	Pearson r	,942**	,722**	1					
TLA-U	Pearson r	,859**	,710**	,739**	1				
OC	Pearson r	,566**	,550**	,489**	,513**	1			
OC-C	Pearson r	,465**	,430**	,418**	,423**	,887**	1		
OC-A	Pearson r	,468**	,501**	,381**	,407**	,814**	,550**	1	
OC-B	Pearson r	,508**	,485**	,438**	,477**	,802**	,528**	,605**	1

**Correlation is significant at the p<0.01 level.
TLP: Toxic Leadership Perception
OC: Organizational Cynicism
TLP-AA: Abusive Supervision and Authoritarianism
OC-C: Cognitive scale
TLP-NS: Narcissism and Self-Promotion
OC-A: Affective scale
TLP-U: Unpredictability
OC-B: Behavioral scale

There is a moderate, positive (r=0.566) and significant (p<0.01) relationship between Toxic Leadership Perception and Organizational Cynicism. Additionally, there is a moderate, positive, and significant (p<0.01) relationship between the subdimensions of Toxic Leadership Perception and the subdimensions of Organizational Cynicism. Based on this relationship, Regression Analysis was conducted to test the Research Hypotheses (Table 9). In the study, Organizational Cynicism is the dependent variable, and Toxic Leadership Perception is the independent variable. Linear regression analysis was conducted to test the extent to which participants' Perception of Toxic Leadership explains Organizational Cynicism.

Table 9. Regression Analysis Results						
		Organizational Cynicism	Cognitive	Affective	Behavioral
Toxic Leadership Perception	R	,566[a]	,465[a]	,468[a]	,508[a]
	R Square	,320	,217	,219	,258
	p	,000[b]	,000[b]	,000[b]	,000[b]
Abusive Supervision and Authoritarianism	R	0,550[a]	0,430[a]	0,501[a]	0,485[a]
	R Square	0,302	0,185	0,251	0,235
	p	,000[b]	,000[b]	,000[b]	,000[b]
Narcissism and Self-Promotion	R	0,489[a]	0,418[a]	0,381[a]	0,438[a]
	R Square	0,240	0,175	0,145	0,192
	p	,000[b]	,000[b]	,000[b]	,000[b]
Unpredictability	R	0,513[a]	0,423[a]	0,407[a]	0,477[a]
	R Square	0,263	0,179	0,165	0,228
	p	,000[b]	,000[b]	,000[b]	,000[b]

According to the results of the linear regression analysis conducted to determine how Toxic Leadership Perception predicts Organizational Cynicism (R= 0.566, R^2= 0.320, p= 0.000), there is a significant positive relationship between Toxic Leadership Perception and Organizational Cynicism, and 32% of Organizational Cynicism is explained by Toxic Leadership Perception. The regression equation is formed as follows: Organizational Cynicism = 0.96 + 0.61 * (Toxic Leadership Perception). H1 is supported.

According to the results of the linear regression analysis conducted to determine how the dimensions of Toxic Leadership Perception—abusive supervision-authoritarianism, narcissism-self-promotion, and unpredictability—predict the cognitive, affective, and behavioral dimensions of Organizational Cynicism (Table 9):

- There is a significant positive relationship between the abusive supervision-authoritarianism dimension and the cognitive dimension of Organizational Cynicism (R= 0.430, R^2= 0.185, p= 0.000), and 18.5% of the cognitive dimension of Organizational Cynicism is explained by the abusive supervision-authoritarianism dimension of Toxic Leadership Perception. The regression equation is y = 1.29 + 0.67 * x. H1a is supported.
- There is a significant positive relationship between the abusive supervision-authoritarianism dimension and the affective dimension of Organizational Cyn-

icism (R= 0.501, R²= 0.251, p= 0.000), and 25.1% of the affective dimension of Organizational Cynicism is explained by the abusive supervision-authoritarianism dimension of Toxic Leadership Perception. The regression equation is y = 0.81 + 0.58 * x. H1b is supported.

- There is a significant positive relationship between the abusive supervision-authoritarianism dimension and the behavioral dimension of Organizational Cynicism (R= 0.485, R²= 0.235, p= 0.000), and 23.5% of the behavioral dimension of Organizational Cynicism is explained by the abusive supervision-authoritarianism dimension of Toxic Leadership Perception. The regression equation is y = 1.05 + 0.56 * x. H1c is supported.

- There is a significant positive relationship between narcissism-self-promotion and the cognitive dimension of Organizational Cynicism (R= 0.418, R²= 0.175, p= 0.000), and 17.5% of the cognitive dimension of Organizational Cynicism is explained by the narcissism-self-promotion dimension of Toxic Leadership Perception. The regression equation is y = 1.31 + 0.56 * x. H1d is supported.

- There is a significant positive relationship between narcissism-self-promotion and the affective dimension of Organizational Cynicism (R= 0.381, R²= 0.145, p= 0.000), and 14.5% of the affective dimension of Organizational Cynicism is explained by the narcissism-self-promotion dimension of Toxic Leadership Perception. The regression equation is y = 1.05 + 0.38 * x. H1e is supported.

- There is a significant positive relationship between narcissism-self-promotion and the behavioral dimension of Organizational Cynicism (R= 0.438, R²= 0.192, p= 0.000), and 19.2% of the behavioral dimension of Organizational Cynicism is explained by the narcissism-self-promotion dimension of Toxic Leadership Perception. The regression equation is y = 1.14 + 0.44 * x. H1f is supported.

- There is a significant positive relationship between unpredictability and the cognitive dimension of Organizational Cynicism (R= 0.423, R²= 0.179, p= 0.000), and 17.9% of the cognitive dimension of Organizational Cynicism is explained by the unpredictability dimension of Toxic Leadership Perception. The regression equation is y = 1.48 + 0.49 * x. H1g is supported.

- There is a significant positive relationship between unpredictability and the affective dimension of Organizational Cynicism (R= 0.407, R²= 0.165, p= 0.000), and 16.5% of the affective dimension of Organizational Cynicism is explained by the unpredictability dimension of Toxic Leadership Perception. The regression equation is y = 1.12 + 0.35 * x. H1h is supported.

- There is a significant positive relationship between unpredictability and the behavioral dimension of Organizational Cynicism (R= 0.477, R²= 0.228, p= 0.000), and 22.8% of the behavioral dimension of Organizational Cynicism is explained by the unpredictability dimension of Toxic Leadership Perception. The regression equation is y = 1.22 + 0.41 ⁎ x. H1i is supported.

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

This study aimed to examine the relationship between employees' perception of toxic leadership and organizational cynicism in organizations. After a literature review, the study was conducted with employees of an energy distribution company with branches in the city centers and several districts of Denizli, Manisa, and İzmir. In the literature, toxic leadership consists of the dimensions of abusive supervision, authoritarianism, narcissism, self-promotion, and unpredictability (Schmidt, 2008). However, based on factor analysis of the field study data, the items for abusive supervision and authoritarianism were combined into the first factor, while the items for narcissism and self-promotion were combined into the second factor. Unpredictability was shaped as the third dimension of the research. The merging of abusive supervision and authoritarianism corresponds to Likert's Exploitive Authoritarian Leadership (System 1) approach. Exploitive Authoritarian Leadership is characterized by distrust of subordinates, rarely consulting their opinions on work-related issues, and making them feel that they are not free to discuss work-related matters (Koçel, 2020). The combination of narcissism and self-promotion in one dimension can be explained by narcissistic individuals' tendency to attract attention, expect admiration, and exhibit their achievements in an exaggerated manner (Yıldırım, 2020), as well as their rudeness in showcasing their superiority and efforts to seize every opportunity for positive evaluations from others (Horvath & Morf, 2010).

According to the data obtained in the study, the average values of toxic leadership perception dimensions—abusive supervision and authoritarianism, narcissism and self-promotion, and unpredictability—were found to be low. In the literature, studies conducted by Çankaya and Çiftçi (2020) on hospital employees, by Elber Börü et al. (2020) on automobile industry employees, and by Bahadır (2020) and Küçük (2020) on teachers also observed that toxic leadership and its subdimensions were at a low level.

The participants' average value for organizational cynicism was also found to be low (Altınöz, Çöp & Sığındı, 2011; İnce, 2018; Çankaya & Çiftçi, 2020). The

cognitive dimension of organizational cynicism was found to be at a moderate level, while the average values of the affective and behavioral dimensions were low. This indicates that participants are moderately cynical (cognitive cynicism) due to the inconsistency between what their managers promised and delivered (Pfrombeck et al., 2020) or the belief that the organization will misuse positive emotions like justice, honesty, and sincerity for organizational interests. However, due to their cynical beliefs, participants exhibit low levels of emotional tension, anger, contempt, and behaviors involving criticism, pessimism, and humorous cynicism (Pfrombeck et al., 2020; Kalağan, 2009; Gündüz, 2023)—in other words, their levels of affective and behavioral cynicism are low. In a study by Yıldız, Akgün, and Yıldız (2013), teachers' perceptions of organizational cynicism, along with its cognitive, affective, and behavioral subdimensions, were found to be low. Unlike other existing studies, Balay, Kaya, and Cülha (2013) concluded that teachers had moderate perceptions of organizational cynicism in cognitive, affective, and behavioral dimensions. In the study conducted by Erdem and İpek (2021), teachers' perceptions of organizational cynicism were most evident in behavioral cynicism, followed by cognitive and affective cynicism.

The low levels of toxic leadership perception and organizational cynicism were questioned, and the company involved in the study was consulted. It was stated that the employees, working in small groups with a supervisor and being in continuous interaction with their managers, had higher levels of sincerity. The relatively low population density in these units also played a role, as employees often knew each other from outside of work. The manager's informal handling of employee matters further influenced the level of toxic leadership perception and organizational cynicism, resulting in low scores. This is thought to be related to the social impact theory, which states that changes in an individual's emotions, thoughts, and attitudes occur as a result of interactions with others (Uzun & Uluçay, 2017). When an individual is influenced by the thoughts or behaviors of others, they change their behavior either to conform or to comply (Sağlam, 2009). Therefore, the continuation of work interactions into social life reduces employees' perception of their supervisors as toxic leaders and decreases levels of organizational cynicism.

According to previous studies examining the relationship between toxic leadership and organizational cynicism, there is a significant positive relationship between the two (Demirel, 2015; İnce, 2018; Dobbs & Do, 2019; Küçük, 2020; Çankaya & Çiftçi, 2020; Eidipour et al., 2020; Erdem, 2021; Hamzah, 2023; Karagöz, Yalçın & Köroğlu, 2024). The findings of this study are consistent with

the literature: despite the low average values for toxic leadership perception and organizational cynicism, a moderate positive and significant relationship was found between toxic leadership perception and organizational cynicism. Toxic leadership perception was found to significantly and positively predict organizational cynicism, with 32% of organizational cynicism explained by toxic leadership perception. In the study conducted by Karagöz et al. (2024), a moderate significant positive relationship was found between toxic leadership and organizational cynicism, with toxic leadership explaining approximately 23% of organizational cynicism. İnce (2018) also found a moderate positive relationship between toxic leadership perception and organizational cynicism. Unlike this study, Demirel (2015) found a high significant relationship between teachers' perceptions of their school principals as toxic leaders and organizational cynicism, with teachers' toxic leadership perception predicting their organizational cynicism attitudes.

According to the research, there is a moderate, positive, and significant relationship between the abusive supervision-authoritarianism dimension of toxic leadership perception and the cognitive, affective, and behavioral dimensions of organizational cynicism. A moderate, positive, and significant relationship was also found between the narcissism-self-promotion dimension of toxic leadership perception and the cognitive, affective, and behavioral dimensions of organizational cynicism, as well as between the unpredictability dimension of toxic leadership perception and the cognitive, affective, and behavioral dimensions of organizational cynicism. The research findings are consistent with previous studies (Küçük, 2020; Demirel, 2015).

Based on the findings from the literature review and field study, the following recommendations are proposed for organizations and researchers interested in toxic leadership perception and organizational cynicism:

1. Given the harmful effects of toxic leadership on both employees and organizations, all managers should be monitored through internal and external audits without discrimination.
2. To prevent organizational cynicism, employees should feel valued by their managers and organizations. Their needs and desires should be accurately identified, and their participation in decision-making processes should be supported.
3. To prevent organizational cynicism, employees' individual development should be supported, and in-house and external training programs should be organized. These training programs will help employees perform their jobs

more consciously and may encourage them to challenge and force changes in their supervisor's toxic behaviors.

4. In the literature, the relationship between toxic leadership perception and organizational cynicism has mostly been studied using teacher samples in the public sector. Research on this topic in the private sector is limited. Examining the relationship between toxic leadership perception and organizational cynicism among employees in different industries within the private sector and comparing the results of different sectors or different occupations within the same sector would contribute to the literature.

5. It is possible to conduct a comparative study of the perceptions of toxic leadership and organizational cynicism among white-collar and blue-collar employees.

6. Given the current discourse on artificial intelligence replacing the workforce, it is essential to analyze the relationship between toxic leadership perception and organizational cynicism in the context of job insecurity. This analysis will pave the way for studies and research linking both dimensions to new perspectives and different viewpoints in the literature.

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Chapter 6

UNDERSTANDING WORK INTEGRATION SOCIAL ENTERPRISES THROUGH SOCIAL ENTREPRENEURSHIP AND SOCIAL ECONOMY PERSPECTIVES

Burcu KÜMBÜL GÜLER[1]

INTRODUCTION

In recent years, the promotion of Work Integration Social Enterprises (WISEs) has become a key strategy for enhancing societal well-being. These organizations focus on addressing long-term unemployment by offering meaningful opportunities, such as education, training, and internships, thereby contributing to the broader social economy. WISEs not only facilitate the integration of marginalized groups into the workforce but also support the development of socially productive community projects, which play a vital role in enhancing the quality of working life and promoting inclusive economic growth.

At the core of WISEs lies their unique approach to labor market behavior and employment integration. Unlike traditional enterprises, WISEs prioritize human resource practices, encompassing recruitment, training, motivation, working conditions, and compensation. This focus reflects a holistic model aimed at overcoming employment challenges and fostering the empowerment of disadvantaged individuals, thereby contributing to the broader social economy through innovative employment practices.

This chapter examines the role of WISEs in creating employment opportunities as an essential component of social policy. By exploring their contributions, we draw on Karl Polanyi's influential work, *The Great Transformation*, which provides a conceptual framework for understanding the socio-economic dynamics that shape such initiatives. Social entrepreneurship, in line with Polanyi's concept of the "Double Movement" emerges as a response to the limitations of the prevailing market economy, offering a collective, community-driven approach to addressing

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socio-economic challenges. Social enterprises, as key actors within the social economy, reflect the shift toward grassroots initiatives that prioritize social protection and inclusive growth in a rapidly changing global landscape.

I. CONCEPTUAL FRAMEWORK

The concept of social entrepreneurship, which finds meaning through nonprofit organizations operating within the scope of the social economy, has become an increasingly important and widespread phenomenon not only in the United States and Europe but also in many countries and regions worldwide, such as India, Bangladesh, Mexico, and Australia. This development in practice has positively influenced academic literature, and since the 1990s, topics such as social entrepreneurship, social enterprises, and the social economy as the sector they belong to have found a place in academic platforms. Generally, the process of social entrepreneurship, which encompasses civil initiatives to solve societal problems, has also managed to produce solutions for significant social issues like unemployment, as this article will examine. Before delving into efforts to combat unemployment and create employment, it is necessary to explain these concepts in detail.

A. Social Entrepreneurship

Social entrepreneurship, a popular concept today, emerges from within society as an action aimed at addressing societal needs. Although the literature on social entrepreneurship has significantly developed in recent years, there is still considerable debate surrounding its conceptualization. Therefore, social entrepreneurship is a developing concept that has not yet reached a full consensus (Weerawardena & Mort, 2006). Despite differences, certain common points exist in the definitions provided. Nearly all researchers agree on the following:

- "Social entrepreneurship addresses social problems or needs that cannot be resolved by the public or private sectors,"
- "It generates innovative ideas for pressing social problems and mobilizes the thoughts, resources, capacity, and social arrangements necessary for sustainable social change,"
- "Social enterprises are private organizations dedicated to solving social problems, serving disadvantaged groups, and meeting social needs inadequately addressed by public institutions or the private sector."

The increasing interest in social entrepreneurship stems from the rise in social unrest due to income inequality and opportunity disparity (Hoogendoorn

& Hartog, 2011). In summary, social entrepreneurship primarily operates with the goal of creating social benefit (Brooks, 2009). Engaging in entrepreneurial activities aimed at social goals, it seeks to provide solutions to complex and persistent global social issues.

As a process, social entrepreneurship aims to address fundamental local-scale social problems that cannot be reached through traditional organizational structures. It includes taking precautions to prevent the recurrence of societal issues and fundamentally transforming the systems that cause these problems (Mair, 2010). From this perspective, social entrepreneurship differs from other solutions by requiring innovation. It seeks to create social transformation by entering the market-based model application process. One of the first authors to define the concept, Leadbeater (1997), described social entrepreneurship as "identifying underutilized resources to address unmet social needs" emphasizing its innovative aspect.

While discussing the relationship with unemployment, Martin and Osberg's (2007) definition of social entrepreneurship, which emphasizes social exclusion, is essential for understanding the concept. They define social entrepreneurship as i) identifying the persistent, characteristic imbalances that cause exclusion, marginalization, and suffering for parts of humanity that lack financial and political power to transform their situation, ii) Seeing an opportunity within this imbalance to create social value, inspire creativity, take direct action, and challenge the status quo with courage and perseverance, iii) Creating a new, lasting balance by unlocking the potential of the target group to alleviate their struggles, forming a sustainable ecosystem that guarantees a better future for the group and society as a whole.

Cook et al. (2002) view social entrepreneurship as a serious threat to the initiatives of the welfare state. They focus on the "organizational" dimension, social enterprises, and define social entrepreneurship as "a system that involves forming social partnerships between the public, social, and market sectors and utilizing market dynamism with public interest in mind" (Cook et al., 2003).

In essence, in social entrepreneurship, where creating social value is the primary motivation, solving societal problems precedes utilizing market opportunities (OECD, 2010). In this sense, social entrepreneurship differs from traditional commercial entrepreneurship in meaning, form, and application (Lawrence, Phillips, Tracey, 2012). While commercial entrepreneurship tends to decline as national income rises, social entrepreneurship increases with national income

growth (Hoogendoorn & Hartog, 2011). This distinction highlights the differing developmental dynamics of social entrepreneurship compared to commercial entrepreneurship.

An ongoing debate surrounds the sector to which social entrepreneurship belongs. Some argue it should be evaluated from a nonprofit perspective, emphasizing the integration of business expertise and market-based skills into the nonprofit sector. This approach involves generating income independent of public assistance and grants and, in some cases, obtaining support to cover operational costs. Additionally, nonprofit organizations adopt private sector management techniques to enhance efficiency in delivering social services (Hoogendoorn, Pennings & Thurik, 2010). Much of the literature on social entrepreneurship has evolved around nonprofit organizations outside the public sector (Weerawardena & Mort, 2006).

However, not all for-profit enterprises can be considered entrepreneurial, and not all nonprofit organizations are social enterprises. Based on Cook et al.'s (2003) definition, it can be argued that social entrepreneurship lies at the intersection of sectors. It represents the overlapping region of the "formal and informal" the "public and private" and the "for-profit and nonprofit". From this perspective, social entrepreneurship can be described as a process within the social economy where the primary goal is to create social impact rather than prioritizing commercial profit to be distributed among the owners or stakeholders of the enterprise. It involves creating ventures that generate profit to sustain their operations and financial viability (EC, 2011).

Social entrepreneurship is represented by different models around the world. It can emerge from different origin points of the state, market, and civil society, within a chain of institutions, rules, and logic. In the U.S., it arises from the collision of the market and civil society, in the context of a strong but reluctant government. On the other hand, in Latin America, social entrepreneurship and cooperative social enterprise models emerged at the same time as in the U.S., but for different reasons. In South America, social entrepreneurship is closely linked with civil society. This is due to the public and private sectors not adequately addressing issues like poverty and the inadequacies of production conditions. In the EU, on the contrary, social entrepreneurship is supported by local governments and EU policies (Hoogendoorn & Hartog, 2011).

The field of social entrepreneurship is built on four fundamental pillars. The first is that it encompasses activities initiated and sustained by individuals, making

it a domain that focuses on entrepreneurs and the psychology of entrepreneurship. Therefore, individual social entrepreneurs, their motivation, leadership skills, and other personality traits form a significant area of study. Secondly, the concept includes organizations due to the structured nature of the activities. In this regard, social enterprises play a key role. The social benefits and employment opportunities created by these organizations represent a substantial academic field of study. The third feature pertains to the entrepreneurial activities that constitute a process involving the discovery, evaluation, and pursuit of opportunities. This includes examining how processes like innovation, opportunity identification, and creativity emerge within the context of social entrepreneurship. The final pillar is the social goal, which involves improving social welfare and providing benefits to society. This area of study focuses on measuring the social impact created by social enterprises and conducting social benefit analyses (Hoogendoorn and Hartog, 2011).

In this article, the focus is on the interaction between social enterprises, as a field of social entrepreneurship, and employment. However, before discussing social enterprises, it is necessary to introduce "social economy" as a sector.

B. Social Economy

The concept of social economy encompasses cooperatives, mutual aid associations, and increasingly, foundations. Organizations within the social economy primarily prioritize their mission, placing greater importance on the benefits they provide to their members and the wider community than on profits earned by investors. While the concept involves elements of being non-profit, it emphasizes democratic decision-making processes within the organization, the precedence of people and labor over capital in governance, and limited profit distribution rather than strictly prohibiting profit distribution altogether (Borzaga et al., 2008).

Therefore, it is argued that the social economy differs from the non-profit sector. Specifically, it is suggested that the "non-profit sector" as conceptualized in the United States does not fully align with the social economy framework in Europe. The limitation of the U.S. definition to "non-profit voluntary organizations" is considered overly narrow, especially from the perspective of European history. For example, under the U.S. perspective, cooperatives, which are integral to the social economy in Europe, would not be included (Noya and Clarence, 2007). In fact, the social economy in Europe allows for the limited allocation of profits to stakeholders, encompassing cooperatives and charitable associations. In contrast,

the non-profit sector adheres to the principle of not distributing profits among members, excluding cooperatives and charitable associations.

In the European model of the social economy, there is less emphasis on the absence of profit-sharing, philanthropy, and volunteerism, and greater focus on mutual aid and collective action driven by socially conscious citizens addressing societal issues (Laville, 2011). Another distinction is that in the U.S., social entrepreneurship has developed a distinct identity, with a strong emphasis on large private foundations. In the UK, the state plays a prominent role, supporting social enterprises in developing their identity. In Europe, as previously mentioned, the concept of the social economy prevails, with cooperatives playing a significant role in driving social entrepreneurship (Brouard and Larivet, 2010).

C. Relationship Between Social Economy, Social Entrepreneurship, and Social Policy

The concept of social economy, or social economics, is a term used in Turkey to describe social policy, which was popularized by Cahit Talas, one of the pioneers of social policy in Turkey. As Talas and other social policy scholars emphasized, the field of social policy encompasses areas such as social security, industrial relations and trade unionism, labor law aimed at protecting and empowering workers, social assistance, wages and minimum wage, health, education, housing, and transportation services—key components of the welfare state. At the core of all these areas lies wage-based employment (Özuğurlu, 2011).

However, in the modern usage of social economy, particularly in Europe, the term differs from Talas's interpretation. It includes the third sector or civil society and its elements. Essentially, the social economy comprises a layer of social enterprises, within which non-profit organizations hold a significant position (Brouard and Larivet, 2010). Nonetheless, using the third sector as synonymous with the social economy is considered debatable (Adam, 2009).

Interestingly, although "social economy" and "social policy" were once used interchangeably, they now refer to different concepts, albeit with some overlapping areas. To better analyze these distinctions, it is useful to turn to Karl Polanyi, author of *The Great Transformation* and one of the leading economists of the 20th century. Polanyi begins his work with the assertion, "The civilization of the 19th century has collapsed" arguing that the market system, functioning according to its own rules, failed because it was contrary to human nature.

Polanyi's general theory about the place of the economy in society revolves around two key ideas. The first states that "none of the basic human impulses are

economic". The second emphasizes that "throughout history, in all societies, the economy has been embedded in social relations and cannot be separated from them" (Buğra, 2000: 18). Polanyi uses the term *embeddedness* to explain that the economic system is merely a function of the social system and is deeply embedded within it (Dumludağ, 2004).

To understand the historical dynamics of the 19th century, Polanyi introduces the concept of the "double movement" which is particularly relevant for understanding social entrepreneurship. The double movement encompasses, on the one hand, efforts to remove obstacles to the functioning of the market economy, and on the other, resistance against the consequences of the market economy on people, nature, and industrial activity (Buğra, 2009). According to Polanyi, the dynamic of modern society throughout the 19th century was governed by this double movement: while the market continually expanded, this expansion was simultaneously met with an opposing movement that imposed certain limitations on it.

Polanyi identifies two regulatory principles in the double movement. The first is the principle of economic liberalism, aimed at establishing a market economy that operates according to its own rules. The second is the principle of social protection, which seeks to safeguard humans, nature, and the productive system while protecting various groups, such as workers and landowners, from the destructive effects of the market. This principle employs protective legislation, restrictive organizations, and other intervention mechanisms (Polanyi, 2000).

From a contemporary perspective, it is not unreasonable to view the development of neoliberal policies and social entrepreneurship as a double movement in modern society influenced by globalization, as Polanyi suggested (Tsai and Kao, 2008). In other words, the rise of neoliberalism and, as a counter-response to the market order, the emergence of social entrepreneurship aiming for social protection can be understood as manifestations of this double movement.

In this context, the economic significance of social enterprises becomes clearer. These initiatives focus on creating and preserving employment, equipping the unemployed with vocational skills, combating poverty and discrimination, and operating ethically without exploiting labor.

Interestingly, although Polanyi did not encounter the concept of social entrepreneurship in his lifetime, he showed a special interest in Robert Owen and Owenism, who are considered among history's significant social entrepreneurs. Polanyi was deeply influenced by Owen's socialist movement, initiated through

his philanthropic endeavors at the globally renowned enterprise in New Lanark. Polanyi describes Owenism as an "industrial religion" carried by the working class, characterized by its unique forms and initiatives. For him, it could be considered the precursor to the modern trade union movement. Owenism established cooperative retail stores specifically for its members, which were not typical consumer cooperatives but shops where passionate supporters directed profits toward realizing Owenite plans, particularly the establishment of "Villages of Cooperation". These activities combined commerce with education and propaganda, aiming to build a new society through collective effort.

Polanyi (2009) mentions about Owenism for its emphasis on a social approach, its efforts to curb market forces while caring for human well-being, and its ambition to transcend the harsh necessities of capitalism. He also recognized Owen as a significant figure in the history of social entrepreneurship, with Owenism bearing notable similarities to modern social enterprise. As the lengthy quotation from Polanyi illustrates, while the nature of the Owenite movement aligns with social entrepreneurship, its practices can be perceived as a form of social enterprise in the modern sense. How Polanyi might evaluate social entrepreneurs today—engaged in ventures aimed at creating social value to counter the negative effects of the prevailing economic order—remains a compelling question.

It is important to note that Buğra (2009) raises significant concerns about modern developments like good governance for economic development, philanthropy emphasized by liberal regimes, and organized welfare mixes for achieving social welfare. The issue revolves around whether it is appropriate to leave services traditionally under the responsibility of the state to civil society initiatives or to allow civil society to become commercialized. Furthermore, Polanyi's focus on the principles of redistribution and exchange, while giving less attention to reciprocity (Buğra, 2009), raises challenges in interpreting social entrepreneurship and the social economy from Polanyi's perspective.

According to Polanyi, three fundamental behavioral principles govern the economy: exchange, redistribution, and reciprocity. Briefly:

1. Exchange refers to transient relationships where individuals seek to maximize their self-interest, a principle that only influences the economy through the existence of markets.
2. Redistribution describes situations where goods and services are centralized and then distributed across a community, characterizing non-market economies and symbolizing welfare states. This principle relies on the presence of state-like structures, as defined by centralization (Buğra, 2009).

3. Reciprocity is the core principle of non-material economies and operates through mutual exchanges among symmetrically organized participants within symbolic networks, such as families. Outside of familial relationships, examples include in-kind contributions to self-help groups or volunteer work in community care services (Adam, 2009).

Where do social enterprises and the social economy stand within this tripartite institutional framework, and which principles govern their operations? Social enterprises and the third sector or social economy, as their dominant domain, are positioned at the intersection of markets, families, and the state (Adam, 2009). As such, they draw on all three principles. Some authors even argue that social enterprises, as hybrid organizations, integrate the principles of exchange, redistribution, and reciprocity to combine market practices with social aims (Defourny & Nyssens, 2006).

In Polanyi's terms, social entrepreneurship is situated at the intersection of exchange (markets), redistribution (state), and reciprocity (community). This corresponds to the literature's description of social entrepreneurship as occurring where traditional sectoral boundaries blur (Peredo & McLean, 2006). Consequently, it is difficult to assign social enterprises to a single principle. While their activities are primarily based on reciprocity, they also operate under redistribution by utilizing grants and under exchange by generating market income. This pluralistic nature emphasizes the multifaceted role of social enterprises (Gardin, 2006).

D. Social Enterprise

Social enterprise is a concept closely related to social entrepreneurship. In its simplest form, a social enterprise can be viewed as the organization itself, while social entrepreneurship is seen as the work that is done. However, for those examining the issue in more detail, social entrepreneurship is considered a subset of social enterprise. According to this explanation, not every social enterprise is expected to have entrepreneurial characteristics. In social enterprise, the focus is more on creating social value and serving the common good of society, rather than elements such as innovation, risk-taking, and profit-making, which are central to traditional entrepreneurship (Brouard & Larivet, 2010).

Different countries have varying practices and approaches toward social enterprise. For example, Kerlin (2006), in a study comparing social enterprises in Europe and the U.S., points out that the emphasis on social enterprise in the U.S. is on "profit-making" while in Europe, it focuses on "social benefits". She also notes that the relationship between beneficiaries and organizations in the U.S. is

"limited" while in Europe, it is much more "widespread". Strategic development in the U.S. is facilitated through "foundations" while in Europe, it is driven by "governments and the EU" Additionally, the environmental context in the U.S. is based on a "market economy" while in Europe, it revolves around a "social economy". The organizational types in the U.S. are typically "501(c)(3) nonprofit organizations" while in Europe, they are often "associations/cooperatives" (Kerlin, 2006).

In their article, which aims to clarify the confusion around concepts, Brouard and Larivet (2010) define social enterprise as: "organizations with a social mission and purpose, operating for the benefit of society, independent of ownership and legal status, that can achieve a certain degree of self-sufficiency, innovation, and social transformation". In their study, which compiles various definitions from the literature, the authors list the primary characteristics most commonly attributed to social enterprises as follows:

- Social enterprises are initiatives, organizations, or projects.
- Social enterprises have a social mission specific to a social need/problem.
- The assets and wealth of social enterprises are used to create social benefits.
- Social enterprises vary in the degree of positive social transformation they create.
- Social enterprises are innovative at different levels.
- Social enterprises exhibit varying levels of financial self-sufficiency.
- Social enterprises may have different legal statuses.

Social enterprises mobilize various sources, both market-based and non-market-based, to achieve their goals. They sell their products and services in the market. Their public-benefit missions are supported by public financing. Social enterprises also rely on volunteers. Therefore, they operate at the intersection of the market, government, and civil society in terms of resource utilization, much as they do in terms of sectoral overlaps (Gardin, 2006).

The 2003 GEM report on social enterprise mentions that social entrepreneurs are disproportionately effective at creating jobs. Regardless of their organizational form, all socially-oriented organizations create more jobs compared to profit-driven enterprises. However, it was found that social enterprises with mixed profit models create five times as many jobs as entrepreneurial organizations, yet they also experience six times more labor turnover. This was most noticeable in the group where the highest proportion of women were employed (Harding, 2004).

II. WORK INTEGRATION SOCIAL ENTERPRISE (WISE)

A. Definition

Work integration social enterprises (WISEs) are market-based organizations that provide employment and training opportunities to disadvantaged and marginalized groups to facilitate their integration into the mainstream labor market. These organizations also provide oppportunities for improving individuals' lives through supported employment programs, enhancing their self-esteem, sense of purpose, and social skills, while also boosting their overall capabilities. (Cooney, 2016; McKinnon et al., 2020). In addition, they have the potential to serve as a mechanism of social and economic opportunity for persons experiencing homelessness in several areas of community connection, employment skill development, mental health, personal agency and empowerment, relationship-building, structure and time management (Barton et al., 2021). WISEs provide pathways to employment, as noted by Ferguson and Islam (2008), who assert that participants not only acquire skills through their involvement but also gain access to networks and connections within mainstream labor markets that were previously inaccessible. Taken together, WISEs create employment by providing job training, supported work environments, and pathways to mainstream labor markets for disadvantaged groups.

WISEs serve as an important tool for implementing active labor market policies. They contribute to increasing national income, growth, and thus employment creation in ways. Generally, social enterprises have high employment potential in community-focused care sectors due to their labor-intensive nature. Additionally, social enterprises create job opportunities for unemployed individuals, such as women with children and those seeking part-time jobs with flexible hours. Some social enterprises specifically aim to integrate disadvantaged workers into employment. This is the goal of WISEs, designed to employ workers who have very little chance of finding jobs in traditional businesses. These organizations are autonomous economic entities whose primary purpose is to integrate individuals who face significant challenges in finding employment into jobs, either within their structure or in other businesses. This integration is achieved through productive activities, personalized support, and vocational training to enhance the skills of the employees (Borzaga et al., 2008).

From a contrasting perspective, Cook and others (2002) argue that the social entrepreneurship movement has misguided predictions regarding job creation. In their article, the authors emphasize that social entrepreneurship, which cannot be considered independent of neoliberal policies, is unlikely to provide a valid

solution to unemployment and its associated welfare issues. They explain this claim as follows: First, they assert that social entrepreneurship cannot fully comprehend the issue of mass unemployment. Additionally, while social entrepreneurship argues that the government's financial constraints hinder solutions to welfare issues, the authors contend that this argument is not valid. Finally, the authors suggest that the proposals of social entrepreneurship regarding the importance of entrepreneurship in resource development for societal progress and welfare provision will, in the long run, threaten universal social rights (Cook et al., 2002).

WISEs are shaped by the trajectory of the welfare state, while simultaneously shaping this trajectory. Beyond the formal representation of the social economy (such as different legal forms for different units, tax advantages, contracts, grants, in-kind contributions, etc.), it is known that social economy organizations and state institutions are interdependent, either individually or through collective channels such as platforms and committees. Following such relationships, they shape policies, facilitate the circulation of financial gains in small or large amounts, create prestige, are showcased through media, and ultimately create concepts and beliefs.

B. Development of WISEs and Their Structure

In general, the development trend and rationale of social enterprises explain why WISEs (Work Integration Social Enterprises) exist and develop specifically. Therefore, it is important to first address why social entrepreneurship is needed. This will help better understand the reasons behind the development of WISEs.

Since the development of social entrepreneurship historically parallels the progress of social policy, it will be useful to take a brief look at the history of social policy. Prior to industrialization, voluntary organizations led by clergy played a significant role in meeting the needs of the poor living in urban areas. With the emergence of unfavorable conditions after industrialization, public sector efforts became essential, leading to state-centered measures. After the state implemented its initial social policy measures, philanthropic social reform movements began to appear, particularly in England and Canada after 1880. A characteristic of social policy during this period was the emphasis on strengthening the working class through education, income support, and social assistance. During the Keynesian period between 1945 and 1975, the concept of the welfare state prevailed. Influenced by the global economic depression and World War II, the belief that the resolution of social problems should be undertaken by the state gained strength. Consequently, the 30-year period between 1940 and 1970 came to be known as

the 'welfare years' during which the state became the primary actor in providing social policy.

When examining the development trends of WISEs, we see that the pioneering WISES in the European Union emerged in the late 1970s and early 1980s. At the initial stage, these organizations did not have any specific public programs to support their objectives. They emerged as a reaction to the lack of a public policy program capable of addressing the problems of rising unemployment and increasing social exclusion. These organizations pointed out the limitations of preventive institutional public interventions for individuals excluded from the labor market, such as the long-term unemployed, low-skilled individuals, and those with social problems. It is generally stated that the pioneering WISEs were established by civil society actors, such as social service professionals, traditional third sector representatives, and sometimes workers who were themselves in a marginalized position (Laville et al., 2006).

In Italy, a legal structure was established under the name "social cooperatives" in 1991 to contribute to the provision of social services and create employment opportunities for disadvantaged individuals. In Italy, where social enterprises developed as social cooperatives in legal status, 1% of total employment in 2003 was provided by such organizations (Borzaga et al., 2008).

Gardin (2006) attempted to explore how the economy of WISE organizations aligns with Polanyi's three principles, classifying resources based on who provides them, their purpose, and their form. As mentioned, the majority of such organizations in Europe adopt a structure based on a mix of reciprocity principles and market funding (35%), while a very small proportion adopt the principle of redistribution (7%). When the resources of WISEs (Work Integration Social Enterprises) were examined, it was found that their material resources, consisting of sales, government aid, and donations, made up 88% of total resources, while their immaterial resources, consisting of indirect government aid and voluntary work, accounted for 12%. The main resource provider for WISEs, which exhibit different characteristics depending on the country, is the public sector, through direct or indirect government assistance. This redistribution, manifested as public support, covers the productivity gap of employees integrated into work, provides social support and job-related training, and meets the costs of the intensive supervision required. An important feature of Gardin's study, which analyzed WISEs in line with Polanyi's principles, is that it demonstrates how the often-neglected principle of reciprocity functions in these organizations (Gardin, 2006).

While research has shown that WISEs offer a promising solution to integrating disadvantaged populations into the labor market, they might face several significant challenges that often jeopardize their long-term viability (Doherty et al., 2014; Smith et al., 2013). A key issue is that many WISEs struggle to achieve financial sustainability and can remain heavily reliant on external funding, particularly from public sources. This dependency on government support might be precarious, especially in times of economic downturns or when political priorities shift. Furthermore, WISEs often face challenges related to balancing their social missions with the need to generate sufficient revenue, which can lead to tensions between maintaining financial stability and fulfilling their social objectives. Additionally, there may be difficulties in scaling their operations while preserving the quality of the social impact they seek to achieve.

CONCLUSION

Since the 1980s, social enterprises have emerged as grassroots initiatives addressing the critical challenge of integrating disadvantaged workers into the labor market. These organizations have proven effective by filling institutional gaps left by conventional labor markets, which often fail to allocate the workforce equitably. Work Integration Social Enterprises (WISEs) are particularly noteworthy as they act as structured mechanisms of supported employment, combating workplace discrimination and equipping marginalized groups with tailored, on-the-job training to overcome barriers to employment. In essence, WISEs are economically sustainable organizations dedicated to creating employment opportunities for individuals facing significant barriers to entering the workforce. Research has demonstrated that WISEs contribute to a variety of positive social and psychological outcomes for disadvantaged individuals involved in their operations. While the positive impacts of these organizations are notable, the available evidence remains limited, highlighting the need for further investigation.

Drawing on Polanyi's principles of economic integration—market exchange, reciprocity, and redistribution—WISEs exemplify how diverse economic practices can coexist to create more inclusive labor systems. They blend market-based funding with reciprocal community support and public-sector redistribution, enabling them to address both individual and systemic disadvantages. By fostering collaboration among stakeholders and balancing economic goals with social imperatives, WISEs reflect Polanyi's vision of embedding economic activities within broader social frameworks. In doing so, they not only provide immediate job opportunities but also promote equity, empowerment, and sustainable

integration for workers excluded by traditional enterprises. However, despite their promise in tackling social and employment inequalities, the long-term sustainability and effectiveness of WISEs remain contingent upon their ability to overcome significant structural and financial challenges.

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Chapter 7

PERFORMANCE COMPARISON OF REGULARIZED REGRESSION METHODS ON THE MODELLING AND FORECASTING OF BITCOIN AND ETHEREUM PRICES

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1. INTRODUCTION

Cryptocurrencies have been developing drastically over the previous decades. Their growth can be attributed to their providing the utility of allowing individuals with the ability of easily sending e-payments to others without obliging them to utilize a (trusted) third party as an intermediary. Bitcoin was professed by Nakamoto (2008) as being the most popular and powerful blockchain-based decentralized digital cryptocurrency. At the moment, compared to other cryptocurrencies, Bitcoin attests the largest market capitalization. Furthermore, it has been used expansively as a way by which to pay for things electronically, primarily due to its low transaction costs and anonymity (Yermack, 2013; Kim, 2017). Nevertheless, other digital cryptocurrencies have been developed as well, such as Ethereum, which has also become very popular amongst cryptocurrency users.

It has, therefore, become vital for investors, economists, and finance analysts to predict the worth of investing in such cryptocurrencies. A number of studies have thus been made of late for the purpose of analyzing how the basic and speculative value of cryptocurrencies (viz. Bitcoin and Ethereum) is affected by a number

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of economic factors, such as the price of gold, oil, and the stock market, as well as currency exchange rates – specifically with relation to their volatility, and in terms of the bubbles which may be created in univariate and multivariate cases (e.g. Ogutu et al., 2012; Garcia et al., 2014; Polasik et al., 2015; Bouoiyour & Selmi, 2015; Ciaian et al., 2016; Zhu et al., 2017; Guo et al., 2018; Hotz-Behofsits et al., 2018; Ardia et al., 2019; S Kumar, 2019; Dennery, 2020; Hakim das Neves, 2020).

Moreover, given the rising popularity of cryptocurrencies in digital platforms, it is interesting to note that recent studies have focused on their attractiveness factor, including a variable number of searches for terms such as "digital cryptocurrencies" on digital platforms, such as Google and Wikipedia. For example, Kristoufek (2013 and 2015) investigated the movement between the daily Bitcoin price and the relative number of hits that the term "Bitcoin" generated in Google trends, as well as how many views are tabulated for the English Wikipedia page for Bitcoin. Additionally, Panagiotidis et al. (2018) examined the significance of 21 variables on the daily Bitcoin price, including stock market indices, gold returns, oil returns, central bank interest rates, policy uncertainty, and exchange rates by employing the Least absolute shrinkage and selection operator (Lasso) framework proposed by Tibshirani (1996). Nevertheless, it must be noted that these two operators are not robust enough to effectively calculate the high correlation between explanatory variables being possibly observed in that data (e.g., Zou & Hastie, 2005; Zeny, 2010; Zhou, 2013). Most of these analyses mainly focus on a limited number of regularized regression methods in relation to the Bitcoin price. None of them have yet provided benchmark comparisons of different regularized regression methods (including the Ridge, Lasso and Elastic net) in terms of the price of significant cryptocurrencies.

The multiple linear regression model using the Ordinary Least Squares (OLS) method is commonly defined as being the most accurate way of attaining the correct value of such cryptocurrencies. Multicollinearity problems, however, are commonly observed because of that method's being highly correlated with its explanatory variables while also dealing with the modelling price of cryptocurrencies. This situation leads to large variance-covariance values for the estimates of the regression coefficients, which results in the regression coefficients' estimations being found to be insignificant. Moreover, the estimated regression coefficients may also differ from their real values in terms of signs and values, meaning that the value of R^2 is usually calculated to be larger than its actual value (Mullet 1976). As a result, the predictions obtained by the OLS regression model lead to errors (Montgomery 2013). In order to deal with this problem, researchers

usually choose to remove one or more of the highly correlated explanatory variables from the regression model. This, though, may also lead to wrong empirical results in the variable selection procedure due to its multicollinearity. A better solution is to use penalized regression methods which allow linear regression models to be penalized by adding a constraint to the equation (Gareth et al., 2014; Bruce & Bruce, 2017). In the last decade, the higher prediction accuracy and computational efficiency of the penalized regression methods have made them an attractive alternative to other selection methods. Smeekes & Wijler (2018) also demonstrated that the penalized regression methods are more robust for the purpose of dealing with mis-specified modelling and the forecasting of non-stationary data.

The Ridge, Lasso, and Elastic net penalized model selection methods were chosen in order to deal with the aforementioned problem while modelling and forecasting the price of cryptocurrencies. Firstly, the Ridge regression, which was proposed by Hoerl & Kennard (1970), is one of the biased regression methods used when a multicollinearity problem is encountered. The Ridge regression tries to minimize variance by compromising the unbiased properties of OLS estimators. The shrinkage of the coefficients is achieved by restricting the regression model with the ℓ_2-*norm* penalty. Thus, Ridge regression shrinks the coefficients and tries to reduce the effects of multicollinearity and model complexity. Nonetheless, it does not reduce the number of variables; rather, it only shrinks its effects. Secondly, the Lasso regression is based on the minimization of residual squares under the constraint that the sum of the absolute value of the coefficients is less than a certain constant, viz. a penalty term called ℓ_1-*norm*. Thus, it shrinks some regression coefficients toward zero (Hastie et al. 2015). Finally, Elastic net, which was proposed by Zou & Hastie (2005), is based on a combined structure of the Ridge (with an ℓ_2-*norm* penalty) and Lasso regressions (with an ℓ_1-*norm* penalty). As a result, it is effectively shrinking the coefficients – as in the Ridge regression – and setting some coefficients toward zero – as in the Lasso regression. To sum up, the aforementioned regularization techniques attempt to decrease the number of covariates in the multiple linear regression model whilst also dealing with multicollinearity.

This research focuses on closing the aforementioned gaps by conducting a comparative analysis. This analysis demonstrates the need for the multiple linear, Ridge, Lasso, and Elastic net regression models for the purpose of modelling and forecasting for the price of Bitcoin and Ethereum – something which has yet to have been undertaken in the literature. The weekly Bitcoin and Ethereum prices,

based on a continuous listing from 12 August 2015 to 9 January 2019, alongside the 2 internet trends (Google and Wikipedia) and 17 common factor variables mentioned above (based on a combination of the factor variables implemented by Kristoufek (2013) and Panagiotidis et al. (2018)), are utilized when running the four regression models previously outlined. Here, the choice of utilizing a specific set of weekly data represents a compromise between daily data, which tends to be too noisy, and monthly data, which tends to be too sluggish (Mergner 2009). Forecasts are made 1 year forward by using a one-week ahead prediction. The aforementioned models' performance is compared using Mean Square Error (MSE) and Mean Absolute Error (MAE).

The remainder of this research is laid out in the following way. Section 2 describes the research data. Section 3 details the compared four models and the empirical outcomes of their comparisons with displaying the further results of the best modelling and forecasting in Section 4. Section 5 summarizes the conclusions of this research.

2. METHODOLOGY

This section defines the statistical methodology this research has adopted. It focuses on four regression models. This section is primarily based upon Friedman et al. (2010) and Ogutu et al. (2012). The linear regression model is given as follows.

$$y_t = x_t'\beta + \varepsilon_t \quad t=1,\ldots,n \tag{1}$$

where y_t represents a response variable which, in turn, is dependent upon covariates $x_t' = (1, x_{t2}, \ldots, x_{tp})$. Here, $\beta = (\beta_1, \beta_2, \ldots, \beta_p)'$ are unknown coefficients, and $\{\varepsilon_t\}$ are independent and identically distributed random errors satisfying $E(\varepsilon_t) = 0$ and $Var(\varepsilon_t) = \sigma^2$ for $t=1,\ldots,n$. The matrix form of Eq. (1) is rewritten as follows.

$$Y = X\beta + \varepsilon \tag{2}$$

where $Y = (y_1, y_2, \ldots, y_n)$ is an $n \times 1$ random responses vector; $X = (x_{tk})$ is an $n \times p$ design matrix with covariates; β is a $p \times 1$ unknown coefficients vector; and $\varepsilon = (\varepsilon_1, \varepsilon_2, \ldots, \varepsilon_n)$ is an $n \times 1$ random errors vector with $E(\varepsilon) = 0$ and $Var(\varepsilon) = \sigma^2 I$. Hence, $E(Y) = X\beta$ and $Var(Y) = \sigma^2 I$.

Multiple linear regression

To estimate the vector of unknown coefficients, β, in Eq. 1 with the multiple linear regression model, $\hat{\beta}(multiple)$ is written as follows.

$$\hat{\beta}(multiple) = \underset{\beta}{argmin}\|Y - X\beta\|_2^2 \tag{3}$$

Here, $\|Y - X\beta\|_2^2 = \sum_{t=1}^{n}(y_t - x_t'\beta)^2$. This model can give inaccurate predictions due to the large number of predictors, or multicollinearity. Various regression models in the literature are used to improve its predictions by reducing the number of variables by means of a model-by-model selection. The Ridge, Lasso, and Elastic net regression models are discussed in this research.

Ridge regression

The estimator of the Ridge regression is derived from Eq. 2 by utilizing the "ℓ_2 penalized least squares" tool as follows.

$$\hat{\beta}(ridge) = \underset{\beta}{argmin}\|Y - X\beta\|_2^2 + \lambda_2\|\beta\|_2^2 \tag{4}$$

Here, $\|Y - X\beta\|_2^2$ is the ℓ_2-*norm* (quadratic) loss function and $\|\beta\|_2^2 = \sum_{j=1}^{p}\beta_j^2$ is the ℓ_2-*norm* penalty on β. $\lambda_2 \geq 0$ is the tunning (known as a penalty, regularization or complexity) parameter regulating the strength of the penalty by determining the relative importance of the data-dependent empirical error and the penalty term.

Lasso regression

The estimator of the Lasso regression produces regression Eq. 2 by utilizing the "ℓ_1 penalized least squares" tool as follows.

$$\hat{\beta}(lasso) = \underset{\beta}{argmin}\|Y - X\beta\|_2^2 + \lambda_1\|\beta\|_1 \tag{5}$$

Here, $\|\beta\|_1 = \sum_{j=1}^{p}|\beta_j|$ represents the ℓ_1-*norm* penalty on β. This induces a sparse solution and $\lambda_1 \geq 0$ is the parameter for tunning.

Elastic net

The Elastic net is the extension of the Lasso regression by combining the Ridge regression in order to be more robust for extreme correlations among the predictors. The Elastic net uses a combination of both ℓ_1 (*Lasso regression*) and ℓ_2 (*Ridge regression)* penalized least squares as follows.

$$\hat{\beta}(elasticnet) = \left(1 + \frac{\lambda_2}{n}\right)\left\{ \underset{\beta}{argmin}\|Y - X\beta\|_2^2 \right.$$
$$\left. + \lambda_2\|\beta\|_2^2 + \lambda_1\|\beta\|_1 \right\} \tag{6}$$

Here, a series of coefficient estimates based on the different values of λ's are produced. In doing this, the selection of an optimum value of λ is a crucial step. The Cross-Validation (CV) criteria is commonly used in the selection of the shrinking parameter. CV is a resampling approach defined as follows.

$$CV(\lambda) = \frac{1}{T}\sum_{i=1}^{T}\left(y_t - \hat{y}_t^{-i}\right)^2 \tag{7}$$

$$\hat{y}_t^{-i} = x_t'\hat{\beta}^{-i}(\lambda) \tag{8}$$

Here, $\hat{\beta}^{-i}(\lambda)$ is an estimation of the model based on previous observations, with the exclusion of (x_t, y_t). Although, a low level of bias in the CV is calculated in a leave-one-out way, the variance of estimation is still high. To deal with this problem, a *k*-fold CV is preferred to obtain an acceptable level of bias and a low level of variance (Hastie et al. 2017). In addition, the significance tests of the model are evaluated. The *Covtest* proposed by Lockhart et al. (2013) is commonly used in order to test the statistical covariance of the Elastic net process, which is defined as follows.

$$T_k = \left(\begin{array}{c} \langle Y, X\hat{\beta}(Elastic\ net)(\lambda_{k+1})\rangle \\ -\langle Y_A, X_A\tilde{\beta}(Elastic\ net)_A(\lambda_{k+1})\rangle \end{array} \right) / \sigma^2$$

Here, A is an active set just before λ_k, and $\tilde{\beta}(Elastic\ net)_A$ is the Elastic net solution using only the predictors X_A. (see Lockhart et al. (2013) for details). *eNetXplore*r and *covTest* packages in *R* software were used for analyzing the hypothesis testing.

Here, these models' fit is contrasted by utilizing two different error summaries i.e. Mean Absolute Error (MAE) and the Mean Squared Error (MSE). These summaries are written as follows.

$$\text{MAE} = \frac{1}{n}\sum_{t=1}^{n}\left|\hat{y}_{t,model} - y_t\right| \tag{10}$$

$$\text{MSE} = \frac{1}{n}\sum_{t=1}^{n}\left(\hat{y}_{t,model} - y_t\right)^2 \tag{11}$$

Moreover, the MAE and MSE offer a way of measuring the modelling (forecasting) abilities of these models, including the multiple linear, Ridge, Lasso and Elastic net regression models, respectively. According to these modelling (forecasting) errors, the models with the lowest MSE and MAE values proffer a better modelling (forecasting) performance. Note that the analysis and testing of these models in this research were computed in *Matlab* and *R* software.

3. DATA DESCRIPTION

The weekly data of this study spans from the time period of 12 August 2015 to 9 January 2019, specifically with regard to the price of Bitcoin (BTC) and Ethereum (ETH), 2 internet trends, including Google and Wikipedia, and 17 common factors, including stock market indices, gold and oil prices, central bank interest rates, policy uncertainty and exchange rates. The main criteria used for selecting the 2 internet trends and 17 common factor variables were: (1) a combination of the variables implemented by Kristoufek (2013) and Panagiotidis et al. (2018); and (2) there being continuous listings for all of these trends and factors from 12 August 2015 to 9 January 2019. Table 1 represents an overview of the variables, their abbreviations, and their data sources. The one-week returns for all variables were obtained from original of Wednesday closing data. Table 2, on the other hand, shows descriptive statistics for the price of Bitcoin/Ethereum, 2 internet trends, and 17 common factors.

Table 1. Variables, Abbreviations and Sources		
Variables	**Abbreviation**	**Source**
Bitcoin		
Coindesk Bitcoin Price Index	BPI	coindesk.com
Google trend for the term "Bitcoin"	Google_BPI	trends.google.com
Wikipedia trend for the article on"Bitcoin"	Wikipedia_BPI	tools.wmflabs.org
Ethereum		
Coindesk Ethereum Price Index	ETH	coindesk.com
Google trend for the term "Ethereum"	Google_ETH	trends.google.com
Wikipedia trend for the article on"Ethereum"	Wikipedia_ETH	tools.wmflabs.org
Common		
Brent oil price (in USD per barrel)	OIL	quandl.com
Gold Price (in USD per troy once)	GOLD	quandl.com
Fed Funds effective rate	EFFR	quandl.com
ECB deposit facility rate	ECBDFR	quandl.com
EUR/USD exchange rate	EURUSD	quandl.com
GBP/USD exchange rate	GBPUSD	quandl.com
CNY/USD exchange rate	CNYUSD	quandl.com
JPY/USD exchange rate	JPYUSD	quandl.com
Dow Jones NYSE index	DJ	quandl.com
Nasdaq index	NASDAQ	quandl.com
Nikkei 225 index	NIKKEI	quandl.com
S&P 350 index	SP350	us.spindices.com
Shanghai Composite index	SSEC	quandl.com
CBOE DJIA Volatility index	VXD	quandl.com
US policy uncertainty	USEPU	policyuncertainty.com
Europe policy uncertainty	EEPU	policyuncertainty.com
China policy uncertainty	CEPU	policyuncertainty.com

Table 2. Descriptive Statistics of Weekly Data					
Variables	**Mean**	**Std. Dev.**	**Skewness**	**Kurtosis**	**K-S**
					Bitcoin
BPI	3591.608	0.1693	1.297	1.260	0.230
Google_BPI	13.721	2.4560	3.115	11.320	0.276
Wikipedia_BPI	24162.296	0.1434	4.447	24.027	0.301
			Ethereum		
ETH	210.500	21.9204	1.514	1.854	0.222
Google_ETH	19.682	3.3547	1.933	3.424	0.226
Wikipedia_ETH	3814.988	0.1754	2.354	5.908	0.232
			Common		
Oil	54.913	1.7835	0.348	-0.536	0.110
Gold	1240.956	10.0829	-0.659	-0.103	0.082
EFFR	0.979	0.0931	0.471	-1.038	0.198
ECBDFR	-0.369	0.0098	1.919	2.019	0.487
EURUSD	1.135	0.0062	0.268	0.480	0.058
GBPUSD	1.349	0.0124	0.728	-0.422	0.147
CNYUSD	6.639	0.0288	-0.083	-1.255	0.106
JPYUSD	111.724	0.7084	0.144	0.220	0.125
DJ	21083.559	0.1421	0.090	-1.424	0.147
NASDAQ	6073.866	148.9264	0.216	-1.298	0.137
NIKKEI	19716.279	321.9427	-0.008	-1.133	0.099
SP350	1511.566	17.6981	0.128	-1.207	0.105
SSEC	3100.672	37.0341	-0.053	0.096	0.067
VXD	15.098	0.6431	1.145	0.815	0.143
USEPU	145.933	5.5176	0.943	0.619	0.107
EEPU	226.355	9.4355	1.574	2.575	0.195
CEPU	381.339	24.9967	1.023	1.032	0.157

Notes: K-S denotes the Kolmogorov-Smirnov normality test statistics result. Std. Dev. denotes the annualized standard deviation.

Table 2 presents some significant information. The mean weekly price of Bitcoin and Ethereum were positive during this period, meaning that their investors

had financial gains during that period. For this data, the standard deviation of Ethereum (21.9204) was greater than that of Bitcoin (0.1693). Therefore, Ethereum was deemed to be the riskiest investment during this period when that risk is measured in terms of unconditional volatility. The price distributions of Bitcoin and Ethereum exhibits positive skewness. This signifies that there were frequent small dips, as well as a number of massive increases in price. Furthermore, the price distributions for Bitcoin and Ethereum are leptokurtic. This means that the market incurs larger tails when compared to when it has normal distribution (which has a kurtosis of 3) and a higher probability for immense results. The normality of Bitcoin and Ethereum has also been rejected at the significance level of 5% using the Kolmogorov-Smirnow (K-S) test. In summary, the key characteristics of this data are that it has a positive mean; a comparatively steep volatility; leptokurtosis (in that it possesses fat tails); and that it is asymmetrical in terms of its having both a left- and right-skew. These discoveries correlate with the most regularly occurring features reported by cryptocurrency studies, especially those documented by Chu et al. (2015) and Catania et al. (2019).

4. RESULTS

4.1. Model Comparison

4.1.1 In-sample model fit

This part of the research contrasts the in-sample model fit of the four models described in Section 2. Within these model frameworks, 2 internet trends and 17 common variables (See in Table 1) are defined as covariates for the Bitcoin and Ethereum price indices, respectively. Table 3 displays the MAE and MSE values for each model created by the in-sampling procedure.

Table 3. In-Sample Model Fit Comparison Criteria				
	Bitcoin (BPI)		Ethereum (ETH)	
Model	**MAE**	**MSE**	**MAE**	**MSE**
Multiple Linear	0.1759	0.0594	0.2323	0.0992
Ridge	0.1668	0.0554	0.2174	0.0886
Lasso	0.1651	0.0550	0.2155	0.0879
Elastic net	**0.1638**	**0.0539**	**0.2120**	**0.0867**

As seen from Table 3, the Elastic net (with the lowest MAE and MSE) performs better than the multiple linear regression (with the highest MAE and MSE) in terms of MAE (MSE) by 6.87% (9.25%) for Bitcoin and by 8.73% (12.60%) for Ethereum. Moreover, the Elastic net improves on the Ridge regression in terms of MAE (MSE) by 1.79% (2.70%) for Bitcoin and by 2.48% (2.14%) for Ethereum. Furthermore, it improves on the Lasso regression by 0.78% (2%) for Bitcoin and by 1.62% (1.36%) for Ethereum. In addition, the R^2 value of the Elastic net (which is 0.9572 at its highest value) is higher than that of the multiple linear model (which is 0.9538 at its lowest value) for Bitcoin, while the R^2 value of the Elastic net (which is 0.9143 at its highest value) is higher than that of the multiple linear model (which is 0.9042 at its lowest value) for Ethereum. In addition, it is clear that the way in which all of the models performed with relation to Bitcoin is better than how they performed for Ethereum. This may be due to the fact that Bitcoin is more stable than Ethereum, as evidenced in Table 1.

To sum up, the Elastic net regression model appears to be more desirable if one wants to model the weekly Bitcoin and Ethereum price indices seeing as it achieves the lowest average MAE and MSE for the data set.

4.1.2 Out-of-sample forecasting

An assessment of the forecasting performance of the aforementioned models is made here utilizing an out-of-sample procedure based on a rolling window technique. The length of the rolling window for this research is 128 weeks, (i.e., roughly two-thirds of the data). This out-of-sample procedure is used in order to predict β_{it} one-week ahead with a 52-week (1 year) prediction period. The MSE and MAE values between the actual and predicted values of the price indices are calculated over these 52 values for Bitcoin and Ethereum in Table 4.

Overall, the Elastic net (with the lowest MSE and MAE) has shown to be better than the multiple linear regression (with the highest MSE and MAE) with relation to MAE (MSE) by 5.75% (19.25%) for Bitcoin and by 10.05% (14.50%) for Ethereum.

Table 4. Out-Of-Sample Forecasting Comparison Criteria				
	Bitcoin (BPI)		**Ethereum (ETH)**	
Model	**MAE**	**MSE**	**MAE**	**MSE**
Multiple Linear	0.1913	0.0613	0.2846	0.1220
Ridge	0.1872	0.0599	0.2779	0.1108
Lasso	0.1870	0.0515	0.2615	0.1104
Elastic net	**0.1803**	**0.0495**	**0.2560**	**0.1043**

In addition, the Elastic net improves on the Ridge regression in terms of MAE (MSE) by 3.69% (17.36%) for Bitcoin and by 7.88% (5.87%) for Ethereum, while it improves on the Lasso regression by 3.58% (3.88%) for Bitcoin and by 2.10% (5.53%) for Ethereum. It is also apparent that the results of all four models with relation to Bitcoin are better than those generated for Ethereum. This may be due to the fact that Ethereum has more outliers than Bitcoin. To sum up, the Elastic net seems to be preferable when predicting over the weekly Bitcoin and Ethereum price indices given that it generated the lowest average MSE and MAE

4.2. Best Model Performance

The fact that the Elastic net model exhibited the best forecasting performance and model fit is discussed here. The parameter estimates of the model, which are obtained via the Elastic net described in Section 2, are presented in Table 5. Figures 1(a) and 1(b) also present the importance rank of the parameter estimates of the Elastic net graphically for both Bitcoin and Ethereum, respectively. These tables provide some key points for Bitcoin and Ethereum stakeholders who wish to make better investment decisions in the future.
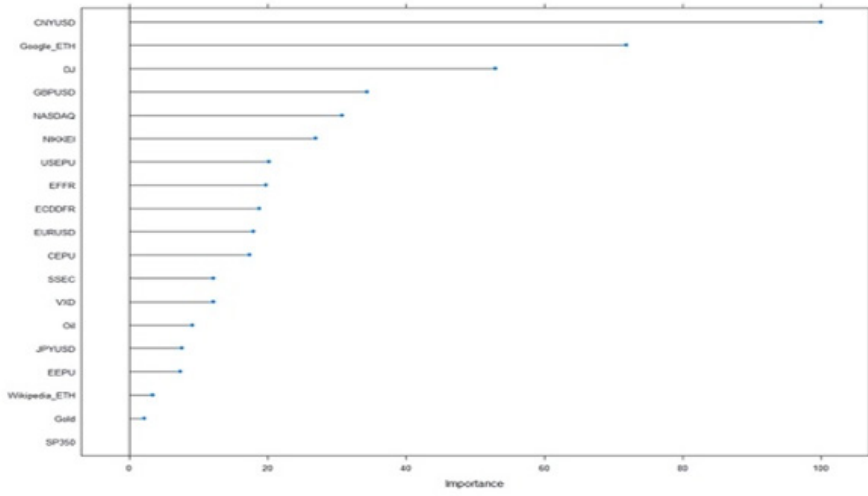
(a) *Bitcoin (BPI)*
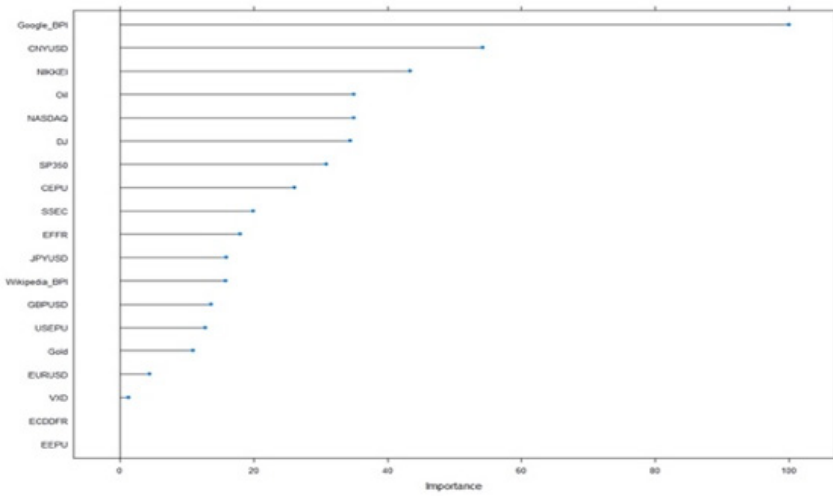
(b) *Ethereum (ETH)*

Figure 1. The Importance Rank of Parameters on Bitcoin and Ethereum

	Bitcoin (BPI)			Ethereum (ETH)		
Table 5. In-Sample Model Fit of Elastic Net Parameter Estimate and Cross-Validation Values						
	Bitcoin (BPI)			**Ethereum (ETH)**		
Rank	Parameter	Estimate	p-value	Parameter	Estimate	p-value
1	Google _BPI	0.445062	0.02095*	CNYUSD	-0.573784	0.0028*
2	CNYUSD	-0.241476	0.0310*	Google _ETH	0.412151	0.0086*
3	NIKKEI	0.193260	0.0004*	DJ	0.303515	0.0046*
4	OIL	0.155644	0.0001*	GBPUSD	-0.197158	0.0059*
5	NASDAQ	0.155300	0.0001*	NASDAQ	0.176632	0.0231*
6	DJ	0.153123	0.0110*	NIKKEI	0.154655	0.0258*
7	SP350	-0.137087	0.0484*	USEPU	0.115838	0.0172*
8	CEPU	-0.115904	0.0000*	EFFR	-0.113735	0.2201
9	SSEC	-0.088642	0.0985	ECBDFR	-0.107872	0.0636
10	EFFR	0.080098	0.0001*	EURUSD	-0.103038	0.0374*
11	JPYUSD	-0.070597	0.0000*	CEPU	-0.099927	0.0278*
12	Wikipedia _BPI	0.070418	0.0218*	SSEC	-0.069756	0.0335*
13	GBPUSD	-0.060423	0.2276	VXD	0.069545	0.6033
14	USEPU	0.056539	0.2156	OIL	0.052159	0.0805
15	GOLD	-0.048729	0.0156*	JPYUSD	-0.043391	0.0292*
16	EURUSD	0.019730	0.0322*	EEPU	-0.042429	0.5837
17	VXD	-0.005666	0.5492	Wikipedia _ETH	-0.019566	0.0829
18	ECBDFR			GOLD	-0.012635	0.1285
19	EEPU			SP350		
	Cross-Validation (CV)	0.0135178		Cross-Validation (CV)	0.0044715	

Note: * display the significant parameter estimation at the 5% significance level.

Table 5 and Figures 1(a) and 1(b) detail some key points. The 2 internet trends and 17 common variables display different importance ranks with various parameter estimates for the Bitcoin and Ethereum prices, respectively, during this period. While the Google_BPI trend (positively) has the greatest impact on the price of Bitcoin, the VXD index (negatively) has the lowest impact on the same. Furthermore, while the CNYUSD exchange rate (negatively) has the greatest impact on the price of Ethereum, the gold price (negatively) has the lowest impact on the same. In addition, while the ECBDFR rate and the EEPU uncertainty has no impact on the price of Bitcoin, only the SP350 index has no impact on the price of Ethereum.

5. CONCLUSIONS

This research compared the multiple linear, Ridge, Lasso and Elastic net regression models' performance on modelling and forecasting the weekly Bitcoin and Ethereum price, respectively, in terms of 2 internet trends and 17 common factors. The empirical findings appeared to be in favor of the Elastic net model while modelling and forecasting the weekly price of both Bitcoin and Ethereum price. Additionally, it is apparent that all four models' performance with relation to Bitcoin was better than that achieved for Ethereum during the modelling and forecasting procedure stages of this study. This may be due to the fact that Ethereum has more outliers than Bitcoin whilst modelling and that Ethereum is more volatile than Bitcoin whilst forecasting. Within an elastic net framework, while the Google trend for the term "Bitcoin" (Google_BPI) (positively) has the greatest impact on the price of Bitcoin, the CNY/USD exchange rate (negatively) has the greatest impact on the price of Ethereum. While the EC/DFR rate and the EEPU uncertainty has no impact on the price of Bitcoin, only the SP350 has no impact on the price of Ethereum. The proposed procedure's benefits will be applicable for a large number of interdisciplinary applications. It may also incite further cross-disciplinary research.

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DATA ANALYSIS IN DETERMINING THE TARGET COUNTRY FOR EXPORT BY SMEs: SECTOR APPLICATION-BABY DIAPER PRODUCT GROUP[1]

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INTRODUCTION

Entering the export market in the era of globalized trade offers immense potential for businesses seeking growth and diversification. Exporting not only creates new revenue streams but also expands a company's customer base. However, entering the world of international trade requires meticulous planning, market research, and a comprehensive understanding of the export process. This study examines the foundational steps that can help businesses embark on a successful export journey.

Embarking on an export journey necessitates careful planning, rigorous research, and a proactive approach to overcoming challenges. By understanding global markets, complying with legal requirements, developing a thorough export plan, building strong partnerships, addressing logistical considerations, and managing finances effectively, businesses can position themselves for success in the international arena.

This study primarily aims to develop a decision support system for firms new to exporting. Given that firms starting their export journey are predominantly small and medium-sized enterprises (SMEs) with limited financial resources, they must engage in short-term planning. Consequently, this study emphasizes the use of recent export data and focuses on short-term forecasting efforts.

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[1] This study is adapted from the thesis titled "The Use of Decision Support Systems in Target Country Selection for Firms Newly Starting Exports", submitted to the Institute of Social Sciences at Istanbul University in 2024.

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I. DEVELOPMENT OF TURKEY'S EXPORTS

The history of Turkey's exports is a fascinating narrative spanning centuries, chronicling the country's transformation from ancient trade routes to a modern, dynamic player in the global economy. Situated at the crossroads of Europe and Asia, Turkey's strategic location has historically played a pivotal role in the development of diverse trade models (Doğanlar et al., 2003: 83).

International trade has been one of the fundamental dynamics driving Turkey's economic growth since the foundation of the Republic (Altıntaş and Özdemir, 2006). From the Republic's establishment, Turkey adopted relatively closed international trade policies, which began transitioning rapidly towards international trade liberalization in the early 1980s.

In a country like Turkey, which pursues an outward-oriented growth strategy tied to liberalization, export performance is of vital importance (Ceviker and Taş, 2011). Countries lacking strategic advantages in natural resources or technological development must optimize their export strategies (Balcılar et al., 2014). Since domestic market growth alone is insufficient, efforts must focus on finding international markets (Ozcan and Özçelebi, 2013).

In light of recent trade policies, export regulations may vary, making it essential to consult the latest information or seek advice from relevant authorities or legal experts. This is primarily due to Turkey's dynamic geopolitical position and its evolving international relations.

MARKET RESEARCH FOR FIRMS NEW TO EXPORTING

Selecting target countries is not a one-size-fits-all process; it requires a tailored approach based on your product, sector, and business objectives. Regular reassessment of market conditions and adaptability of export strategies to changing circumstances are crucial.

Given the resource constraints of firms new to exporting—which are primarily SMEs—priority should be placed on analyzing historical export data and key indicators. Historical export data and relevant product-specific indicators for target countries are valuable for firms starting their export journey. Brazinskas emphasized the importance of historical data analysis in market selection methods for Finnish SMEs (Brazinskas, 2015: 4). Similarly, a study by Bothma and Cant on trade between China and South Africa utilized the Trade Map database to analyze real trade between the two countries based on HS codes.

I. METHODOLOGY

Recognizing the limited human and financial resources of a firm new to exporting, it is critical to develop the most efficient export model. A successful start to exporting can generate resources for the firm, enabling more in-depth market analyses in the future. The following model steps will be employed in this study:

	MODEL STEPS
1. Step	Defining the Target Product Group
2. Step	Determining the Objective
3. Step	Identifying Decision-Makers
4. Step	Establishing Criteria (C1, C2, …, Cn) for Research
5. Step	Determining Criteria Weights Using the Analytical Hierarchy Process (AHP)
6. Step	Creating a Matrix of Alternative Countries and Criteria
7. Step	Ranking the Most Suitable Alternatives Using the VIKOR Method

Analytical Hierarchy Process (AHP)

The Analytical Hierarchy Process (AHP) was initially formulated through the collaborative efforts of Myers and Alpet in 1968. In the 1970s, Thomas L. Saaty at the Wharton School of Business further developed AHP as a method to address decision-making problems and evaluate alternative solutions systematically (Onder, 2015).

AHP is a multi-criteria decision-making methodology that evaluates both quantitative and qualitative factors (Oey et al., 2020). It enables the inclusion of individual or group preferences, experiences, intuitions, knowledge, judgments, and opinions into the decision-making process. AHP provides a structured and hierarchical approach to addressing complex problems, allowing for systematic resolution (Oey et al., 2020). Experts or decision-makers leverage both objective and subjective inputs during the decision-making process, empowering them to refine their decision-making mechanisms effectively (Ozbek, 2017).

$$A = \begin{bmatrix} 1 & \alpha_{12} & \cdots & \alpha_{1n} \\ \alpha_{21} = {1}/{\alpha_{12}} & 1 & \cdots & \alpha_{2n} \\ \vdots & \vdots & \cdots & \vdots \\ \alpha_{n1} = {1}/{\alpha_{1n}} & \alpha_{n2} = {1}/{\alpha_{2n}} & \cdots & 1 \end{bmatrix}$$

This text explains the **pairwise comparison method** and the definition of importance levels used in the **Analytic Hierarchy Process (AHP)**. AHP is a method commonly used in decision-making processes to evaluate the relative importance of criteria. It is particularly useful for complex, multi-criteria decision problems.

Key Concepts:

1. Pairwise Comparison Matrices:

- In AHP, criteria or alternatives are compared in pairs. For example, the relative importance of one criterion compared to another is assessed.
- This assessment is represented by a value, aija_{ij}aij, assigned to the pairwise comparison of criterio**n i** with **criterion j**.

2. Reciprocal Property:

- If a comparison assigns a value of **aija_{ij}aij**, the reciprocal comparison assigns a value of **$1/aij$1/a_{ij}$1/aij$**.
- For instance, if **criterion i** is 5 times more important than **criterion j** (**$aij=5$a_{ij}=5$aij=5$**), then **criterion j** is **$1/5$1/5$1/5$** as important as **criterion i** (**$aji=1/5$a_{ji}=1/5$aji=1/5$**).

3. Importance Levels Table (Table 1):

- The levels of importance used in pairwise comparisons are specified in Table 1:
  - 1: Equal importance.
  - 3: Slightly more important.
  - 5: Strongly more important.
  - 7: Very strongly more important.
  - 9: Absolutely more important.
  - **2, 4, 6, 8:** Intermediate levels, used for finer distinctions.

Using Importance Levels:

When two factors are compared (e.g., **i** and **j**):

If one factor is **"Very Strongly More Important"** than the other, it is assigned a value of **7.**

The reciprocal comparison is then assigned the value **1/71/71/7.**

Consistency Ratio Calculation

After pairwise comparisons, priorities are established, and the consistency of comparison matrices is assessed using the Consistency Index (CI). The CI value is calculated as follows:

With "n" as the number of criteria:

After determining the CI and RI values, the Consistency Ratio (CR) is calculated as CR = CI / RI. By examining the priority values, alternatives are ranked, and their significance order is identified.

n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RI	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49	1.51	1.53	1.56	1.57	1.59

VIKOR METHOD

VIKOR (VlseKriterijumska Optimizacija I Optimumno Resenje) is one of the multi-criteria decision-making methods applied to solve problems involving multiple criteria. This method was specifically developed to address complex decision-making problems with diverse and conflicting criteria. VIKOR is based on the principle of ranking various alternative solutions in situations with multiple objectives and working towards proximity to an optimal solution (Ayçin, 2019: 314).

The VIKOR method aims to rank a set of alternative solutions based on multiple criteria and subsequently identify an optimal solution. The optimal solution enables the decision-maker to find the best possible solution within a specific level of acceptability.

The emergence of the VIKOR method began with the Lp-metric form (Ayçin, 2019: 314).

$$L_{pj} = \left\{ \sum_{i=1}^{n} \left(\frac{w_i \left(f_i^* - f_{ij} \right)}{\left(f_i^* - f_i^- \right)} \right)^p \right\}^{1/p}$$

$$1 \leq p \leq \infty; \; j = 1, 2, \dots, j$$

In the VIKOR method, the ranking criteria $L1j=SjL\_1j = S\_jL1j=Sj$ and $L\infty j=RjL\_\infty j = R\_jL\infty j=Rj$ are utilized. Here, wiw_iwi represents the subjective weights indicating the importance level of each criterion. The solution identified by $MinjSj\text{Min}\_j S\_jMinjSj$ is used to maximize group utility (majority rule), while the solution identified by $MinjRj\text{Min}\_j R\_jMinjRj$ is employed to minimize individual regret.

The optimal solution FcF_cFc is a feasible solution and represents the result "closest" to the ideal solution $F*F^*F*$. As shown in Figure 1, the optimal solution is expressed by $\Delta f1=f1*-f1c\Delta f\_1 = f\_1^* - f\_1^c\Delta f1=f1*-f1c$ and $\Delta f2=f2*-f2c\Delta f\_2 = f\_2^* - f\_2^c\Delta f2=f2*-f2c$, signifying an agreement established through mutual consensus (Ayçin, 2019: 315).
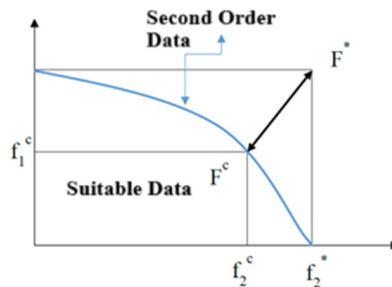
Figure: Distance to the Ideal Solution

II. APPLICATION: BABY DIAPER PRODUCT GROUP

Step 1:

A target country selection study will be conducted for the export of hygienic disposable diapers under HS Code 961900.

Step 2:

The implementing company aims to focus on the export of its hygienic baby diapers due to market contraction and financial difficulties in the domestic market.

Step 3:

The company's general manager, export manager, and their team have been identified as the decision-makers.

Step 4:

K1, K2, and K3 have been established as general criteria for the study, while K4 has been designated as a sector-specific criterion by the decision-makers.

- K1: Identification of the list of imports from the world for the target product group by all countries.
- K2: Identification of the list of imports from the exporting country for the target product group by all countries.
- K3: Product Price Segment: Unit price per ton for the target product group in all countries.
- K4: Product Potential Data: Annual birth rates of all countries.

Step 5:

The AHP method was used to determine the weights of the criteria. A total of six pairwise comparisons were made for the four criteria. To simplify the process for non-experts, a pairwise comparison questionnaire table was prepared for use in the AHP method.

S1	Importance Level	More Important	Equal	More Important	Importance Level	S2	S1/S2
K1: The target country's imports of the target product group from the world				X	5	K2: The target country's imports of the target product group from our country	0,2
K1: The target country's imports of the target product group from the world				X	2	K3: Product Price Segment: Import Price	0,5
K1: The target country's imports of the target product group from the world	3	X				K4: Product Potential Data: Birth Rates	3,0
K2: The target country's imports of the target product group from our country	3	X				K3: Product Price Segment: Import Price	3,0
K2: The target country's imports of the target product group from our country	7	X				K4: Product Potential Data: Birth Rates	7,0
K3: Product Price Segment: Import Price	5	X				K4: Product Potential Data: Birth Rates	5,0
Consistency Ratio (CR)							0,029

Consistency Ratio (CR):

The consistency index was calculated as **0.029**, indicating acceptable consistency in the pairwise comparisons.

Consistency Ratio Calculation for the Survey Group								CR
S1/S2	1. expert	0,2	0,33	3	3	7	5	0,029247
	2. expert	0,143	0,5	4	3	6	4	0,084295
	3. expert	0,2	1	2	3	7	6	0,060093
	4. expert	0,167	0,5	3	3	8	5	0,025802
	5. expert	0,33	0,5	4	3	5	6	0,071719
	6. expert	0,2	0,5	2	2	8	5	0,004669
	7. expert	0,2	0,5	3	3	7	5	0,029247
	8. expert	0,11	0,5	3	3	8	7	0,063578
	9. expert	0,5	0,5	3	3	7	5	0,044088
	10. expert	0,167	0,5	4	3	9	3	0,047066
	11. expert	0,143	0,5	2	3	7	6	0,026931
	12. expert	0,2	0,5	3	2	6	6	0,032624
	13. expert	0,2	1	3	3	7	5	0,040075
	14. expert	0,167	0,5	4	4	6	5	0,09053
	15. expert	1	0,5	3	2	7	4	0,068035
	16. expert	0,2	0,25	3	3	8	5	0,056147
	17. expert	0,11	0,5	3	4	7	6	0,083039
	18. expert	0,2	0,5	3	6	8	4	0,06111
	19. expert	0,11	0,33	3	3	6	5	0,087307

The criteria weights obtained through the application of the AHP steps are as follows:

K1: The target country's imports of the target product group from the world	13%
K2: The target country's imports of the target product group from our country	57%
K3: Product Price Segment: Import Price	24%
K4: Product Potential Data: Birth Rates	6%

Step6:

The decision-makers must determine the desired direction of impact for the identified criteria. For example, in the case of baby diapers, the target country's

importation of the product group from the global market is valuable in terms of the country's trade openness. Therefore, the K1 criterion is expected to be maximized (MAX). Similarly, the K2 criterion is also intended to be maximized (MAX).

In contrast, for the product price segment, a minimum (MIN) value is preferred, as it reflects the perception of our brand and the price sensitivity of the target market. Birth rates, however, are considered a MAX-oriented criterion within the scope of this study.

CRITERIA (2018-2022 AVERAGE)	SOURCE	DIRECTION OF EFFECT
K1: The target country's imports of the target product group from the world	TRADEMAP	MAX
K2: The target country's imports of the target product group from our country	TRADEMAP	MAX
K3: Product Price Segment: Import Price	TRADEMAP	MİN
K4: Product Potential Data: Birth Rates	WORDLDOMETER	MAX

Ranking of Alternatives Using the VIKOR Method

The list of criteria and alternatives will be ranked using the VIKOR method, employing the criterion weights established in Step 5 through the application of the AHP methodology.

COUNTRY	ORDER	COUNTRY	ORDER	COUNTRY	ORDER
Iraq	1	Turkmenistan	46	Liberia	91
Iran	2	Egypt	47	Mexico	92
Israel	3	Greece	48	Slovakia	93
Uzbekistan	4	Brazil	49	Burkina Faso	94
Libya	5	South Africa	50	Congo	95
Azerbaijan	6	Lebanon	51	Switzerland	96
Georgia	7	Cyprus	52	Benin	97
Syrian Arab Republic	8	Afghanistan	53	Togo	98
United States of America	9	Korea, Republic of	54	Uganda	99

Russia	10	Gabon	55	Myanmar	100
Yemen	11	Ghana	56	Cabo Verde	101
Tajikistan	12	Bangladesh	57	Jordan	102
Germany	13	Equatorial Guinea	58	Rwanda	103
United Kingdom	14	Senegal	59	Chad	104
China	15	Côte d'Ivoire	60	New Zealand	105
France	16	Guyana	61	Guatemala	106
Morocco	17	Dominican Republic	62	Nepal	107
Ukraine	18	Sweden	63	Norway	108
Netherlands	19	Taiwan	64	Denmark	109
Somalia	20	Belarus	65	Qatar	110
Kazakhstan	21	Oman	66	Bolivia	111
Saudi Arabia	22	Djibouti	67	Finland	112
Poland	23	Guinea	68	Thailand	113
India	24	Congo, Democratic Republic of the	69	Burundi	114
Belgium	25	Portugal	70	Zambia	115
Canada	26	Madagascar	71	Albania	116
Spain	27	Malaysia	72	Honduras	117
Romania	28	Cameroon	73	Palestine, State of	118
Venezuela	29	Haiti	74	Japan	119
Bulgaria	30	Vietnam	75	Croatia	120
Serbia	31	Hungary	76	Bosnia and Herzegovina	121
Sudan	32	Niger	77	Mozambique	122
Nigeria	33	Indonesia	78	Kuwait	123
Kyrgyzstan	34	Gambia	79	Comoros	124
Macedonia	35	Austria	80	Cambodia	125
Tanzania	36	Mali	81	Sri Lanka	126
Kenya	37	Hong Kong	82	Mauritius	127
Ethiopia	38	Chile	83	Algeria	128
Mauritania	39	Sierra Leone	84	Malawi	129
Australia	40	Angola	85	El Salvador	130

United Arab Emirates	41	Singapore	86	Paraguay	131
Philippines	42	Panama	87	Kiribati	132
Moldova	43	Guinea-Bissau	88	Timor-Leste	133
Italy	44	Zimbabwe	89	Nicaragua	134
Czech Republic	45	Peru	90	Central African Republic	135
Costa Rica	136	Curaçao	164	Gibraltar	193
Ireland	137	Pakistan	165	Micronesia, Federated States of	194
Colombia	138	Seychelles	166	Marshall Islands	195
Tunisia	139	Latvia	167	British Virgin Islands	196
Maldives	140	Barbados	168	Turks and Caicos Islands	197
Ecuador	141	Bahrain	169	Anguilla	198
South Sudan	142	Cayman Islands	170	Cook Islands	199
Jamaica	143	Cuba	171	Nauru	200
Lesotho	144	Saint Lucia	172	United States Minor Outlying Islands	201
Belize	145	Grenada	173	Wallis and Futuna Islands	202
Botswana	146	Solomon Islands	174	French Southern and Antarctic Territories	203
Trinidad and Tobago	147	Luxembourg	175	Northern Mariana Islands	204
Eswatini	148	Estonia	176	Bonaire, Sint Eustatius and Saba	205
Lithuania	149	French Polynesia	177	Ship stores and bunkers	206
Faroe Islands	150	MacaU	178	Sint Maarten	207

Fiji	151	Iceland	179	Guam	208
Namibia	152	Andorra	180	Tokelau	209
Uruguay	153	Montserrat	181	Saint Pierre and Miquelon	210
Mongolia	154	Bahamas	183	American Samoa	211
Slovenia	155	Bermuda	184	Tuvalu	212
Argentina	156	Papua New Guinea	185	Niue	213
Armenia	157	Korea, Democratic People's Republic of	186	Norfolk Island	214
Brunei	158	Eritrea	187	Saint Helena	215
Samoa	159	New Caledonia	188	Christmas Island	216
Montenegro	160	Bhutan	189		
Palau	161	Vanuatu	190		
Malta	162	Saint Kitts and Nevis	191		
Lao People's Democratic Republic	163	Tonga	192		

III. RESULTS AND DISCUSSION

As a result of the study, the prioritization of target countries for the export of products under Customs Code 961900 was determined using the VIKOR method. The weights of the decision criteria, defined by the decision-makers, were calculated using the AHP methodology. During the process of determining the criterion weights, pairwise comparison questions were posed to 19 sector experts, and the consistency ratios for each expert were individually assessed.

The top 10 countries identified as target markets were Iraq, Iran, Israel, Uzbekistan, Libya, Azerbaijan, Georgia, Syria, and the United States. It is recommended that the exporting firm narrow down the target countries from these top-ranked options to conduct more detailed analyses, considering the firm's export budget, personnel and logistical infrastructure, financial resources, and management's strategic preferences.

In addition to the decision criteria, firms' specific preferences or management's personal connections may prioritize certain target countries over others.

In this study, the first three criteria can be applied across all sectors and product groups. The fourth criterion, defined as "K4 - Product Potential Data," can be tailored to specific sectors by the decision-makers**.**

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