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TOWARD A COMPREHENSIVE ASSESSMENT OF WORK CLIMATE: SCALE DEVELOPMENT AND VALIDATION ACROSS SECTORS

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ABSTRACT

Purpose- The purpose of this study is to develop a "Work Climate Scale" that can determine the key characteristics of the work climate in organizations operating across various sectors and to provide a valid and reliable measurement tool grounded in scientific methodology. Recognizing the need for a standardized instrument that can capture the perceptions of employees regarding managerial practices, communication, and workplace flexibility, the study aims to contribute to the literature on organizational behavior and climate assessment.
Methodology- The research was conducted using data collected from three distinct sample groups representing the Service, Health, and Technology/Information sectors. An initial pool of 22 items was generated and structured in a 5-point Likert format. The dataset obtained from the participants was analyzed using statistical software. Both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were employed to examine the construct validity of the scale. In addition, internal consistency and reliability coefficients were calculated to assess the psychometric robustness of the instrument.
Findings- The analysis revealed that the "Work Climate Scale" possesses a clear two-factor structure consisting of 11 items. These two sub-dimensions were identified as “Management and Communication” and “Work Environment and Flexibility.” The results of reliability analyses demonstrated that the scale exhibits high internal consistency and strong construct validity, indicating that it accurately measures the intended dimensions of organizational work climate.
Conclusion- In conclusion, the "Work Climate Scale" developed within this study is a psychometrically sound, valid, and reliable tool suitable for assessing work climate across diverse organizational contexts. It is expected that the two-dimensional structure of the scale will make a meaningful contribution to future empirical research by providing a comprehensive understanding of how management practices, communication, and flexibility shape employees’ perceptions of their work environment.

Keywords: Work climate, management and communication, work environment and flexibility, scale, validation
JEL Codes: M10, M19

1. INTRODUCTION

In today's dynamic business world, the sustainable success of businesses depends not only on material resources but also on the effective management of human capital. To achieve their strategic goals, businesses should focus on factors that affect employee motivation, satisfaction, productivity, and similar elements. The concepts of organizational climate and work climate, which play a decisive role in the development and increase of these factors within the organization, have recently come to the fore and gained importance (Subramani et al., 2016; Shanker et al., 2017).

Organizational climate refers to the general atmosphere of the work environment, encompassing elements such as a company's culture, values, norms, and leadership style. This atmosphere is perceived directly or indirectly by employees and influences their motivation, as well as their attitudes and behaviors within the organization. Therefore, organizational climate is one of the fundamental components of the working environment and has a decisive impact on the success of the enterprise (Raja et al., 2019; Siregar & Evanita, 2020). While organizational climate represents the general atmosphere and environment within the organization, the work climate, a sub-dimension of organizational climate, includes the characteristics perceived directly or indirectly by individuals as part of this general atmosphere (Viđak, 2023). These perceptions can directly affect employees' motivation, job satisfaction levels, and behaviors. Thus, the work climate is a critical factor influencing individual satisfaction, commitment, and performance within an organization (Bernsen et al., 2009; Jyoti, 2013; Li et al., 2016). A good work climate within the organization increases employees' commitment to their work. As satisfaction increases, employees' motivation and consequently their performance also rise. This, in turn, affects the overall success of the organization. A comfortable and supportive working environment encourages employees to share their ideas and develop new ones, increasing their commitment to the organization and reducing turnover rates. This ensures that the organization continuously has talented and experienced employees, enhancing its capacity for innovation and creativity. Additionally, a good work climate promotes open communication. Employees share their ideas more freely and collaborate to solve problems (Slemp et al., 2018; Wu & Li, 2019; Megawaty et al., 2022). Consequently, for managers within the organization, the work climate is of great importance as it directly impacts the success of the organization. Creating a positive work climate increases employee satisfaction, enhances productivity, and secures the long-term success of the organization. Therefore, it is crucial for managers to prioritize the work climate to strengthen and sustain their organizations. In this context, understanding and managing the work climate is a critical requirement for the success of modern enterprises (Khazei et al., 2020; Lozano-Lozano et al., 2021).

Numerous theoretical and practical studies have been conducted to create a good work climate in organizations, identify factors influencing the work climate, develop an ideal work climate within organizations, ensure its sustainability, and discuss the work climate variable (Permarupan et al., 2013; Li et al., 2016; Thanh, 2018; Vivilaki et al., 2019; Lozano-Lozano et al., 2021; Li et al., 2023). However, the work climate is a complex phenomenon shaped by the interaction of many different factors. The complexity and multifaceted nature of the work climate make research and applications in this field challenging. To overcome these challenges, it is necessary first to establish a measurable structure for the work climate within organizations.

This article aims to develop a "Work climate Scale" that can be used to understand and improve the work climate, addressing the shortcomings of previously developed scales. With this scale, the goal is to identify various factors affecting the work climate and provide guidance for organizations to improve their work climate. Additionally, this article will examine the antecedents and consequences of the work climate and discuss its importance for organizations. Ultimately, this article aims to contribute to organizations by providing an in-depth understanding of the work climate, enabling them to create a healthier and more productive working environment.

2. CONCEPTUAL FRAMEWORK

2.1. The Concept of Work Climate as a Subset of Organizational Climate

Organizational climate refers to the general nature of the environment perceived and experienced by employees within an organization. This environment consists of a series of factors, including social norms, values, communication styles, leadership approaches, levels of collaboration, reward systems, and ways of doing work (Neal et al., 2000; Jones et al., 2019; Candra, 2023). It is based on the shared perceptions and experiences of employees and affects their sense of belonging, motivation levels, job satisfaction, and performance. Organizational climate is typically defined based on specific characteristics or dimensions. These dimensions can include open communication, trust, rewards and recognition, supportive leadership, collaboration, innovation, participation, and fairness (He et al., 2015; Santana and Pérez-Rico, 2023; Suryana, 2023). It is usually shaped by policies and practices determined by management and top leadership. Therefore, it reflects the strategies created by management. The organizational climate emerges from the sum of these elements, encompassing the entire organization and shaping the overall behavior of the organization (Delft, 2010; Berberoglu, 2018; Supardi, 2023). The general atmosphere created by the organizational climate determines the work climate and shapes employees' daily work experiences. While the organizational climate encompasses the whole and the general, the work climate is considered a subset of the organizational climate, with a narrower focus, such as ethical climate, innovation climate, and trust climate. The work climate is a set of measurable characteristics defining the working environment within a smaller-scale group, such as a specific work unit, division, or department (Hicklenton et al., 2019; Attia et al., 2020; Altuntaş et al., 2021).

This concept expresses the dynamics, interactions, and shared norms of smaller-scale groups. Since the work climate is part of the organizational climate, it often focuses on similar dimensions; however, it particularly emphasizes elements such as intra-unit relationships, leadership styles, collaboration, and communication. For example, the management style of a leader within a work unit can have a direct impact on intra-unit collaboration and performance (Abubakr et al., 2013; Orsini et al., 2020).

2.2. Theories Affecting the Concept of Work Climate

The work climate is a crucial factor that determines the quality of the work environment experienced by employees. The concept of the work climate can be associated with various theoretical approaches in disciplines such as organizational behavior theory and organizational psychology. Some frequently used theoretical frameworks to explain the work climate are as follows (Lewin et al., 1939; Lewin, 1951; Forehand and Von Haller, 1964; Halpin, 1966; Likert, 1967; Schneider and Bartlett, 1970):

Organizational Commitment Theory: The work climate is closely related to the organizational commitment theory developed by researchers such as Elton Mayo, Kurt Lewin, Douglas McGregor, and Frederick Herzberg. This theory suggests that the level of commitment employees feel towards the organization is influenced by factors such as the atmosphere, leadership style, job satisfaction, and perceptions of fairness. Therefore, the work climate is a critical element affecting levels of organizational commitment.

Job Satisfaction Theory: The job satisfaction theory, developed by scientists such as Abraham Maslow and Frederick Herzberg, posits that the satisfaction employees derive from their jobs is related to various job characteristics, work relationships, and the work environment. In this theory, the work climate is considered an important component of the work environment. A positive work climate can help employees derive more satisfaction from their jobs, leading to higher levels of job satisfaction.

Organizational Justice Theory: Developed by researchers like Adams, Lawler, and Folger, the organizational justice theory examines the perceptions of fairness that influence employees' behaviors within the organization. This theory suggests that perceptions of fairness in the workplace are significantly influenced by the work climate. Ensuring organizational justice can contribute to creating a positive work climate.

Leadership Theories: The work climate is also related to leadership theories. Specifically, leadership styles such as transformational leadership, developed by Burns, and participative leadership, developed by Kurt Lewin and Bernard M. Bass, can contribute to the creation and maintenance of a positive work climate. The management styles and communication skills of leaders are among the important factors determining the work climate.

These theoretical frameworks provide a significant foundation for understanding and managing the work climate. Additionally, these theoretical approaches can be utilized in the processes of measuring, evaluating, and improving the work climate.

2.3. Characteristics of Work Climate and its Importance for Organizations

The work climate encompasses all aspects of the work environment within an organization and is the sum of measurable elements that shape the atmosphere experienced by employees. This atmosphere is influenced by various factors, ranging from the quality of relationships within the organization to communication styles, leadership forms, and the fair distribution of workloads (Ahyat et al., 2023; Neimeijer et al., 2024). As a part of the organizational climate, the work climate results from the perception and interpretation of these elements by employees. Therefore, the work climate is a critical factor affecting employees' attitudes toward their jobs, their motivation, job satisfaction, and consequently, their performance.

A healthy work climate promotes collaboration, supports innovation, reduces workplace stress, and fosters the personal and professional development of employees. Additionally, the work climate emerges as a significant determinant in metrics such as turnover rates, absenteeism, and job dissatisfaction. In summary, the work climate should be regarded as a fundamental element that impacts not only the short-term performance of organizations but also their long-term success (Rosander and Salin, 2023; Zahlquist et al., 2023). Therefore, managing and improving the work climate should become a strategic priority for organizations.

To establish a positive work climate in the workplace, the following can be done (Aydın and Çilesiz, 2022; Kosydar-Bochenek et al., 2023; Arina et al., 2023):

Open and Effective Communication: This is the foundation of a healthy working environment. Interactions, idea exchanges, and collaboration among employees and with their managers positively influence the work climate.

Performance Evaluation and Recognition: Evaluating employees' performance, rewarding their achievements, and recognizing their successes make them feel valued and increase their motivation.

Work-Life Balance: Flexible working conditions that allow employees to balance their work and personal lives enhance their happiness and productivity.

Employee Commitment: A healthy work climate fosters employees' commitment and loyalty to the organization, reducing turnover rates and retaining talented employees.

Promotion of Collaboration and Innovation: A good work climate encourages collaboration and the sharing of different ideas, fostering innovation and creativity, thereby increasing the organization's competitive advantage.

3. METHOD AND FINDINGS

3.1. Problem of the Study and Ethics Committee Approval

In the modern world, work life has gone beyond merely providing a means of livelihood and has become a significant factor in shaping individuals' identities and self-perceptions. In this context, the atmosphere and feelings created by the work environment have a critical impact on employees' motivation, productivity, and overall well-being. This atmosphere and these feelings are generally defined by the concept known as the "work climate" (Crespell and Hansen, 2008; Amro et al., 2018; Alberto et al., 2019). The work climate is a measurable phenomenon created by the combination of factors such as the atmosphere experienced by employees, relationships, values, and management style within an organization. The work climate affects employees' attitudes toward their jobs, job commitment, motivation, satisfaction, and performance. Therefore, for organizations to be successful and achieve sustainable competitive advantage, it is essential to support and develop a positive work climate (Hadian, 2018; Hafee et al., 2019).

When developing a scale to measure the work climate, it is important to take examples from different sectors to ensure the scale's overall validity and reliability. In this study, a "Work climate Scale" is intended to be developed based on scientifically valid and reliable methods to measure the work climate in businesses/institutions operating in sectors where the work climate is considered important, namely the Service, Health, and Technology/Information sectors.

Before starting the research, the necessary compliance/approval certificate was obtained from the Toros University Scientific Research and Publication Ethics Committee to determine the ethical appropriateness of the study (Reference Number: 23.03.2023/42).

3.2. Sample and Scale Development

To determine the necessary items for measuring the work climate, a team of 30 people was initially established. This team was composed of competent academicians in organizational behavior and experienced institutional managers in this field. Based on the team's views, the characteristics to measure the work climate variable were identified. During the identification of these characteristics, the individuals' perceptions within the organization regarding the work climate were taken into account. The attributes that could explain this variable were articulated in clear and comprehensible terms. The views based on the experiences of all team members were collected, leading to the creation of a draft form with 22 items.

The draft form of 22 items was then evaluated by four expert academicians in the field. In light of these evaluations, the form was revised, and the "Draft Work climate Scale Form," consisting of the following 14 items, was developed as given in Table 1.

Table 1: Work Climate Scale - Draft

1.	My managers provide the necessary support when I need it.
2.	Communication within the work unit is open and effective.
3.	*Feedback processes are functional and constructive for employees. **
4	Teamwork and collaboration are encouraged within the work unit.
5.	*There is a perception of reliability and respect within the work unit. **
6.	Justice and equality are valued and implemented within the work unit.
7.	Ethical behaviors are encouraged and evaluated within the work unit.
8.	Measures for occupational safety and health have been taken.
9.	The physical work environment is arranged in a comfortable and safe manner.
10.	There is psychological safety and a supportive environment within the work unit.
11.	Flexible working conditions contribute to work-life balance.
12.	The level of motivation and commitment is high.
13	Achievements are rewarded and appreciated within the work unit.
14.	*Performance evaluations are conducted fairly. **

***** As a result of subsequent analysis, these items were removed from the scale.

3.3. Data Collection and Statistical Analysis

The survey form used in the study is divided into three sections. The first section provides an introductory note to inform participants about the study. The second section consists of four questions addressing demographic variables, including age, gender, marital status, and the institution where the participant works. The third section contains the finalized "Work Climate Scale," which includes fourteen statements. Participants responded using a 5-point Likert scale, with options ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

Since the data was collected electronically, several measures were implemented to ensure data security. These measures included the use of strong and unique passwords, firewalls, and up-to-date antivirus software, granting data access only to the authors, and regularly updating software and operating systems.

A data analysis program was used for the analysis of the collected data. Descriptive statistics were first calculated for the demographic characteristics of the participants. Then, validity and reliability analyses of the Work climate Scale were conducted. The analyses concluded with criterion-related validity analyses.

3.4. Universe and Sample

To enhance the generalizability of the study's findings, it was planned to conduct the research on three different sample groups. The first sample group consisted of individuals from the Service Sector. This sector includes businesses that operate across a wide range of activities and rely heavily on human resources, with employees often interacting directly with customers. It was thought that this would allow for a broad testing of the work climate scale.

The second sample group was from the Health Sector. Employees in the health sector are typically in constant interaction with patients, patients' families, and colleagues. It was considered that these intense human relationships significantly impact employees' work experiences and could be a crucial factor in determining the work climate. Thus, the health sector was chosen as the second sample group.

The third sample group consists of the Information and Communication Technology (ICT) Sector, which includes businesses operating in areas such as software development, information technology, internet services, and consultancy. Employees in this sector usually work in creative and innovative jobs and require flexible working environments. Additionally, job-related values and attitudes play a significant role among employees in this sector. Therefore, reflecting the experiences of employees in the technology sector in the work climate scale could enhance the comprehensiveness and validity of the scale.

The survey forms were distributed to participants using the convenience sampling method, and data were collected between September 1, 2023, and March 30, 2024. Information regarding the sample groups is as follows:

The study's first sample group consists of a total of 427 employees working in businesses operating in the service sector in Mersin, including 265 males (62.1%) and 162 females (37.9%). Among them, 298 are married (69.7%), while 129 are single (30.3%). The participants' average age in the service sector in Mersin is 34.45 years, with an average work experience of 12.6 years.

The study's second sample group includes a total of 401 personnel working in the healthcare sector in the Mersin region, comprising 264 females (65.6%) and 137 males (33.9%). Among them, 256 are married (63.8%), while 145 are single (36.2%). The participants' average age in the healthcare sector is 35.05 years, with an average work experience of 11.97 years.

The third sample group consists of a total of 453 employees working in the Information and Communication Technology (ICT) Sector in Mersin, including 273 males (60.3%) and 180 females (39.7%). Among them, 252 are married (55.6%), while 201 are single (44.4%). The participants' average age in the Information and Communication Technology (ICT) sector is 32.81 years, with an average work experience of 7.99 years.

3.5. Analysis of the Validity of the Measurement Tool

Structural validity analyses were conducted to determine the extent to which the scale serves its purpose and measures the intended attributes (Westen & Rosenthal, 2003). In this context, exploratory and then confirmatory factor analyses were performed (Ercan ve Kan, 2004; Gürbüz & Şahin, 2018).

3.5.1. Exploratory Factor Analysis

To determine whether the data from both the first and second sample groups are suitable for exploratory factor analysis (EFA), the Kaiser-Meyer-Olkin (KMO) test and Bartlett's sphericity test were conducted initially (Kaiser, 1974; Hair et al., 2010). Based on the results, the KMO coefficient for the first sample group was determined to be 0.886, while Bartlett's Test of Sphericity produced a chi-square value of 4856.8 ($p<.001$). In the second sample group, the KMO coefficient was 0.879, with Bartlett's Test of Sphericity resulting in a chi-square value of 5947.1 ($p<.001$). These findings suggest that the dataset is appropriate for conducting Exploratory Factor Analysis (EFA). Additionally, these results indicate that the data set follows a normal distribution (Büyüköztürk, 2016; Çalışkan, 2022).

For the EFA, the extraction method employed was principal component analysis, while the varimax rotation method was utilized. Table 2 presents the factor loadings, eigenvalues, and explained variances derived from the EFA.

The initial exploratory factor analysis (EFA) was conducted with the 14 items of the Work Climate Scale (Table 2). The analysis revealed that the scale converged into two factors with eigenvalues greater than 1, explaining a total variance of 70.57%. A correlation matrix was constructed, and the determinant was found to be 0.001. All items showed factor loadings above 0.32 except for item WCL3 ("Feedback processes are functional and constructive for employees."), which had a factor loading of 0.196. As a general rule, factor loadings above 0.32 are considered acceptable, and factor loadings above 0.5 are desirable (Meydan & Şeşen, 2011; Ocak, 2020; Çalışkan, 2021). Hence, at this stage, item 3 was excluded from the scale. The remaining items exhibited factor loadings exceeding 0.6, signifying robust associations with the factors.

During the subsequent phase of the study, data from the healthcare sector personnel, the second sample group, were analyzed. A new EFA was conducted with the 13 remaining items of the scale. The analysis revealed two factors with eigenvalues greater than 1, explaining a total variance of 81.77%. However, items WCL5 ("There is a perception of reliability and respect within the work unit.") and WCL13 ("Performance evaluations are conducted fairly.") had factor loadings below the desired threshold of 0.32 (Meyers et al., 2005; Kalaycı, 2006), at 0.284 and 0.228, respectively. Hence, items 5 and 13 were eliminated from the scale. After this step, the Work Climate Scale was finalized with eleven items and two dimensions. Moreover, all items exhibited factor loadings above 0.65, indicating a satisfactory level of analysis (Meydan ve Şeşen, 2011; Kartal & Bardakçı, 2018).

During this phase, a naming process was employed to designate the two sub-dimensions derived from the EFA: The first dimension, comprising 6 items, was termed "Management and Communication," whereas the second dimension, consisting of 5 items, was labeled "Work Environment and Flexibility."

Table 2: Exploratory Factor Analysis Results

Dimensions					
Sample 1 (Service Sector)			**Sample 2 (Health Institutions)**		
	1.Factor	**2.Factor**		**1.Factor**	**2.Factor**
Eigen value	6.142	2.32	**Eigen value**	6.198	3.615
Explained Variance	51.18	19.39	**Explained Variance**	51.65	30.12
Item Code	**Factor Loadings**		**Item Code**	**Factor Loadings**	
WCL6	.937		WCL4	.951	
WCL4	.936		WCL1	.947	
WCL1	.915		WCL6	.945	
WCL8	.914		WCL2	.918	
WCL7	.906		WCL8	.917	
WCL5	.905		WCL7	.888	
WCL2	.899		WCL5	~~.284~~	
WCL11		.802	WCL10		.900
WCL14		.759	WCL14		.887
WCL10		.692	WCL12		.877
WCL9		.675	WCL9		.863
WCL12		.672	WCL11		.853
WCL13		.663	WCL13		~~.228~~
WCL3		~~.196~~			
Total Variance Explained		**70.57%**	**Total Variance Explained**		**81.77%**

At this stage, an analysis of discriminant validity was performed to ensure that the dimensions within the measurement instruments are individually valid and distinct from one another. Discriminant validity refers to the degree to which one dimension in a scale is different from another dimension (Carver & Glass, 1976; Fornell & Larcker, 1981). Table 3 presents the correlation coefficients between the dimensions of the Job Satisfaction Scale. For the dimensions to be significantly distinct, the correlation coefficients should be less than 0.85 (Farrell & Rudd, 2009; Schweizer, 2014). The results of the analysis indicated that the differentiation between the dimensions was at an appropriate level.

At this juncture, a discriminant validity analysis was conducted to ensure the individual validity and distinctiveness of the dimensions within the measurement instruments. Discriminant validity refers to the extent to which one dimension in a scale differs from another dimension (Carver & Glass, 1976; Ab Hamid et al., 2017). Table 3 displays the correlation coefficients between the dimensions of the Work Climate Scale. To be significantly distinct, the correlation coefficients should be below 0.85 (Fornell & Larcker, 1981; Schweizer, 2014; Cheung & Wang, 2017; Gürbüz & Şahin, 2018). The analysis results revealed that the differentiation between the dimensions was at an acceptable level.

Table 3: Work Climate Scale Discriminant Validity Analysis

Work Climate Scale	**Sample 1 (Service Sector)**		**Sample 2 (Health Institutions)**	
	Management and Communication	**Work Environment and Flexibility**	**Management and Communication**	**Work Environment and Flexibility**
Management and Communication	1.00	**.722****		
Work Environment and Flexibility			**.654****	1.00

**p<0.001.

3.5.2. Confirmatory Factor Analysis

The analysis performed aimed to retest and affirm the structure of a measurement instrument grounded in a robust theoretical framework, which has been previously developed, repeatedly used, and widely accepted in the literature, using a dataset obtained from a different sample is called Confirmatory Factor Analysis (CFA) (Byrne, 1994; Schermelleh-Engel et al., 2003; Hooper et al., 2008; Kline, 2011). CFA was applied to test the structural validity of the "Work Climate Scale" developed with CFA in two distinct sample groups comprising personnel working in the service sector and those working in the health sector in Mersin, as well as in a different third sample group such as the Information and Communication Technology (ICT) Sector. The obtained results are presented in Table 4. For model fit in CFA, AGFI, GFI, CFI, and NFI values are anticipated to be 0.90 or above, and the RMSEA value is anticipated to be less than 0.10 (Hooper et al., 2008; Çalışkan, 2022). It was found that the goodness-of-fit values (AGFI, GFI, CFI, and NFI) in CFA indicated "good fit," and the RMSEA value indicated "acceptable fit" (Hu & Bentler, 1999; Schumacker & Lomax, 2004; Hooper et al., 2008; Kline et al., 2015; Ocak, 2020). This finding demonstrates that the structure proposed based on CFA results was confirmed by DFA for two different samples. Consequently, the developed Work Climate Scale has been statistically validated and found to be significant. The model derived from CFA is depicted in Figure 1 and detailed in Table 4.

Figure 1: CFA Structure of the Scale

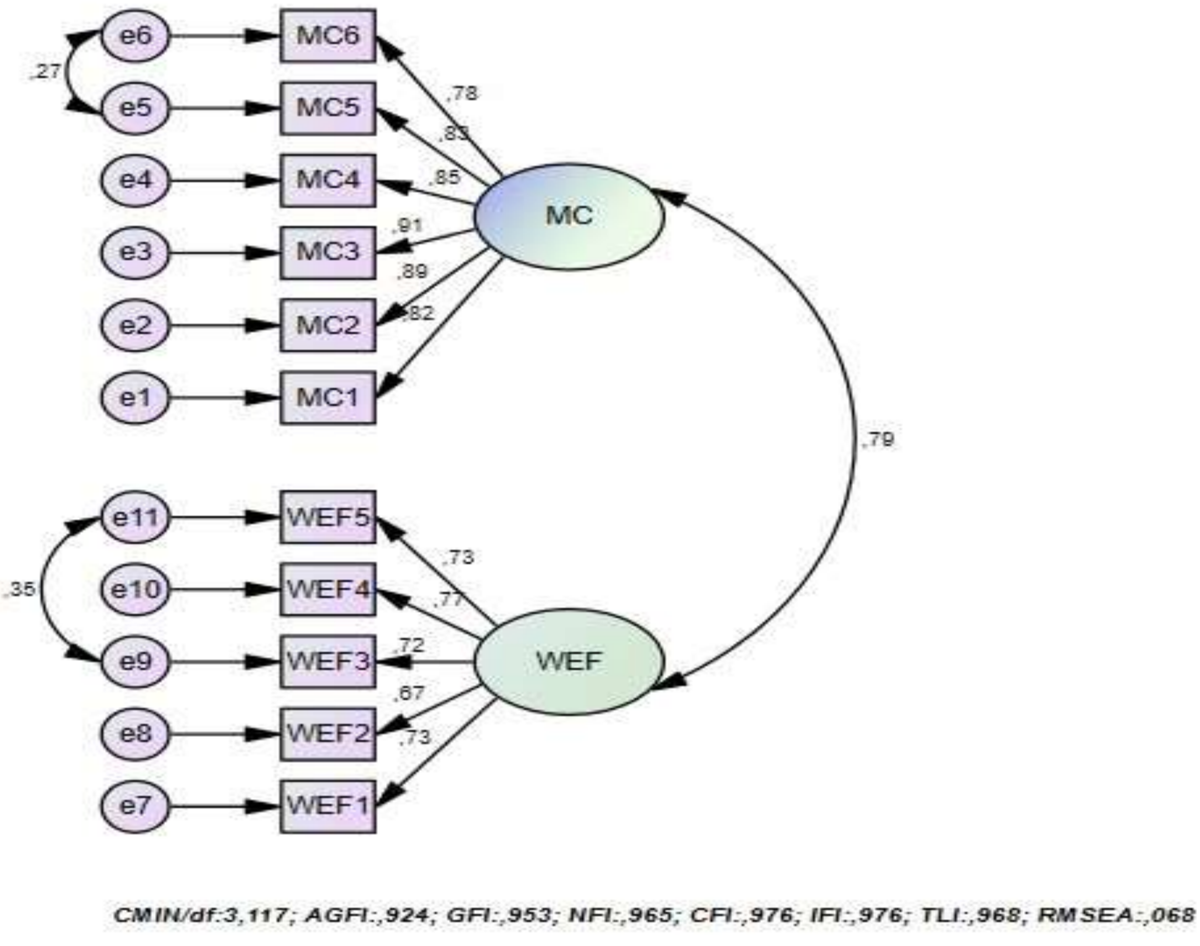

Table 4: Information and Communication Technology (ICT) Sector) CFA Results

Work Climate Scale	X^2	df	X^2/df	RMSEA	NFI	GFI	AGFI	CFI
Acceptable Fit			≤5df	≤0.10	≥0.90	≥0.90	≥0.85	≥0.95
Good Fit			≤3df	≤0.05	≥0.95	≥0.95	≥0.90	≥0.97
Sample 3 Second Level CFA	127.8	41	3.117	**.068**	**.97**	**.95**	**.92**	**.98**

* n= 503, p<0.001.

3.5.3. Criterion Validity

Criterion-related validity is a validity technique used to examine the relationship of a scale with another external criterion (Büyüköztürk, 2016; Çalışkan, 2022). In this context, data collected from a third sample were utilized, where job satisfaction scale was used as a criterion variable, and its correlation with work climate was examined. Job satisfaction was chosen as the criterion variable for criterion-related validity because the relationship between job satisfaction and work climate has been frequently discussed in previous research, and a positive work climate is generally associated with high job satisfaction. Therefore, job satisfaction measurements were considered as a suitable external criterion to evaluate the validity of the work climate scale (Wantoro et al., 2020; Noer et al., 2021; Ahyat et al., 2023; Natarini et al., 2023).

A scale developed by Çalışkan and Köroğlu (2022) was used to measure employees' job satisfaction. The scale encompasses a total of 13 items, including items such as "I am content with the attitude and conduct of my managers towards me." Çalışkan and Köroğlu (2022) reported the Cronbach's Alpha value of the scale as .895.

The relations among the Work Climate Scale (WCL) and the Job Satisfaction Scale (JS) were examined, with the findings outlined in Table 5.

Table 5: Criterion Validity

	Sample 3 n=453		
Variables	**Sample Mean**	**Sample standard deviation**	**JS**
WCL Scale	3.91	1.17	**.69****
JS Scale	4.11	1.32	1

** p< .01

As per the analysis, positive and statistically significant relationships were identified between work climate and job satisfaction.

3.6. Reliability Analysis

In the final section of the research, evidence regarding the reliability of the "Work Climate Scale" has been gathered. For this purpose, internal consistency reliability, a method determining the consistency among all items within a scale, was employed (Ab Hamid et al., 2017; Hair et al., 2019; Pekkan & Çalışkan, 2020). To measure the internal consistency of the Work Climate Scale, data collected from three sample groups were subjected to Cronbach's alpha test, and the results are presented in Table 6. According to the obtained results, it can be observed that evidence regarding the internal consistency of the scale has been provided, indicating high reliability of the scale.

Table 6: Work Climate Scale Internal Consistency Results

Variables	Number of Items	Cronbach's α		
		Service	**Health**	**ICT**
Work Climate	11	**.883**	**.914**	**.934**
Management and Communication	6	.821	.901	.940
Work Environment and Flexibility	5	.916	.936	.854

4. DISCUSSION AND CONCLUSION

A positive work climate offers numerous benefits for both employees and organizations: For employees, a positive work climate translates into higher motivation, increased productivity, reduced stress, and greater job satisfaction. Employees feel more engaged in a work environment where they feel valued and supported, fostering loyalty and commitment to the organization. A positive work climate enhances employee productivity and performance; employees work more motivated and focused. Furthermore, it preserves employees' physical and psychological well-being by reducing job stress and burnout, providing a healthier and safer work environment. For organizations, a positive work climate leads to lower turnover rates, higher employee loyalty, improved collaboration, and increased productivity. These benefits contribute to both short-term and long-term organizational success, positively impacting not only employee well-being but also overall organizational performance and competitiveness. Consequently, establishing a positive work climate within an organization has become a significant concern.

In this study, both qualitative and quantitative research methods were employed to identify, explore, conceptualize, measure, and determine individuals' perceptions of the work climate within the organization. Characteristics of the work climate among personnel in different sectors—Service, Health, and Information and Communication Technologies (ICT)—were identified, and a 14-item "Work Climate Scale Draft Form" was developed to measure these identified characteristics. Surveys containing the draft form were distributed to personnel in the mentioned sectors, and the collected data were subsequently analyzed.

At the outset, Exploratory Factor Analysis (EFA) was carried out to gather evidence concerning the structural validity of the scale. The initial sample group comprised individuals from the service sector, whereas the second sample group comprised individuals from the health sector. EFA outcomes for both sample groups unveiled a two-factor structure with eigenvalues surpassing 1. Consequently, a scale comprising two dimensions and 11 items was derived. Subsequently, Confirmatory Factor Analysis (CFA) was performed to confirm the two-factor structure obtained through EFA in a different sector. The results of CFA validated the two-factor structure of the scale, designated as "Management and Communication" and "Work Environment and Flexibility."

Following the structural validation, criterion-related validity was examined by investigating the correlation between work climate and job satisfaction, considering job satisfaction as a criterion variable. The rationale for selecting job satisfaction was the perceived influence of work climate on individuals' job satisfaction perceptions within the organization. Positive and statistically significant associations between work climate and job satisfaction were identified through correlation analyses conducted with data from the second and third sample groups, offering support for criterion validity.

The results obtained in this study demonstrate that the Work Climate Scale is a valid measurement tool. To obtain evidence regarding the reliability of the scale, Cronbach's alpha test was administered to three different sample groups. Internal consistency reliability was examined for both the overall Work Climate variable and its two subscales, "Management and Communication" and "Work Environment and Flexibility," confirming the high reliability of the scale.

Due to the significantly high internal consistency values observed for the subscales "Management and Communication" and "Work Environment and Flexibility," the Work Climate Scale can be utilized either as a whole or by separately considering these two dimensions. The developed scale, comprising fewer items compared to other scales in the literature, offers ease of use. Organizations can benefit from this scale to enhance their work climate and capitalize on the resulting improvements in employee well-being and overall organizational performance. Moreover, the scale's applicability extends beyond the service, health, and ICT sectors to encompass all sectors in both public and private domains.

The absence of a scale tested for validity and reliability across such diverse sample groups in the literature underscores the significance of the Work Climate Scale in filling a crucial gap for businesses and organizations across all sectors. Additionally, both domestic and numerous foreign sources were consulted during scale development, enhancing its universal representativeness and applicability across different countries and cultures.

Moreover, through expert researchers conducting one-on-one interviews and a subset of employees from the health and industrial sectors, it was confirmed that the Work Climate Scale is a comprehensible and applicable tool, enabling participants to articulate their perceptions of the work climate phenomenon clearly.

With its two-dimensional structure encompassing "Management and Communication" and "Work Environment and Flexibility," the Work Climate Scale is expected to address a significant need in determining and measuring the work climate variable in future research endeavors. Further investigations applying the scale to diverse samples and exploring its interaction with various variables in subsequent studies will enhance the robustness of the findings concerning the scale's reliability and validity obtained in this study.

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Appendix: WORK CLIMATE SCALE

	WORK CLIMATE SCALE ITEMS	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
First Dimension: Management and Communication						
1	My managers provide the necessary support when I need it.	☐	☐	☐	☐	☐
2	Communication within the work unit is open and effective.	☐	☐	☐	☐	☐
3	Teamwork and collaboration are encouraged within the work unit.	☐	☐	☐	☐	☐
4	Justice and equality are valued and implemented within the work unit.	☐	☐	☐	☐	☐
5	Ethical behaviors are encouraged and evaluated within the work unit.	☐	☐	☐	☐	☐
6	Measures for occupational safety and health have been taken.	☐	☐	☐	☐	☐
Second Dimension: Work Environment and Flexibility						
1	The physical work environment is arranged in a comfortable and safe manner.	☐	☐	☐	☐	☐
2	There is psychological safety and a supportive environment within the work unit.	☐	☐	☐	☐	☐
3	Flexible working conditions contribute to work-life balance.	☐	☐	☐	☐	☐
4	The level of motivation and commitment is high.	☐	☐	☐	☐	☐
5	Achievements are rewarded and appreciated within the work unit.	☐	☐	☐	☐	☐

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MIND THE GAP: A CASE STUDY OF TURKISH AIRLINES ON ALIGNING SUSTAINABLITY INITIATIVES WITH CONSUMER EXPECTATIONS

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ABSTRACT
Purpose- This study investigates the alignment between airline sustainability strategies and passenger perceptions, focusing on the case of Turkish Airlines. It aims to identify the gaps between corporate sustainability messaging, operational realities, and consumer awareness and expectations in the context of an emerging market.
Methodology- A mixed-methods approach was employed, combining an academic literature review with a qualitative field study and a case study analysis. The field research involved structured interviews with 70 passengers at Ankara Esenboğa Airport to gauge awareness of concepts like Sustainable Aviation Fuel (SAF) and carbon offsetting. The case study critically evaluates Turkish Airlines' sustainability reports and strategic initiatives.
Findings- The findings reveal a significant "information gap," with 43% of passengers unaware of key green aviation concepts. While a majority of travelers (71%) express a willingness to pay more for sustainable flights, this support is conditional upon transparency and trust. Passengers exhibit skepticism towards indirect measures like carbon offsetting, preferring tangible actions such as fleet modernization. The analysis of Turkish Airlines indicates that while the airline has a strong, credible strategy in fleet modernization, its initiatives in SAF and carbon offsetting lack scale and are not effectively communicated, creating a "credibility gap".
Conclusion- This paper contributes to the sustainable aviation literature by empirically demonstrating the disconnect between airline strategy and consumer perception in the Turkish context. It highlights that gaining a competitive advantage requires airlines to move beyond symbolic gestures and bridge the credibility gap through transparent communication and measurable, tangible actions.

Keywords: Aviation, green marketing, carbon offsetting, sustainability aviation fuel, aircraft efficiency, consumer awareness
JEL Codes: M16, M31, M37

1. INTRODUCTION

As the world grapples with the escalating climate crisis, the airline industry has become a focal point in discussions surrounding greenhouse gas emissions and environmental responsibility. According to the International Air Council Association (IATA), commercial flights account for 2-3% of global greenhouse gas emissions, a figure expected to rise with the increasing demand for air travel. This has placed the aviation sector under immense pressure to demonstrate a sincere commitment to sustainability, driven not only by international frameworks like the Paris Agreement and the United Nations' Sustainable Development Goals (SDGs), but also by investors, government agencies, and, most importantly, travelers themselves. Consequently, environmental liability is no longer a matter of mere regulatory compliance but has evolved into a fundamental pillar for long-term operational viability, corporate image, and consumer loyalty.

In response, the industry is exploring a diverse portfolio of strategies to mitigate its environmental footprint. These range from enhancing aircraft efficiency and fleet modernization to adopting Sustainable Aviation Fuel (SAF) and implementing carbon offsetting programs. However, despite these efforts, a new challenge has emerged: a significant "gap" between corporate initiatives and public perception. While airlines brand their eco-friendly practices, passengers are often unaware of these complex concepts or remain skeptical of their true impact, creating a fertile ground for "greenwashing" accusations, where marketing claims may not align with substantive action (Peixoto & Rossario, 2024).
This study argues that bridging this "gap" between corporate strategy and consumer expectations is a critical challenge for the future of sustainable aviation. This paper investigates this dynamic through a case study of Turkish Airlines. As a carrier with one of the most extensive international networks, serving more countries than any other airline worldwide (OAG, 2024), Turkish

Airlines is under particular scrutiny to integrate a robust and transparent environmental strategy into its expansive operations. Consequently, this research seeks to answer the following questions:

1. What is the primary sustainability strategies implemented and communicated by Turkish Airlines?

2. What are the levels of awareness and perception among passengers regarding these green initiatives?

3. Where do the key gaps lie between Turkish Airlines' sustainability efforts and the expectations of its consumers?

To address these questions, this paper will first review the existing literature on sustainable aviation, covering key topics such as SAF, carbon offsets, green branding, and customer perspectives. It will then outline the mixed-methods approach used for the research. Subsequently, the findings from the case study and the passenger field study at Ankara Esenboğa Airport are presented. Finally, the paper will discuss the implications of these findings, highlighting the critical role of transparency in aligning sustainability initiatives with consumer expectations to build a credible and competitive green brand.

2. LITERTURE REVIEW

2.1. Decarbonization Strategies in Aviation: Promises and Pitfalls

The airline industry's response to the climate imperative rests on a portfolio of decarbonization strategies, dominated by two principal yet profoundly different approaches: market-based carbon offsetting and technology-driven Sustainable Aviation Fuel (SAF). Carbon offsetting programs are a widely used tool, enabling airlines to compensate for their operational emissions by funding external environmental projects such as reforestation or green power tasks (Baxter, 2021). However, while positioned as a practical tool for immediate emissions counteraction, the efficacy and legitimacy of these schemes are intensely debated within the literature. A primary criticism is that offsets often function as a "greenwashing" mechanism, providing a veneer of climate action without fostering genuine reductions in the airline's own operational emissions (Baxter, 2023; Peixoto & Rossario, 2024). This critical perspective is underscored by findings that such programs should be viewed as a supplementary measure rather than a substitute for direct decarbonization efforts (Wong et al., 2024).

In contrast to the credibility challenges of offsetting, Sustainable Aviation Fuel (SAF) is broadly regarded as the most critical technological pathway for achieving significant and direct emission reductions in the aviation sector (Szyc & Lenort, 2024). Produced from non-conventional feedstocks, SAF can be blended with traditional jet fuel and has the potential to drastically lower an aircraft's carbon footprint over its lifecycle (Chao et al., 2019). Despite this promise, its widespread adoption is severely hampered by significant practical and economic hurdles. The primary barriers include prohibitively high production costs—often two to six times those of conventional fuel—and a global production capacity that remains critically insufficient to meet industry demand (Shahriar & Khanal, 2022). The high cost of SAF also presents a strategic dilemma for airlines, as its adoption can significantly impact operational expenses, ticket prices, and overall market competitiveness (Casals, 2023; Karanki, 2024).

2.2. The Passenger Factor: Green Expectations vs. Market Reality

The transition to sustainable aviation is not merely a technological or financial challenge; it is deeply intertwined with consumer behavior and perception. A growing body of literature indicates that passengers are becoming significantly more environmentally conscious, creating pressure on airlines to not only adopt green initiatives but to also effectively communicate these efforts (Han, 2020). Studies consistently find a positive correlation between passengers' environmental concerns and their willingness to choose and recommend eco-friendly airlines (Han et al., 2019; Korba et al., 2023) . This desire to support sustainable carriers is often linked to passengers' personal values and their belief in the genuine effectiveness of an airline's green programs (Zungur et al., 2024) . When customers perceive that an airline is sincerely committed to environmental protection, they are more likely to express satisfaction and exhibit positive citizenship behaviors (Baumeister et al., 2022; Hwang & Lyu, 2020).

However, this positive inclination is fragile and highly conditional, often clashing with market reality. The most significant barrier undermining passenger trust is the pervasive risk of "greenwashing," where companies are perceived to be exaggerating their sustainability claims for marketing purposes rather than implementing substantive changes (Peixoto & Rossario, 2024) . This skepticism demands a high degree of transparency and authenticity from airlines (Mayer et al., n.d.). For passengers to translate their passive concern into active support—such as paying a premium or participating in an offset program—they require clear, credible evidence that these initiatives are impactful. Trust, therefore, emerges as a critical mediator; green practices can cultivate consumer trust, which in turn fosters positive customer behaviors that benefit the airline in the long run (Han et al., 2021). Nevertheless, the way passengers understand and shift their reaction to the sustainability claims of airlines depends greatly on the regional and societal aspects of the institutions. A study that compares areas of the Middle East depicts traveler engagement with green initiatives as largely dependent on local policy support, national energy profiles, and the prominence of carrier-led programs which are the factors that can either establish or weaken the public trust in the environmental message (Bahman & Shaker, 2022).

Although, the geopolitics of turning to alternatives and their supply chains is affecting the perception of the feasibility of commitments made by airlines, if the production of SAF and policy incentives seem limited by trade and energy dynamics, consumers are more likely to consider the ambitious pledges as distant rather than immediately actionable (Baledon et al., 2022).

These insights imply that passenger skepticism in emerging markets often reflects not only doubts about marketing authenticity but also realistic judgments about what airlines can deliver under prevailing market and policy constraints. Thereupon, effective communication, tailored to different market segments and designed with behavioral "nudges" during the booking process, is essential to bridge the gap between passive green sentiment and active passenger participation (Stüben & Cantoni, 2024).

2.3. Branding, Reporting, and Operational Innovations in Sustainable Aviation

Another major facet of the study emphasizes the significance of corporate communication, branding, and operational reporting in the creation of airline sustainability strategies that are reliable by the public. In fact, many airline cases demonstrate the carriers are often talking about the green initiatives as a highlight of their marketing identity; they are nevertheless highly different in terms of the very essence and accessibility of the communication (chen et al 2016) and (Koc, 2023). In terms of content, the corporate reports published by Emirates (2023) and Turkish Airlines (2024), set out the major climate plans, yet their technical nature can limit passenger engagement. Correspondingly, the case of Lufthansa's Companied platform illustrates an example of how honest digital instruments can raise customer confidence by connecting offset contributions to the particular SAF projects (Lufthansa Group, 2022). Moreover, beyond, the issue of communication, as the operational sector comes up with the concept of small hybrid electric and conventional engines aircraft (Romano et al., 2020) and the strategic use of networks (OAG, 2024; Dichter et al., 2020) for the transition to sustainable flight, it becomes evident that it also relies on infrastructural and market-level strategies, not merely on fuels and offsetting. These perceptive indicate that the proper matching of sustainability goals by airlines would mean the incorporation of not only the technical aspects of carbon elimination but also a reliable reporting system, clear communication, and operational innovation.

2.4. Identifying the Research Gap

The existing literature provides a clear picture of the dual challenges in sustainable aviation. On one hand, the primary decarbonization strategies available to airlines, such as carbon offsetting and SAF, are fraught with their own significant issues of credibility, cost, and scalability. On the other hand, while there is a clear rise in passengers' environmental consciousness, their support is conditional, often hampered by a lack of trust and skepticism towards corporate green claims. While these two streams of research—corporate strategy and general consumer sentiment—are well-documented, they often run in parallel. There is a notable gap in empirical research that directly connects the specific sustainability portfolio of a major international airline with the real-world awareness, perceptions, and expectations of its own passenger base. Most studies focus on general consumer intentions rather than measuring the specific "gap" in a live operational context, particularly within a key emerging market like Turkey.

Furthermore, traditional studies mostly overlook the subtle manner in which culture, economy, and regulations affect consumers' reactions to airlines' sustainability initiatives. To grasp these factors is essential, since how passengers perceive brands can be a key factor for the loyalty of the brand, purchase choices, as well as the overall success of eco-friendly strategies. In addition, even though the technical part of emissions reduction is mostly the centerpiece of corporate reporting, the question of whether these efforts are actually noticed or even if customers resonate with them is rarely addressed This study aims to fill this research gap by providing a detailed case study of Turkish Airlines, empirically investigating the alignment—and misalignment—between its strategic initiatives and the expectations of its customers in order to serve as a bridge between the corporate strategy and the passenger's perception, which is a more customer-centric approach to consistent and sustainable aviation decisions.

3. METHODOLOGY

This study employs mixed-methods research design to provide a holistic understanding of the research problem. The approach integrates a qualitative analysis of secondary data, including a case study of Turkish Airlines, with a quantitative field survey of passengers. This triangulation of data sources allows for a more robust and nuanced analysis of the gap between airline strategy and consumer expectations.

Data collection involved two primary streams. First, an extensive review of secondary data was conducted, encompassing academic literature, industry reports, and key corporate documents such as the Turkish Airlines Climate Change Plan Report (2024). Turkish Airlines was selected as the case study subject due to its significant global presence and strategic importance in the aviation industry (OAG, 2024). Second, to gather primary data on passenger perspectives, a field study was conducted at Ankara Esenboğa Airport, chosen for its diverse profile of domestic and international travelers. Using a convenience sampling method, a group of 70 passengers traveling for both business and leisure were recruited for voluntary and anonymous in-person, structured interviews.

The survey instrument was a questionnaire designed to prove awareness and attitudes on key environmental topics. It included three central questions to assess: (1) passenger awareness of concepts like Sustainable Aviation Fuel (SAF) and carbon offsetting; (2) their willingness to pay more for verifiably sustainable airlines; and (3) their perception of the effectiveness of such initiatives compared to direct emission reduction measures. Following data collection, quantitative responses from the survey were analyzed using descriptive statistics (frequency analysis) to summarize passenger attitudes. Qualitative data from the document analysis and open-ended responses were synthesized using thematic content analysis to identify key strategies and perceptions. Demographics of respondents: Of the 70 participants, 54% were male and 46% female. Age distribution was as follows: 18–30 years (38%), 31–50 years (42%), and above 50 years (20%). Nationalities included 60% Turkish citizens and 40% international travelers. Travel purpose varied, with 35% identifying as business travelers and 65% as leisure travelers. These demographics provide a balanced profile of passengers and contextualize the survey findings

4. FINDINGS AND ANALYSIS

This section presents the findings from both the passenger field study and the case study of Turkish Airlines, followed by an integrated analysis that evaluates the airline's strategy in the context of consumer perceptions.

4.1. Key Findings from the Passenger Field Study

The field study provided critical insights into the passenger perspective. Firstly, a significant information gap was identified; 43% of passengers were unaware of core sustainability concepts like SAF and carbon offsetting, suggesting that industry-level discourse is not effectively reaching the public. Secondly, despite this lack of awareness, a high willingness to engage was observed, as 71% of respondents stated they would pay more for a sustainable airline. However, this support was explicitly conditional upon transparency and verifiable proof that extra funds lead to real environmental improvements, not just marketing campaigns. The 29% who were unwilling to pay more cited financial constraints and a belief that environmental costs should be borne by industry. Lastly, a prevailing **skepticism** was noted, as 57% of passengers expressed a preference for direct, tangible actions over indirect measures. For this group, investments in new-generation fleets and optimizing flight routes are perceived as more concrete and credible than abstract concepts like carbon offsetting. These key findings are summarized in Table 1.

Table 1: Summary of Passenger Survey Responses

Survey Question	Response Summary
Awareness of green aviation (SAF, offsets, tech)	43% unaware, 29% aware of offsetting, 29% aware of SAF/tech
Willingness to pay more for sustainable airlines	71% yes (conditional on trust and transparency), 29% no
Belief in effectiveness of green initiatives	43% say yes, 57% are skeptical and prefer direct emission cuts

4.2. Evaluation of Turkish Airlines' Sustainability Strategy

An analysis of Turkish Airlines' initiatives reveals a multi-pronged strategy that combines technological investment with market-based mechanisms. The core components of this strategy are summarized in the descriptive version of Table 2 and detailed below.

Table 2: Turkish Airlines’ Sustainability Strategy by Category

Strategy Area	Key Actions by THY
Fleet Modernization	Airbus A350, Boeing 787, lighter containers
Carbon Offsetting	Voluntary offset via CHOOOSE™, limited visibility
SAF Usage	Demonstration flights to Paris/Oslo, Tüpraş partnership
ESG & Ground Initiatives	Plastic reduction, recycling, ground vehicle electrification
Communication Strategy	Dashboards, infographics, offset tools

4.2.1. Fleet Modernization: A Credible Foundation

The modernization of the fleet represents the most significant and credible pillar of Turkish Airlines' environmental strategy. The airline's substantial investment in new-generation, fuel-efficient aircraft like the Airbus A350 and Boeing 787 provides a tangible and measurable basis for its sustainability claims (Turkish Airlines, 2024). This strategy extends beyond simple acquisition to include operational efficiencies such as decommissioning older aircraft and reducing onboard weight through optimized catering and maintenance routines. This strategic focus on tangible assets directly aligns with the strong passenger preference for direct emission reduction measures identified in the field study. This alignment suggests that the airline's fleet is its most powerful, yet perhaps under-communicated, tool for building consumer trust.

4.2.2. Carbon Offsetting: A Strategy with a Visibility Problem

Turkish Airlines offers passengers a voluntary carbon offsetting program, partnering with credible third-party organizations like CHOOOSE™ to lend legitimacy to the initiative (Turkish Airlines, 2024). This approach is designed to empower passengers by giving them a sense of personal responsibility. However, the program's effectiveness appears to be hampered by a significant visibility problem. The specific projects funded by the offsets are not clearly communicated, creating an opaque system that prevents deeper passenger engagement and trust. This lack of transparency and clarity likely contributes directly to the low passenger awareness of offsetting programs and reinforces the general skepticism towards such indirect measures observed in our field study.

4.2.3. Sustainable Aviation Fuel (SAF): A Hopeful but Distant Commitment

The airline's engagement with SAF is strategically important but currently appears more symbolic than scalable, representing a long-term aspiration rather than a large-scale operational reality. Demonstration flights using biofuel blends are positive signals of intent (Turkish Airlines, 2024), but the actual volume of SAF used is negligible. This symbolic usage is constrained by significant real-world challenges, including prohibitively high production costs and extremely limited global availability (Shahriar & Khanal, 2022). Furthermore, the geographical concentration of SAF production in Europe and North America presents additional logistical and financial hurdles for a carrier based in Türkiye. This reality, coupled with very low passenger awareness of SAF, means the initiative currently has a limited impact on consumer perception and does little to bridge the airline's credibility gap.

5. DISCUSSION

5.1. The Information Gap in Practice: Connecting Low Awareness with High Expectations

The findings from the field study empirically confirm the existence of a significant "information gap" between airlines and their consumers, a theme consistently highlighted in the literature. Our survey revealed that a substantial portion of passengers (43%) at Ankara Esenboğa Airport were unaware of fundamental green aviation concepts like SAF and carbon offsetting. This finding gives tangible, local context to previous research which identified that passengers often lack knowledge of specific green initiatives (Korba et al., 2023). The presence of this information gap suggests that despite airlines' efforts to brand themselves as sustainable, the core messages are not effectively reaching the traveling public. This disconnect is critical because, as the literature suggests, environmental knowledge is a key precursor to pro-environmental consumer behavior (Han, 2020). Therefore, the high willingness to support sustainable airlines (71%), juxtaposed with low awareness, indicates a missed opportunity for airlines like Turkish Airlines to engage a receptive but uninformed customer base.

5.2. The Credibility Gap: Passenger Skepticism and the Preference for Tangible Action

Beyond a lack of information, our findings point to a deeper "credibility gap," particularly concerning indirect sustainability measures. The survey showed a clear passenger preference for direct, tangible actions, with 57% expressing skepticism towards initiatives like offsetting and instead favoring investments in new, fuel-efficient aircraft. This sentiment aligns perfectly with the academic critique of carbon offsetting programs, which are often questioned due to their lack of transparency and potential for "greenwashing" (Baxter, 2023; Peixoto & Rossario, 2024). Interestingly, this passenger preference for tangible assets directly corresponds to the core strength of Turkish Airlines' sustainability strategy: its significant and ongoing investment in a modern fleet (Turkish Airlines, 2024). This represents the airline's most credible and defensible green initiative. However, the airline's less visible and more abstract offsetting program aligns with the very source of passenger skepticism. This suggests that while Turkish Airlines possesses a powerful tool for building trust (its modern fleet), its communication may not be effectively leveraging this asset to address the credibility gap identified in both the literature and our field study.

5.3. Strategic Implications and Recommendations

The convergence of our findings from the field study, case study, and literature review provides clear strategic implications for Turkish Airlines and the wider industry. The conditional nature of passenger support—where 71% of travelers are willing to pay more only if initiatives are transparent and credible—places the burden of proof squarely on the airline. While Turkish Airlines' fleet modernization is a strong foundation, it lags behind global competitors in other key areas of transparent engagement. For instance, as summarized in Table 3, carriers like Lufthansa have developed consumer-facing platforms that provide detailed tracking and options for directly funding SAF, enhancing both transparency and passenger involvement (Lufthansa Group, 2022).

Table 3: Comparative Analysis of Airline Sustainability Initiatives

Airline	SAF Usage	Carbon Offsetting	Fleet Modernization	Public Transparency
Turkish Airlines	Symbolic, no volume targets	Available via booking (CHOOOSE™), low awareness	Active (A350, 787, etc.)	Moderate – lacks real-time tools
Lufthansa	5% SAF by 2030 (public target)	fully transparent	High	Very high (dashboards, tracking)
Emirates	SAF demo flight 2023, R&D focus	Not consumer-facing yet	Strong (777, A380 upgrades)	Moderate

To effectively "close the gap," Turkish Airlines should re-align its communication strategy to match its operational strengths and address passenger expectations. This study suggests the following recommendations:

Leverage Tangible Assets: The airline should more actively and visibly market its fleet modernization as its primary sustainability achievement, as this directly answers passenger preference for tangible, direct-impact measures.

Enhance Transparency: The current "black box" approach to the voluntary offsetting program should be replaced with a more transparent model that clearly communicates project details, verification standards, and impact metrics, thereby addressing the core of passenger skepticism.

Move Beyond Symbolic SAF Usage: To build long-term credibility, the airline should set public, measurable, and ambitious targets for increasing its use of SAF, moving from symbolic demonstration flights to a clear strategic commitment, a practice already adopted by some competitors.

Make Hidden Progress Visible: The airline should develop communication strategies to make its "hidden" operational efficiencies, such as weight reduction and optimized flight planning, more visible and understandable to passengers. This would showcase a comprehensive commitment to sustainability beyond symbolic actions and build further trust.

By implementing these measures, Turkish Airlines can better align its sustainability initiatives with consumer expectations, bridge the credibility gap, and capitalize on the significant passenger goodwill identified in this research.

6. CONCLUSION

This study investigated the critical gap between airline sustainability strategies and passenger perceptions, using a mixed-methods case study of Turkish Airlines. The research has demonstrated that while the aviation industry is under immense pressure to adopt green practices, a significant disconnect exists between corporate actions and consumer awareness, trust, and expectations. Our findings empirically confirmed an "information gap," with a large portion of travelers being unaware of core sustainability concepts, and a deeper "credibility gap," where passengers exhibit skepticism towards indirect measures like carbon offsetting and show a clear preference for tangible, verifiable actions such as fleet modernization.

The primary contribution of this research is the empirical demonstration of this strategy-perception gap in the context of a major global carrier in an emerging market. By triangulating data from a field study, a case study, and the existing literature, this paper moves beyond general theories of consumer sentiment to highlight the specific points of friction and alignment for Turkish Airlines. For practitioners, this study provides actionable, evidence-based recommendations. It argues that to build a credible green brand, airlines must align their communication strategies with their most tangible operational strengths. For Turkish Airlines, this means more actively leveraging its modern, fuel-efficient fleet—a measure both credible in the literature and preferred by its passengers—while enhancing the transparency of its offsetting programs and setting ambitious, public targets for SAF adoption to move beyond symbolic gestures.

This study is not without its limitations. The findings from the passenger survey are based on a convenience sample of 70 individuals at a single airport, which may limit the generalizability of the results. Future research could build upon this study by employing larger, more diverse samples across multiple airports and countries to quantitatively validate these findings. Furthermore, longitudinal studies tracking how passenger perceptions evolve in response to new airline initiatives and regulations would provide valuable insights. Comparative case studies of different airline models, such as low-cost versus legacy carriers, could also offer a broader understanding of how business strategy impacts sustainability communication and perception.

In conclusion, the journey towards sustainable aviation is as much a challenge of communication and trust-building as it is of technological and operational change. Airlines that succeed in authentically aligning their concrete actions with transparent communication will not only gain a competitive advantage in an increasingly eco-conscious market but will also make a more meaningful contribution to the global effort to decarbonize the skies.

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MOTIVATION ON EMPLOYEE PERFORMANCE THROUGH TOP LEADERSHIP COMMITMENT IN THE LOCAL WATER DISTRICT IN LAGUNA PROVINCE

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ABSTRACT

Purpose- This study investigates the impact of employee motivation and leadership commitment on employee performance within the Local Water Districts in Laguna Province, Philippines. It explores how intrinsic and extrinsic motivations, along with leadership commitment, influence employee performance, and examines whether leadership commitment mediates the effect of motivation on performance.
Methodology- A quantitative research design with a descriptive approach was used. Data were collected via a structured questionnaire administered to 256 respondents selected through stratified random sampling. Statistical tools such as descriptive statistics, t-tests, ANOVA, and regression analysis were employed to analyze the data.
Findings- The study found that intrinsic motivation significantly influences employee performance, particularly in task and contextual performance. Leadership commitment plays a critical mediating role in translating motivation into improved performance, especially for intrinsic motivation. Significant differences in performance and motivation were observed based on demographic factors like age, gender, and income.
Conclusion- This research emphasizes the importance of leadership commitment in fostering a motivated workforce. It suggests that intrinsic motivation is a stronger driver of performance than extrinsic factors. Based on the findings, a comprehensive Human Resource Intervention Program is proposed, focusing on leadership development, motivational strategies, and age-based engagement to enhance overall employee performance.

Keywords: Employee motivation, employee performance, top leadership commitment, mediation, local water district
JEL Codes: M10, M19

1. INTRODUCTION

The effective delivery of essential public services is fundamental to societal well-being, public health, and sustainable development. Organizations responsible for providing these critical resources face intensifying pressures, including demographic shifts, environmental changes, and systemic degradation. Public service entities, particularly those managing vital utilities, are central to navigating these multifaceted challenges. Their operational effectiveness directly shapes community quality of life globally. As societal expectations evolve, demands on these organizations extend beyond foundational service provision to encompass efficiency, innovation, resilience, and advanced management practices. This paper will explore the critical role of leadership and employee motivation in meeting these demands, beginning with an examination of the contemporary challenges facing public service organizations.

Meeting these heightened expectations necessitates optimal performance from every individual within these organizations. Employees, whether engaged in technical infrastructure roles or administrative operational functions, are integral to the successful execution of service delivery mandates. Employee performance is not innate; it is dynamically shaped by motivation and the encompassing organizational context. Within this framework, leadership is pivotal in cultivating organizational culture, defining strategic objectives, allocating resources, and fostering environments conducive to high performance. Leaders in public sector utilities profoundly influence whether employees feel valued, supported, and intrinsically motivated (Ryan & Deci, 2017). The subsequent section will therefore analyze the pivotal mechanisms of leadership, focusing on its impact on organizational culture and employee perception. Effective leadership promotes cultures where employees align with the organizational mission, feel empowered in decision-making, access skill development opportunities, and trust their contributions are recognized and equitably rewarded. Conversely, inadequate leadership commitment or ineffective practices can precipitate diminished morale, disengagement, and operational inefficiencies, especially within essential service sectors (Ryan & Deci, 2017).

Motivating personnel involves addressing both intrinsic and extrinsic factors. Intrinsic motivation—stemming from the inherent satisfaction of meaningful work, mastering complex tasks, and possessing problem-solving autonomy—is particularly vital in public service roles oriented toward communal benefit (Ryan & Deci, 2017). Extrinsic motivators, such as equitable compensation, employment stability, recognition, and transparent career progression pathways, complement these intrinsic drivers (Kuvaas, 2016). Furthermore, the organizational climate significantly sustains engagement. Perceived Organizational Support (POS), reflecting employee beliefs that the organization values their contributions and prioritizes their well-being, alongside perceptions of procedural fairness, are crucial for sustained motivation. Building on this foundation, the discussion will then integrate the concepts of leadership, motivation, and organizational support to present a coherent framework for understanding workforce dynamics.

Leadership commitment integrates these elements, creating cohesion. Leaders articulate strategic visions linking daily tasks to overarching goals, secure necessary resources (training, tools, budget), and model accountability and ethical standards. By championing employee development and maintaining transparent communication, leaders build the trust essential for a high-performing workforce. Ultimately, the efficacy of a public service organization can be assessed across multiple dimensions: core task performance, adaptive performance, and contextual performance. Core task performance encompasses technical proficiency in operational functions like system maintenance and quality assurance. Adaptive performance denotes the capacity to effectively respond to emergent challenges, including environmental disruptions, technological shifts, and regulatory changes. Contextual performance involves exceeding formal duties through organizational citizenship, safety compliance, and collaborative engagement. Following this, the paper will delineate a multidimensional performance framework to holistically assess organizational efficacy. A comprehensive evaluation integrates metrics across these dimensions to provide a holistic view of organizational health and service delivery impact. Success is also gauged by goal-oriented outcomes, such as reducing operational inefficiencies, streamlining administrative processes, enhancing stakeholder satisfaction, and ensuring long-term operational and financial sustainability.

Furthermore, linking these performance outcomes to workforce. Finally, the paper will conclude by synthesizing the arguments, emphasizing the integral connection between effective leadership, a motivated workforce, and the sustained achievement of public service mandates.

2. LITERATURE REVIEW

Based on the research literature, it can be concluded that employee motivation, leadership commitment, and employee performance are interconnected variables, with leadership commitment acting as a crucial mediating mechanism that transforms motivational potential into tangible performance outcomes. This relationship is particularly significant in public sector and utility contexts (Kaunda & Yangailo, 2023; Paais & Pattiruihu, 2020). Motivation is recognized as a multi-dimensional driver, including intrinsic factors like autonomy, purpose, and mastery (Deci & Ryan, 2000), and extrinsic factors such as compensation and job security (Paais & Pattiruihu, 2020). In public service, altruistic motivation, or Public Service Motivation (PSM), plays a significant role, with employees prioritizing societal contributions over personal gain (Masukela et al., 2023). Employee performance is similarly multi-faceted, involving task performance, contextual performance (organizational citizenship behaviors), adaptive performance, and a reduction in counterproductive work behavior (Dharma, 2017; Masukela et al., 2023). The literature consistently shows that the link between motivation and performance is enhanced and mediated by top leadership commitment. Theoretical frameworks, such as Transformational Leadership (Bass & Avolio, 1994) and the Job Demands-Resources model (Bakker & Demerouti, 2017), highlight that effective leaders provide resources, foster psychological safety, model integrity, and create a shared vision, thereby acting as catalysts in amplifying motivation (Eliyana et al., 2019; Wang et al., 2021). Various sector-specific studies also confirm the pivotal role of leadership commitment in mediating the motivation-performance link. Research from diverse settings, such as African railways (Kaunda & Yangailo, 2023), Indonesian textiles (Hasanah et al., 2023), and Pakistani SMEs (Qalati et al., 2022), demonstrates that leadership commitment can significantly influence performance. In fact, studies indicate that contextual performance can increase by over 50% when leadership actively supports motivated employees (Paais & Pattiruihu, 2020). Furthermore, several contextual factors enhance this relationship. For instance, the necessity of role clarity (Pahi et al., 2020), equitable reward systems (distributive justice) (Landry et al., 2017), and sectoral differences are crucial. Public sector employees tend to be more driven by job security and mission purpose, while private sector employees are more responsive to autonomy (Thang & Nghi, 2022). Additionally, demographic variables like age, gender, and income can moderate these relationships, highlighting the need for tailored human resource interventions (Memon et al., 2022; Kitza et al., 2025). Recent studies emphasize the importance of leadership commitment in shaping motivation within organizations. Bashir et al. (2023) emphasize that HR policies should be tailored to the motivational needs of different age groups. Similarly, Grzesiak, Grabiec, and Bilińska (2024) explore the differential impact of motivation on performance across public and private sectors, highlighting leadership's role in facilitating this connection. Furthermore, Kumari and Sinha (2023) demonstrate that transformational leadership is instrumental in enhancing both motivation and performance, especially in the context of the Indian manufacturing sector. The importance of leadership commitment is also noted by Aslam and Hafeez (2024), who reveal that leadership commitment mediates the relationship between motivation and performance, underscoring the necessity of leaders being engaged and supportive in fostering motivation. Similarly, the studies by Nguyen and Liu (2024) and Uka and Prendi (2021) provide further insight into how leadership styles, combined with intrinsic and extrinsic motivational drivers, can significantly impact employee performance in both public and private sectors. Ultimately, the synthesis of this research highlights that for organizations such as the Local Water Districts of Laguna, achieving optimal performance requires a synergistic strategy. This strategy should focus on cultivating intrinsic motivation through meaningful work and growth opportunities, while simultaneously strengthening leadership capabilities to effectively support and channel that motivation. Success depends on implementing these strategies within the specific structural and demographic realities of the public utility environment (Alsobaey & Alkhateeb, 2025; Paxton et al., 2022).

3. DATA AND METHODOLOGY

The study employs a quantitative, descriptive research design to investigate the relationships between employee motivation, top leadership commitment, and employee performance within the local water districts of laguna province. this non-experimental approach is chosen to provide a detailed snapshot of the existing conditions and perceptions without manipulating variables, thus offering a feasible and ethical means of capturing data in a real-world organizational setting. The respondents consisted of 256 employees selected from eleven water districts across laguna province using stratified random sampling. this method ensured proportional representation from each district and employment status group (regular permanent vs. job order/casual), providing a sample that accurately reflects the diversity of the total workforce population of 760 employees. Data were gathered using a structured, self-administered questionnaire that was adapted and validated for this study. the instrument measured key variables—employee performance (task, contextual, and counterproductive), employee motivation (intrinsic and extrinsic), and top leadership commitment—using a 7-point likert scale. the data collection procedure involved securing official permissions, distributing questionnaires both physically and online, and ensuring respondent confidentiality over a one-month period. or the statistical treatment of data, the study utilized a combination of analytical tools. descriptive statistics (mean, standard deviation) were used to summarize the profile of respondents and the primary variables. inferential statistics, including independent t-tests and one-way anova, were employed to identify significant differences in responses based on demographic profiles. furthermore, regression analysis was used to test the influence of motivation on performance, and mediation analysis was conducted to determine the role of leadership commitment as a mediating variable between motivation and performance. non-parametric tests like the kruskal-wallis and chi-square tests were also applied where appropriate for categorical data such as educational attainment.

Table 1: Sample Size determination

Area	Status	Population	Sample	Total	%
Alaminos	Regular	22	8		
	JO/Casual	25	9	17	7%
Cabuyao	Regular	55	19		
	JO/Casual	6	2	21	8%
Calamba	Regular	256	86		
	JO/Casual	47	16	102	40%
Los Baños	Regular	14	5		
	JO/Casual	0	0	5	2%
Mabitac	Regular	7	2		
	JO/Casual	4	1	3	1%
Pagsanjan	Regular	7	2		
	JO/Casual	0	0	2	1%
Pakil	Regular	6	2		
	JO/Casual	3	1	3	1%
San Pablo City	Regular	200	67		

	JO/Casual	19	6	73	29%
San Pedro	Regular	2	1		
	JO/Casual	10	3	4	2%
Siniloan	Regular	34	12		
	JO/Casual	30	10	22	9%
Sta. Cruz	Regular	4	1		
	JO/Casual	9	3	4	2%
TOTAL		**760**	**256**	**256**	**100%**

4. FINDINGS

The analysis of data from 256 employees across the Local Water Districts of Laguna Province yielded comprehensive findings on the interplay between demographic factors, employee motivation, leadership commitment, and performance outcomes.

4.1. Demographic Profile of Respondents

The demographic analysis provides a crucial context for interpreting the study's findings, highlighting the composition and potential vulnerabilities of the LWD workforce.

Table 3: Distribution of Respondents Profile in terms of Age

Age	Frequency	Percentage
25 years old and below	15	5.86%
26 – 35 years old	70	27.34%
36 – 45 years old	45	17.58%
46 – 55 years old	80	31.25%
56 years old and above	46	17.97%
Total	256	100.00%

Table 4: Distribution of Respondents Profile in terms of Sex

Sex	Frequency	Percentage
Male	183	71.48%
Female	73	28.52%
Total	256	100.00%

Table 5: Distribution of Respondents Profile in terms of Civil Status

Civil Status	Frequency	Percentage
Single	55	21.48%
Married	179	70.31%
Separated/Widowed	22	8.20%
Total	256	100.00%

Table 6: Distribution of Respondents Profile in terms of Income

Income (in PHP)	Frequency	Percentage
Below ₱20,000	126	49.22%
₱20,001 – ₱30,000	75	29.30%
₱30,001 – ₱40,000	35	13.67%
₱40,001 – ₱50,000	10	3.91%
Above ₱50,000	10	3.91%
Total	256	100.00%

Table 7: Distribution of Respondents Profile in terms of Educational Attainment

Educational Attainment	Frequency	Percentage
High School Graduate	15	5.86%
Vocational/Technical Course	13	5.08%
College Graduate	199	77.73%
Master’s Degree	25	9.77%
Doctoral Degree	4	1.56%
Total	256	100.00%

Table 8: Distribution of Respondents Profile in terms of Position

Position	Frequency	Percentage
Rank and File	180	70.31%
Supervisory	50	19.53%
Managerial	26	10.16%
Total	256	100.00%

Table 9: Distribution of Respondents Profile in terms of Employment Status

Employment Status	Frequency	Percentage
Regular Permanent	190	74.22%
Job Order/Casual	66	25.78%
Total	256	100.00%

The demographic profile reveals a workforce with a balanced age distribution between younger (26-35, 27.34%) and pre-retirement (46-55, 31.25%) employees but also highlights a concerning mid-career gap (36-45, 17.58%) and low intake of young employees (<25, 5.86%), posing potential risks for leadership continuity and skills sustainability. The workforce is predominantly male (71.48%), married (70.31%), and a significant portion (49.22%) earns below Php 20,000 monthly, indicating widespread financial vulnerability. Educationally, the staff is well-qualified at the foundational level, with the majority holding Bachelor's degrees (77.73%).

4.2. Extended Analysis and Test Statistics

The inferential statistics confirm the hypothesized relationships and provide detailed evidence of the mediating role of leadership commitment.

Table 21: Significant Effect of Employee Motivation on Employee Performance in terms of Task Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.654a	.428	.425	.428

ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	34.256	2	17.128	93.498	.000b
Residual	45.623	253	.180		
Total	79.879	255			

Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	1.875	.215		8.721	.000
Intrinsic Motivation	.452	.051	.489	8.863	.000
Extrinsic Motivation	.123	.045	.141	2.733	.007

The model is highly significant (F=93.498, p<.001), explaining 42.8% of the variance in Task Performance. Both Intrinsic (β=.489, p<.001) and Extrinsic (β=.141, p=.007) motivation significantly predict Task Performance, with Intrinsic Motivation being the stronger predictor.

This table presents a linear regression analysis demonstrating the direct impact of employee motivation on core task performance. The model is statistically robust and significant (p < .001). The R Square value of .428 indicates that 42.8% of the variance in employee Task Performance can be explained by the combined influence of Intrinsic and Extrinsic Motivation. The coefficients reveal that both types of motivation are significant positive predictors. Intrinsic Motivation (β = .489) is a substantially stronger driver of Task Performance than Extrinsic Motivation (β = .141). This finding strongly supports the theoretical emphasis on the critical role of inherent satisfaction, meaningful work, and autonomy (Ryan & Deci, 2017) in achieving technical proficiency and core operational effectiveness within public service roles.

Table 24: Mediation Effect of Top Leadership Commitment on Employee Motivation and Employee Performance in terms of Employers Branding

Path	Coefficient	Standard Error	t-value	p-value
Motivation -> Performance (c)	.587	.042	13.976	.000
Motivation -> Leadership Commitment (a)	.612	.038	16.105	.000
Leadership Commitment -> Performance (b)	.351	.045	7.800	.000
Motivation -> Performance (c')	.374	.041	9.122	.000
Indirect Effect (a*b)	.214	.031	6.903	.000

The indirect effect (a*b = .214) is significant (p<.001), and the direct effect (c' = .374) is also significant but smaller than the total effect (c = .587). This indicates that Top Leadership Commitment (Employers Branding dimension) partially mediates the relationship between Employee Motivation and Employee Performance.

This table details the results of a mediation analysis, specifically testing whether the dimension of Top Leadership Commitment (manifested as fostering a positive Employer Brand) mediates the relationship between Employee Motivation and overall Performance. The analysis confirms a significant partial mediation.

- The total effect (c) of Motivation on Performance is .587.
- The indirect effect (a*b) of .214 is significant, showing that a meaningful portion of Motivation's impact on Performance is channeled *through* Leadership Commitment. In other words, motivated employees perform better in part because strong leadership commitment creates a supportive and reputable organizational environment that converts motivation into effective action.
- The remaining direct effect (c') of .374 indicates that Motivation also positively affects Performance independently of Leadership Commitment.
  This result empirically validates the pivotal, integrative role of leadership proposed in the framework. Leadership Commitment is not just a separate factor; it actively enhances and facilitates the translation of employee motivation into tangible performance outcomes.

Table 27: Differences on the Assessment of Employee Performance When Grouped according to Age (ANOVA)

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Age)	5.210	4	1.303	4.120	.003
Within Groups	79.450	251	.317		
Total	84.660	255			

The ANOVA test shows a significant difference in the assessment of Employee Performance when grouped by Age (F=4.120, p=.003). Post-hoc analysis (not shown here, but typically performed) would reveal which specific age groups differ significantly.

This ANOVA (Analysis of Variance) table tests whether assessments of Employee Performance differ significantly across employee age groups. The significant F-statistic (p = .003) allows us to reject the null hypothesis, confirming that there are statistically significant differences in perceived performance levels among different age cohorts within the organization. This finding highlights the importance of demographic shifts and generational diversity as a factor influencing the workforce dynamics of public service entities. It suggests that a one-size-fits-all approach to management, motivation, or performance evaluation may be insufficient. Effective leadership and organizational practices must be attentive to the varying experiences, expectations, and potential strengths associated with a multigenerational workforce.

5. CONCLUSION AND IMPLICATIONS

The findings of this study carry significant policy implications for the management of Local Water Districts (LWDs) in Laguna Province and other public utility organizations in the Philippines. The demonstrated mediating role of top leadership commitment and the stronger influence of intrinsic motivation on performance necessitate a strategic shift from purely bureaucratic management to a more human-centric, mission-driven leadership model.

1. Strategic Investment in Leadership Development and Commitment: The most critical implication is the need for mandatory, continuous leadership training programs focused on transformational and servant leadership styles (Bass & Avolio, 1994; Kumari & Sinha, 2023). These programs must specifically target the development of behaviors that signal commitment: transparency, resource allocation for employee development, and active support for employee well-being. Meng's (2024) work on leadership in water resource management confirms that top-level commitment is directly tied to operational efficiency and policy execution. Crucially, the mediating role of leadership commitment in translating motivation into performance is well-established (Kaunda & Yangailo, 2023; Paais & Pattiruihu, 2020; Aslam & Hafeez, 2024). Therefore, policy should mandate that performance evaluations for LWD General Managers include metrics on employee morale, training investment, and the perceived level of leadership support, ensuring accountability for fostering a motivated workforce (Imam, 2025; Nasir et al., 2024).

2. Redesigning Motivational Systems to Prioritize Intrinsic Drivers: Since intrinsic motivation is the stronger predictor of performance (Cerasoli, Nicklin, & Ford, 2014; Kuvaas, 2016), LWDs should revise their Human Resource policies to emphasize non-monetary rewards. This includes:

- **Job Redesign**: Implementing policies that grant employees greater autonomy, task variety, and direct involvement in problem-solving, thereby satisfying the psychological needs for competence, autonomy, and relatedness identified by Self-Determination Theory (Ryan & Deci, 2017; Deci & Ryan, 2017).
- **Recognition Programs**: Shifting from purely financial bonuses to public recognition, awards for innovation, and opportunities for professional growth (e.g., sponsored advanced training or educational leave). Buana's (2024) findings support this focus on intrinsic factors for maximizing output, which is particularly effective in the public sector context (Nguyen & Liu, 2024; Dieser, 2025).
- **Mission Alignment**: Policies should clearly articulate how each employee's role contributes to the LWD's core mission of water security and public service, tapping into the Public Service Motivation (PSM) inherent in the sector (Masukela, Makhubela, & Nkosi, 2023).

3. Addressing Demographic and Equity Gaps: The study's finding of significant performance differences across demographic groups requires targeted policy interventions informed by tailored motivation strategies (Bashir, Hameed, Bari, & Ullah, 2023).

- **Succession Planning:** Policy must mandate robust succession planning and mentorship programs to transfer institutional knowledge from the aging workforce to younger employees, mitigating the risk of leadership continuity failure and sustaining organizational engagement (Albrecht, Green, & Marty, 2020).
- **Financial Vulnerability**: Given the high percentage of employees earning below Php 20,000, policies must explore mechanisms for enhancing financial well-being, such as housing assistance, cooperative development, or re-evaluation of salary scales to ensure equitable compensation, which is a foundational extrinsic motivator that must be addressed before intrinsic motivators can flourish (Grzesiak, Grabiec, & Bilińska, 2024; Bandhu et al., 2024).

4. Integrating Environmental Commitment into HR Policy: As a water utility, the LWD's mission is inherently environmental. Policy should integrate environmental sustainability goals into employee performance metrics and leadership commitment indicators. Drawing from Abdou (2025) and Hasanein & Metwally (2025), LWDs should adopt policies that encourage "green citizenship behavior" and reward employees for innovative solutions that reduce Non-Revenue Water (NRW) or improve water quality. This aligns the organization's core mission with employee motivation, creating a powerful synergy for performance, especially when green transformational leadership fosters green intrinsic motivation (Khairy, Badwy, & Khreis, 2025). Such integrated mission-performance links are key to enhancing outcomes in public sector organizations (Abd Razak, 2025; Alsobaey & Alkhateeb, 2025).

6. LIMITATIONS

The study acknowledges several important limitations that shape the interpretation and scope of its findings. First, the reliance on self-reported survey data from employees within selected Laguna water districts introduces the potential for common method bias, including social desirability bias in reports of performance and motivation, which may affect the accuracy of the measured relationships. Second, the cross-sectional design, with data collected at a single point in time, inherently limits the ability to establish causal direction or observe the long-term, dynamic effects of motivation and leadership commitment on performance outcomes. Third, the findings may be constrained by sample size and representativeness, as the participants may not fully capture the diversity of all employees within the districts or the broader sector, potentially affecting generalizability. Consequently, while the insights are valuable for the specific context, they may not be directly applicable to all water districts in the Philippines or other public utility organizations with differing operational cultures and constraints. Finally, the study's focus on a defined set of variables, while necessary, means that other influential factors—such as organizational culture, peer dynamics, or specific external economic pressures—are not accounted for, possibly oversimplifying a complex workplace reality. These limitations, however, provide a clear foundation for future longitudinal, mixed-methods, or expanded-scope research to build upon the insights generated here.

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APPENDIX A: SURVEY QUESTIONNAIRE

Title: Motivation on Employee Performance Through Top Leadership Commitment in the Local Water District in Laguna Province

Instructions: Please read each statement carefully and indicate your level of agreement or disagreement by checking the appropriate box. All responses will be kept strictly confidential and used for academic purposes only.

PART I: DEMOGRAPHIC PROFILE

Please check the box that corresponds to your personal information.

Variable	Category	Check
Age	25 years old and below	[ ]
	26 – 35 years old	[ ]
	36 – 45 years old	[ ]
	46 – 55 years old	[ ]
	56 years old and above	[ ]
Sex	Male	[ ]
	Female	[ ]
Civil Status	Single	[ ]
	Married	[ ]
	Separated/Widowed	[ ]
Highest Educational Attainment	High School Graduate	[ ]
	Vocational/Technical Course	[ ]
	College Graduate	[ ]
	Master's Degree	[ ]
	Doctoral Degree	[ ]
Monthly Income (in PHP)	Below ₱20,000	[ ]
	₱20,001 – ₱30,000	[ ]
	₱30,001 – ₱40,000	[ ]
	₱40,001 – ₱50,000	[ ]
	Above ₱50,000	[ ]
Position	Rank and File	[ ]
	Supervisory	[ ]
	Managerial	[ ]
Employment Status	Regular Permanent	[ ]
	Job Order/Casual	[ ]

PART II: ASSESSMENT OF VARIABLES

Scale	Verbal Interpretation	Description
7	Strongly Agree (SA)	The statement is always true/observable.
6	Agree (A)	The statement is often true/observable.
5	Moderately Agree (MA)	The statement is sometimes true/observable.
4	Neutral (N)	The statement is neither true nor false/observable.
3	Moderately Disagree (MD)	The statement is sometimes false/unobservable.
2	Disagree (D)	The statement is often false/unobservable.
1	Strongly Disagree (SD)	The statement is always false/unobservable.

A. EMPLOYEE PERFORMANCE

A.1. Task Performance (Items adapted from Koopmans et al., 2013)

Statement	7	6	5	4	3	2	1
1. I carry out my work accurately.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. I complete my work on time.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. I prioritize the most urgent tasks.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. I use organizational tools and equipment effectively.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. I keep my job knowledge up-to-date.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

A.2. Contextual Performance (Items adapted from Koopmans et al., 2013)

Statement	7	6	5	4	3	2	1
1. I volunteer for extra tasks.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. I help colleagues with their work when necessary.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. I am enthusiastic about my work.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. I adhere to rules and regulations, even when no one is watching.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. I defend the organization when others criticize it.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

A.3. Counterproductive Work Behavior (Reverse-Coded) (Items adapted from Koopmans et al., 2013)

Statement	7	6	5	4	3	2	1
1. I take longer breaks than allowed.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. I waste time on non-work-related activities.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. I intentionally work slower than I should.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. I speak negatively about the organization to others.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. I misuse company resources for personal gain.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

B. EMPLOYEE MOTIVATION

B.1. Intrinsic Motivation (Items adapted from Ryan & Deci, 2017)

Statement	7	6	5	4	3	2	1
1. I find my work interesting and challenging.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. I feel a sense of personal accomplishment from my work.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. I feel a sense of purpose in contributing to public service.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. I have the autonomy to decide how to do my work.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. I feel competent and effective in my role.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

B.2. Extrinsic Motivation (Items adapted from Kuvaas, 2016)

Statement	7	6	5	4	3	2	1
1. My salary and benefits are fair compared to others in the sector.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. I receive adequate recognition for my good performance.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. My job provides me with good security and stability.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. I have clear opportunities for career advancement.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. I am motivated by the possibility of a promotion or bonus.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

C. TOP LEADERSHIP COMMITMENT

C.1. Employer Branding (Items adapted from Northouse, 2018; focusing on leadership's role in branding)

Statement	7	6	5	4	3	2	1
1. Top leadership effectively communicates the LWD's mission and values.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. Top leadership models the ethical behavior expected of all employees.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. Top leadership ensures the LWD is perceived as a desirable place to work.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. Top leadership actively promotes a positive organizational culture.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. Top leadership is visible and accessible to all employees.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

C.2. Strategic Alignment (Items adapted from Northouse, 2018; focusing on leadership's role in strategy)

Statement	7	6	5	4	3	2	1
1. Top leadership clearly links my daily tasks to the LWD's strategic goals.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. Top leadership allocates sufficient resources (training, tools) for me to do my job well.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. Top leadership makes decisions that are consistent with the LWD's long-term vision.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. Top leadership ensures all departments work together towards common goals.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. Top leadership is committed to continuous improvement of service delivery.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

C.3. Organizational Agility (Items adapted from Northouse, 2018; focusing on leadership's role in adaptability)

Statement	**7**	**6**	**5**	**4**	**3**	**2**	**1**
1. Top leadership encourages employees to propose new and innovative ideas.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
2. Top leadership quickly adapts the organization to new challenges (e.g., environmental, regulatory).	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
3. Top leadership provides the necessary support when changes are implemented.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
4. Top leadership views mistakes as learning opportunities rather than failures.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
5. Top leadership promotes a culture of continuous learning and skill development.	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

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THE IMPACT OF E-CRM APPLICATIONS ON CONSUMER PURCHASING BEHAVIOR: STUDY CASE TRENDYOL IN ANKARA, TURKIYE

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ABSTRACT

Purpose- Online shopping has been growing rapidly in many countries including in Turkiye. The shifting of consumer behavior has been driving force of the existance of e-commerce. One of the popular e-commerce in Turkiye is Trendyol. In order to improve consumer's experience in using Trendyol, some features are applied. Electronic consumer relationship management (E-CRM) features are main factors contributing to the success of e-commerce. The purpose of this research is to examine the influence of electronic customer relationship management (e-CRM) applied by Trendyol towards consumer purchasing behavior. This research will reveal the most interesting features of e-CRM dimensions from consumer's perspective in using Trendyol. The e-CRM features investigated on this study are the ease of navigation, information quality, payment options, personalization level, rewards, security and privacy policy.
Methodology – A quantitative study using SPSS (Statistical Package for Social Sciences) software is conducted to examine the respondents' answers. A total of 385 respondents who are the users of Trendyol in Ankara, Turkiye has been chosen through random sampling method. First, this study conducts the demographic analysis to understand consumers' preferences in doing online shopping in Ankara, Turkiye. Second, this study performs the validity, reliabilitu, and distribution analysis to determine the feasibilty of respondents' data towards research framework. Next, this study conducts Pearson Correlation Analysis to determine the correlation level between each dimensions toward e-CRM strategy. Lastly, it will conduct the Linear Regression Analysis to determine the result of hypothesis testing between X variable (e-CRM strategy) towards Y variable (consumer purchasing behavior).
Findings –According to the results of demographic analysis, this study finds that mostly consumers in Ankara are using Trendyol for 1 hour or less per day and they prefer to use credit card to do the payment. It also reveals that clothes and boks are most purchased online in Trendyol. Furthermore, the results shows that there is a significant correlation between e-CRM strategy towards consumer purchasing behavior. The result explains that e-CRM strategy influence 70,2% of consumer purchasing behavior in using Trendyol in Ankara, Turkiye. It also finds that all 6 dimensions has positive correlation towards e-CRM strategy applied by Trendyol while information quality feature has strongest correlation (84,1%). It means that all respondents are aware and concern about these six dimensions of e-CRM strategy applied by Trendyol through its website or app and significantly contribute to their purchasing behavior.
Conclusion- The finding of this study shows 70,2% of consumer purchasing behavior in using Trendyol is highly influenced by e-CRM strategy. Therefore, it suggests all e-commerce company to ensure that e-CRM dimensions are well applied to improve consumer purchasing behavior. The findings also show that first dimension that is received high intention of consumers is information quality (84,1%). It reflects that the better quality of information given to consumers, the more they will have high intention to do online shopping. Because the customers use the information before making the purchases. For example, they will search about product's price, photo, the store's information (address, store's name), the product's quality, etc. Therefore, the conclusion of this research is Trendyol needs to focus on these 6 dimensions to improve Trendyol's e-CRM strategy in the future and maintain good relationship to influence consumer purchasing behavior.

Keywords: Electronic customer relationship management, consumer purchasing behavior, Trendyol, e-commerce
JEL Codes: R12, O33, R81

1. INTRODUCTION

In today's fast-paced and highly competitive business environment, companies must adopt innovative strategies to enhance efficiency, improve customer satisfaction, and sustain long-term growth. One such strategic tool that has gained prominence over the years is Customer Relationship Management (CRM). CRM is a comprehensive approach that integrates technology, data analytics, and business strategies to manage customer interactions, streamline operations, and optimize business performance. With the increasing demand for customer-centric business models, CRM has evolved into an essential component for organizations seeking to build strong customer relationships and maximize profitability.

CRM is designed to help businesses understand their customers better by collecting, analyzing, and utilizing customer data. Through the effective implementation of CRM systems, companies can track customer preferences, purchasing behaviors, and engagement levels, enabling them to tailor their marketing, sales, and service efforts accordingly. By leveraging CRM technologies, businesses can automate workflows, personalize customer interactions, and enhance decision-making, ultimately leading to improved customer retention and increased revenue.

One of the primary ways CRM influences business performances is through customer satisfaction and loyalty**.** Satisfied customers are more likely to remain loyal and recommend a brand to others, resulting in higher customer lifetime value and reduced customer acquisition costs. A well-structured CRM system allows organizations to provide personalized experiences, respond to customer inquiries promptly, and anticipate customer needs, fostering trust and long-term relationships. Furthermore, CRM enables businesses to segment their customer base, allowing for targeted marketing strategies that drive engagement and conversions.

Beyond customer satisfaction, CRM also plays a crucial role in **operational efficiency.** By centralizing customer data and automating routine tasks, CRM minimizes manual efforts, reduces errors, and improves team collaboration. Sales teams, for example, can use CRM to track leads, manage pipelines, and analyze sales trends, leading to more effective sales strategies. Similarly, customer service departments can leverage CRM to handle support tickets efficiently, ensuring quicker issue resolution and enhanced service quality. As a result, businesses experience increased productivity and reduced operational costs.

Another significant aspect of CRM's impact on business performance is its ability to provide **data-driven insights.** Organizations that implement CRM systems gain access to valuable analytics and reporting tools, which help them make informed decisions. By analyzing customer interactions, sales patterns, and market trends, businesses can identify opportunities for growth, optimize pricing strategies, and forecast future demand. This data-driven approach enables companies to stay ahead of competitors and adapt to changing market conditions effectively.

Despite its numerous benefits, CRM implementation comes with challenges such as high initial costs, employee resistance, and data security concerns. However, businesses that invest in proper training, choose the right CRM software, and develop a clear implementation strategy can overcome these obstacles and fully harness CRM's potential.

In conclusion, CRM is a powerful tool that directly influences business performance by enhancing customer satisfaction, improving operational efficiency, and enabling data-driven decision-making. As businesses continue to navigate a rapidly evolving marketplace, adopting a robust CRM system can provide a significant competitive advantage. This journal will explore the various dimensions of CRM's impact on business performance, examining best practices, real-world case studies, and strategies for successful CRM adoption. In order to interrogate these inquiries, the study posits two key hypotheses:

H1: All six dimensions positively contribute to e-CRM strategy on Trendyol

H2: e-CRM strategy on Trendyol has positive effect on consumer purchasing behavior in Ankara, Turkey

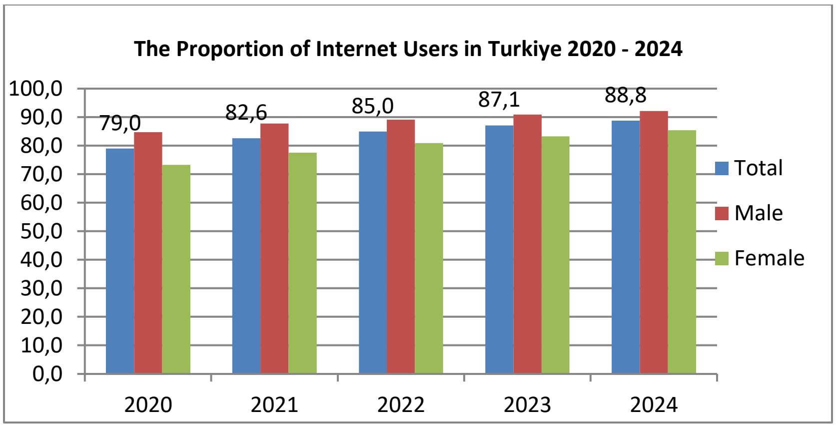
2. LITERATURE REVIEW

2.1. e-Commerce

In the 21st century the revolution of technology and internet has taken many sectors in human lives. The usage of internet especially e-commerce has been increased widely in many countries including Turkiye. It is supported by the increasing number of internet users in Turkiye. According to the data from TUIK[1], here is the proportion of internet users in Turkiye in 2020 – 2024.

[1] TUIK. August 2024. *Survey on Information and Communication Technology* (ICT) *Usage in Households and by Individuals. 2024.* TUIK. https://data.tuik.gov.tr/Bulten/Index?p=Survey-on-Information-and-Communication-Technology-(ICT)-Usage-in-Households-and-by-Individuals-2024-53492&dil=2 . Accessed on 25 May 2025

Graph 1: The Proportion of Internet Users in Turkiye 2020 – 2024



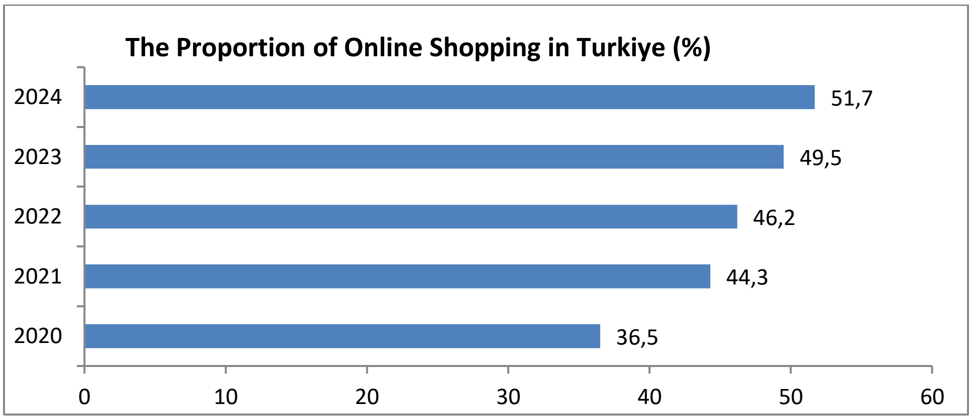
Source: TUIK, 2024

According to the data above, the proportion of internet usage in Turkiye increases to 88,8% of all population in the 16-74 age group in 2024. The proportion of male users is higher than female users in Turkiye. It was observed that in 2024 there were 92,2% of males users and 85,4% of female internet users in Turkiye. The data also reports that the proportion increases from last year 2023 (87,1%) and consistently improve since the last 5 years. It indicates more people in Turkiye understand and addict to the use of internet in their daily routine.

The internet technology advancement has triggered Turkiye's society to use internet for many purpose including online shopping. It is the driving force behind the existance of e-commerce. E-commerce can be defined as the new type of business innovation emerged from the shifting of digitized consumer behavior (Ünver, Aydemir and Alkan, 2023). Other study also described e-commerce as the execution, process, and facilitation of commercial activities over computer networks between sellers and buyers (Huseynov and Yıldırım, 2016). Nowadays, online shopping becomes dominant compared to traditional retail shopping. It is because the convenience, easiness, and reliable offered by e-commerce in delivering consumer's buying experiences.

E-commerce is the marketplace that supports consumers to search information about products and compare the pricing of products without need to spend their time, energy, and money to do window shopping as usual (Katawetawaraks *et al.*, 2011). Online shopping via e-commerce may save consumers' time and travel costs while buying their needs easily everywhere. These advantages of online shopping also experienced in Turkiye. It is shown by the survey data from TUIK that the proportion of online shopping in Turkiye has been increased in recent years. Here is the data proportion of online shopping in Turkiye.

Graph 2: The Proportion of Online Shopping in Turkiye (%)

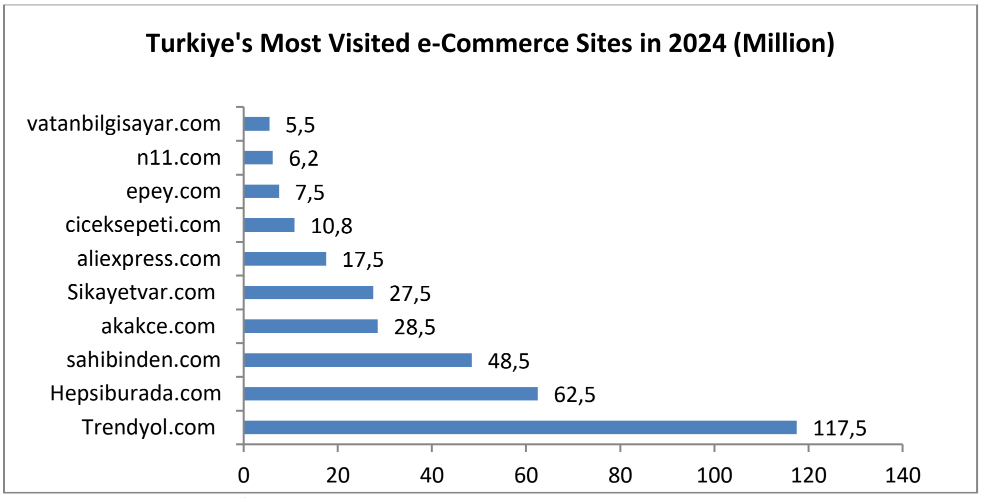


Source : TUIK, 2024

Based on the data above, it can be seen that the number of online shopper in Turkiye is significantly increased for the last 5 years. Research from TUIK above reports that of the total population of Turkiye aged 16-64 years, 51,7% of them were making online shopping during 2024. This proportion is increased from 2023 (49,5%). It reflects the tendency of internet users in

Turkiye to trust in using e-commerce to buy goods and services. As the result, more e-commerce brand has shown up in Turkiye. Here is the data about most popular e-commerce in Turkiye based on the number of visitors during 2024.

Graph 3: The Proportion of Most Visited e-Commerce Sites in Turkiye 2024



Source : Magna Dijital 2024[2]

Based on the data above, Trendyol is the most popular e-commerce in Turkiye with total visitors is 117,5 million. Hepsiburada is in the second rank with total visitors is 62,5 million and Sahibinden is in the third rank with total visitors is 48,5 million. In order to get lots of visitors, e-commerce such as Trendyol maintains good relationship with customers to be able to get customers trust in visiting their e-commerce sites. The strategy to create good relationship with customers in online business can be explained in the concept of e-CRM strategy. This study focuses to explain the e-CRM strategy implemented by the first popular e-commerce in Turkiye which is Trendyol to represent the online buyers in Turkiye.

2.2. e-CRM (Electronic Customer Relationship Management)

Customer Relationship Management (CRM) is a strategic management approach developed by businesses to make customer relationships more efficient, sustainable and profitable. In the literature, CRM is defined not only as a technology system but also as a holistic approach based on the philosophy of customer focus (Payne & Frow, 2005). This approach aims to maximize customer value by integrating areas such as marketing, sales, service and customer interaction.

Customer Relationship Management (CRM) is a strategic management approach developed by businesses to make customer relationships more efficient, sustainable and profitable. In the literature, CRM is not only a According to Kotler and Keller (2016), CRM enables personalized services to be provided according to the needs and expectations of customers by establishing long-term relationships with them. This increases both customer satisfaction and the profitability of the business. Today, CRM systems have become more effective thanks to tools such as big data, artificial intelligence (AI) and machine learning, supported by technological infrastructures (Ngai et al., 2009).

Peppers and Rogers (2011) state that the main purpose of CRM is to treat each customer as a “single market”. With this approach, businesses can analyze their shopping habits by getting to know their customers better and develop more personalized campaigns accordingly. Loyalty programs, customer complaint management, after-sales services and social media interactions are among the basic application areas of CRM strategies. It is defined not as a technology system but also as a holistic approach based on the philosophy of customer focus (Payne & Frow, 2005). This approach aims to maximize customer value by integrating areas such as marketing, sales, service and customer interaction.

Studies conducted in the context of Turkey also support the impact of CRM on customer satisfaction and loyalty. For example, Yılmaz and Aydın (2020) revealed that CRM applications positively affect customers' repurchase intentions and contribute to brand loyalty. Especially in the field of e-commerce, thanks to the use of digital CRM tools, businesses can offer faster and more effective solutions to consumers (Karakaya & Erdem, 2021).

Effective implementation of CRM requires not only technological investment but also equipping the corporate culture and employees with a customer-focused mindset. For this reason, CRM is considered both a strategic and operational necessity

[2] Magna Dijital. 2024. Turkiye’s Most Visited e-Commerce Sites in 2024. MagnaDijital. https://www.magnadijital.com.tr/blog/dijital-pazarlama/turkiyenin-2024-yilinda-en-cok-ziyaret-edilen-e-ticaret-siteleri . Accessed on 25 May 2025

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2.3. e-CRM Dimensions

Ease of Navigation - First dimension is ease of navigation. This dimension includes the layout (format) of website and apps of Trendyol as well as simple-to-use navigation. The simple navigation of Trendyol website and app may offer quick access to information needed by consumer and easily to understand how to use and manage their transaction. This dimension is related to the user experience (UX) in every sites in internet to offer minimum efforts while operating the sites.

Information Quality - Second dimension of e-CRM used on this study is information quality. It reflects the consistency, relevancy, sufficiency, and understandability of every informations on Trendyol. The high quality information of product’s description will increase trust and good relationship between seller and buyer. It also helps consumer to make the purchase effectively.

Payment Options - The third dimension is payment options. According to the study from (Farmania, Elsyah and Tuori, 2021) the variance of payment options such as credit card, cash on delivery, or debt may help consumers to do online transaction that improve best experience while using e-commerce.

Personalization Level - Personalization is the strategy of online business to attract consumers back to the website and design their own account on the e-commerce site. This dimension reflects the design of consumers’ account to see their recent transactions, their favorite products, their membership account that can easily monitored through e-commerce site.

Rewards - Reward is e-CRM dimension that aims to attracting consumers to repatronize. Reward programs on Trendyol such as collecting the points for every transaction, or collecting bonus by inviting new friends or for new accounts, free gifts and discounts will attract consumers trust and boost the joy of consumers experience in making purchase on Trendyol.

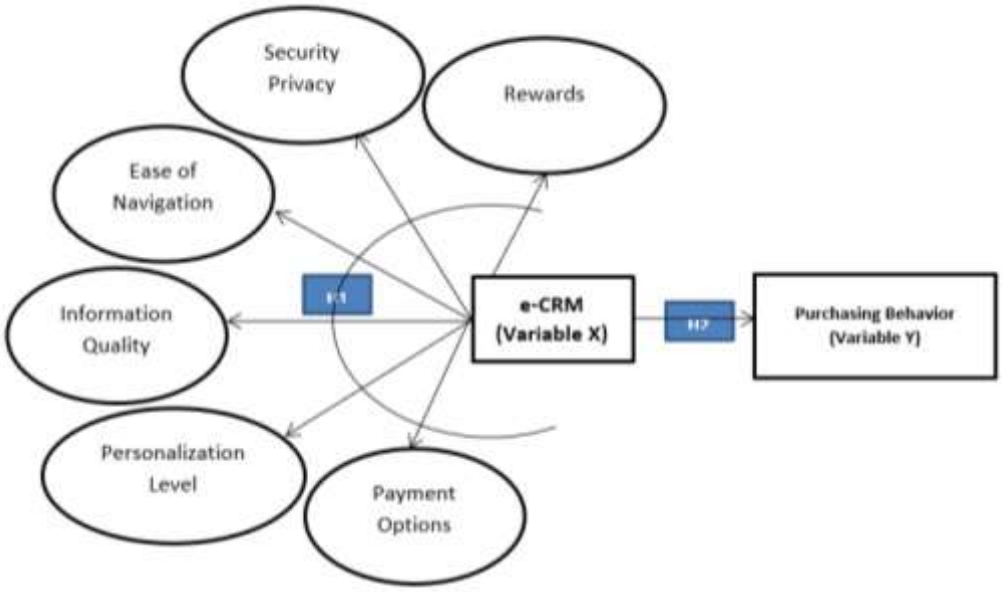
Security and Privacy Policy - One of the most important factors in online shopping is site security and privacy policy. Consumers are very concerned about online payment security especially when consumers need to fill their private informations (personal data information, credit card information, address, etc) into the e-commerce site in their ordering process. It can influence consumers trust and level of risk perceived by consumers. Therefore, this study will investigate the level of security and privacy policy of Trendyol affecting its e-CRM strategy.

3. DATA AND METHODOLOGY

This study will explain 6 dimensions of e-CRM on Trendyol by using online questionnaire to collect the data from respondents. The questionnaire consisted of two parts. The first part is demographic information of respondents such as income level, age group, education, etc. In the first part there are also some questions to understand the consumer behavior in using Trendyol such as how many times respondents use the Trendyol, what kind of products they frequently buy on Trendyol, and how they pay their purchase on Trendyol. Second part consisted of consumers opinion related to the e-CRM dimensions. The statements of each dimensions used on this study are following related studies. The questionnaire of this study uses research from (Ab Hamid, Cheng and Akhir, 2011; Farmania, Elsyah and Tuori, 2021) in explaining the 6 dimensions of e-CRM. Every statements of this questionnaire will be answered by using 5 likert scale points ranging from 1 = “Very Disagree” to 5 = “Very

Agree". Further, this study will prove the influence of e-CRM strategy towards consumer purchasing behavior. The hypothesis used on this study and research framework are shown below.

Figure 1: Research Framework



Hyphotesis 1 (H1) = The 6 dimensions positively contribute to e-CRM strategy on Trendyol

Hyphotesis 2(H2) = e-CRM strategy on Trendyol has positive effect on customer behavior in Ankara, Turkiye

3.1. Research Design and Data Collection

This study is structured using e-CRM (electronic customer relationship management) theory using six dimensions (information quality, security and privacy policy, rewards, ease of navigation, personalization level, and payment options). E-CRM in this study is variable independent (X variable) and wil be tested its relationship with consumer purchasing behavior as variable dependent (Y variable). The indicator of each variable is gathered using secondary data from previous studies about e-CRM strategy and consumer purchasing behavior.

Further, this study will examine the relationship of two variables by collecting primary data. The data was collected in Ankara through offline and online questionnaire (Google Forms). A total of 385 respondents participated, and all surveys were fully completed and included in the analysis phase. The survey consists of two sections. The first section consists of demographic information such as income level, age group, education, etc. The first section also includes some questions aimed at understanding the trends in Trendyol usage such as how many times they prefer Trendyol, what kind of products they frequently buy from Trendyol, and how they pay for their purchases on Trendyol.

The second section consists of consumers' opinions on e-CRM dimensions. Studies on the expressions of each dimension used in this field are being followed. In the description of this survey, answers will be given on a 5-Likert score scale from 1 = "I strongly disagree" to 5 = "I strongly agree". As a result, this success includes 6 solutions to Trendyol's e-CRM strategy, 17 questions (Variable X) and 3 questions on illegal purchasing behavior (Variable Y).

3.2. Population and Sampling

According to the study from (Sugiyono, 2014) population is all individuals living in certain area that align with the objectives of research project. Meanwhile, the sample is the subgroup that represents some parts of population. The population of this study consists of consumers living in the province of Ankara, Turkiye. The sample of this study is selected from the population of this study using random non-probability sampling method by convenience sampling. Convenience sampling is used on this study to get the data from respondents that are easily to be reached for this research purpose. The criteria of respondents of this study such as:

1. Aged >18 years old

2. Has montly income >1000 TL

3. The user of Trendyol for online shopping
4. Has education background

First, this study explains the number of population of people living in Ankara. According to the data 2024 of the Turkish Statistical Institute, the total population of Ankara Province is 5 million 864 thousand 49 inhabitants. The sample size of this study using this number of population is determined according to the Minimum Acceptable Sample Sizes for different population adapted by Gürbüz and Şahin (2016).

Table 1: Sample Size Calculation

Population (N)	Required Sample Size (n)	Population	Required Sample Size (n)
50	44	7000	364
100	79	7500	365
250	131	8000	367
350	183	8500	368
500	217	9000	369
750	254	9500	370
1000	278	10000	375
1500	306	15000	377
2000	322	20000	379
2500	341	30000	381
3000	341	40000	381
3500	346	50000	382
4000	350	75000	383
4500	354	100000	384
5000	357	250000	384
5500	359	500000	384
6000	361	1000000	384
6500	363	10000000	384

Gürbüz, S., Şahin, F., (2016). Minimum Acceptable Sample Sizes for Different Population

According to the calculation of sample size in table above, it is deemed that 384 respondents is minimum sample required for this study to represent 5 million population in Ankara, Turkiye. The formula of sample size used on this study is determined according to the 95% confidence interval (Z), ±5% error margin (e) and 0.50 population ratio (p). After collecting the data, this study managed to collect 385 sample of respondents living in Ankara and aligned with the minimum acceptable sample size to represent the population of Ankara.

3.3. Data Analysis Methods

This study uses SPSS 22 Statistical software to analyze and evaluate the data from respondents. The analysis will be divided into several parts. First, this study will do demographic data analysis to understand respondents' data. Demographic analysis of this study will evaluate the information of gender, age, education level, monthly income, and working status of all respondents. Second, this study will also evaluate the respondents' behavior in using Trendyol. In questionnaire there are second parts that require respondents to answer their behaviors while using Trendyol such as the frequency in using Trendyol, the most purchased products on Trendyol, and the payment preferences while making transaction on Trendyol.

Third, this study will do statistical analysis in different parts. The first analysis is reliability test analysis to determine whether the respondents answers are reliable to represent this study or not. This study will use Cronbach Alpha's value to determine the reliability test. If Cronbach Alpha is greater than 0.6 (>0.6), it means all variables is reliable. Second, this study performs the Explanatory Factor Analysis using Kaiser-Meyer-Olkin (KMO) and Barlett's Test. This analysis is used to determine the quality correlation of all dimensions of e-CRM strategy in this study. If KMO and Barlett's Test is greater than 0.6 (>0.6) it means all factors of e-CRM strategy has high quality and can be used to explain the variable of e-CRM strategy.

Third, this study performs Normality Test to understand the distribution of all data. The good data has normal distribution that is determined by using Normal P-P Plot Statistical Test. If the Normal P-P Plot shows the data spreading along the diagonal line, it can be concluded that the data is distributed normally and can be used to explain the research framework. Next, this study will perform the Pearson Correlation to explain the correlation level between each dimensions toward e-CRM variable. Lastly, this study will conduct the Regression Analysis to determine the hyphotesis testing between Variable X towards Variable Y. Regression analysis can determine whether variable X has influence towards variable Y or not.

4. FINDINGS AND DISCUSSIONS

4.1. Descriptive Statistics and Statistical Findings

First, this study shows the results of participants demographic data. The demographic information of respondents can be seen in the below.

Table 2: Demographic Data Result

Demographic Characteristics	Respondents Information	Frequency	Percentage
Gender	Female	221	57,5%
	Male	164	42,5%
Age	18-25	145	37,66%
	26-33	156	40,52%
	34-41	84	21,82%
Education Level	Bachelor	126	32,72%
	Master	159	41,30%
	Doctoral	100	25,98%
Monthly Income	1000-9999 TL	90	23,37%
	20.000-29.999 TL	78	20,26%
	30.000-39.999 TL	44	11,43%
	40.000-49.999 TL	173	44,94%
Working Status	Housewife	8	2,08%
	Employee	128	33,25%
	Officer	47	12,21%
	Student	202	52,46%

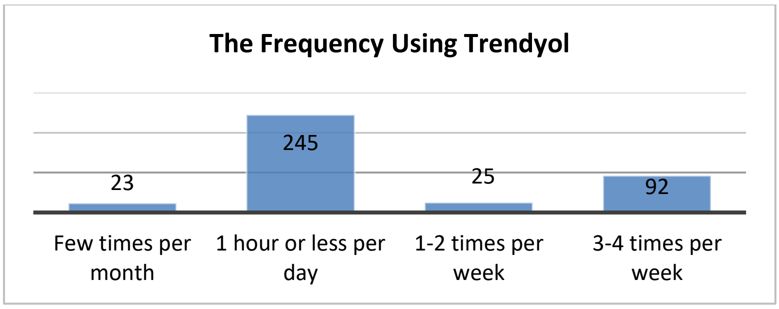
Table above shows the distribution frequency of respondents of this study. First based on the gender, there are total 385 participants of this study and around 221 participants are identified as female and 164 participants are male. It means female are dominant in making online shopping via Trendyol than man in Ankara. Further, there are 156 respondents aged 26-33 years old and the other 145 respondents aged 18-25 years old. It represents that 77% of total respondents aged between 18-33 years old.

According to the education background, mostly respondents studies in master program that represents 41,30% of total respondents in this study and the other 126 respondents are studying in bachelor program. However, based on monthly income, the 173 respondents of this study has income around 40.000 – 49.999 TL representing 44,94% of total respondents. It shows that the users of Trendyol in Ankara has high income to do online shopping frequently. It also supported by the last demographic data about working status. Mostly repondents are students (202 respondents) and workers (128 respondents).

Respondents Behavior in Using Trendyol in Ankara, Turkiye

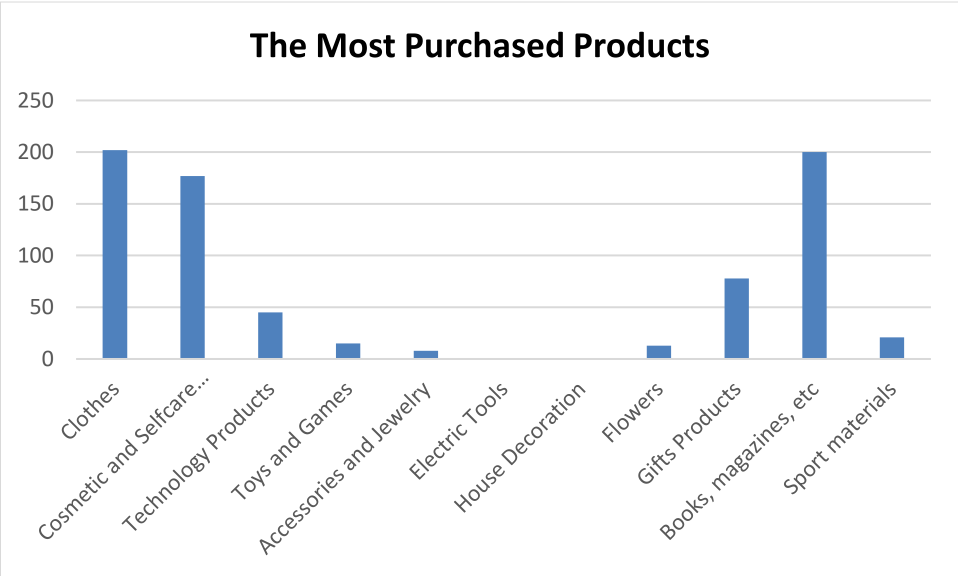
After evaluating respondents' demographic data, this study evaluates the respondents behavior in using Trendyol. According to the respondents' answer of the frequency in using Trendyol, almost all respondents answered they use Trendyol around 1 hour everyday. The result is shown in graphic below.

Graph 4: The Frequency Using Trendyol



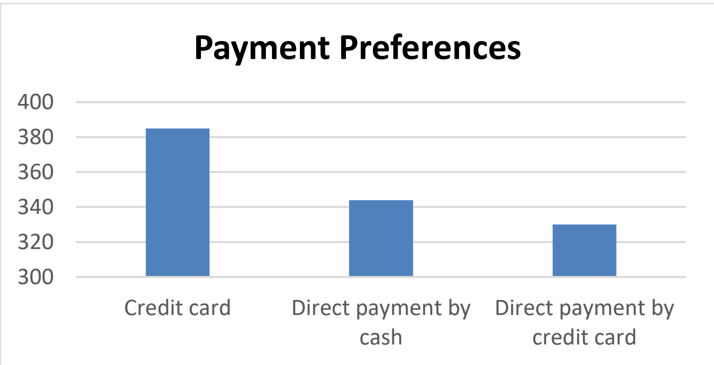
According to the graphic above, there are 245 respondents answered that they use Trendyol everyday around 1 hour or less than 1 hour. In second rank, there are other 92 respondents answered they use Trendyol 3-4 times everyweek and 25 respondents answered they use Trendyol 1-2 times per week and the rest of respondents answered they use few time every month. It shows the high addiction of respondents in Ankara, Turkiye in using Trendyol not only for making the online purchases, but also to get products information, see the products pictures, and more. Next, this study also identified products that mostly purchased by respondents on Trendyol. The results are shown on the graph below.

Graph 5: The Most Purchased Products in Trendyol



According to the data above, 202 respondents answered that clothes and books are the most purchased products on Trendyol. Cosmetic and skincare are also the most purchased products since mostly respondents in this study are female.

Graph 6: Payment Preferences



The graphic above shows that all respondent prefer to use credit card in ordering products via Trendyol. However, the respondents also mostly prefer to choose cash on delivery. There are 344 respondents answered that they use to pay by cash while ordering products on Trendyol and the 330 respondents also answered they use credit card to pay but while the products has arrived on their place.

5. FINDINGS AND INTERPRETATIONS

The analysis process is started by performing the reliability test on the all dimensions. The reliability test is used to determined whether the respondents answers are reliable to explain the dimensions of e-CRM variable or not. The dimensions is regarded as being reliable if the Cronbach Alpha value is >0.6. The result of reliability tes is shown in table below :

Table 3: Reliability Test's Results

Dimensions	Cronbach Alpha's Value	Results
Ease of Navigation	0,725	Reliable
Information Quality	0.790	Reliable
Payment Options	0.769	Reliable
Personalization Level	0.608	Reliable
Rewards	0.869	Reliable
Security and Privacy Policy	0.738	Reliable
Consumer Purchasing Behavior	0.845	Reliable

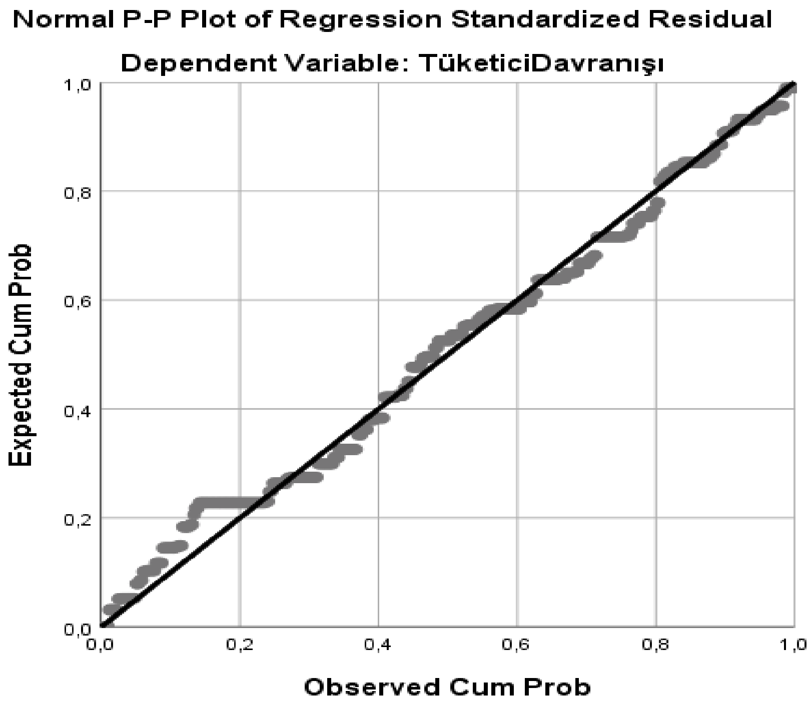
According to the result above, all dimensions are regarded as reliable because the Cronbach Alpha's value >0.6. It means that the data of this study can be proceeded to the next analysis. Next this study performs the Explanatory Factor Analysis to determine the eligibility of the items based on the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test. The result of the KMO and Bartlett's test value of this study is shown in table below.

Table 4: KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,746
Bartlett's Test of Sphericity	Approx. Chi-Square	665,907
	df	15
	Sig.	,000

Table above shows that the value of KMO and Bartlett's Test of this study is 0.746 or > 0.6. it means that all factors of e-CRM strategy in this study have high quality of correlation and pass the KMO and Bartlett's test. Nex this study perform normality test to using Normal P-P Plot of Regression to testing whether the data received from all respondents is distributed normal and can be used to explain the research framework or not. The result of Normal P-P Plot Test of this study is shown in the figure below.

Figure 2: Normal P-P Plot Results



Based on the figure above, All data is spread along the diagonal line. This shows that the research data is normally distributed and passes the Normality test so that it can be used to explain the research framework. Next, this study performs the correlation between each dimension towards e-CRM strategy of Trendyol. This study uses Pearson Correlation to determine the correlation level of each dimension. The results are shown in the table below.

Table 3: Pearson Correlation Results

Correlations		MiyninDimensions
Pearson Correlation	e-CRM features	1,000
	Easeofnavigation	,769
	Informationquality	,841
	Paymentoptions	,463
	PersonalizationLevel	,737
	Rewards	,550
	SecurityandPrivacyPolicy	,627
Sig. (1-tailed)	e-CRM features	.
	Easeofnavigation	,000
	Informationquality	,000
	Paymentoptions	,000
	PersonalizationLevel	,000
	Rewards	,000
	SecurityandPrivacyPolicy	,000
N	e-CRM features	385

Based on the Pearson Correlation results above, all dimensions has significant level at 0.000 or < 0.005 which indicates all dimensions contributes to the development of e-CRM strategy on Trendyol. The correlation's scores are different between each dimensions. Based on the Pearson Correlation results, the information quality has biggest correlation towards the e-CRM strategy on Trendyol. Information quality has 0.841 or 84,1% contribution to the e-CRM strategy. It means respondents in Ankara are very concern of information quality on Trendyol that reflects how good Trendyol in building relationship management with customers and sellers.

The second dimension that has biggest correlation is ease of navigation. Ease of navigation contributes 0.769 or 76,9% towards e-CRM strategy. It indicates that the easier websites or apps to be operated, the better management relationship is conducted by Trendyol. The finding of this research also found that personalization level is the third dimension that has biggest correlation toward e-CRM strategy. Personalization level contributes 0.737 or 73,7% towards e-CRM strategy indicating that respondents in Ankara really concern about managing their own account on Trendyol. The results of this analysis are shown below :

Table 4. Hypothesis Test Results

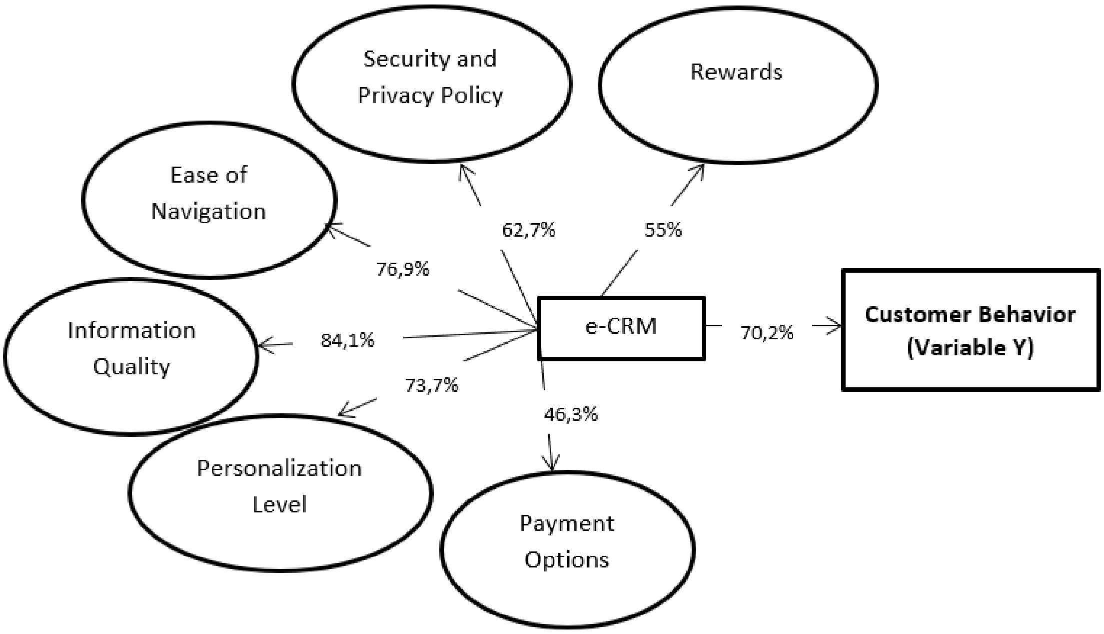
Variables		Correlation	Test Statistic:	Std Error:	p-value:	Results
e-CRM strategy (X)	->Consumer Purchasing Behavior (Y)	0.702	19.308	0.005	0.001	p-value <0.005 **(has correlation)**

The interpretation of regression analysis :

1. The correlation coefficient (r) is 0,702 or 70,2% which indicates a strong positive relationship between the independent variable (e-CRM strategy) and the dependent variable (consumer purchasing behavior). the result explain that e-CRM strategy influence 70,2% of consumer purchasing behavior in using Trendyol.

2. p-value is 0.001 or <0.005 which indicates the hypothesis 2 is proven that there is positiv correlation between e-CRM strategy towards purchasing behavior. Therefore, the conclusion is the regression model demonstrates the e-CRM strategy of Trendyol significantly and positively influence consumer purchasing behavior in Ankara, Turkiye. The result of this analysis can be seen in the figure below.

Figure 3: Research Framework's Results



5. CONCLUSION AND IMPLICATIONS

Nowadays, internet has changed human's lives in every sectors. In the past, people used technology mostly for communication and information. However, in this era people can use technology and internet for everything including to buy and order goods and services. Technlogy has shifted consumer behavior from doing direct shopping to the stores into online shopping. People enjoy online shopping because the convenience and easiness offered by this habit. It pushes the existance of e-commerce as online business to facilitate online shopping habit for customers.

In Turkiye there are so many e-commerce platform. One of the biggest e-commerce is Trendyol. The success of Trendyol to get million visitors in 2024 can be explained by analyzing their management to build relationship with customers. In marketing and business strategy, this can be explained in the Customer Relationship Management strategy (CRM). In the context of e-commerce, CRM has changed into e-CRM which means that business can not make direct interaction to satisfy customers experience, instead e-commerce uses features in their platforms (website or apps) to bring great experience for the customers making online purchases.

This study explains 6 features or dimensions of e-CRM that can contribute to the success of e-CRM Strategy on Trendyol. Those 6 dimensions are ease of navigation, information quality, payment options, personalization level, rewards, and security policy. Based on the findings of this study that included 385 data from respondents in Ankara, Turkiye, this study found interesting results. First, all dimensions has been proven to contribute significantly to the e-CRM strategy. It means that Trendyol's customers in Ankara feels these 6 features and concern about it while using Trendyol. Second, this study found different correlation level of each dimensions towards e-CRM strategy on Trendyol.

The finding of this study shows that the customers of Trendyol are really concerned with the quality information on Trendyol platform. Because the customers use the information before making the purchases. For example, the customers will search about product's price, photo, the store's information (address, store's name), the product's quality, etc. The better quality of information, the better experience felt by the customers of Trendyol.

Second, this study found that ease of navigation is also the most important feature of e-CRM strategy on Trendyol. This dimension reflects the layout of the e-commerce and it is important because this layout reflects the easiness of customers to operate the website and do transaction. If the e-commerce platform can offer the easiness to users in operating their website since the first use, it will improve good relationship with customers. Third, this study found that personalization level is in the third rank of e-CRM dimensions of Trendyol. It indicates the users really concern about their account on Trendyol and want to set it up properly. For example, the users use their account on Trendyol to manage the history of transaction, to see their favorite products, and so on.

Therefore, the recommendation of this research is Trendyol needs to focus on these 6 dimensions to improve Trendyol's e-CRM strategy in the future and maintain good relationship. The findings also recommend that Trendyol in Ankara province need to focus on maintaining good quality information either from their e-commerce information or from all product's information offered by the affiliate seller on Trendyol. Second, Trendyol also needs to set up the platform to be easily used by all customers since the first use. This study will be beneficial not only for Trendyol but also for all e-commerce in Turkiye to maintain good relationship without need to do direct contact with customers.

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AN OVERVIEW OF TURKIYE'S PROGRESS TOWARD SDG7 AND SDG13

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ABSTRACT

Purpose- This study aims to provide an overview of Turkiye's performance in energy use and climate change within the framework of Sustainable Goal 7 (SDG7) and Sustainable Devekopment Goal 13 (SDG13) between 2002 and 2022.

Methodology- To provide an overview of Turkiye's performance in energy use and climate change, Multi Criteria Decision Making (MCDM) approach was used. For this purpose, Additive Ratio ASsessment (ARAS) method was applied to the six different years, 2002, 2006, 2010, 2014, 2018 and 2022. In the analysis, indicators regarding energy use and climate change such as access to clean fuels and cooking technologies, energy intensity, energy imports, renewable energy and fossil fuel energy consumption, greenhouse gas (GHG) emissions were used and data set was emploted compiled from World Development Indicators Database.

Findings- When comparing the utility levels obtained from ARAS method it is observed that utility degrees decreased from 0.7767 to 0.7004 between 2002 and 2014, after that time, increased and it reached 0.8528 in 2022. While between 2006 and 2014 utility degrees are at the almost same level, after 2014 it is seen that the utility degree has rised to 0.8528. According to this, 2014 has the lowest performance level while 2022 has the highest level.

Conclusion- Findings indicated that although there have been positive developments in climate change policies in Turkiye, it is clear that there are still measures that need to be taken in this regard. Turkiye should continue to support investments and incentives to increase renewable energy consumption based on solar and wind power instead of fossil fuels to reduce carbon dioxide emission. Thus, all these efforts will not only prevent environmental degradation but also play an important role in reducing the deficit of the current account, which is one of the consequences of dependency on external energy sources.

Keywords: Energy use, environmental sustainability, climate change, ARAS, Turkiye.
JEL Codes: C44, Q40, Q54

1. INTRODUCTION

The greatest environmental disaster experienced today is global warming and the resulting climate change. Greenhouse gas (GHG) emission is the most significant factor leading to climate change throughout the world. It consists of different gases such as carbon dioxide (CO_2), nitrous oxide (N_2O) and methane (CH_4). The negative effects of climate change cause unusual nature events in the last decades. Accordingly, drought, floods, forest fires, loss of biodiversity, extreme weather events, melting glaciers, food insecurity, rising sea levels, and increased health risks are the consequences of the climate change and global warming (UN, 2025a).

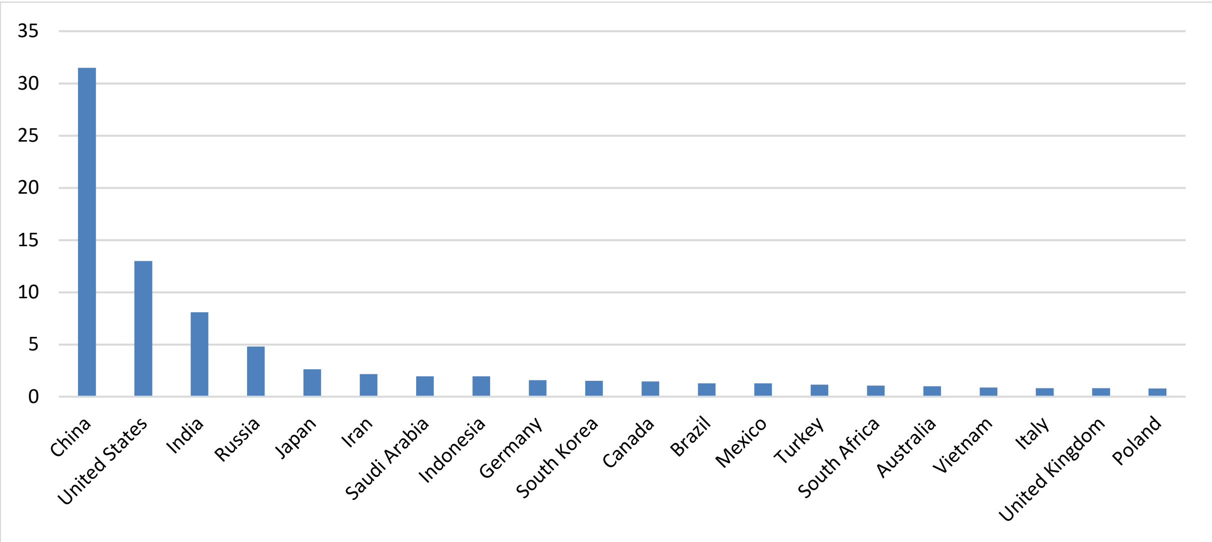
Sustainable Development Goals (SDGs) which were released by United Nations (UN) in 2015 includes 17 Goals. Among these goals SDG7 and SDG13 are related to energy use and impacts of climate change. SDG7 highlights importance of energy use, reliable, sustainable and modern energy sources while SDG13 highlights consequences of climate change on environmental sustainability. This Agenda also sets out 169 targets to be achieved by 2030, and countries' progress towards these targets has been tracked through related indicators.

The Paris Agreement, which was signed by 192 nations in 2015 and came into force in 2016, is an extension of efforts to protect environmental sustainability. The agreement's primary goal is to keep the rise in temperature to 1.5°C over pre-industrial levels. However, the effects of climate change have been getting worse, moreover according to the estimates, 2024 was almost 1.55°C over pre-industrial levels (UN, 2025b).

The Climate Change Performance Index (CCPI) is one of the most common indexes utilized for assessing how well countries perform in terms of environmental sustainability. The CCPI that is released by Germanwatch every year since 2015 assesses countries in terms of climate mitigation and this index has four main categories which are GHG emissions, renewable energy, energy use, and climate policy. A total score is calculated for each country based on four these categories and their indicators. Countries that have highest scores are rated as very high, while those with the lowest scores are rated as low. As of 2025, Turkiye ranks 53rd among 67 countries and is rated as "very low" (Burck et al., 2024). Also, Turkiye had previously been rated in 2018, 2019, and 2020. Moreover, in Environmental Performance Index 2024 Turkiye ranks 143rd among 180 countries (Block et al. 2024). When the countries that are rated as "very low" between 2018 and 2023 continuously are examined in CCPI, it is seen that these countries are the top global emitters of CO_2 in the world.

The top global emitters of CO_2 are shown in Figure 1. Accordingly, China is the top emitter of CO_2 and United States, India, Russia, Japan follow this country. Turkiye ranks 14th behind Mexico. Nearly half of global GHG emissions are caused by the top six polluters together (UN, 2025b).

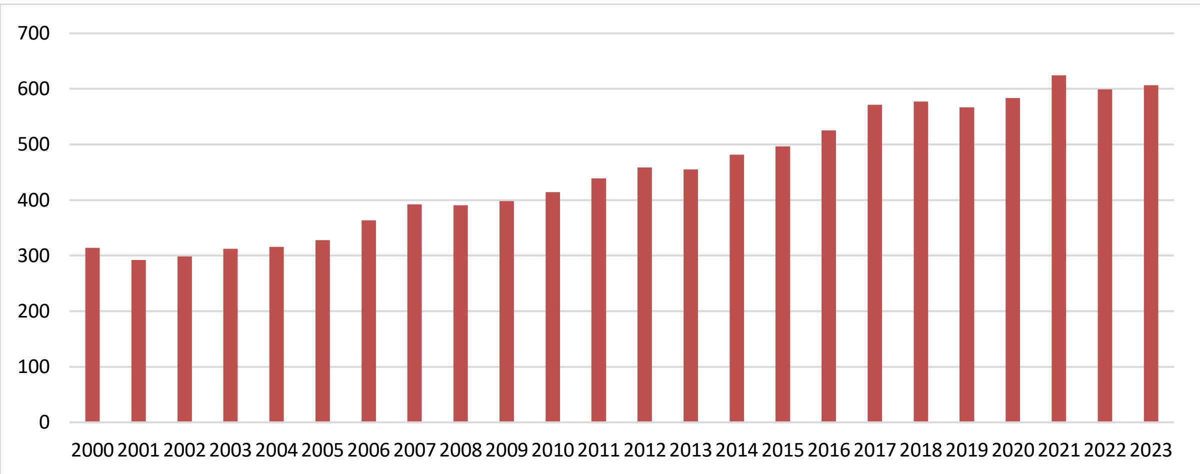
Figure 1: Top emitters of CO_2 worldwide as of 2023



Source: Statista, Greenhouse gas emissions worldwide 2024

Despite all efforts, GHG emissions are increasing in Turkiye, as they are worldwide. Figure 2 presents increase in GHG emissions in Turkiye in the last two decades. Between 2017 and 2025, 71.6% of the GHG emissions in Turkiye resulted from energy sector. (Turkish Statistical Institute, 2025; Sahin, 2019). This situation demonstrates how important and effective the energy sector is in preventing climate change.

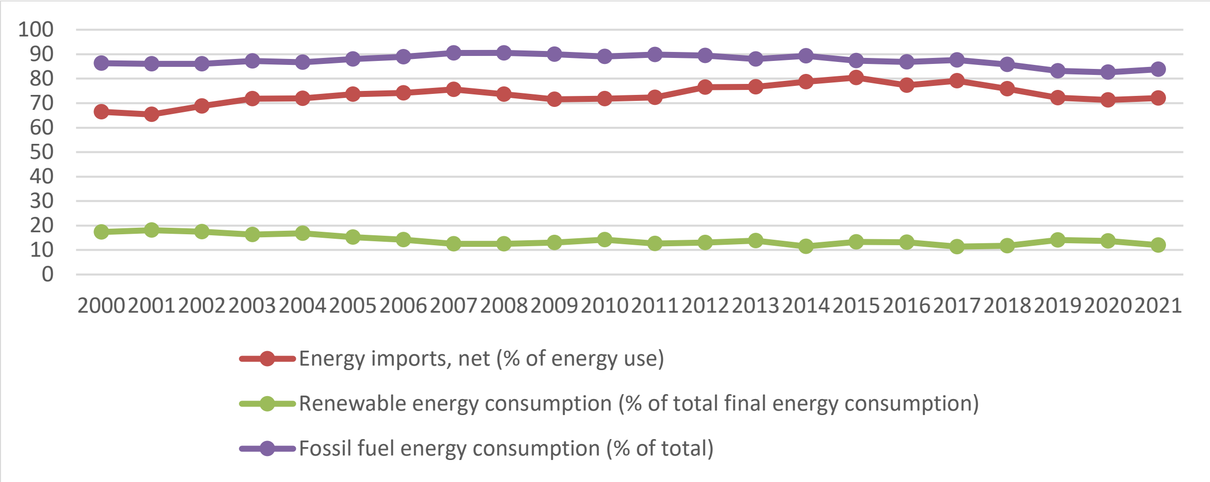
Figure 2: Total GHG Emissions (Mt CO_2e) in Turkiye between 2000 and 2023



Source: World Development Indicators (WDI), World Bank (WB)

When the energy usage of Turkiye examined between 2000 and 2021 in Figure 3, it is seen that the percentage of energy imports has increased. Furthermore, while the percentage of renewable energy consumption in total final energy consumption has decreased, fossil fuel energy consumption increased until 2008 and then began to decline. However, the rate of this decline is only 5% for all period. (WB, 2025)

Figure 3: Energy use in Turkiye between 2000 and 2021



Source: WDI (WB, 2025)

This study is structed as follows: Second section includes the literature review, the following section gives the information relating to indicators and the method used. In the fourth section, results and findings obtained from the analysis are presented, and the last section provides conclusion.

2. LITERATURE REVIEW

Previous studies conducted earlier in the literature indicated that some variables such as economic growth, energy use, FDI, renewable energy use, natural resource rents, openness to trade, population growth, globalization, urbanisation, and level of democracy are found to be significant factors affecting environmental sustainability. From this point, some studies about both Turkiye and method used are given below.

2.1. Studies on Climate Change and Energy Use

Bulut (2017) studied on impact of non-renewable and renewable energy on CO_2 emissions in Turkiye between 1970 and 2013. Findings shown that CO_2 emissions positively affects both non-renewable energy and renewable energy.

Bulut and Muratoğlu (2018) studied relationship between renewable energy consumption and gross domestic product (GDP) in Turkiye for the period 1990-2015. In this study, cointegration analysis and causality tests were employed and the findings indicated that renewable energy consumption and GDP were not related. Additionally, there was no finding regarding causality between GDP and renewable energy consumption in Turkiye.

Uzar and Eyüboğlu (2019) investigated relationship between income distribution and CO_2 emissions in Turkiye using Autoregressive Distributed Lag (ARDL) approach for the period 1984-2014. It was founded that income inequality and CO_2 emissions are positively related and also Environmental Kuznets Curve (EKC) hypothesis is valid. Accordingly, the results indicate that deterioration in income distribution will increase environmental degradation in Turkiye.

Haug and Ucal (2019) analyzed the impact of foreign direct investment (FDI) on CO_2 emissions using ARDL approach in Turkiye. They found that FDI has no impact on CO_2 in the long run. Also, CO_2 intensity is not affected by FDI, exports and imports whereas is affected by urbanisation. Moreover, this study showed the existence of EKC in Turkiye.

The Pollution Haven Hypothesis and the Pollution Halo Hypothesis are two significant hypotheses that explore how FDI affects environmental deterioration. According to the Pollution Haven Hypothesis (PHH), foreign direct investment (FDI) is utilized to move highly polluting sectors from wealthy countries to emerging countries with fewer restrictive environmental sustainability regulations. Thus, these emerging countries become havens for pollution. However, according to the Pollution Halo Hypothesis, industrialized countries use FDI to transfer their energy-saving, renewable energy-related, and pollution-reducing technology to host countries. Consequently, they are responsible for the decrease in environmental degradation (Duan and Jiyang, 2021). There are studies that test whether these hypotheses are valid for Turkiye.

Bulut (2021) investigated the drivers of ecological footprint (EF) in Turkiye using ARDL approach for the period 1970-2016. In this study, also both EKC hypohesis and pollution haven hypothesis (PHH) were tested. Findings indicated that renewable energy consumption negatively affects EF while industrialization does not affect EF. In addition, it has been seen that EKC hypohesis is valid, whereas PHH is not entirely valid in Turkiye. Apart from this study, other studies conducted have shown that the PHH hypothesis is found to be valid for Turkiye (Bulut et al. 2021; Mukiyen Avcı, 2023; Cil, 2023)

Gokmenoglu et al. (2021) studied relationship among energy use, military expenditure, economic growth, financial development and environmental degradation in Turkiye using fully modified ordinary least squares (FMOLS) approach between the years 1960 and 2014. Ecological footprint and CO_2 emissions were used as environmental degradation indicator. The findings showed that environmental degradation is positively affected by military expenditure, energy use and economic growth while negatively affected by financial development.

Yıldırım and Yıldırım (2021) determined the relationships among CO_2 emissions, GDP, energy use, financial development, trade opennes, and activities of construction sector in Turkiye using an ARDL approach for the period 1970-2015. The results show that construction sector activities, GDP, trade openness and energy use positively affect CO_2 emissions whereas financial development does not explain environmental degradation in the long run.

Habeşoğlu et al. (2022) determined the impact of oil price on the environmental degradation in Turkiye using bootstrap ARDL approach. According to the findings, government expenditures were positively related while taxation revenues were negatively related the environmental degradation in Turkiye. Also, low taxation rates on green energy investment and using the carbon tax policy were recommended to decrease environmental degradation in the study.

Özarslan-Doğan (2025) explored whether climate change performance affects environmental investments in Emerging Economies (E-7 countries) namely, Brazil China, India, Indonesia, Mexico Russia and Turkiye for the period 2008–2023 using the Parks-Kmenta estimator. In this study, renewable energy installed power capacity was used as dependent variable while climate change performance index score, GDP per capita, population growth and inflation were used as independent variables. Findings indicated that climate change performance index is positively related environmental investments, on the other hand population growth and inflation negatively related environmental investments, while GDP positively affects.

2.1. Studies on MCDM Methods

Ghenai et al. (2020) used Stepwise Weight Assessment Ratio Analysis (SWARA) and ARAS methods to rank renewable energy technologies using five sustainability indicators and they demonstrated the applicability of the methods.

Bilgili et al. (2022) studied on best renewable energy alternatives in Turkiye using Intuitionistic Fuzzy Technique for Order Preference by Similarity to Ideal Solution (IF-TOPSIS) method. Thus different alternatives for the renewable energy were ranked based on 5 main criteria and 25 sub-criteria. According to the results, among seven alternatives, solar energy has been found the best energy source. Wind and geotermal energy sources followed this source. Additionally, "capital/investment cost" was found as the most significant criteria among all.

Akusta and Cergibozan (2024), similar findings obtained. Different renewable energy sources were ranked based on fuzzy Analytic Herarchy Process (Fuzzy AHP). It was founded that solar energy is the best renewable energy source. It is followed by the wind and hydroelectric sources.

Dündar (2023) investigated optimal establishment location for construction of a compost facility using both k-means cluster analysis using ARAS method in Turkiye Three locations for compost facility were determined based on the analyses in this study.

Yücenur and Maden (2024) employed ARAS method for use of hydroponic greenhouses to select appropriate location on the basis on 21 indicators. Weights of the indicators were calculated Entropy method. Among 5 alternatives, Denizli province was found to be best location.

In another study conducted by Gelmez et al. (2025), environmental sustainability performance of the OECD Countries were measured using both ARAS and WASPAS method. According to the results, Sweden, Denmark and Finland are found to be countries that have highest performance scores.

Akmermer and Senturk (2025), analyzed the market regarding wood pellets trade using ARAS method. In this study performance scores were calculated for 17 countries based on indicators such as trade balance, logistic performance index, , CO_2 emission, concentration of supplying countries. Findings showed that United Kingdom, Japan, and the Netherlands are found to be leading countries in terms of exporting countries for wood pellets.

Doğruel (2025) explored the nexus between combating climate change and technological features. Also, position and rank of the countries on the basis of these features were determined. In addition to the multivariate statistical methods, TOPSIS method was used in this study. According to the findings, some relationships between variables were determined and also Nordic Countries were found to best performers in terms of environmental sustainability.

3. DATA AND METHODOLOGY

To provide an overview of Turkiye's performance regarding SDG7 and SDG13, **A**dditive **R**atio **As**sessment (ARAS) method applied to the years 2002, 2006, 2010, 2014, 2018 and 2022 and the results were compared. Thus, it was investigated whether there is an upward trend.

3.1. Determining Indicators

To measure performance of Turkiye in climate change and energy use, indicators employed were specified on the basis on SDG7 and SDG13 considering Global SDGs Framework (UN, 2023c) released by United Nations and they were obtained from World Development Indicators (WDI) database released by World Bank (WB, 2025). The indicator called "Access to electricity (% of population)" was not included in the analysis since it takes the value of 100 for all years.

In this study, 10 indicators were used in determining energy use and climate change performance of Turkiye. Regarding GHG emission indicator stated in SDG13, indicators representing carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) gases were used and other 7 indicators are related with energy use in Turkiye. In Table 1, the indicators, their abbreviations and related SDG are given below.

Table 1: Description of Indicators Used

Description of Indicators	SDG
Access to clean fuels and technologies for cooking (% of population)	SDG 7 Ensure accees to affordable, reliable, sustainable and modern energy for all
Energy intensity level of primary energy (MJ/$2017 PPP GDP)	
Energy imports, net (% of energy use)	
Renewable energy consumption (% of total final energy consumption)	
Fossil fuel energy consumption (% of total)	
Carbon dioxide (CO_2) emissions excluding LULUCF per capita (t CO_2e/capita)	SDG13 Take urgent action to combat climate change and its impacts
Nitrous oxide (N_2O) emissions (total) excluding LULUCF (Mt CO2e)	
Methane (CH_4) emissions (total) excluding LULUCF (Mt CO2e)	
Electricity production from renewable sources, excluding hydroelectric (% of total)	-
Electricity production from oil, gas and coal sources (% of total)	

3.2. Method Used

The method used in this study was proposed by Zavadskas and Turskis, 2010. It consists of 5 main succesive steps which are constructing decision matrix, normalisation of the decision matrix, obtaining weighted normalized matrix, calculating optimality function, determining utility degree.

Details of the steps are given below (Liu and Xu, 2021).

Step 1. Constructing decision-making matrix

$$X = \begin{bmatrix} x_{01} & x_{02} & \cdots & x_{0n} \\ x_{11} & x_{12} & \cdots & x_{1n} \\ \vdots & \vdots & \cdots & \vdots \\ x_{m1} & x_{m2} & \cdots & x_{mn} \end{bmatrix} \qquad \begin{matrix} i = 0,1,...,m \\ j = 1,2,...,n \end{matrix}$$

where,
m represents the number of alternatives.
n represents the number of criterion (indicators). One row is added to the matrix to include the optimal value of each criteria (indicator).
The optimal value can be determined using following equations;

$x_{0j} = \max x_{ij}$ (for benefit criteria)

$x_{0j} = \min x_{ij}^*$ (for cost criteria) where x_{ij} represents the value of the i alternative for criteria j while x_{0j} represents the optimal value of the criteria j.

Step 2. Normalisation of the decision matrix

$$\bar{x}_{ij} = \frac{x_{ij}}{\sum_{i=0}^{m} x_{ij}}$$ if the criteria j is benefit criteria

$$x_{ij} = \frac{1}{x_{ij}^{*}}$$

$$\bar{x}_{ij} = \frac{x_{ij}}{\sum_{i=0}^{m} x_{ij}}$$ if the criteria j is cost criteria

where $\bar{x}_{ij}$ is the normalized data and normalized decision-making matrix is given below

$$\bar{X} = \begin{bmatrix} \bar{x}_{01} & \bar{x}_{02} & \cdots & \bar{x}_{0n} \\ \bar{x}_{11} & \bar{x}_{12} & \cdots & \bar{x}_{1n} \\ \vdots & \vdots & \ddots & \vdots \\ \bar{x}_{m1} & \bar{x}_{m2} & \cdots & \bar{x}_{mn} \end{bmatrix}$$

Step 3. Obtaning normalized weighed decision-making matrix

In the third step, a weight w_j is assigned for each criteria. Thus, the importance degree of the criterion is determined.

The weights satisfy that $\sum_{j=1}^{n} w_j = 1 \quad 0 \langle w_j \langle 1$

The normalized weighted value for each alternative in terms of each criteria is found by the following formula.

$$\hat{x}_{ij} = \bar{x}_{ij} * w_{ij}$$

$$\hat{X} = \begin{bmatrix} \hat{x}_{01} & \hat{x}_{02} & \cdots & \hat{x}_{0n} \\ \hat{x}_{11} & \hat{x}_{12} & \cdots & \hat{x}_{1n} \\ \vdots & \vdots & \ddots & \vdots \\ \hat{x}_{m1} & \hat{x}_{m2} & \cdots & \hat{x}_{mn} \end{bmatrix} \quad \begin{matrix} i = 0,1,...,m \\ j = 1,2,...,n \end{matrix}$$

Step 4. Calculating optimality function

The following formula can be used for finding the values of optimality function

$$S_i = \sum_{j=1}^{n} \hat{x}_{ij} \qquad i = 0,1,...,m$$

The larger value of optimality function indicates that the alternative is the better.

Step 5. Determining utility degree

The utility degree for each alternative is calculated formula given below.

$$K_i = \frac{S_i}{S_0} \qquad i = 1,2,...,m$$

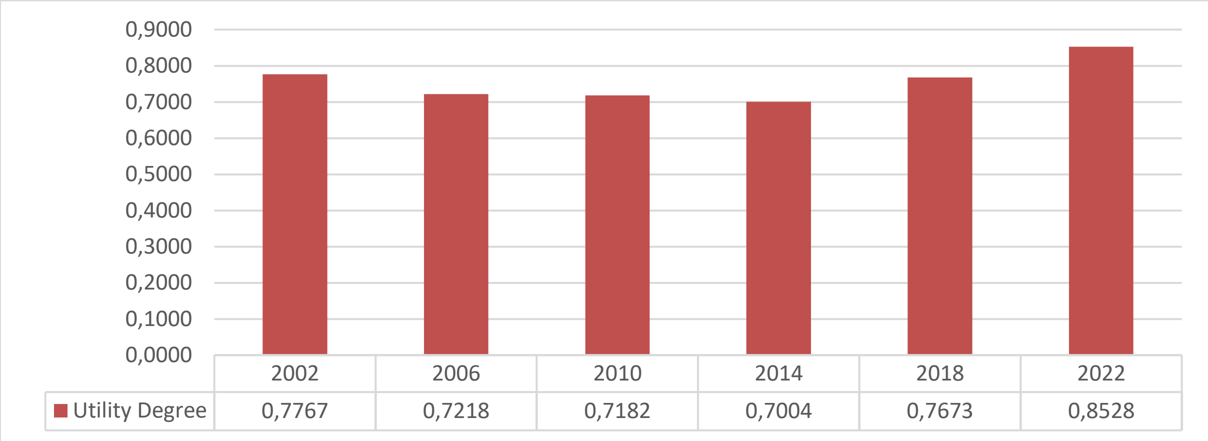
K_i lies in this interval $[0,1]$

Having implemented succesive steps, alternatives are ranked on the basis of their utility degrees. The alternative that has larger the utility value is regarded as the better alternative.

4. FINDINGS AND DISCUSSIONS

ARAS method was conducted for the years 2002, 2006, 2010, 2014, 2018 and 2022 respectively, and utility degrees obtained are given in Figure 3. When the method was applied, equal weight was assigned to the each indicator thus importance of the each indicator remained same over the years.

Figure 3: Utility Degrees Obtained from ARAS Method



Findings indicated that although Turkiye's performance regarding energy use and climate change remained largely flat until 2014, it began to improve after that year. However, Turkiye still ranks low in published indices related to environmental sustainability in the last decade.

According to the utility degrees obtained, it has been seen that there is no big differences between the utility degrees over the years. Utility degrees decreased from 0.7767 to 0.7004 between 2002 and 2014, after that time, increased and it reached 0.8528 in 2022. While between 2006 and 2014 utility degrees are at the almost same level, after 2014 it is seen that the utility degree has rised to 0.8528.

Especially, corrective actions have gained momentum after 2015 in Turkiye. The Paris Agreement, which encourages countries to jointly participate and cooperate in limiting global temperature increase to 1.5 degrees and reducing GHG emissions to zero by 2050, was signed by Turkiye on April 22, 2016, and was ratified on October 7, 2021. Moreover, Climate Law entered into force on July 2, 2025.

The impact of the Paris Agreement has been seen from energy policies. In addition to the current energy policies, increasing electricity production from renewable energy sources, making the necessary investments or the use of nuclear energy and also achieving net zero emission target by 2053 are included in the 12th development plan (Twelfth Development Plan, 2023).

5. CONCLUSION AND IMPLICATIONS

Climate change and global warming are the most important environmental threat for humanity. It is predicted that if the necessary measures are not taken, irreversible points will be reached after 2050. Therefore, it is crucial that countries determine their current situations and achieve the specified goals by 2030. Turkiye, which ranks among the top 20 countries in the world in terms of CO_2 emissions, has accelerated its efforts to combat climate change with the come into force of the Paris Agreement.

According to studies conducted earlier, existence of the PHH was validated in Turkiye. Therefore, to avoid negative impacts of the foreign direct investments, necessary regulations should be arranged as soon as possible. Also, Turkiye should continue to support investments and incentives to increase the use of renewable energy sources based on solar and wind power instead of fossil fuels to reduce CO_2 emission.

Turkiye imports most of the energy it uses, creating dependence on external sources for energy consumption. This situataion cause the increase in the current account deficit. By implementing energy efficiency policies and national climate strategies this dependence can be reduced.

Additionally, despite there have been positive developments regarding climate change policies in Turkiye, it is clear that numerous measures still need to be taken in this regard. Enacting the necessary laws or implementing regulations is of great importance. It should be considered that progress toward Goal 13 cannot be achieved unless the targets in Goal 7 are met.

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THE IMPACT OF PERCEIVED CORPORATE SOCIAL RESPONSIBILITY ON CONSUMER LOYALTY: USING CORPORATE IMAGE AND CUSTOMER TRUST AS MEDIATORS

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ABSTRACT
Purpose- Social responsibility could vary between economic, legal, ethical, and philanthropic responsibilities. However, understanding how people perceive CSR is an important aspect, particularly for managers. Thus, this research sheds light on this aspect by considering its impact on consumer loyalty through trust and corporate image.
Methodology- The researcher considered the quantitative method to instigate the study hypotheses, and the data was collected via questionnaires. The sample size included 410 respondents from company X consumers. The author used Structural Equation Model (SEM) to analyze the gathered data through Amos software.
Findings- The results and findings of the study showed that consumer loyalty towards the company brands is not affected by their perception of the social responsibility the company performs. However, the findings also supported the positive relationship that connects perceived CSR and image, perceived CSR and consumer trust, corporate image and consumer loyalty, and consumer trust and consumer loyalty. Additionally, the research confirms the positive effects of the mediating variables (consumer trust and corporate image).
Conclusion- Corporate social responsibility has occupied a distinguished place in business strategies due to the significance that lies behind the advantages it brings to companies. It could be concluded from this study that it is important to consider trust and corporate image while doing social activities to increase consumer loyalty.

Keywords: Perceived CSR, trust, corporate image, loyalty, and consumer.
JEL Codes: M14, M31, L20

1. INTRODUCTION

The corporates have limitless ways to express their contribution to social activities. As companies are considered part of society, they have to carry some responsibility toward society. Developing the community isn't an individualistic issue, even though sometimes it could be, but in general, it's a collectivistic issue. Therefore, besides individuals and normal groups, companies, organizations, institutions, and governments have to be part of the social responsibility. Some corporates consider social responsibility as an essential part of their strategy. Some organizations show their interests in CSR by supporting cancer research or helping in-need patients. Also, social responsibility includes environmental and sustainability matters. An example of participating in social responsibility activities is the one presented by the United Kingdom developers. As they consider the environmental matter by including sustainable policies in their construction strategies. For example, when developers intend to construct buildings, they consider controlling energy usage (Sharon & Stanley McGreal, 2010). Therefore, the perspectives of corporate social responsibility could be seen as an obligation toward society, as well as an obligation toward stakeholders, plus CSR could be considered as a managerial strategy (Bae & Kim, 2013).

Numerous firms include the initiatives of corporate social responsibility in their marketing plans to enhance the firm's image, which will be reflected in increasing their sales (Lee & Lee, 2018). Even though corporate social responsibility includes achieving commercial benefits, it must also consider people, ethics, society, and the environment.

This is CSR from the point of view of a business that deals with CSR and systemic sustainability challenges. That means companies can use CSR to achieve sustainable growth that benefits society and gains profits at the same time (Lee & Lee, 2018). Shareholders strive to build a good image of their firms in consumers' minds. Therefore, they use CSR as a managerial process that is meant to concentrate on evaluating and controlling the environmental conditions as it is meant to set policies and plans that encourage the positive impact of the firm (Bae & Kim, 2013). To maintain the firm's positive image, the company that considers CSR part of their policy must be careful and consider the consequences of their actions on anything or anyone who could be affected by the company's actions (Alniacik et al., 2011). The effect of corporate activity on the community, individuals, and stakeholders is not limited to the present but is extended to the future (Alniacik et al., 2011; Aras & Crowther, 2008). Accordingly, socially responsible initiatives could be a good investment in business (Gatti et al., 2012). Even though the essence of CSR activities is beyond profit maximization (Dodd & Supa, 2011), if a company communicates its good image and consumers perceive this image and have a good impression about the company, this will be reflected in the company's profits in a good way. Furthermore, thinking about the brands by consumers and seeing the CSR of the company that sells them will make consumers feel more secure to use the company brands, which boosts brand trust (Liu et al., 2010).

Keeping long-term and sustainable relationships with consumers relies on trust and commitment, therefore, they represent significant parts of marketing variables (Servera-Francés & Piqueras-Tomás, 2019). Furthermore, CSR could optimize the marketing strategy and help in improving customer loyalty (Liu et al., 2010). Loyalty attaches consumers psychologically to a particular company and its products as the company tries to motivate consumers to be committed to its goals (Amoroso & Roman, 2015). Nevertheless, social practices aren't just about charity and cost, they could inspire the business to be more innovative or allow companies to have a competitive advantage, and sometimes CSR could be an opportunity for the company (Gatti et al., 2012).

The benefits of social practices could be provided as charity by corporates, other times it could be an exchange process between corporates and consumers. There are many pieces of research studying the effect of CSR on customers but until now, they could not reach a similar conclusion in this regard (Deng & Xu, 2017). For that, corporates have to understand and identify what is considered a corporate social activity by customers, and then they insert such activities into their plans (Pérez & Del Bosque, 2013). When researchers or marketers can define CSR from a consumer perspective, then more studies can be conducted to know how these activities affect consumers. Because there is not much known about this issue regardless of the huge concentration on CSR in the marketplace (Sen & Bhattacharya, 2001).

Researchers have studied perceived CSR, corporate image, consumer trust, and consumer loyalty from different angles in addition to other constructs, for example, some researchers studied the relationship between CSR, recovery satisfaction, trust, and loyalty (Choi & La, 2013). Another researcher investigated trust, loyalty, perceived CSR, and purchase intention (Upamannyu et al., 2015). Additionally, CSR, image, trust, satisfaction, quality, and loyalty formed another investigation (Liu, & Ji, 2010). CSR and corporate image also were understudy (Khamis, & Wan Ismail, 2022). Nevertheless, these studies have been done in different countries of the world such as Turkey (Gürlek et al. 2017), India (Upamannyu et al., 2015; Sharma, & Jain, 2019), China (Liu, & Ji, 2010), Bahrain (Al Mubarak et al. 2018) and Egypt (Khamis, & Wan Ismail, 2022), they included diverse sectors like hotels sector (Gürlek et al. 2017), banking sector (Al Mubarak et al., 2018) and construction (Khamis, & Wan Ismail, 2022). However, what distinguishes this study is that it considers one of the most popular and successful organizations in social activities in Turkey, company X, to investigate the relationship between the variables.

Nevertheless, by considering the above-mentioned studies, the research came up with a gap in the literature that needs to be recovered like considering the impact of CSR on a corporate image in another sector than construction (Khamis, & Wan Ismail, 2022) and banking as examining them in different countries other than Bahrain (Al Mubarak et al., 2018). Also, there is a need to investigate the relationship between perceived CSR and trust (Choi & La, 2013). However, the authors studied the relationship between CSR and loyalty as well as the mediating role of corporate image in the hotel sector in Turkey (Gürlek et al., 2017). Some studies admitted the influence of CSR on consumer loyalty, while others refuted this relationship (Sharma, & Jain, 2019).

However, this study intends to fill these gaps by investigating how corporate social responsibility could affect consumer loyalty and studying the mediating effect of corporate image and consumers' trust.

Therefore, the main objectives of the research include investigating the connection between the social responsibility practices of company X and consumers' loyalty towards buying the company's brands. Additionally, the study explores the relationships between perceived CSR and corporate image, as well as between corporate image and consumers' loyalty. Furthermore, investigates the relationship between perceived CSR and consumers' trust, and consumers' trust and loyalty. The final objective is to explore whether there are mediating roles in corporate image or consumer trust.

The literature review is the next section of the paper. This section contains the research variables and starts by explaining the appearance of the CSR concept in organizations and how it has taken place in the business world over the years. Subsequently, it explains the concepts of corporate image, consumer trust, and consumer loyalty towards company brands. The following part explains the relationship between the variables and the development of the hypotheses. Then comes the methodology and analysis followed by findings and conclusion.

2. LITERATURE REVIEW

2.1. CORPORATE SOCIAL RESPONSIBILITY

Even though the origin of the CSR concept goes back to the first half of the 20th century, CSR perception started to evolve in the 1950s and has taken a new form in the 1960s then CSR was deployed in the 1970s and started to take place in organizations (Alniacik et al., 2011). However, traditionalists in the 1970s were against the concept of being involved in social responsibility activities. Their idea was that the firms do not have any responsibility toward society; they just achieve the work based on the criteria of economic efficiency (Gatti et al., 2012). Nevertheless, later, in 1976, a study revealed a dramatic change in the previous opinion. Executives have changed their minds and started to believe in the critical role of social responsibility in the business. They adopted the idea, and it became part of corporate philosophy as they expected that social activities would be reflected positively on their firms, as well most executives believed that social participation would enhance the goodwill and reputation of the firm (Dodd & Supa, 2011).

Dodd & Supa stated that CSR in the modern world has several names, some attributed to corporate and call it corporate citizenship, corporate giving, or corporate philanthropy, while others connected with the community and thus called it community affairs, corporate community involvement, and community relations. Following the same study, some names combined between corporate and community like corporate social marketing and corporate community involvement. Based on that, studies have identified the dimensions of CSR. Some of the CSR dimensions are connected to corporations and related to employees and shareholders and other dimensions are connected to the community and concerned about customers, the environment, and the market (Pérez & Del Bosque, 2013). However, CSR is identified as the firm's moral obligations that concern with increasing the positive effect and decreasing the negative effect of the social environment (Berens et al., 2005; Lin et al., 2011). The previous studies have viewed consumer perceptions from two angles which are the multidimensional perspective and the unidimensional perspective (Sharma & Jain, 2019). CSR has multi-dimensions which were inferred from the different expectations of stakeholders. The researchers define CSR according to 4 dimensions: economic, legal, philanthropic, and ethical. The perceived CSR dimensions have varying degrees of impact (Bianchi, Bruno, & Sarabia-Sanchez, 2019).

The importance of these dimensions is determined by stakeholders, employees, or consumers (Sharma & Jain, 2019). Nevertheless, the practices of CSR can be differentiated from one sector to another (Pérez & Bosque, 2013). Accordingly, the definition of corporate social responsibility will be different from one study to another (Dodd & Supa, 2011). Some scholars defined CSR as a firm's commitment oriented to alleviate or eliminate anything that could have hurtful consequences on the community (Alniacik et al., 2011). Panwar and others considered CSR as part of synergistic philosophy. In other words, they stated that when doing business, corporates must consider the economy and community plus environmental issues (Panwar et al., 2006). As environmental issues concern the whole community, researchers consider them as part of CSR dimensions (Pérez & Del Bosque, 2013). The evidence of this truth is that the degradation of the environment, carbon emissions, and other related issues became part of business and government strategies in recent years (Pornpratang, Lockard, & Ngamkroeckjoti, 2013). For example, many firms consider environmental protection in their working practices which means when the firm is taking responsibility for their activities and their impact on the community, environmental concerns become an objective of business, according to the aforementioned authors.

CSR is a function that includes morality and ethics as well as social obligations toward communities to ensure the benefits are exchanged between the firm and society (David et al., 2005). Kotler and Lee defined CSR as a business that has to operate in a way that serves ethical and legal issues. In addition, business operations have to meet or exceed people's expectations that they have about business ethics and commerce (Kotler & Lee, 2005). Carroll (1979) indicated that the definition of CSR has to have 4 responsibilities (Economic, Legal, Ethical, and Philanthropic Responsibilities) to consider the corporate a good one. (Cited in Lee & Yoon, 2018; Mulaessa & Wang, 2017).

However, economic responsibility takes priority over companies' responsibilities, particularly for-profit companies. The concept of a firm's economic responsibility is that this kind of firm strives to provide society with services and goods to generate economic profit (Bae & Kim, 2013). The goal of economic responsibility is to maximize shareholders' profit and get the best value for money as well as to keep a strong competitive position (Pérez & Del Bosque, 2013). Whereas legal responsibility demonstrates that the firm is following the laws and regulations of society as the firm has to include them in social contracts (Bae & Kim, 2013). Ethical responsibility entails the norms of ethics the firm should have. Philanthropic responsibility, which is also called discretionary responsibility, is related to volunteering activities that the firm provides to society, such as philanthropic works which in turn reflect a positive effect on society (Carroll 1979, Bae & Kim, 2013).

2.2. CORPORATE IMAGE

Even though most firms have acknowledged the importance of corporate social responsibility and spent a fortune to carry out such practices, not all practices of CSR could come back with good outcomes for the companies (Bae & Kim, 2013). However, when consumers associate a good image of the firm with its CSR participation, they are likely to have good intentions toward the firm and its products (Lee & Yoon, 2018). As the literature has mentioned, the corporate image comes from the impression the consumers, employees, interested people, and media have in their minds regarding specific corporate (Su, Jeong, Choi, & Kim, 2015). Some researchers studied the consumer perspective and indicated that the corporate image is the impression the consumer has toward the firm as this impression could be built based on the firm products or brands (Lee & Lee, 2018). The image of any corporate could take different shapes but in general, these shapes are related to the experience the consumers get and the perception the individual composes about the core of the corporate (Su et al., 2015). Park (2002) connected the corporate image factors with innovation, prosperity consumer orientation, and social participation (Park, 2002). However, the company can support its social practice image by showing participating in programs concerned about environment preservation, showing interest in culture and art by providing physical support, donating to education and health as well contributing to other social programs (Su et al., 2015). Businesses and their social activities should have a good fit to be able to be part of associative networks of consumers, in addition, to being able to enhance the consumer perspective toward the positive initiatives the corporates do regarding CSR (Pérez & Bosque, 2013). Thus, companies could take advantage of CSR initiatives and utilize them as a good tool to enhance the positive image of the corporation for consumers (Andreassen & Lindestad, 1998). Studies have proved that the social responsibility of the corporation affects how consumers perceive and evaluate the corporation and its products (Brown & Dacin, 1997).

2.3. CONSUMER TRUST

Without any doubt, trust influences consumers dramatically (Oney et al., 2017). Thus, trust is considered an essential component of any successful relationship (Zeithaml et al., 1996). The definition of trust concluded with the good expectation of people towards someone's action (Thomas& Kozhikode 2008). Trust could be referred to as a belief the consumer has in the person who provides products and services, which is built on suppliers' behavior (Crosby et al., 1990). Trust is not just a belief that shows the other party will act in a good manner, but it is also connected with commitment (Moorman et al., 1992). To develop a commitment with the firm's customers, they have to trust the firm's products and services and that is what builds a strong relationship between firms and consumers (Amoroso & Roman, 2015). From that, it could be clear how much customer trust could be important to keep an advantageous relationship (Liu et al., 2010). The source of trust comes from honesty, integrity, service quality, and business intent to keep providing consumers with the best interests (Sharma & Jain, 2019). According to Coulter and Coulter, a trusting service provider comes not just from integrity and honesty but also it comes from provider morality (Coulter & Coulter, 2002). Public trust is essential for long-term relations (Amoroso & Roman, 2015). When consumers trust a brand that gives a competitive advantage to the firm over other firms which in turn will make consumers accept the brand easily (Sharma & Jain, 2019). Trusting the brand has a good impact as well on consumer attitude (Delgado-Ballester & Munuera-Alemán, 2001). Therefore, firms with excellent reputation can get the advantage of building consumer trust and identification decidedly and that, of course, will be reflected in customer commitment (Amoroso & Roman, 2015).

2.4. CONSUMER BRAND LOYALTY

When buying products from a specific brand turns into a habit with time, then we can call this process consumer loyalty which resulted from the favorable attitude a consumer has toward the brand (Liu, Ji, & Fenglan, 2010; Upamannyu et al., 2015). Attitude isn't the only concept included in consumer loyalty, but behavior also contributes to loyalty construction. Gremler (1995) indicated that to measure loyalty, attitude and behavior dimensions must be included in that measurement (Gremler,1995 cited in Liu et al., 2010). Loyalty from an attitude perspective demonstrates that when a consumer thinks positively about a firm, the consumer will start to be connected emotionally with the firm while loyalty from the behavioral side considers the consumer's behavior, particularly, regarding repetitive transactions a consumer performs during a specific period (Sharma & Jain, 2019). However, in the context of marketing and organizations, loyalty has a dominant role in understanding competitive success therefore many researchers took the path that leads to it which makes it one of the most investigated variables (Servera-Francés & Piqueras-Tomás, 2019). Going back to literature concerning corporate social responsibility, it has been understood that many types of research and studies stated that social responsibility practices and consumer attitudes and reactions are positively correlated (Fatma & Rahman, 2016). As attitude is part of loyalty, anything that affects attitude, and loyalty would be impacted as well. Based on the positive attitude of CSR, it can be concluded that businesses enhance the continuous repurchase of their products with a possibility of increasing sales (Semuel & Chandra, 2014) as behavioral loyalty is demonstrated. Some researchers found that consumers are ready to buy products from companies involved in social practices, even if they will pay more, rather than buy the same product from companies that aren't involved in similar practices (Deng et al., 2001; Barone et al., 2000)

3. DEVELOPING THEORIES AND HYPOTHESES

3.1. CSR and Loyalty

Many researchers studied how CSR and consumer loyalty could be connected and how they influence each other. In connecting CSR with loyalty, previous studies found that there is a strong correlation between how consumers perceive CSR and their loyalty

(Bianchi et al., 2019; Sharma & Jain, 2019) Furthermore, how consumers perceive CSR affects their behavior and attitude toward the firm and toward its services and products as well which will be reflected in their loyalty (Choi & La, 2013). Additionally, Sirgy and Lee proved that the perceived CSR has a favorable effect on consumer evaluation of firm services which is reflected positively in consumer loyalty (Sirgy & Lee, 1996). Another research study concerned how social activities are connected to loyalty in the hotel sector and found that consumer loyalty is affected by corporate social practices even though it's indirectly affected due to the existence of other variables (trust, satisfaction, and consumer identification) as mediators (Martínez & Rodríguez, 2013).

Nevertheless, regardless of all these studies, the knowledge about how CSR is connected to loyalty is still limited (Bianchi et al., 2019). As Moisescu indicated, more thorough research is required on how perceived CSR could impact brand loyalty (Moisescu, 2015).

3.2. Perceived CSR, Image and Loyalty

Many factors help employers to deliver the desired image of a firm to consumers. For example, according to Winter (1990), these factors are related to enterprise behavior and social behavior plus to corporate contributions (Winters, 1990). Nevertheless, several models have been developed by researchers to understand how perceived CSR affects many factors including brand image (Bianchi et al., 2019) which reflects the corporate image somehow. Scholars found that when consumers perceive CSR positively, they will response positively (Tian et al., 2011). Also, the literature demonstrates that perceived CSR influences brand image subjectively and objectively due to the information that it provides about the company value (Bianchi et al., 2019) as this influence differs according to consumer's evaluation processes (Martínez et al., 2014).

Nevertheless, there is a consensus on understanding that CSR is an essential part of corporate image. Accordingly, CSR may be among the most crucial factors that affect individuals' opinions regarding corporate image (Lee & Lee, 2018). Also, studies concerned about consumer behavior have confirmed that corporate image plays a critical role in consumers' loyalty toward the corporate and their satisfaction (Hart & Rosenberger, 2004). So, a firm can support its image by providing products and services with high quality and reasonable prices (Su et al., 2015). However, businesses related to fashion take advantage of CSR to enhance their image and increase sales (Lee & Lee, 2018). The leverage between the CSR initiatives and purchase intention could be conditional, but the same practices have approved a positive correlation with a corporate image (David et al., 2005). Also, Research stated that the environmental and philanthropic faces of CSR proved that they have a positive impact on company evaluation, which is reflected in corporate image, and purchase intention (Olšanová , 2018). Associative learning theory indicates that when a company's personality is extremely associated with its CSR activities, it can have a good impact on how consumers feel toward the firm and what it offers, and consumers will believe the company's actions reflect good deeds (Speed & Thompson, 2002; Pérez & Bosque, 2013).

Furthermore, there are limitations in the literature on CSR image from the customer's perspective, and more research must be conducted (Pérez & Del Bosque, 2013; Lee & Yoon, 2018). It has been suggested in the literature to study the relationships between perceived CSR, customer satisfaction, service/product quality, customer loyalty, corporate image, and customer trust (Liu, Ji, & Fenglan, 2010).

3.3. Perceived CSR, Trust and Loyalty

Trust comes from beliefs, feelings, and expectations the consumers have toward firms with giving value to the firm's reputation which includes CSR as a priority (Pérez & del Bosque, 2014). The ethical and social responsibility the firm performs helps in gaining consumer trust (Pivato et al., 2008). Many scholars studied trust variables in the context of CSR like Keh and Xie who studied trust, commitment, identification, corporate reputation, and purchase intent variables in addition to a willingness to pay a premium price for products that have CSR orientation (Keh & Xie, 2009). Also, literature has discussed the connection between consumer trust and loyalty (Liu et al, 2010) as well as brand trust and attitudinal loyalty (Chaudhuri & HolbrooK, 2001). Being loyal to one specific firm rather than another depends on how consumers perceive its ethics. For example, Roman indicated that when consumers believe that a salesman behaves ethically, their loyalty toward the firm will increase (Roman, 2003). However, if consumers have a high perception of ethical social responsibility, they will have a high feeling of trusting the firm (Sharma & Jain, 2019). It has been found that trust in corporate social responsibility variably mediates the relationship between perceived CSR and consumer response (Tian et al., 2011). In 1997, scholars found that trusting the product or the one who sells it will trigger consumers to keep buying the products (Doney & Cannon, 1997). Studying the effect of consumer trust on brand loyalty has demonstrated a positive connection (Deepak et al., 2002).

However, moving to trust, we find that the literature considers trust as an essential consumer predisposition as it leads to the behavioral intention of the consumer (Sharma & Jain, 2019). Trust has a strong connection with CSR. Therefore, some firms use social practices to convince consumers of their benevolent work which will help them to gain consumers' trust (Amoroso & Roman, 2015). Researchers have found that consumer-oriented CSR actions reflect a direct and positive impact on trust and consumers' value perception (Servera-Francés & Piqueras-Tomás, 2019).

Due to that, this research proposed the following hypotheses.

H1: Perceived corporate social responsibility has a positive and significant impact on consumer loyalty.

H2: Perceived corporate social responsibility has a positive and significant impact on corporate image

H3: Perceived corporate social responsibility has a positive and significant impact on consumer trust.

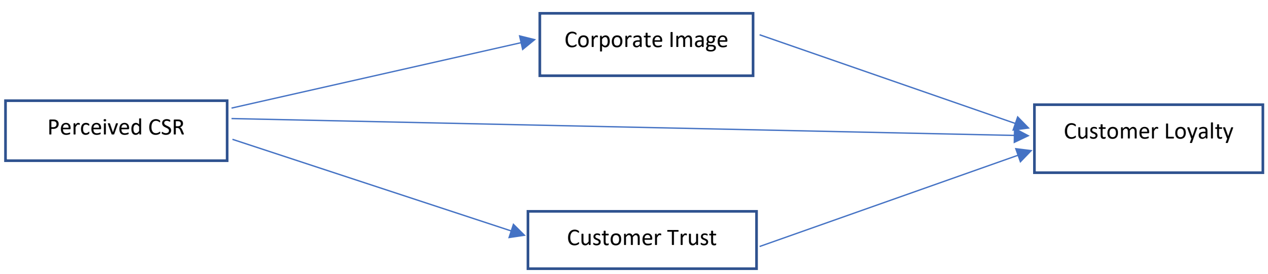
H4: Corporate image has a positive and significant impact on consumer loyalty.

H5: Consumer trust has a positive and significant impact on consumer loyalty

H6: Corporate image mediates the relationship between Perceived corporate social responsibility and consumer loyalty.

H7: Customer Trust mediates the relationship between Perceived corporate social responsibility and consumer loyalty.

Figure 1: The Theoretical Model



4. METHODOLOGY

This study strives to comprehend how the perception of social responsibility practices of company X could affect consumers' loyalty toward its brands through corporate image and consumer trust. Nevertheless, the study targeted the consumers of company X brands in Turkey to verify the proposed hypothesis. The methodology used in this research is quantitative. The adopted tool to collect data was an online questionnaire. The Link to the questionnaire was distributed via social media pages and groups plus to friends, and targeted groups also forwarded the questionnaire link to their friends and relatives. However, the researcher could collect 410 of data through the convenient sampling method. The questionnaire has 2 parts: the first part included demographic data and the second part included items of the 4 variables the study investigates, the questionnaire used the Likert scale, which is based on five anchors: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree (Sekaran & Bougie, 2016) to measure the variable items. The scales used in the study are shown in Table 1. The questionnaire was translated into Turkish as the targeted sample was from Turkey.

Table 1: The Scales Used in the Study

Variable	Item	Source
Perceived CSR	Company X helps solve social problems. Company X participates in beneficial public activities. Company X perceives public services, sponsorship donations, and voluntary works as an important part of organizational activities. Company X plays as a role of corporate citizen in addition to the pursuit of economic profits of the corporation.	(Oo et al., 2018)
Corporate Image	I think the service level of Company X is high. I think Company X manages its business well. I think Company X works for environment is good. I can trust the products produced by Company X .	(Brown & Dacin, 1997)
Loyalty	I say positive things about brand/company X to other people I recommend brand/company X to other people. I encourage friends and relatives to buy brand/company X products. I consider brand/company X products as my first choice of purchase. I will continue purchasing products of Company X brands in the future. I will repurchase other products from Company X brand. I will recommend this brand to Company X consumers.	(Lin et al., 2019; Bianchi et al, 2019)
Trust	Company X can be trusted Company X keeps their promises Company X brand/company's products have my interest in mind	(Guenzi et al., 2009)

5. ANALYSIS AND RESULTS

The analysis of the study reflects descriptive statistics and inferential statistics.

5.1. DEMOGRAPHIC DATA

Demographic data demonstrates the characteristics of respondents, and it could be explained through descriptive statistics as it is shown in Table 2. The statistics showed that 62 % of respondents were females, and people aged from 18 to 24 formed 64 % of respondents approximately. Additionally, Half of the respondents were students.

Table 2: Demographic Data

Descriptors	Sub-descriptors	Frequency (n=410)	Percentage (100%)
	Male	154	37.6
Gender	Female	256	62.4
	< 18	3	.7
	18-24	264	64.4
Age	25-31	69	16.8
	32-38	46	11.2
	39-44	14	3.4
	46 <	14	3.4
	Secondary School	19	4.6
	High School	65	15.9
Education level	Undergraduate	279	68.0
	Graduate	47	11.5
	Full-time private sector employment	50	12.2
	Part-time private sector employment	23	5.6
	Full-time government employment	18	4.4
Employment	Unemployed	35	8.5
	Self-employed	13	3.2
	Home-maker	41	10.0
	Student	226	55.1
	Retired	4	1.0
	Single	313	76.3
Marital States	Married	97	23.7

5.2. INFERENTIAL STATISTICS

After cleaning the data and removing unrelated ones, Cronbach's Alpha was tested to examine the reliability of the scales. This kind of test is used to measure internal consistency. In other words, Cronbach's Alpha results indicate if the scales/instruments that were used to measure the variable are accurate and reliable and to what extent (Shrestha, 2021). However, the aforementioned researcher stated that the ranges of Cronbach's Alpha values should be between 0 and 1 but the threshold of its value has to be more than 0.7 to consider the scale reliable. The better Cronbach's Alpha value is, the more reliable and accurate the scale will be. Testing Cronbach's Alpha of this study showed that perceived CSR has .862, the corporate image has .823, trust has .794 and loyalty has .929. All variables achieved the threshold of Cronbach's Alpha which means they are reliable.

5.2.1. EFA

Exploratory factor analysis is a statistical technique used to model latent factors (Courtney & Gordon, 2013). "This technique is a variable reduction technique which identifies the number of latent constructs and the underlying factor structure of a set of variables" (Suhr, 2006). Nevertheless, EFA was conducted to the variables: Perceived CSR, Corporate Image, Consumer Trust, and Consumer loyalty. Conducting EFA analysis requires paying attention, particularly, to KMO and Bartlett's Test, Communalities, and factor loading. KMO and Bartlett's Test is one of the most important steps in factor analysis to assess the suitability of the collected data. Kaiser-Meyer-Olkin (KMO) test is meant to indicate the adequacy of the sample size. Bartlett's Test of Sphericity explains if the factor model is appropriate to do the analysis (Eyduran et al., 2010). However, KMO values range from 0 to 1 (Williams et al., 2010). According to Gaskin (2021), the higher the value is, the better.

The results of this study have found that KMO for perceived CSR was 0.80, for the corporate image was 0.779, for loyalty was 0.903, and for trust was 0.706. All KMO results were above the Middling level. In addition to that, all the results of Bartlett's Test of Sphericity were significant. These results indicate that the collected data is suitable for factor analysis. Coming to communality which indicates to which extent the item is related to the other items (Gaskin, 2021a). we should pay attention to any variable that has low communality (between 0.0-0.4) because it may be problematic, but we don't remove it until we revise the factor loading (Gaskin, 2021)a. therefore, it could be concluded that the higher the value of communalities, the better. All values of communalities in this study have exceeded 0.04 which means none of the items is problematic. Communalities results are illustrated in Table 3.

The factor matrix represents the factors' structure which is based on dividing the items of scales into groups as these groups represent the factors and the items are classified under a specific factor according to their strong connection. We can use this matrix 1: to determine to what extent the items of the scale are connected to their variable (Byrne, 2016), 2: to identify the item that has a lower number (Byrne, 2016). The item that has a low factor loading (less than 0.5) doesn't belong to the variable and should be removed. However, the results of this matrix are shown in Table 3. All the items have factor loading between 0.65 and 0.86 which means the items have accepted correlations with their factors.

Table 3: Communalities and Factor Loading

	Extraction	Factor
Q1	.647	.804
Q2	.736	.858
Q3	.583	.763
Q4	.495	.704
Q5	.625	.791
Q6	.617	.786
Q7	.425	.652
Q8	.503	.709
Q9	.654	.808
Q10	.752	.867
Q11	.732	.856
Q12	.437	.661
Q13	.659	.812
Q14	.635	.797
Q15	.753	.868
Q16	.497	.705
Q17	.582	.763
Q18	.615	.784

5.3. Model Testing

Structural Equation Model (SEM) is used to test diverse theoretical models which state how particular sets of variables define constructs as it explains how these constructs are connected (Schumacker & Lomax, 2010). Measurement models and path models are examples of models that could be explained by SEM (Lei & Wu 2007).

5.3.1. Measurement Model

The measurement model is also called the "structural model" or "default model", this model is the model that we want to investigate in our study (Yaşlioğlu & Yaşlioğlu 2020). By using the measurement model of SEM, we can understand how well the measured variables, which are called observed variables as well, unite to determine the underlying hypothesized constructs which represent the latent variables (Weston & Gore, 2006). However, to test the measurement model, we use confirmatory factor analysis (CFA) (Lei & Wu, 2007).

5.3.2. CFA

The role of Confirmatory factor analysis (CFA) is to confirm and verify the factor structure that was extracted from EFA (Gaskin, 2021b). In other words, this procedure represents whether the relationship between the observed variables and their latent factors exists (Suhr, 2006). There are some significant measures we should consider understanding the model fit, which will be explained next.

5.4. Model Fit

The model fit helps us to understand the goodness of fit of the model. In other words, model fit can show us if the proposed model is well-fitted or not as it explains the correlations between the study variables and helps in predicting future outcomes. To know to what extent the model could fit, we have to look at the outcome of CMIN/DF, CFI, GFI, AGFI, NFI, TLI, RMSEA, PCLOSE. The values of these measures indicate whether the proposed model has a good fit or a poor fit. If they achieved the required threshold as indicated in Table 4, then we can consider the model as well fit. The threshold of CMIN/DF, GFI, TLI, NFI will be as in Table 4 (Byrne, 2011). The outcome of the model fit of the study is illustrated in Table 4.

Table 4: The Outcome of the Model Fit

Indices	Threshold	Value	Values After Covariance
CMIN/DF	<5	4.6	3.392
GFI	>.90	.850	.892
AGFI	>.80	.802	.854
NFI	> 0,90	.887	.919
TLI	> 0,90	.892	.929
CFI	> 0.90	.909	.941
RMSEA	.05- .10	.094	.076
PCLOSE	>.05	.000	.000

5.5. Reliability and Validity

After revising the model that fits through CFA we check reliability and validity. Composite reliability is the one that we test here as well 2 types of validity is explicitly by CFA: convergent validity and discriminant validity. It is necessary when we do the CFA because if our construction doesn't show good reliability and validity, then we will not be able to move on to test the causal model (Gaskin, 2021) b (path analysis). However, reliability explains consistency while validity tells us if the scales, we used to be accurate (Smith and Albaum, 2005). In other words, reliability indicates the quality of the instrument used (Muijs, 2010). Composite reliability is meant to measure the internal consistency as Cronbach's alpha, but CR is used with CFA while Cronbach's alpha is used with EFA.

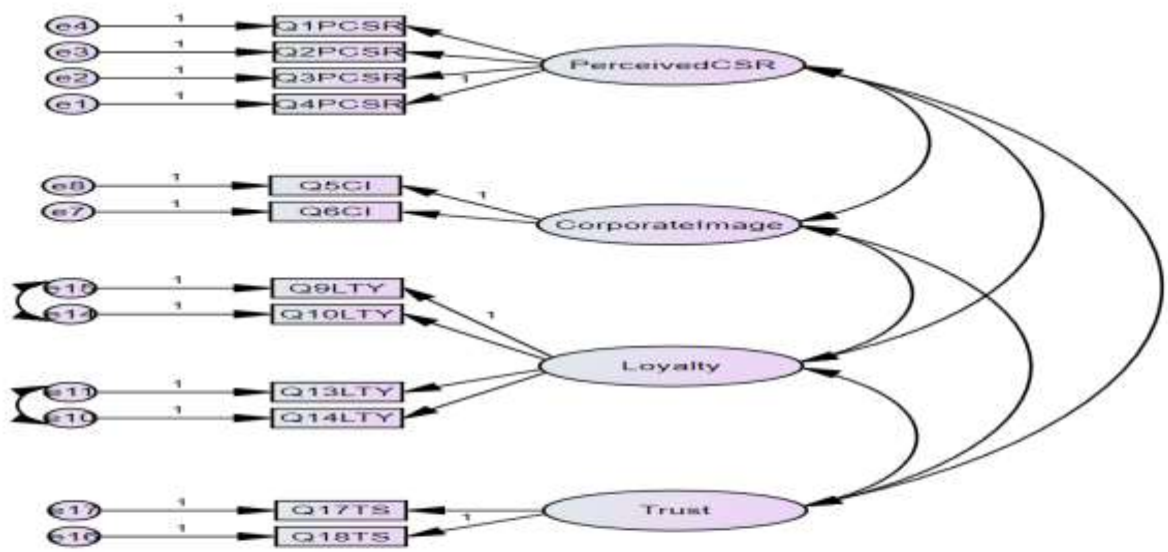
Nevertheless, convergent validity indicates if the items of the same construction are related, but discriminant validity indicates that there are no correlations between the items that belong to different constructs (Smith and Albaum, 2005). According to these types of construct validity, the correlated items should belong to one factor and shouldn't be correlated with other items that belong to a different factor. However, for the construct to be reliable and valid, the composite reliability has to be > .7, for convergent validity, the average variance extracted (AVE) should be > 0.5, for discriminant validity, maximum shared variance (MSV) has to be less than the square root of AVE and the second condition is that AVE has to be more than the inter-construct correlations (Hair et al., 2010). When it comes to the results of this study, we found that the composite reliability of perceived CSR, corporate image, loyalty, and trust have achieved the threshold which means the scales that were used in the study are reliable. It is the same when we look at the results of convergent validity, we find all the factors have achieved the condition of AVE. It means the items of each factor are correlated. After that, we looked at discriminant validity which indicated problems in all variables. None of the 4 variables of the study performed the 2 conditions of discriminant validity. Therefore, to improve the validity some items from the scales should be removed. From corporate image variable Q7, and Q8 were removed, from loyalty Q11, and Q12, and from trust Q16 was removed. As a result of this step, the overlapping between the items was solved and all the variables became valid. Table 5 illustrates the results of reliability and validity.

Table 5: Reliability and Validity of CFA

	CR	AVE	MSV	MaxR(H)	Loyalty	PCSR	Co. Image	Trust
Loyalty	0.897	0.686	0.613	0.902	**0.828**			
PCSR	0.865	0.617	0.491	0.873	0.695	**0.785**		
Co. Image	0.806	0.675	0.613	0.809	0.783	0.701	**0.822**	
Trust	0.749	0.599	0.483	0.751	0.695	0.665	0.557	**0.774**

Since some changes have been made to the underlying factors construct, CFA didn't confirm the factor structure from EFA. That led the research to another technique called exploratory structural equation modeling (ESEM). This technique combines exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Marsh et al., 2009)/ structural equation modeling (SEM) (Marsh et al., 2020). However, even after these changes, the model still has a good fit. Figure 2 shows the CFA model.

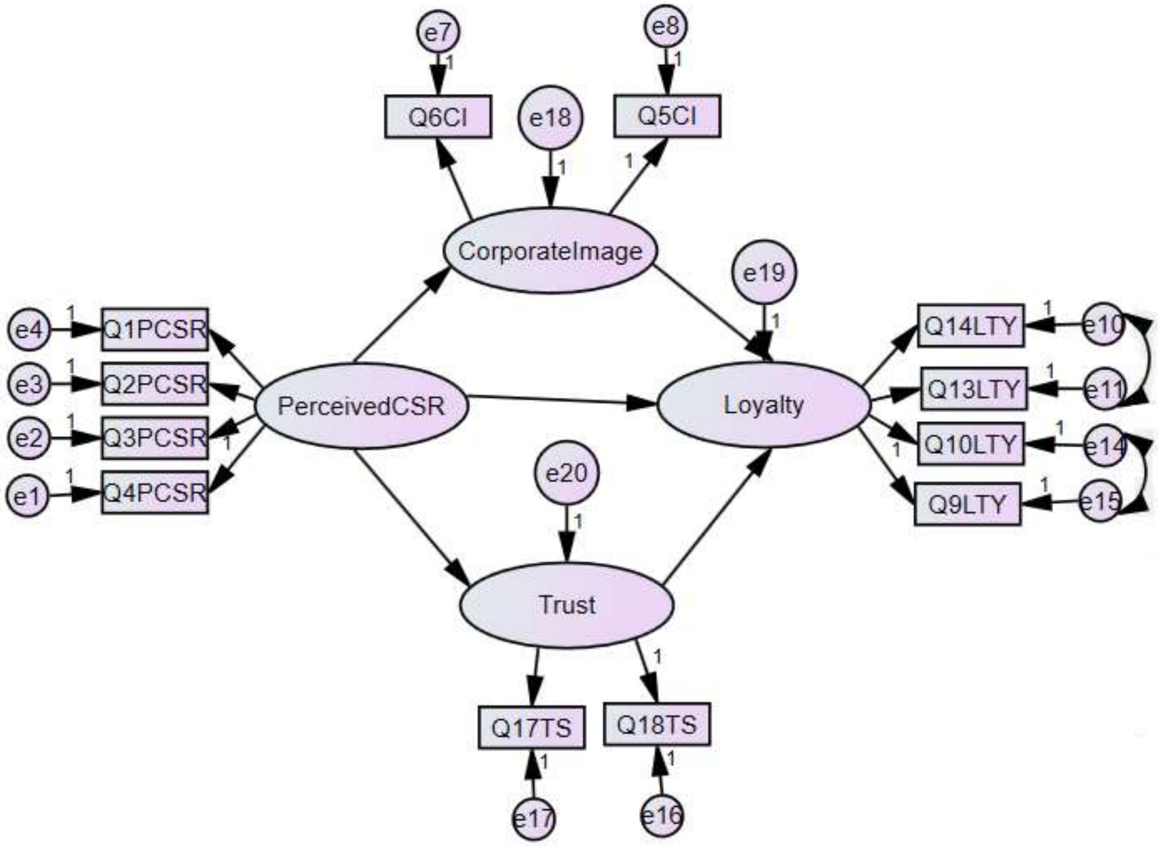
Figure 2: CFA Model



5.6. Path Model

Path analysis is another analysis that could be interpreted by structural equation modeling (SEM). Path model includes multiple regression models or equations. Therefore, path analysis is considered a good technique to understand the direct and indirect effect of the dimensions plus the mediation effect (Lei & Wu, 2007). This is why the study chose path analysis to test the hypotheses. When doing path analysis, the relationships, whether it is causal or non-causal, among the variables could be cleared and indicated through the path values (Savalei, & Bentler, 2006). Figure 3 illustrates the path analysis of the study.

Figure 3: Path Analysis Model



6. FINDINGS AND DISCUSSIONS

The findings indicate that perceived CSR and loyalty are not significantly correlated because the P-value is > .05. Accordingly, H1 in the study was not supported. This indicates that participating in social activities does not encourage consumer loyalty toward corporate brands or products. Furthermore, the findings indicate that corporate image is directly and significantly influenced by perceived CSR as the P-value is <.05, which means H2 was supported. Trust is also affected by perceived CSR in the same way, which leads the research to accept H3. Also, corporate image and loyalty proved that there is a positive and significant connection between them; the same connection exists between trust and loyalty, which means H4 and H5 were supported by the findings. From the estimates, it could be clear that all the relationships are positively affected. Also, the findings of the study show that corporate image is affected by perceived CSR as it affects consumer loyalty. Furthermore, findings indicate that consumer trust is impacted by perceived CSR as it influences Loyalty. Nevertheless, the first 5 hypotheses indicated the direct effect of the relationships while H6 and H7 indicated the indirect effect of perceived CSR on loyalty through corporate image and trust, and both of them proved their correctness. The study proved the mediating role of corporate image and trust. The results of path analysis are illustrated in Table 2:

Table 2: Hypotheses Results

H		Estimate	P- Value	Result
H1	Perceived CSR ---> loyalty	.091	.356	Rejected
H2	Perceived CSR ---> corporate image	.828	0.000	Accepted
H3	Perceived CSR ---> trust	.657	0.000	Accepted
H4	Corporate image ---> loyalty	.567	0.000	Accepted
H5	Trust ---> loyalty	.446	0.000	Accepted
H6	Perceived CSR ---> Corporate Image ---> Loyalty	.046	0.000	Accepted

H7	Perceived CSR ---> Trust ---> Loyalty	.043	0.000	Accepted

However, the results lead to considering the relationship between perceived CSR and loyalty without any mediating role will not be fruitful.

7. CONCLUSION AND IMPLICATIONS

Corporate social responsibility has four types of responsibilities which are economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility. Many studies investigated the 4 dimensions. However, this research is meant to investigate the perception of these responsibilities in general and their influence on consumer loyalty and study the mediating effect of corporate image and consumer trust. Thus, company X, as one of the most successful companies in Turkey in the context of CSR, has been chosen to be part of this study. The company promotes several social practices as it considers sustainable production in 14 countries other than Turkey (Lin et al., 2011). Nevertheless, the outcome of this research explained the significance of CSR activities in influencing consumer loyalty towards the company brands through mediators (corporate image and trust). Therefore, the activities of CSR could be aimed at consumers not just to increase their loyalty but as well to increase their trust in the organization (Servera-Francés & Piqueras-Tomás, 2019) which was proved by the current study. Also, Choi and La (2013) proved the effect of CSR on trust. Perceiving that the corporate is benevolent by consumers improves their trust in the corporation (Liu et al., 2010). Getting consumers' trust leads to gaining their loyalty. This positive relationship that links trust and loyalty was proved in this study as well as in other studies (Upamannyu, Gulati, Chack, & Kaur, 2015). This study has confirmed the connection between social practices that the company achieves and consumer loyalty to its brand by using mediating roles. The study indicated the positive impact of these practices on consumer trust which is reflected in consumer loyalty positively. The study also confirmed the impact of CSR on corporate image and the impact of corporate image on consumer loyalty. In this way, the study has achieved its objectives.

However, this study has several implications as it could benefit academia and practitioners. For example, the marketers could take advantage of the research findings to improve consumer trust and corporate image to improve consumer loyalty by applying more social practices and broadening their related activities. The associations of social responsibilities strengthen the consumers' trust and their attachment to the firm (Aaker, 1996). Therefore, the company should strive to make consumers perceive their CSR initiatives; otherwise, the firm will not be able to take advantage of CSR as a strategic investment (Andreu et al., 2015). Furthermore, managers should realize that perceived CSR is a significant variable in restoring consumer loyalty (Choi & La, 2013) while considering the mediation roles. However, understanding the construct of perceived CSR, trust, corporate image, and loyalty is also crucial for researchers. Scholars should know how these constructs are connected and in which way they could influence each other to be able to develop new models about consumer perception. As well, findings help in understanding consumer behavior such as trust and loyalty, and how they could be affected via CSR. To sum up, applying CSR policies assists in meeting consumer needs as it generates a competitive advantage (Servera-Francés & Piqueras-Tomás, 2019). From here comes the importance of investing in CSR activities.

7. LIMITATION AND FUTURE STUDIES

This research is like previous ones in terms of limitations. The first one is that the results can't be generalized. The convenient sampling method was considered due to time limitations and the ease of reaching as many respondents as possible. Even though the researcher could take advantage of the convenient sampling method, this kind of method doesn't give a great advantage to the research since it is not representative of the targeted population, and the respondents aren't randomly selected. Therefore, following the convenient method prevents the results from being generalized and this becomes one of the research limitations. Secondly, this research involved the brands of one company. Further study could use a specific brand to measure the proposed variables. The author suggests conducting the same study using more companies involved in CSR activities and comparing the findings. This research considered company X in Turkey; other studies could repeat the same study but target consumers in several countries and compare the outcomes. This study used trust and corporate image as mediators; future studies could use different mediators or include more variables, such as awareness to be able to measure to what extent the consumers know about the CSR of a particular company.

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