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CONTENT

AN EVENT STUDY WORK ON THE SPONSORSHIP AGREEMENTS IN TERMS OF MARKETING ACTIVITIES

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To cite this document
Maral, B., Olcen, O., (2023). An event study work on the sponsorship agreements in terms of marketing activities. Journal of Management, Marketing and Logistics (JMML), 10(2), 53-61.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2023.1742

ABSTRACT

Purpose- It is well known and clear reality that sponsorships agreements have got great importance, especially in marketing and promotion activities through increasing sales and reputation management. It is asked and proposed whether sponsorship agreements have got an impact on stock returns in this paper or not.
Methodology- Three important events are determined from sports management, and returns are calculated benefiting from data. Adjusted Market Returns (AR) and Cumulative Adjusted Market Returns (CAR) are determined for two different timespans [-5,0,5] and [-10,0,10] and the values are reached. These important events are, i) The first sponsorship of Turkish Airlines agreement with the Euroleague Basketball Championship, ii) The first sponsorship agreement of BEKO with Barcelona Football Team on 01.07.2015, iii) The first sponsorship agreement of Turkish Airlines with the European Champions League Football Tournament on 05.09.2022. And basic and simple OLS Regression with Dummies are utilized for Anticipation days (-5), Event day (0) and Adjustment days(+5).
Findings- It can be said here clearly that Turkish Airlines' sponsorship agreement with Euroleague has not got any impact on stock returns, like Beko and Barcelona agreement. On the other side, Turkish Airlines' last agreement with European Champions League had got an important impact on stock returns, especially for 10 days intervals. The change in the stock returns is especially interesting according to different time intervals in the last event. When change is for 5 days interval is negative for event day, for a calculation including 10 days interval it is positive.
Conclusion- This situation can be explained by investors like consumers are beginning to change their behaviours naturally their attitudes, perceptions and intentions toward sponsorship agreements, with interests of Turkish Airlines investors to European Champions League or increasing vulnerability to events like this or football attracted Turkish Airlines investors more than Basketball activities.

Keywords: Event study, aviation management, sponsorship agreements, sports management, reputation management.
JEL Codes: G14, M31, Z21

1. INTRODUCTION

Sports management, if sustained rationally and consciously, can be a good revenue and investment opportunity in the financial markets. On the other side, news such as sponsorship declarations, joining to international events, and championships in great organizations can be considered also in the marketing context.

It has been proven in studies that investors react positively or negatively to marketing activities (such as sponsorship activities) that have a positive or negative effect on firm performance (Sorescu et al., 2017). It can be said that investors are the customers of the companies they invest in. The importance of the study is that the majority of empirical research in marketing on sponsorship has been on sponsoring organizational objectives like improving corporate image and raising brand awareness (Spais and Filis, 2006:102). While many marketing and strategic management studies seek to evaluate specific strategic decisions, few have made an effort to connect their evaluating criteria to the company's valuation. (Cheney, Devinney, and Winer, 1991:576). To measure the economic impact of a company-specific action, stock market information is generally used via event study analysis (Becker-Olsen, 2003:13) . The theoretical suggestions state that decisions about the purchase of financial assets should be made in light of investor beliefs regarding the potential returns and risks of such assets (Spais and Filis, 2006:102)

For example, Spais and Filis (2006) argue the impacts of Olympic Games sponsorship declarations on stock prices, and they find that sponsorship declarations can have impacts on investor decisions. Considering their arguments, we try to make an event study analysis of Turkish semi-state-owned (Turkish Airlines) and private company' (Arçelik-Beko) sponsorship activities across Europe in Turkey.

We realized a literature review in the first section of the paper. We discuss three important event dates, the BEKO and Barcelona sponsorship agreement on 01.07.2015, Turkish Airlines and Euroleague's first sponsorship agreement on 26.07.2010 and the Turkish Airlines and European Champions League agreement on 05.09.2022 will be discussed in this analysis. We will explain what kind of financial event study methodology will be realized in the second section. We state the findings. We add conclusions in the final section.

2. LITERATURE REVIEW

An approach frequently used in marketing to assess the financial value of certain marketing activities is event study analysis (Tsiotsou and Lalountas, 2005:259). Event studies investigate stock price movements in response to corporate events (Sorescu et al., 2017:186). Event study methodology measures the stock price reaction to an unanticipated announcement of an event (Johnston, 2007:2). The event study approach was established by finance experts but has now spread to other areas such as marketing.

The impact of marketing campaigns such as sponsorship on stock returns has been evaluated using event study analysis (Miyazaki and Morgan, 2001; Cornwell et al., 2002; Cornwell et al. 2005; Mazodier and Rezaee 2013), new product introductions (Chaney et al., 1991), brand extensions (Lane and Jacobson, 1995), and celebrity endorsements (Agrawal and Kamakura, 1995). Several studies have used the event study approach to investigate how sponsorship affects the stock prices of sponsoring companies. Some studies discovered no impact (Kinney and Bell, 2003), while others have shown large favourable benefits (Miyazaki and Morgan, 2001; Cornwell et al., 2002; Pruitt et al., 2004).

Sorescu et al. (2017) summarized the event studies in the marketing literature. One of them is corporate announcements such as new product launches. According to Borah and Tellis (2014:116), an announcement is defined as the release of information by the firm directly or by other sources about some event. They analyzed the companies' announcements to make, buy or ally generate positive or negative investor behaviour on stock market returns.

Another event study and marketing interface was analyzed by Swaminathan and Moorman (2009) in terms of marketing alliance announcements. Because of the network formation capability of the firm, it may be said that the stock market rewards the firm in announcing new alliances. Their study has shown that the marketing alliance capability of the companies, which reflects a firm's ability to manage a network of marketing alliances, has a positive impact on value creation. Marketing alliance announcements can be considered to produce value (i.e., abnormal stock returns) for the business during the announcement or event window.

Brand acquisitions and disposals which generally represent businesses' biggest marketing expenditures and how these actions taken by firms affect financial performance and the stock market have been studied with event studies in the marketing literature. For instance, Wiles et al. (2012) analyzed how the stock market responds to announcements about brand acquisitions and disposal.

Financial Recommendations Programs and news were another research stream for event study in terms of marketing cause persuasive attempt of the presenter, message intensity, presentation order, and source credibility, consumer bias and cognitive processes that can affect consumer decisions and consumer judgment (Karniouchina et al. 2009). Karniouchina et al. (2009) used an event study methodology to measure investors' stock reactions to financial TV program recommendations.

Karniouchina et al. (2009:260) study demonstrates that in order to forecast individual investor reactions to news about financial instruments, financial managers and academics must use the information developed within the marketing area. Marketing research reveals a wide range of consumer behaviour patterns that might greatly enhance the conventional investor behaviour models that depend on investor rationality.

Product placements in movies (For ex. Karniouchina et al. 2011; Wiles and Danielova 2009) are another event study analysis from the marketing perspective. It starts from the idea of marketers' difficulty to communicate through conventional media, and the authors examined the economic worth of product placement in movies over a time span.

Environmental sustainability innovations in the construction sector were also studied using event study methodology and a positive impact on the stock market was found. Managers will be more likely to use these environmental innovations in related projects because of improved financial performance. Consequently, it persuades investors and construction firms to fund

sustainable innovations and benefit from them (Duong et al., 2021:399) and these may affect the consumers' decisions about their purchases in this sector.

Confounding events are noteworthy news or other important occurrences that have an influence on a certain business or sector within the event window. For instance, it would be expected that a change in the CEO, the launch of a new product, a recommendation from an investment house to purchase company stock, mass layoffs of employees, or industry-wide government regulations would have an impact on the company, and both events would be taken into account in the stock valuation. Smaller news items, such as discussions about a rental agreement, a change in a shipping contract, or a change in an airline's food supplier, are unlikely to have an influence on the company's stock valuation. (Becker-Olsen, 2003:13-14)

The study of Mathur and Mathur (2000) has found that announcements pertaining to green marketing announcements are generally neither favourably nor adversely regarded by investors. In contrast, stock price reactions to news of green marketing are notably unfavourable. These findings imply that investors view green marketing initiatives as depreciating in value (Mathur and Mathur, 2000: 198)

Other event studies using marketing literature from the study of Sorescu et al. (2017) can be summarized as casting announcements (Elberse 2007), corporate brand name changes (Kalaignanam and Bahadir 2013), M&A announcements (Sorescu et al. 2007a, b; Swaminathan et al. 2008), innovation and new product announcements such as announcements of different stages of innovation projects (Sood and Tellis 2009), new product development (NPD) outsourcings (Raassens et al. 2012), executive appointments such as Movie releases (Joshi and Hanssens 2009), new Chief Marketing Officer appointments (Boyd et al. 2010), channel-related announcements such as channel expansions (Homburg et al. 2014), internet channel additions (Geyskens et al. 2002), horizontal collaborations in NPD (Wu et al. 2015), and buyer-supplier contracts and joint ventures (Houston and Johnson 2000) and announcements generated outside the firm such as Competitors/ partner announcement.

Improving image, increasing the popularity of the company, influencing non-consumer audiences such as financial institutions and potential investors and shareholders, reducing public resentment of a sponsor's previous acts, and combating unfavourable press are among the corporate objectives of the sponsorship. Sponsorship-linked marketing events not only help to strengthen the image of the company but also help to fix the corrupted image. Increasing brand awareness, generating sales, helping in eliminating competitors and segmenting the markets are among the marketing objectives of the sponsorship. Sponsorship has become integrated into the marketing mix and includes investing in events and activities to achieve corporate and marketing objectives (Cornwell, 1995:18).

"Sponsorship-linked marketing is the orchestration and implementation of marketing activities for the purpose of building and communicating an association (link) to a sponsorship" Orchestration in this context implies harmonious planning and coordination of the activities such as events, employees, audiences, volunteers, activities, sales promotions, co-sponsors, media. (Cornwell, 1995:15).

Event study methodology studies the financial impact of unanticipated events. When new information is made public, it quickly spreads and is reflected in stock prices. If the news is good, the market will respond favourably, producing abnormally high gains. Negative news, however, may result in abnormally poor results (Kwon and Cornwell, 2020: 609).

The importance of event studies in marketing is that they enable researchers to determine the total financial effect of a certain marketing strategy. In the case of sponsorship announcements, the result of the event study methodology may show whether sponsorships create significant economic wealth for stockholders or not. The methodology's capacity to identify how marketing tactics affect business value significantly aids in the process of improving the relationship between marketing and finance (Johnston, 2007:15-23).

For example, The effects of official product sponsorships in major-league sports on stock prices have been empirically tested for the first time by Cornwell et al. (2005). The study's findings show that official sponsorships were seen favourably by stock market investors using announcements from the five most popular professional sports in the United States: baseball, basketball, football, hockey, and golf.

Because it is successful at raising brand recognition, offering distinctive marketing platforms, facilitating immediate commercial advantages, and presenting priceless networking and hospitality experiences, sponsorship generally occupies a special place in the marketing mix. Although being an official sponsor necessitates a substantial financial investment, it is anticipated to produce more favourable results, such as profit growth, increased stock returns, and beneficial promotional effects (Kim, 2010:2)

In sponsorship studies, there can be two approaches can be evaluated. The first is a consumer psychology method that takes into account how sports sponsorship affects customers' knowledge, recognition, and behavioural intentions. The other strategy

focuses on understanding how sports sponsorship may influence changes in stock price, either positively or negatively. The impact of sponsorship on a company's stock market value may be studied from a financial standpoint (Kim, 2010:2-3).

3. DATA AND METHODOLOGY

The logic behind the event studies takes its roots from Fama's famous contribution to the efficient financial market hypothesis. According to this theorem, the investors decide due to the amount of information level in the financial market. Yen and Lee (2008) give detailed information on efficient market hypotheses and event studies and the power of the event studies on specific conditions and state that event studies serve as some pieces of evidence for the efficient market hypothesis. According to Titan (2015), if a market gives the necessary response to the news, it can be concluded that it is the beginning point of the efficient market hypothesis. Binder (1998) underlines the different statistical analysis methodologies in event study research. Considering the arguments above, we try to utilize the econometric equations below.

In the first step of the three companies and events, we utilized Equation 1 to calculate the return of stock prices and market return for the event study (Ölçen, et al, 2022) .

R_s, R_m= [(SP$_{i, t}$) − (SP$_{i, t-1}$)] / (SP$_{i, t-1}$)   (1)

Where R_s isrReturn of stock prices, R_m is return of the market, SP is stock price, Market Price of i th company, t is time.

Market returns (R_m) are computed with the formula used to compute stock returns. Then, the Market Adjusted-Return Serie (RAR) is calculated with the formula given below.

R_{AR} = R_m - R_s (2)

Where R_{AR} is adjusted return of the stock price, R_m is return of market price, R_s is return of stock price.

Cumulative Market Adjusted Return is added value of adjusted values. It can be found through the formula below.

R_{AR}= $\sum_{t=1}^{n}(R_{AR,t} + R_{AR,t-1})$ (3)

In this methodology, we build ordinary time series regression analysis with dummies, which can be formulated as follows,

$Y_t = \beta_0 + \beta_1 Y_{i-n, t}$-n+ $\beta_2 Y_i$, t+ $\beta_3 Y_{i-n, t+n}$+ϵ_i (4)

n = {1,2,3,4,5) and t=0,

Where β_0 is constant of the model, β_1 is coefficient of anticipation dates, β_2 is coefficient of the event date, β_3 is coefficient of adjustment dates.

The regression model with dummies is organized according to [-5, 0, 5] event analysis period for each variable, which is described below.

$Y_t = \beta_0 + \beta_1 D_1 Y_{i-n, t-n}$+ $\beta_2 D_2 Y_{i, t}$ + $\beta_3 D_3 Y_{i+n, t+n}$+ϵ_i (5)

n = {1,2,3,4,5) and t=0,

Dummy variables have been coded as follows;

		D1	D2	D3
Anticipation	[-5,0]	1	0	0
Anticipation	[-4,0]	1	0	0
Anticipation	[-3,0]	1	0	0
Anticipation	[-2,0]	1	0	0
Anticipation	[-1,0]	1	0	0
Event	[0,0]	0	1	0
Adjustment	[0,1]	0	0	1
Adjustment	[0,2]	0	0	1
Adjustment	[0,3]	0	0	1
Adjustment	[0,4]	0	0	1
Adjustment	[0,5]	0	0	1

The same logic can be utilized for [-10,0,10] timespan. The formula should be utilized below.

_____

$$Y_t = \beta_0 + \beta_1 Y_{i-n,\, t-n} + \beta_2 Y_{i,}\, t + \beta_3 Y_{i-n,\, t+n} + \varepsilon_i \tag{6}$$

n = {1,2,3,4,5, 6,7,8,9,10) and t=0,

Where β_0 is constant of the model, β_1 is coefficient of anticipation dates, β_2 ia coefficient of the event date, β_3 ia coefficient of adjustment dates.

We organize the regression model with dummies according to [-10, 0, 10] event analysis period for each variable, which is described below.

$$Y_t = \beta_0 + \beta_1 D_1 Y_{i-n,\, t-n} + \beta_2 D_2 Y_{i,\, t} + \beta_3 D_3 Y_{i+n,\, t+n} + \varepsilon_i \tag{7}$$

n = {1,2,3,4,5,6,7,8,9,10) and t=0,

Dummy variables have been coded as follows.

		D1	D2	D3
Anticipation	[-10,0]	1	0	0
Anticipation	[-9,0]	1	0	0
Anticipation	[-8,0]	1	0	0
Anticipation	[-7,0]	1	0	0
Anticipation	[-6,0]	1	0	0
Anticipation	[-5,0]	1	0	0
Anticipation	[-4,0]	1	0	0
Anticipation	[-3,0]	1	0	0
Anticipation	[-2,0]	1	0	0
Anticipation	[-1,0]	1	0	0
Event	[0,0]	0	1	0
Adjustment	[0,1]	0	0	1
Adjustment	[0,2]	0	0	1
Adjustment	[0,3]	0	0	1
Adjustment	[0,4]	0	0	1
Adjustment	[0,5]	0	0	1
Adjustment	[0,6]	0	0	1
Adjustment	[0,7]	0	0	1
Adjustment	[0,8]	0	0	1
Adjustment	[0,9]	0	0	1
Adjustment	[0,10]	0	0	1

Considering these arguments, we create a sample for every event including 120 days of data taken from investing.com. [-10,0,10] and [-5,0,5] time intervals are essential for analysis. The event days are declarations of agreements equal to zero (0).

4. FINDINGS AND DISCUSSIONS

According to [-5,0,5] and [-10,0,10] time spans analysis, we utilize the same process for both the AR (Adjusted Return) and CAR (Cumulative Adjusted Return). For Turkish Airlines Company, the first sponsorship agreement with Euroleague Basketball Championship on 26.07.2010 and related event study results (Ordinary Least Square) are given in Table 1 for [-5,0,5] periods and in Table 2 for [-10,0,10] periods. As it can be seen, the results are statistically insignificant in these tables.

Table 1: The First Sponsorship Agreement with Euroleague Basketball Championship on 26.07.2010 on AR and CAR [-5,0,5]

Adjusted Return for [-5, 0, 5] **0.01, **0.5, ***0.1 significant level*			
	Anticipation	*Event*	*Adjustment*
Coefficients	*0.000948*	*0.007076066586120*	*-0.004886685*
t-stat	*0.144146453869541*	*-0.48816839481793*	*-0.742499906*
p-value	*0.885598*	*0.626217*	*0.459065*
Cumulative Adjusted Return for [-5, 0, 5]			

*0.01, **0.5, ***0.1 significant level*			
Coefficients	*0.002612279*	*-8.23835E-05*	*-0.010185781*
t-stat	*0.273419091*	*-0.003915573*	*-1.066114093*
p-value	*0.784948932*	*0.996881613*	*0.288275015*

Table 2: The First Sponsorship of Turkish Airlines Agreement with the Euroleague Basketball Championship on 26.07.2010 on AR and CAR [-10,0,10]

Adjusted Return for [-10, 0, 10] *0.01, **0.5, ***0.1 significant level*			
	Anticipation	*Event*	*Adjustment*
Coefficients	*0.004760737*	*-0.006432871*	*0.002210681*
t-stat	*1.003515484*	*-0.444589211*	*0.465989227*
p-value	*0.317394356*	*0.657323351*	*0.641968672*
Cumulative Adjusted Return for [-10, 0, 10] *0.01, **0.5, ***0.1 significant level*			
Coefficients	*0.008859027*	*0.001053839*	*0.003034085*
t-stat	*1.285932316*	*0.050169256*	*0.440412709*
p-value	*0.200667945*	*0.960061663*	*0.660342595*

For Beko (sub-branch of Arçelik Company), the first sponsorship agreement with the Barcelona Football Team event on 01.07.2015 results are given in Table 3 for [-5,0,5] and in Table 4 for [-10,0,10]. **As it can be seen, the results are insignificant statistically in these tables.**

Table 3: The First Sponsorship Agreement of BEKO with Barcelona Football Team on 01.07.2015 on AR and CAR [-5, 5]

Adjusted Return for [-5, 0, 5] *0.01, **0.5, ***0.1 significant level*			
	Anticipation	*Event*	*Adjustment*
Coefficients	*2.152806202*	*6.054806202*	*9.518806202*
t-stat	*0.142542108*	*0.182026329*	*0.630261424*
p-value	*0.886862781*	*0.855833098*	*0.529581123*
Adjusted Return for [-5, 0, 5] *0.01, **0.5, ***0.1 significant level*			
Coefficients	*-0.415796875*	*25.25820313*	*21.47620313*
t-stat	*-0.018784745*	*0.51817027*	*0.970245372*
p-value	*0.985040558*	*0.605187671*	*0.333659325*

Table 4: The First Sponsorship Agreement of BEKO with Barcelona Football Team on 01.07.2015 on AR and CAR [-10,0, 10]

Adjusted Return for [-10, 0, 10] *0.01,**0.5,***0.1 significant level*			
	Anticipation	*Event*	*Adjustment*
Coefficients	*7.966218487*	*7.186218487*	*13.59621849*
t-stat	*0.734384621*	*0.217208096*	*1.253399436*
p-value	*0.463978661*	*0.828371695*	*0.212210872*
Cumulative Adjusted Return for [-10, 0, 10] *0.01,**0.5,***0.1 significant level*			
Coefficients	*11.96374576*	*27.22974576*	*25.77374576*
t-stat	*0.753830315*	*0.562705958*	*1.623992291*
p-value	*0.452263904*	*0.574568393*	*0.106710108*

For Turkish Airlines Company, the first sponsorship agreement with European Champions League Football event on 05.09.2022 and related event study results are given in Table 5 for [-5,0,5] and in Table 6 for [-10,0,10]. The results of event day and adjustment days are statistically significant in Table 5 and Table 6.

Table 5: The First Sponsorship Agreement of Turkish Airlines with the European Champions League Football Tournament on 05.09.2022 on AR and CAR [-5, 0, 5]

Adjusted Return for [-5, 0, 5] *0.01, **0.5,***0.1 significant level			
	Anticipation	Event	Adjustment
Coefficients	-11.99190698	-130.427907	-52.96590698
t-stat	-0.572829678	-2.82880822	-2.530076616
p-value	0.567705873	0.00537964**	0.012543796***
Cumulative Adjusted Return for [-5, 0, 5] *0.01, **0.5,***0.1 significant level			
Coefficients	145.3487813	3223.400781	-448.8652188
t-stat	0.191494549	1.928436268	-0.591372296
p-value	0.848425867	0.055899989**	0.555259924

Table 6: The first Sponsorship Agreement of Turkish Airlines with the European Champions League Football Tournament on 05.09.2022 on AR and CAR [-10,0, 10]

Adjusted Return for [-5, 0, 5] *0.01,**0.5,***0.1 significant level			
	Anticipation	Event	Adjustment
Coefficients	-11.83619328	-127.1931933	24.31980672
t-stat	-0.773616466	-2.725723255	1.589548471
p-value	0.440500272	0.007260745*	0.114258626***
Cumulative Adjusted Return for [-10, 0, 10] *0.01, **0.5,***0.1 significant level			
Coefficients	-146.1639244	2873.479076	-965.0079244
t-stat	-0.351643768	2.266600611	-2.321633224
p-value	0.725649665	0.024993003***	0.021738701***

According to the analysis results, we can say that Turkish Airlines' sponsorship agreement with Euroleague has not got any impact on stock returns, like Beko and Barcelona agreement. On the other side, Turkish Airlines' last agreement with European Champions League had got an important impact on stock returns, especially for 10 days intervals. The change in the stock returns is especially interesting according to different time intervals in the last event. When change is for 5 days interval is negative for event day, for a calculation including 10 days interval it is positive.

5. CONCLUSION

The link between sports sponsorship deals and stock market reactions was investigated in this research with using event study methodology. The literature review emphasized the importance of event studies in marketing since they allow researchers to measure the financial effect of various marketing activities such as sponsorship.

The data indicated that the announcement of the sponsorship arrangement with the European Champions League in 2022 had a significant influence on both cumulative adjusted returns and adjusted returns. Over a five-day timeframe, investor reaction was unfavorable, but over a ten-day timeframe, it was positive. These findings have statistical significance.

The importance of this study is its clear explanation of how marketing activities might impact investor behavior based on the date and context of the sponsorship arrangement. According to the data, investors are beginning to accommodate their behavior and become more alert to sponsorship agreements as a result of increased interest in specific events.

The data imply that, when effectively designed and implemented, sponsorship agreements may have a considerable impact on stock returns. This information is useful for sports clubs when it comes to consider sponsorship as a marketing and investment

option. Firms should consider financial consequences of their marketing efforts if they understand the possible implications of sponsorship agreements on stock market performance. It is critical to continuously monitor and analyze investor behavior and market reactions to sponsorship agreements.

6. LIMITATIONS

Even while event studies are a popular technique for analyzing investor reactions, they cannot identify the mechanism underlying any reported abnormal returns. Investor surveys will be helpful in verifying this presumption.

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A STUDY ON MIDDLE-CLASS FEMALE REMOTE WORKERS: A STUDY ON WORK-FAMILY CONFLICT, JOB SATISFACTION, AND INTERPERSONAL COMMUNICATION SATISFACTION

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ABSTRACT
Purpose- This study sought to investigate the impact of the emerging remote working model, which has gained significant popularity among businesses in recent years, specifically focusing on middle-class female employees. The primary objectives included understanding how work-family conflict, job satisfaction, and interpersonal communication satisfaction interplay in the context of remote work and how they contribute to the overall employee experience.
Methodology- To gather the data for the study, a comprehensive questionnaire was designed and distributed among the target population. The data collected were meticulously analyzed using the SPSS 23 statistical package program, ensuring the reliability and precision of the results. For further validation and in-depth interpretation, advanced statistical models such as Random Forest (RF) and Naive Bayes (NB) were employed. These supervised machine learning models played a crucial role in enhancing the completeness of the analysis and corroborating the study findings.
Findings- Empirical analysis led to several significant conclusions. The first was the finding that work-family conflict exhibited a negative correlation with interpersonal communication satisfaction. This suggested that a higher level of conflict between work and family roles tends to lower the quality of interpersonal communication in the context of remote work. Furthermore, the study found a positive relationship between job satisfaction and the nexus between work-family conflict and interpersonal communication satisfaction. This indicates that higher job satisfaction can potentially mitigate the negative impacts of work-family conflict on communication.
Conclusion- The study provides critical information on the challenges faced by middle-class female remote workers, particularly in the realm of work-family conflict and its subsequent effects. The findings underscore the negative implications of this conflict on both job satisfaction and interpersonal communication. Employers and organizations, therefore, must be mindful of these issues and devise suitable strategies, taking into account these outcomes to better manage the work-life balance and communication dynamics of their remote working female employees, thus improving their overall work experience.

Keywords: Remote work, woman, work-family conflict, job satisfaction, ınterpersonal communication.
JEL codes: E24, O47, J21

1. INTRODUCTION

Remote work has become an essential issue for modern organizations, especially after the COVID-19 pandemic. Before the pandemic, remote work was already on the rise, with 3.6% of the US workforce and 5.4% of all workers in the European Union (EU) reporting remote working full-time, and a greater number of workers reporting remote working from home at least some of the time. However, the pandemic has accelerated this trend, with approximately 70% of US workers with jobs conducive to remote work working from home or remotely at the height of the pandemic (Iordache et al., 2021). Remote work refers to working outside of a physical organizational setting, often using information communication technology to perform work tasks and communicate with others both within and outside the organization (Lott & Abendroth, 2020).

Although remote work has increased over the last decade and tremendously in response to the COVID-19 pandemic, researchers are still exploring its relationship with productivity and well-being. Formal remote work arrangements have been

associated with higher reports of employee job satisfaction, especially for women, but also higher levels of depression, except for women with children (Iordache et al., 2021; López-Igual & Rodríguez-Modroño, 2020). Work and family are the two most important areas of human life. The family is one of the most important social institutions where a person completes her basic needs. Business life is another important area that meets the social and economic needs of the individual (Pordelan et al., 2022). The problems experienced in business and family life affect each other, as well as are reflected in the relations of the employees. For this reason, ensuring work-family balance is important not only for the individual, but also for the organization of which she is a member and family member (Gálvez et al., 2020).

Remote work can have a complex impact on work-family conflict among women, which is influenced by various factors. Workplace culture is one of those factors that can contribute to higher levels of work-family conflict perceived by women who remote work (Pordelan et al., 2022). Research indicates that remote work is associated with higher levels of time- and strain-based work-family conflict among women. Remote workers are also more likely to experience higher levels of work-family conflict if they perceive their workplace culture to be highly demanding. The roles attributed to gender are critical in ensuring work-family balance, especially for female employees (Aguiar et al. 2023; Nguyen & Armoogum, 2021). In societies where the patriarchal order predominates, women are expected to take on the responsibilities of the home and family, in addition to workplace responsibilities (Lott & Abendroth, 2020). With the remote work working order, the expected responsibilities of women working together have increased, leading to a deterioration of the work-family balance of female employees. Therefore, it is essential for women workers to understand the effects of this disruption. Within the scope of this research, the effect of female remote workers' work-family life balance on interpersonal communication will be examined.

2. LITERATURE REVIEW

2.1. Remote work and Gender

Remote working has the potential to challenge traditional gender roles and expectations in the workforce, as women are more likely to take advantage of this work arrangement than men (Heggeness & Suri, 2021). Remote working, in particular, can offer a solution for women seeking to balance their work and family responsibilities (Lu & Zhuang, 2023). However, remote working does not directly address the conflict between work and family. Traditional gender roles can be replicated during remote work through childcare, domestic labor, gendered family structures, and time use (Aguiar et al. 2023). Without buffer mechanisms such as grandmother babysitting, kindergarten and cleaning services, remote working can lead to women being socially isolated, facing more demands on both home and work lives, and being exposed to stricter control by their husbands (Loezar-Hernández et al., 2023).

The flexibility model suggests that remote work can provide opportunities to balance home and work lives. However, without these buffer mechanisms, remote working can become an intermediate form that confines women's labor to the home and makes it invisible rather than a permanent solution for work-life balance (Loezar-Hernández et al., 2023). Furthermore, women who remote work may be limited to lower wage part-time jobs due to domestic responsibilities (Gálvez et al., 2020). Remote working may also lead to individualized work and a lack of solidarity, self-esteem, and collective activism, which were previously provided by stable work relations. Moreover, remote working can cause precarization of women's employment (Raišienė, Rapuano & Varkulevičiūtė, 2021). Women find remote working to be unsustainable and exacerbate work-family conflict for them. Additionally, remote working does not result in a reduction in time spent on domestic chores for women (Lu & Zhuang, 2023). In conclusion, remote working has many gender traps that make it difficult for women to balance work and life.

2.2. Importance of Work Family Conflict and Interpersonal Communication

The conflict between work and family is when the individual's wishes are not met in both areas of her life: at work and in her personal life. The theory of Clark's boundary states that individuals have two worlds, a personal life and a professional life (Clark, 2000). Theory separated work and family as two separate disciplines (Gálvez et al., 2020). The individual must mold and alter himself as she transitions between her professional and family lives. Boundary theory recognizes the importance of the path individuals take to maintain the boundary between work and personal space. Despite being considered separate entities, "family" and "work" have an indirect relationship that directly affects one another (Rodríguez-Modroño & López-Igual, 2021). This will allow individuals to complete their obligations with the least role conflict at home and at work, and maintain this balance.

Interpersonal communication is the exchange of information, feelings, and thoughts between two individuals or entities. Interpersonal communication is a process that involves both the sender and the receiver simultaneously exchanging messages, interpreting them in interpersonal relationships, and drawing conclusions (Adamovic, 2022).

Studies have shown that finding a balance between work and personal life is crucial for a fulfilling and successful life. However, research has also found that women experience more conflict in their professional, family, and private lives than men, leading

to negative emotional states and physical and psychological symptoms of stress. Work-family conflict has been shown to negatively impact employee job satisfaction and can lead to interpersonal conflict in the workplace (Clark, 2000). This is because individuals experiencing work-family conflict can bring their negative emotions and stress from home to the workplace, leading to conflicts with colleagues. Psychological distress has been found to mediate the relationship between work-family conflict and interpersonal conflict. Therefore, organizations should recognize the negative impact of work-family conflict on employees and provide adequate support and resources to address these issues to prevent interpersonal conflicts from arising in the workplace (Gálvez et al., 2020). Furthermore, work-family conflict can negatively affect the social lives of workers, leading to a decrease in interpersonal satisfaction and the willingness to interact with others (Schall & Chen,2022). It is essential to manage work and careers to minimize negative emotional spillover and achieve a balance between professional and personal life. Women face more pressure to manage the boundaries between professional and private life.

H1: Work-family conflict has a negative effect on interpersonal communication satisfaction.

Work-family conflict is a significant issue that can have negative outcomes for employees, such as reduced job satisfaction and increased work stress. Studies have shown that work-family conflict has an adverse impact on career satisfaction of employees, leading to negative spillovers and decreased job performance (Adamovic, 2022). The impact of work-family conflict on job satisfaction is a significant issue that deserves the attention of organizations and scholars. A systematic review and meta-analysis conducted on this topic revealed several important findings. Firstly, work-family conflict has a negative impact on job satisfaction among social workers. Secondly, the impact of work-family conflict on job satisfaction is stronger for women than for men (Loezar-Hernández et al., 2023). Third, the impact of work-family conflict on job satisfaction is stronger for those with children than for those without children. It is crucial to address this issue and to enact progressive family-friendly laws and regulations to improve the lives of employees and their families (Schall & Chen,2022). Work-family conflict can lead to stress, burnout, and other forms of stress, which can undermine family satisfaction and job satisfaction, leading to general unhappiness for both employees and family members.

H2: Work-family conflict has a negative effect on job satisfaction.

2.3. Role of Job Satisfaction

The literature on job satisfaction is vast and multifaceted, offering valuable insight into the factors that contribute to the happiness and well-being of employees in various professions. A crucial topic within this body of literature is the significance of the work cycle for female employees. Women often face unique challenges in balancing their professional and personal responsibilities, and understanding the rhythms and patterns that can help alleviate the demands of their hectic lives can make a substantial difference in their overall job satisfaction (Lu & Zhuang, 2023).

The literature further elucidates the positive impact of job satisfaction on the often challenging interplay between work-family conflict and interpersonal communication satisfaction. Three significant pieces of evidence illustrate this relationship. First, employees who feel fulfilled by their job are more likely to develop strong communication skills, which can be applied to both their professional and personal relationships (Gálvez et al., 2020). Second, an enjoyable and supportive work atmosphere can provide a foundation of stability and positivity that can help buffer the effects of work-family conflict, making it easier for the employee to maintain strong communication with loved ones (González Ramos & García-de-Diego, 2022). Lastly, job satisfaction can serve as a powerful motivator, encouraging employees to strive for a healthy work-life balance and thus enhancing their ability to engage in satisfying and meaningful interpersonal communication across all aspects of their lives.

H3: Job satisfaction has a positive effect on interpersonal communication satisfaction.

In addition to recognizing the specific needs of female employees, the literature on job satisfaction also demonstrates the positive relationship between workplace happiness and satisfaction with interpersonal communication. Three key pieces of evidence highlight this connection. First, studies suggest that contentment with one's job leads to open, honest, and constructive communication with colleagues, facilitating better collaboration and problem solving (Lu & Zhuang, 2023). Second, employees who feel supported and encouraged by their workplace environment are more likely to develop genuine relationships and connections with their colleagues, which can facilitate more meaningful and productive communication. And finally, job satisfaction has been shown to increase the overall sense of trust and camaraderie within a working environment, fostering a culture of open and respectful discourse (Taboroši et al., 2022). Therefore, job satisfaction has a mediator effect on the negative relationship between work-family conflict and interpersonal communication satisfaction.

H4: Job satisfaction has a mediator effect on the relationship between work-family conflict and interpersonal communication satisfaction.

3. RESEARCH METHODOLOGY

3.1. Sample and Method

In this study, our aim was to determine the effects of work-family conflict on the relationship between interpersonal communication. The survey was conducted with a questionnaire applied to 271 female employees. The data obtained were measured using SPSS 23.00 Statistical Package Program. While descriptive analysis was performed in the analysis of demographic information, factor analysis and reliability analysis were performed on the questions in the questionnaire. Hypotheses are proven by correlation and regression analysis. In addition, two different machine learning algorithms were used in this study to support the validation methodology. These are, respectively, supervised machine learning models of random forest (RF) and logistic regression (LR). Three machine learning algorithms are investigated to evaluate their performance in predicting employee job satisfaction, work-family conflict, and interpersonal communication satisfaction using a data set that contains employees' reviews and comments.

The survey consists of two parts. In the first part, demographic information of the person is included. In the second part of the questionnaire, there are scales related to Job Satisfaction, Work-Family Conflict, and Interpersonal Communication. The Work-Family Conflict scale is based on the 5-work-family conflict questionnaire developed by Netemeyer et al. (1996); Job Satisfaction scale is based on the 5 questionnaire developed by Pond & Geyer (1991) and Interpersonal Communication was measured with a 5-item inventory developed by Smith (2018). All scales have five options ranging from (5) strongly agree to (1) Strongly Disagree.

The research was carried out with 271 middle-income female employees working in different departments of private and public institutions. 26.6% of the respondents are between the ages of 26-30 (72 Participants), 29.9% are between the ages of 31-35 (81 Participants), 9.1% are between the ages of 36-40 (52 Participants), 24.4% are between the ages of 41-45 (66 Participants). 38% of the employees are in the public sector (103 employees), and 62% are in the private sector (168 employees). Working time of the employees in the institutions they are affiliated with; 11.8% less than 1 year (32 employees), 32% between 1-3 years (87 employees), 33.6% between 4-7 years (83 employees), 12.5% between 8-10 years (34 employees), 12.9% of them have been working for 10 years or more (35 employees). Participants; 11.8% (32 participants) have vocational school/associate degree, 55.7% (151 participants) have university degrees, and 32.5% (88 participants) have graduate degrees.

3.2. Research Model

In the research model, one independent variable; Work Family Conflict, An Intermediate variable; Jop Satisfaction, and a Dependent variable; There is Interpersonal Communication Satisfaction. Within the scope of the research model, the relationships between the variables and their effects are examined.

There are four hypotheses in our research, as explained in the second chapter and supported by the literature (Figure 1). The hypotheses are listed below.

H1: Work-family conflict has a negative effect on interpersonal communication satisfaction.

H2: Work-family conflict has a negative effect on job satisfaction.

H3: Job satisfaction has a positive effect on interpersonal communication satisfaction.

H4: Job satisfaction has a mediator effect on the relationship between work-family conflict and interpersonal communication satisfaction.

Figure 1: Research Model
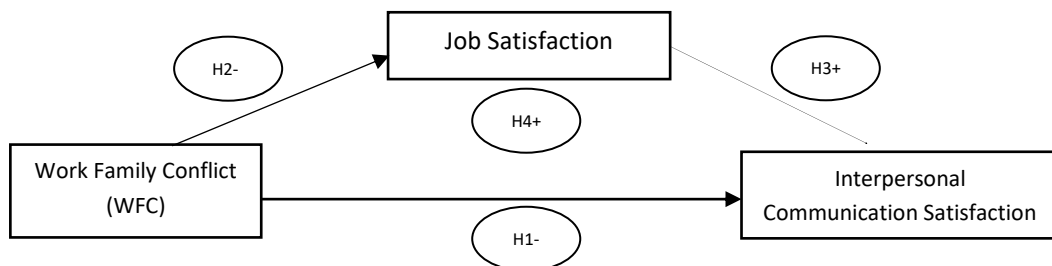
3.3. Evaluation

The study used ML models and transformer-based techniques for the supervised portion of the assessment. The aim was to evaluate and compare the performance of conventional machine learning algorithms and transformer-based techniques. The models were evaluated based on classification criteria such as precision, recall, F1 score, and accuracy. The study compared the performance of other ML models with the trained version of their model, which used the Text model as the benchmark. The study used the naive Bayes method, the random forest method, the support vector machine method, as well as multilayer perceptron and transformer-based techniques. Tables 1 and 2 show classification models for Bert and Electra that were trained using their data and text embeddings, respectively. The models were trained using their data. It is evident that the Multilayer Perceptron model exhibits superior performance in terms of precision, recall, and F1-score, with values of 0.73 across all three metrics. This suggests a strong performance in terms of both the identification of true positives and the minimization of false negatives and positives. This demonstrates the model's robustness in handling the given dataset. Moreover, the Multilayer Perceptron model ties in terms of accuracy with the Naive Bayes and Support Vector Machine methods, each boasting an accuracy score of 0.86. This denotes a high overall correctness of classification, reinforcing the model's reliability for the study's objectives. On the other hand, the transformer-based techniques, Bert and Electra, presented somewhat mixed results. Despite their prowess in natural language processing tasks, they didn't surpass the traditional machine learning models in this context. However, Electra outperformed Bert slightly in terms of precision and F1-score. It's also worth noting that their accuracy scores are not too far behind the top-performing models.

This analysis underscores the importance of the choice of model in machine learning tasks, and that advanced transformer-based methods may not always outperform traditional ML models depending on the specific task and dataset at hand. These results also stress the need for further research to optimize the use of transformer-based techniques in such contexts. the Multilayer Perceptron model takes the lead in terms of precision, recall, and F1 score, although the performance has slightly dropped compared to the first set of embeddings. With scores of 0.71 across all three metrics, it demonstrates a solid performance in identifying true positives while minimizing false negatives and false positives. Furthermore, the Multilayer Perceptron, along with the Naive Bayes method, scored the highest in terms of accuracy, both garnering a score of 0.84. This indicates a consistently high overall classification correctness across different data embeddings, reinforcing the reliability of these models for the study's objectives. On the other hand, the transformer-based techniques, Bert and Electra, didn't manage to outperform the traditional ML models in this context, albeit with a slight increase in their performance compared to the first set of embeddings. Despite the advancements in these transformer-based techniques, particularly in the field of natural language processing, their results in this scenario underline that selecting the best performing model may often depend on the specific task and dataset. The results from the second set of data embeddings further emphasize the importance of selecting the most appropriate model for specific tasks. Moreover, it showcases the potential of traditional ML models in extracting insights from the data, even when compared to more recent and advanced methodologies.

Table 1: Calculations of Accuracy, Recall, and F1 Score as Macro Averages for Evaluations Using First Data Embeddings

Method	Precision	Recall	F1-Score	Accuracy
Random Forest	0.64	0.72	0.64	0.78
Naïve Bayes	0.58	0.60	0.59	0.86
Support Vector Machine	0.59	0.61	0.60	0.85
Multilayer Perceptrone	0.73	0.74	0.73	0.86
Bert	0.66	0.65	0.56	0.81
Electra	0.70	0.70	0.62	0.84

Table 2: Calculations of Precision, Recall, and F1 Score as Macro Averages for Baseline Evaluations Using Second-Data Embeddings

Method	Precision	Recall	F1-Score	Accuracy
Random Forest	0.62	0.70	0.62	0.76
Naïve Bayes	0.56	0.58	0.57	0.84
Support Vector Machine	0.57	0.59	0.58	0.83
Multilayer Perceptrone	0.71	0.72	0.71	0.84
Bert	0.65	0.67	0.62	0.83
Electra	0.69	0.68	0.59	0.82

The assessment results show that our model outperforms the second model in all machine learning models, except for naive Bayes and Multilayer Perceptron, which have the same accuracy. The multilayer perceptron model achieved the highest scores in all assessment criteria for both representation models in the supervised task of sentiment analysis, regardless of the selected model. The F1 score for the first model is 0.73, while the F1 score for the second model is 0.71. Although transformer-based approaches such as Bert and Electra had performance values greater than the general norm, they were not successful in achieving the highest possible model scores. Class-wise performance assessments were performed for both positive and negative classes to determine which algorithm produced the most favorable results. The results of the ML models and transformer-based approaches are compared in Table 3. All trained models can perform more successfully with a dataset that is more uniformly distributed, despite the fact that the number of positive comments is a very small fraction of the total number of comments in the other classes.

Table 3: Class-Wise Performance of the ML Models and Transformer-Based Approaches

Class	RF	NB	SVM	MP	Bert	Electra
Positive	74.5	86.1	85.7	87,3	84,6	81,2
Negative	78.2	82.6	81,3	82,5	82,2	84,3

In table 3, the Multilayer Perceptron model displayed the highest performance for the positive class, with a score of 87.3%. This indicates the model's exceptional capability in identifying and correctly predicting positive instances from the dataset, thereby showcasing its effectiveness in capturing the nuances of the positive class. On the contrary, Electra, a transformer-based approach, achieved the highest performance for the negative class at 84.3%. Despite its overall performance being lower than the Multilayer Perceptron in the earlier evaluations, its top performance in this specific aspect highlights the model's strength in understanding and predicting negative instances. Interestingly, while both classes had their best performances with different models, it emphasizes the complexity of sentiment analysis tasks and how no single model may be the best fit for all aspects of such tasks. These results underline the significance of understanding the strengths and weaknesses of different models for various classes and tasks. It further exemplifies the need for comprehensive evaluation techniques that cover all potential aspects of a problem when choosing the best machine learning approach.

4. FINDINGS

Factor analysis was performed to examine the validity of the structure of the scale. Büyüköztürk (2005) defines factor analysis as a multivariate statistical method that aims to discover a small number of unrelated but conceptually significant variables (factors, dimensions) by bringing together interrelated variables. To determine whether the data are suitable for factor analysis, the Kaiser-Meyer Olkin (KMO) sample fit test was performed on the data obtained from the pre-application and the Bartlett sphericity test was performed to examine the diagonal values of the anti-image correlation. The KMO and factor analysis test of the research are shown in Tables 4 and 5.

Table 4: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin measurement of sampling adequacy.		, 866
Bartlett's Test of Sphericity	Approx. Chi-Square	3179,174
	df	105
	Sig.	,000

If the value obtained as a result of the Kaiser-Meyer-Olkin (KMO) test is greater than 0.5, the sample size is assumed to be sufficient for factor analysis (Büyüköztürk, 2005). According to the analysis results, the sample size is suitable for factor analysis. In our study, the variables prepared according to the 5-point Likert Scale and were measured by a questionnaire with 15 questions. Independent variables (Work Family Conflic), and intervening variable (Job Satisfaction) and dependent variable (Interpersonal Communication Satisfaction) were subjected to factor analysis. The variables are subjected to factor analysis and are shown in the following table, together with factor loads (Table 5).

Table 5: Rotated Component Matrix[a]

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
JS5.	,903			
JS4.	,898			

JS2.	,862			
JS1.	,853			
JS3.	,849			
WFC3.		,869		
WFC4.		,862		
WFC2.		,853		
WFC1.		,792		
WFC5.		,781		
ICS3.			,857	
ICS2.			,846	
ICS4.			,816	
ICS1.			,814	
ICS5.			,785	
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. The rotation converged in 5 iterations.				

JS: Job satisfaction, WFC: Work- Family Conflict, ICS: Interpersonal Communication Satisfaction

Reliability analysis is defined as the internal consistency of the measure that takes into account the mean relationship between questions. In the literature, a Cronbach's alpha coefficient of 0.50 and above is considered sufficient, as stated by Nunnally (1978) (Nunnally, J. C., 1978, Hair et al., 2000, Büyüköztürk, 2007).

Table 6: Reliability Analysis

Variables	Number of questions	Cronbach Alfa (α) Values
ICS	5	,904
WFC	5	,909
JS	8	,939

Reliability means that the measurement tool shows consistent results in all situations. When the literature is examined, reliability is seen to be examined before validity in scale development studies (Hair et al., 2000). For this purpose, items or scale scores are used as a basis for item selection (Item Analysis) among draft items (Büyüköztürk, 2007). The reliability of the scale was determined by the difference in the mean scores of the subgroups and the item analysis based on correlation. According to the results of the research, the reliability analysis is among the appropriate values (Table 6).

As seen in Table 7, correlation analysis deals with the interrelationships between work-family balance, interpersonal communication satisfaction, and job satisfaction. As we mentioned before, analyzes (factor analysis, reliability analysis, descriptive analysis) were made on 271 questionnaires obtained from remote workers.

Table 7: Correlation Analysis

Correlation		ICS	WFC	JS
ICS	Pearson Correlation	1	-,380**	,353**
	Sig. (2-tailed)		,000	,000
	Sum of Squares and Cross-products	202,497	-108,835	92,118
	Covariance	,753	-,405	,342
	N	270	270	270
WFC	Pearson Correlation	-,380**	1	-,333**

	Sig. (2-tailed)	,000		,000
	Sum of Squares and Cross-products	-108,835	404,832	-122,584
	Covariance	-,405	1,505	-,456
	N	270	270	270
JS	Pearson Correlation	,353**	-,333**	1
	Sig. (2-tailed)	,000	,000	
	Sum of Squares and Cross-products	92,118	-122,584	335,435
	Covariance	,342	-,456	1,247
	N	270	270	270
**. The correlation is significant at the 0.01 level (2-tailed).				
*. The correlation is significant at the 0.05 level (2-tailed).				

As a result of the hypothesis tests performed between the variables specified in our research model, the hypotheses were supported by regression analysis. The relationships between the variables are statistically significant as a result of the regression analysis. According to the results of the regression analysis in terms of its relationship with the independent variable of work-family conflict that affects the satisfaction of interpersonal communication in Table 8, (β=,-380***; Sig=,000) H1 is supported. According to the results of the regression analysis in terms of its relationship with the independent variable of work-family conflict affecting job satisfaction, (β=-,-333***; Sig=.000) H2 hypothesis is supported. According to the results of the regression analysis in terms of its relationship with the job satisfaction independent variable affecting interpersonal communication satisfaction, (β=.353***; Sig=.000) H3 hypothesis is supported.

Table 8: Results of Regression Analysis of the Effects of Independent Variables on Dependent Variables

Independent Variables	Dependent Variables	Standart β	Sig.	Adjusted R^2	F
WFC	ICS	,-380***	,000	,141	45,264
WFC	JS	,-333***	,000	,107	33,347
JS	ICS	,353***	,000	,122	38,261

*: p<0.05   **: p<0.01   ***:p<0.001

According to the regression analysis in Table 9, the mediator effect of job satisfaction affects the satisfaction with interpersonal communication in institutions with work-family conflict. In this case, it is understood that if the job satisfaction of employees who have work-family conflict is ensured, the satisfaction of interpersonal communication will increase.

Table 9: Regression Analysis Results of the Mediator Effect

	Independent Variables	Dependent Variables	Standart β	Sig.	Adjusted R^2	F
Regression	WFC	ICS	-,295***	,000	,141	45,264
	JS		,255***	,000	,196	33,884

*: p<0.05   **:p<0.01   ***:p<0.001

Regression analysis was used to test the research hypotheses and the four hypotheses are shown in Table 10. As a result of the hypothesis tests performed between the variables specified in our research model, the hypotheses were supported by regression analysis. As a result of the regression analysis, the relationships between the variables are statistically significant.

Table 10: Supported/Unsupported Status of Research Hypotheses

Hypotheses	Supported / Not Supported	Significance Level (Sig.)
H1: Work-family conflict has a negative effect on interpersonal communication satisfaction.	**Supported**	**P<0.001**
H2: Work-family conflict has a negative effect on job satisfaction.	**Supported**	**P<0.001**
H3: Job satisfaction has a positive effect on interpersonal communication satisfaction.	**Supported**	**P<0.001**

H4: *Job satisfaction has a mediator effect on the relationship between work-family conflict and interpersonal communication satisfaction.*	**Supported**	**p<0.001**

5. CONCLUSION

According to our study, the analysis of data obtained from white collar female remote workers working in the public and private sectors shows the relationships between work-family conflict variables and interpersonal communication satisfaction variables in employees.

The two areas where individuals socialize and spend most of their time are work and family (Loezar-Hernández et al., 2023). The workplace provides the benefits that employees receive so that they can continue their lives. Additionally, the family is an area to which individuals attach great importance in terms of their values and goals. For this reason, it has been assumed that the incompatibility between work and family roles can negatively affect the communication satisfaction. The results obtained confirm this idea.

When the effect of gender on work-family conflict is examined, contrary to many studies in the literature, the levels of work-family conflict experienced by male and female employees do not differ (Gálvez et al., 2020). Although it is quite ambitious to conclude that the profile of working women in Turkey has begun to differ from this finding, it also points to the need for more research on gender differences.

However, it should not be ignored that conducting the research while the pandemic conditions continue may affect the results. One of the reasons for the low satisfaction of participants in interpersonal communication may be the ongoing epidemic and its effects.

The other purpose of the study was to compare the performance of conventional machine learning algorithms and transformer-based techniques. Researchers used transformer-based ML models and techniques to achieve this goal. The text data were split into two separate datasets, and class-wise performance measurements were carried out across both positive and negative classes. The transformer-based approach known as Elecktra achieved the highest performance in the negative class, while multilayer perceptrone achieved the highest performance in the positive class. Transformers are state-of-the-art models in NLP, trained on large corpora of text, and are popular due to their ability to learn contextual relationships between input data, which allows for more accurate predictions. Transformers have the ability to process large amounts of data, making them ideal for handling big data problems. The Transformer architecture was introduced in 2017 and has had a great impact on many NLP tasks.

The difficulties experienced by women working remotely are multifaceted and complex. Balancing the demands of their professional lives along with fulfilling the needs of their families has become increasingly strenuous, as the boundaries between work and home life have become blurred with remote work situations. (Lu & Zhuang, 2023). In addition, the responsibility often falls on the shoulders of these women to balance household chores and caregiving duties in tandem with their professional obligations. This added weight can have a significant impact on their mental health and overall well-being, leading some women to suffer from increased levels of stress, burnout, and anxiety (Schall & Chen,2022).

The literature on flexible work arrangements and gender practices in organizations suggests that while flexibility presents opportunities, remote work does not improve gender stereotypes (Nakrošienė et al., 2019). Traditional gender roles are maintained in both family and work organizations, and remote work strengthens gender stereotypes by providing continuity between home and work and reinforcing gender stereotypes in both mediums (Gálvez et al., 2020). Remote work does not directly resolve the work-family conflict because traditional gender roles are reproduced through childcare, domestic labor, gendered family structures, and gendered time use.

Gender comprises roles learned and internalized through interactions in organized social constructs, such as education, family, and work organizations. Studies have focused on gendering practices in work organizations, revealing how gender stereotypes are created and protected, how male norms are established, and how gender roles are reproduced in daily communication practices in workplace relationships in formal organizations (Pordelan et al., 2022). Some studies point to the possibility of "undoing gender" in organizations. Culturally, it becomes possible for women to start working by negotiating genderroles and undoing gender (Lu & Zhuang, 2023).

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SATISFACTION OF HIGHER EDUCATION STUDENTS WITH BLACKBOARD LEARNING SYSTEM DURING COVID-19

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To cite this document
Alyadumi, Y. A.M., Falcioglu, P., (2023). Satisfaction of higher education students with blackboard learning system during Covid-19. Journal of Management, Marketing and Logistics (JMML), 10(2), 72-84.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2023.1744

ABSTRACT

Purpose- With the advent of the novel COVID-19 disease, the world has become facing an extraordinary situation that has changed the course of normal human life upside down and pushed them towards compulsory, recent technology-based alternative solutions, education being not an exception. Higher education institutions in Turkey rushed from the first moments to avoid the disruption of education process, and transformed into the full-fledged online learning system. Current study addressed aims to investigate how satisfied higher education students are with the transformation to Blackboard Learning System in İstanbul, Turkey during COVID-19. The study compares undergraduate and postgraduate students' perceptions via thirty items divided into six axes, which are included in a single model.
Methodology- An online questionnaire survey sent through BLS itself and WhatsApp was filled out by a total of 294 student respondents, wherein afterwards an inferential and descriptive study with quantitative approach has been employed for analyzing their perceptions.
Findings- The results are indicative that the Usefulness, Engagement, Communication and Ease of Use, Self-efficacy, and Challenges axes respectively have a statistically significant effect on students' perceptions concerning satisfaction with the BLS. As the Usefulness and Engagement axes have the highest contribution to students' satisfaction with the BLS, the Challenges axis has the least contribution. The findings state that satisfaction of postgraduate students, in terms of Self-efficacy, Communication and Ease of Use and Challenges axes, along with a clear supremacy over the Overall axes level is higher than undergraduate students. Moreover, all demographic dimensions except gender, place of living, the kind of device preferred and the willingness in using BLS in the future, influence students' perceptions.
Conclusion- It can be concluded that the transformation into BLS during COVID-19 has been satisfactory for higher education students, especially for postgraduate students. Some traits and drawbacks of BLS have been inferred along with recommendations which may contribute to successful implementation of BLS.

Keywords: Blackboard Learning System, COVID-19, Satisfaction, Learning Management System, Higher Education
JEL Codes: I10, I20, I23

1. INTRODUCTION

After COVID-19 has been categorized as pandemic worldwide, it has become the first main concern of the world' nations and institutions to stand up in the front of their responsibilities toward their nationals not only to protect their health, but also to ensure economic, social and educational aspects of life as before. In Turkey as well, the traditional in-class education in all schools as well as universities was halted and suspended. From then on education was executed through online education platforms and every university identified their own online learning systems (MEB, 2020).

As Sarac (2021) stated, the Turkish higher education system with 207 universities, 129 state universities and 78 foundation universities, has the largest number of students when compared with the European area. Number of students recorded a national total of 8 million or so, distributed as follows: 101,242 Doctoral, 3,002,964, 297,001 Master's, 4,538,926 Bachelor's, and

Associate's and around 51% female, 49% male as reported in Study in Turkey (2020). The fast evolution in the technology of information has revolutionized the teaching-learning practices in instructional environment in Turkey as well (Alokluk, 2018). According to another study (Isik, et al., 2010:222), an increasing demand exists for postgraduate education in Turkey that can only be met by online learning. The online or distance learning in Turkey was not completely spur of the moment decision. Very early on, Turkey had been in an effort to keep up with the latest technologies in education so far. Turkey has adopted the Digital Transformation in Higher Education Project since the early years wherein 120 universities have Distance Education Application and Research Centers (DEARC) to support online learning for more two million students (Elçi, 2021:345).

In the related literature, it has been reported that although the technology has become an integral part of establishments, the transformative effect of the tools of Technology-Enhanced Learning (TEL) on processes of teaching and learning has still not been realized (Jenkins, et al., 2011:462). As far as the technology is concerned, some consideration should be made to enhance satisfaction with the transition to online learning system. Investigating tendency of users towards online teaching and learning system is an important issue, with a view to identify which online education format is convenient for users' needs on one hand, and to support strengths and better weaknesses for both system and users alike, on the other hand. Moreover, very little information exists pertained to the experiences of students towards Learning Management System (LMS) in Turkish universities during COVID-19 outbreak. This study, therefore, will center on how satisfied higher education students have been with BLS during COVID-19.

2. LITERATURE ON TECHNOLOGY-BASED LEARNING SYSTEMS

There is a growing literature on the definitions of different types of Technology-based Learning Systems - Distance Education, eLearning, Online Learning, LMS etc. The numerous terminologies that referred to the digital technology-built education are used in many different names and nomenclatures with varied forms and manners (Littlefield, 2018; Moore, et al., 2011). Soroka (2019) cited that digital education has undergone a shift from offline to online education thanks to Internet, and online learning and distance education have much in commonality. Another study (Maity, et al., 2021) overviewed the digital education through online teaching and learning, eLearning and distance learning to explore the effectiveness, accessibility and quality of digital education during COVID-19. Furthermore, Sari & Nayır (2020) stated that open education, eLearning, virtual learning, m-learning, online learning, all are in fact various tools of distance learning, and they are different from each other in terms of the system or approach they utilize. Parker & Martin (2010) point out that distance learning is nearly a synonym for the word online learning. In favor of previous saying, in another study (Moore, et al., 2011) it has been mentioned that a relation between online learning and distance learning exists but while they themselves observe inconsistency in using the terminology. Moreover, Goi & Ng (2008) believe that eLearning stemmed from distance education but there are differences between them in terms of interaction, paradigm in education and the technology used in instructional activities. In another study (Saputro, et al., 2021) online learning is part of technology-based learning that employs the internet, intranet, and extranet resources and requires a LMS in its implementation and stages to get its effectiveness. It has been also stated that the growth in use of LMSs is associated with the growth in online learning (Malikowski, et al., 2007).

The growing introduction of LMS, which is defined as "a technology platform that can be used to automate the administration, development, and delivery of all of a company's training programs", in all levels of instruction has been noted across the world (Noe et al., 2017:292). Thus, it has become a crucial tool for almost all tertiary instruction institutions, and a driving force in online learning (Rhode, et al., 2017). Balkaya and Akkucuk (2021) add that it has become a major strategic component of instructional institutions, wherein, as for some researchers (Gautam, D. K., & Gautam, P. K., 2021), it is a space designed to meet learners, rate learners, assign, interact, and distribute material virtually.

As a result, what is manifestly explicit is that some ambiguity still exists in relation to the differences among terminologies that express Technology-based Education System. Nonetheless, it can be said that all the different terms fall within a larger term of technology-based learning. Moreover, it can be noted that LMSs are employed by all of Technology-based Learning Systems as a core tool or media to deliver instruction to the beneficiaries (Liaw, 2008; Baber, 2020; Giray, 2021).

Several literature reviews have tried to evaluate satisfaction with online learning system or LMS in various ways and methods, wherein some strived to look for users' perception, attitude and belief towards LMS, some others focused on addressing factors or dimensions that have an effect on users and their learning outcomes. Other scholars have touched on measurement of LMSs' features and their effects on users' performance along with the advantages and disadvantages of LMS. There are considerable variances of perspectives about satisfaction in using online learning system or LMS, ranging from positive, moderate to negative perceptions (Parker & Martin, (2010); Hall (2006); Liaw, 2008; Findik-Coşkunçay, et al., 2018; Acar & Kayaoğlu 2020; Gautam, D. K., & Gautam, P. K., 2021; Evişen, et al., 2020; Giray, 2021; Aguilera-Hermida, 2020; Maqableh, 2015).

The Blackboard, hereinafter referred to as the Blackboard Learning System (BLS), is one of the salient LMSs, which has been used for the application of eLearning in many countries (AlKhunzain & Khan, 2021). It was launched by Blackboard Inc. in 1998 and the number of users reached 12 Million in over 60 countries in 2006 (Bradford, et al., 2007). This number went up more than 100 Million users in 90 countries (Gonzalez, 2020). In this line of discussion, it can be concluded that BLS is deemed as one of the most common web-built education system tools within tertiary instruction and one of the more widely used user-friendly platforms (Carvalho, et al., 2011; Tarhini, et al., 2015). In the current study BLS has been chosen as the platform due to the mentioned reasons.

3. RESEARCH MODEL AND HYPOTHESES

Investigating how satisfactory the transformation of educational process has been during COVID-19 in Istanbul for higher education students is deemed as the problem statement and TAM model will be employed in the current paper. The main idea of Technology Acceptance Model (TAM), which was introduced by Davis (1989), investigates if the users have a positive perception about usefulness and ease of use of technology. This in turn gives rise to a positive attitude towards adopting the technology, which will contribute to enhance the actual use of system later on. The model has undergone many developments, the external variables were investigated as well in order to understand direct and indirect influences on users' attitudes towards technology use, especially in education (Aguilera-Hermida, 2020; Al-hawari & Mouakket, 2010; Kemp, et al., 2019; Maqableh, 2015; Sahin & Shelley, 2008).

Sahin & Shelley, (2008) stated that it is not easy to address students' needs and optimize their education if the satisfaction of students in terms of online learning is not investigated. The satisfaction about technology is conceptualized as a key link in their outcomes, with increased enjoyment connected to greater levels of student engagement, which is also linked to increasing student learning. They added that usefulness, computer expertise and flexibility are essential to enforce student satisfaction with online learning. Students' satisfaction, motivation, and attendance are essential to the success of online learning (Haleem et al., 2021). For their sides, Al-hawari & Mouakket, (2010) stated that, according to the previous study conducted by Lin and Sun (2009), there is a positive and association between satisfaction and TAM factors. Moreover, the usefulness and ease of use, along with the external variables are significant factors that play a role in the satisfaction of online learning or LMS (Hall, 2006; Liaw, 2008; Parker & Martin, 2010; Carvalho, et al., 2011; Maqableh, 2015; Findik-Coşkunçay, et al., 2018; Hamid, et al., 2020; Aguilera-Hermida, 2020; Emiroglu, et al., 2021). Self-efficacy, is another flexible indicator for establishing student satisfaction and with the advent of technology, technology self-efficacy level of students has been considerably developed (Haleem et al., 2021). Santoso, (2021), based on his model, claimed that engagement has an effect on satisfaction significantly and positively. Hall (2006) also confirmed that students' engagement contributes highly to the successful implementation of LMS.

Therefore, the proposed research model in this paper will count on six axes; Self-efficacy, Engagement, Usefulness, Communication and Ease of Use, Challenges and Satisfaction. The Satisfaction axis will be employed as dependent variable and the others as independent variables (see Figure 1).

Figure 1: Research Model
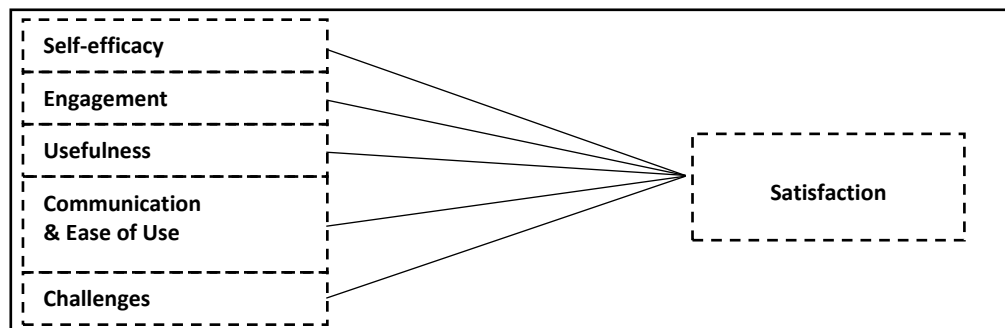
H1: The Self-efficacy, Engagement, Usefulness, Communication and Ease of Use, and Challenges axes positively have no effect on students' Satisfaction.

H2: There is no statistically significant difference between undergraduate and postgraduate students' perception on the level of Overall axis of the satisfaction with BLS.

H2a: There is no statistically significant difference between undergraduate and postgraduate students' perception on the level of Self-efficacy axis of the satisfaction with BLS.

H2b: There is no statistically significant difference between undergraduate and postgraduate students' perception on the level of Engagement axis of the satisfaction with BLS.

H2c: There is no statistically significant difference between undergraduate and postgraduate students' perception on the level of Communication and Ease of Use axis of the satisfaction with BLS.

H2d: There is no statistically significant difference between undergraduate and postgraduate students' perception on the level of Usefulness axis of the satisfaction with BLS.

H2e: There is no statistically significant difference between undergraduate and postgraduate students' perception on the level of Challenges axis of the satisfaction with BLS.

H2f: There is no statistically significant difference between undergraduate and postgraduate students' perception on the level of Satisfaction axis of the BLS.

H3: The demographic dimensions positively have no an effect on the program students study on the satisfaction with BLS.

4. RESEARCH METHODOLOGY

4.1 Data Collection Progress

The study design at hand can be described as an inferential and descriptive study with a quantitative method. Therefore, the online self-reported two-part questionnaire survey formulated by Google Form were employed with a view to compiling the primary data. Further, it was adopted from similar studies and subjected to be developed through extensive review to keep up with the requirements of the proposed research. The eleven demographic questions as well as thirty students' perceptions questions listed in the survey were closed-ended in two formats, multiple-choice and rating questions on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Due to the reasons that the majority of the population targeted are predominantly Turkish-speaking students and are unable to talk English, the survey was firstly created in both English and Turkish languages. The second part having thirty items is made up of six axes: Self-efficacy has four items adopted from (Aguilera-Hermida, 2020; Ituma, 2011; Liaw, 2008), Engagement has four items from (Aguilera-Hermida, 2020), Usefulness with a five-item from (Ituma, 2011; Liaw, 2008; Maqableh, 2015), Communication and Ease of Use has six-items from (Al-hawari & Mouakket, 2010; Ituma, 2011; Salloum et. al., 2019), Challenges has seven items from (Aguilera-Hermida, 2020; Maqableh, 2015; Parker & Martin, 2010). Finally, Satisfaction has four items from (Liaw, 2008; Salloum et. al., 2019).

Once approved by Ethics Committee, the questionnaire link was distributed by WhatsApp group and BLS itself to all registered higher education students of a private university in Istanbul/Turkey especially those who have witnessed lockdown actions to mitigate the effects of pandemic due to the prevalence of COVID-19, in 2020-2021. As a result, the actual overall size of the random sample was 294 students whose data were brought together and analyzed, where most of them were in the 18-29 age group, male and undergraduate. Moreover, the most rated respondents have previous experience using LMS, live in city, use laptop, and would like to have 45 minutes' classes, two classes per day and multiple choice & true-false exams (Table 1).

Table 1: Demographic Information

		Total 294	100%
Demographic Dimensions		**Frequency**	**Percent**
Age	18-29	268	91.2
	30-39	19	6.5
	40 & above	7	2.4
Gender	Male	160	54.4
	Female	134	45.6
The current program you study	Undergraduate	242	82.3
	Postgraduate	52	17.7
Where do you live?	City	271	92.2
	Village	12	4.1
	Others	11	3.7

The device you prefer to use for Blackboard	Mobile	24	8.2
	Laptop	240	81.6
	Desktop	26	8.8
	Tablet	4	1.4
How long would you like the online classes (per class) to be?	45 Min	196	66.7
	60 Min	69	23.5
	90 Min	24	8.2
	More than two hours	5	1.7
How many classes per day would you like to take on Blackboard collaborate?	Only one class	54	18.4
	Two classes	116	39.5
	Three classes	76	25.9
	Over three classes	48	16.3
What kind of exams would you like?	Take home	57	19.4
	Multiple choice & true-false	125	42.5
	Both	112	38.1
What kind of subjects do you study?	Practical and Theoretical	211	71.8
	Only theoretical	83	28.2
Are you willing to continue the classes through Blackboard system in the future after COVID-19?	Yes	144	49.0
	No	79	26.9
	Not sure	71	24.1
I have a previous experience in using the Learning Management Systems (Blackboard).	Yes	176	59.9
	No	118	40.1
No missing data			

4.2. Questionnaire Test

The pilot study that is "pre-test the questionnaire on a small number of people before it is used in earnest" (Walliman, 2010:98) was applied to a twenty-student sample to measure the reliability by Cronbach's Alpha Coefficient test. The reliability coefficient above 0.7 are seen as satisfactory, as Cronbach's Coefficient value ranges from 0.0 to +1.0. Cronbach's Coefficient of sample was valued by α = 0.838, pointing out that it is acceptable value. In the same vein, the reliability in either each axis or allover axes, demonstrates to be assumed as Cronbach's alpha Coefficient goes through 0.70 (Table 2).

Table 2: Reliability Test

Axes	Items No.	Cronbach's Alpha Coefficient
Self-Efficacy	4	.799
Engagement	4	.848
Usefulness	5	.920
Communication and Ease of use	6	.784
Challenges	7	.762
Satisfaction	4	.813
Overall Axes	30	.848

4.3. Data Analysis Progress

Multiple Regression Analysis is implemented to investigate the extent to which Self-efficacy, Engagement, Usefulness, Communication and Ease of Use, and Challenges axes (Independent Variables) influence satisfaction axis that is considered in the current thesis as a measure of Dependent Variable. The Independent Samples T-test is adopted to tell the differences between the undergraduate and postgraduate students' perceptions, as the level of significance is 0.05.

Moreover, to arrive at the degree to which the students perceive each Item in a bid to infer the traits and drawbacks of BLS, the five-point Likert Scale will be employed to establish if an approval is high, moderate, or low level through examining Items' means meaning; high level the mean value is more than or equal 3.4, moderate level the mean value ranges from 2.6 to 3.39, low level the mean value is less than 2.6. To establish the extent of the influence of demographic dimensions Pearson's Chi Square Test has been conducted.

5. FINDINGS

Since the P-value (significance level) in terms of the Self-efficacy, Engagement, Usefulness, Communication and Ease of Use and Challenges axes show to be less than 0.001, the regression is statistically significant (Table 3). There is a positive correlation between Satisfaction dependent variable and the independent variables- Self-efficacy, Engagement, Usefulness, Communication and Ease of Use and Challenges. It turns out that theses axes have a positive effect on students' Satisfaction axis (Dependent Variable). This certainly leads to the argument that Hypothesis H1 is rejected. Moreover, an axis that has the most effective contribution to students' satisfaction with the transformation towards BLS is the Usefulness axis, followed by the Engagement axis. Challenges axis has the lowest effective contributor (4.1%), as it has the lowest R-squared (R^2) value (.041).

Table 3: Stepwise Multiple Regression Analysis & Correlation Path

Dependent variable	Independent variables	B	R^2	Correlation	P-value
Satisfaction	**Usefulness**	.045	.229	.679	<0.001
	Engagement	.052	.224	.646	<0.001
	Communication and Ease of Use	.061	.164	.593	<0.001
	Self-efficacy	.054	.140	.570	<0.001
	Challenges	.168	.041	.202	<0.001

The level of significance (P-value) at 0.001.

Since the P-value (significance level) on the overall axes level is less than 0.05 in the 95% confidence interval, the discrepancy between undergraduate and postgraduate students is statistically significant (Table 4). It turns out that students' perceptions towards the satisfaction with BLS make a distinction as concerns overall axes. Such leads unquestionably to the argument that the Hypothesis H2 is rejected. The mean of the overall axes level of postgraduate students (M = 93.6, SD = 12.89) shows to be greater than that undergraduate students (M = 87.2, SD =15.40).

As for sub-hypotheses, since the P-value (significance level) on the Self-efficacy, Communication and Ease of Use, and Challenges axes level is evident to be less than 0.05 in the 95% confidence interval, the discrepancy between undergraduate and postgraduate students is statistically significant. It turns out that students' perceptions towards the satisfaction with BLS make a distinction as concerns self-efficacy axis. Such leads unquestionably to the argument that the Hypotheses H2a, H2d, H2e is rejected. The mean of the Self-efficacy, Communication and Ease of Use, and Challenges axes level of postgraduate students is evident to be greater than that undergraduate students. Conversely, the Engagement, Usefulness, and Satisfaction axes are not statistically significant due to the P-value shows to be more than 0.05, It turns out that students' perceptions towards the satisfaction with BLS do not make a distinction as it concerns Engagement, Usefulness and Satisfaction axes. Such leads unquestionably to the argument that the Hypotheses H2b, H2c, H2f is accepted.

Table 4: Independent Sample t-test Analysis Results

	The current program you study			
	Undergraduate No.= 242	**Postgraduate No.= 52**		
Axes	**M (SD)**	**M (SD)**	**t- value**	**P-value**
Self-Efficacy	14.1 (3.32)	15.3 (2.99)	-2.473	.014
Engagement	11.6 (4.50)	12.7 (3.62)	-1.656	.099
Usefulness	16.5 (5.13)	17.5 (4.65)	-1.338	.182
Communication and Ease of use	20.2 (3.20)	21.8 (2.57)	-3.227	.001
Challenges	21.8 (3.21)	23.1 (3.05)	-2.645	.009
Satisfaction	15.4 (2.70)	15.8 (2.52)	-1.155	.249
Overall Axes	87.2 (15.40)	93.6 (12.89)	-2.803	.005

The level of significance at 0.05.

Furthermore, Table (5) spells out the students' approval in terms of thirty items tends to range from high to moderate level with superiority of high approval level, except tow items tend to be low approval level.

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Table 5: Mean of Question Items

No.	Item	M	S.D	Level of Approval
1	I feel confident using the Blackboard system.	3.98	0.88	High
2	Blackboard enabled me to organization and time management.	3.45	1.05	High
3	Blackboard helped me with knowledge of new tools.	3.61	1.05	High
4	Blackboard added value to your learning skills.	3.25	1.16	Moderate
5	Blackboard increased the level of involvement activities.	3.04	1.18	Moderate
6	Blackboard encouraged me on the class attendance more than face-to-face.	2.87	1.42	Moderate
7	Blackboard aided me to concentrate more than traditional learning.	2.77	1.39	Moderate
8	Blackboard improved my grades.	3.13	1.27	Moderate
9	Blackboard increased my productivity.	3.08	1.15	Moderate
10	I believe Blackboard can assist learning efficiency.	3.37	1.18	Moderate
11	I believe Blackboard can assist learning performance.	3.41	1.16	High
12	I believe Blackboard can assist learning motivation.	3.22	1.22	Moderate
13	I believe Blackboard can assist learning assessment / evaluation (quizzes / surveys / self-tests).	3.57	1.10	High
14	Posting announcements, other timely news and information by your instructor or department were in time.	3.77	0.96	High
15	I got feedback from instructors/staff immediately.	3.47	1.01	High
16	Discussions and Submissions (email, chat, post, etc.) were active and effective.	3.71	0.89	High
17	Blackboard Collaborate (virtual classroom) is very beneficial.	3.42	1.09	High
18	Blackboard enables me to access to learning resources / materials (files / content/ assignments / learning modules).	4.08	0.78	High
19	It was difficult for me to use Blackboard.	2.06	1.06	Low
20	I felt time-consumption.	2.78	1.17	Moderate
21	I felt isolated.	3.27	1.26	Moderate
22	I was ready to study using Blackboard system (Having intention).	3.50	1.02	High
23	Using Blackboard was costly of internet access.	2.59	1.16	Low
24	Blackboard increased family time during COVID-19.	3.42	1.24	High
25	Blackboard helped me with personal improvement during COVID-19.	3.21	1.23	Moderate
26	Blackboard allowed me to practice new activities during COVID-19.	3.25	1.19	Moderate
27	I am satisfied with using Blackboard as a learning assisted tool.	3.81	0.92	High
28	I am satisfied with Blackboard functions.	3.94	0.78	High
29	I am satisfied with Blackboard contents.	3.96	0.74	High
30	I am satisfied with Blackboard interaction.	3.72	0.89	High

As can be noted from Table 6, it is abundantly clear that all demographic dimensions except gender, place of the living, the sort of preferred device and the willingness in using BLS in the future, positively have an effect and association with undergraduate and postgraduate students meaning that the third hypothesis concerning them is rejected.

Table 6: Pearson's Chi Square Test Results

		The current program you study			
		Undergraduate	Postgraduate		
Demographic Dimensions		Count (%)	Count (%)	X2 value	P-value
Age	18-29	239 (89.2)	29 (10.8)	74.079*	< 0.001
	30-39	3 (15.8)	16 (84.2)		
	40 & above	0 (0.0)	7 (100)		
Gender	Male	128 (80)	32 (20)	1.290	.256
	Female	114 (85.1)	20 (14.9)		
Where do you live?	City	221 (81.5)	50 (18.5)	4.780	.092
	Village	12 (100)	0 (0.0)		

	Others	9 (81.8)	2 (18.2)		
The device you prefer to use for Blackboard	Mobile	16 (66.7)	8 (33.3)	5.223*	.156
	Laptop	200 (83.3)	40 (16.7)		
	Desktop	22 (84.6)	4 (15.4)		
	Tablet	4 (100)	0 (0.0)		
How long would you like the online classes (per class) to be?	45 Min	178 (90.8)	18 (9.2)	33.067*	< 0.001
	60 Min	50 (72.5)	19 (27.5)		
	90 Min	11 (45.8)	13 (54.2)		
	More than two hours	3 (60)	2 (40)		
How many classes per day would you like to take on Blackboard collaborate?	Only one class	29(53.7)	25 (46.3)	39.653*	< 0.001
	Two classes	96 (82.8)	20 (17.2)		
	Three classes	71 (93.4)	5 (6.6)		
	Over three classes	46 (95.8)	2 (4.2)		
What kind of exams would you like?	Take home	33 (57.9)	24 (42.1)	32.827	< 0.001
	Multiple choice & true-false	116 (92.8)	9 (7.2)		
	Both	93 (83)	19 (17)		
What kind of subjects do you study?	Practical and Theoretical	183 (86.7)	28 (13.3)	10.015	< 0.001
	Only theoretical	59 (71.1)	24 (28.9)		
Are you willing to continue the classes through Blackboard system in the future after COVID-19?	Yes	114 (79.2)	30 (20.8)	2.286	.319
	No	66 (83.5)	13 (16.5)		
	Not sure	62 (87.3)	9 (12.7)		
I have a previous experience in using the Learning Management Systems (Blackboard).	Yes	153 (86.9)	23 (13.1)	6.426	< 0.001
	No	89 (75.4)	29 (24.6)		

X2. Pearson's Chi square Test.

*. Likelihood Ratio used, as the expected count at one of group < 5. Source: Author

6. DISCUSSION

6.1. Self-efficacy Axis

Self-efficacy is defined as "perceived beliefs about one's own capability of achieving a task or being successful in a particular area" (Şimşek, 2012:1530). Students' self-efficacy, interaction environments and multimedia forms are considered by a study (Liaw, 2008:866) as dimensions for developing effective eLearning capabilities. Furthermore, Self-efficacy is also a strong determinant of a successful online educational experience (Albelbisi & Yusop, 2019). Thus, students should be aided to set out their resources and improve their confidence (Aguilera-Hermida, et al., 2021). The researcher therefore, in the present study, has opted this factor as axis because of its importance.

In line with the literature, Self-efficacy seems to be a somewhat significant predictor of students' satisfaction. As well, it shows a statistically significant divergence among both groups in favor of postgraduate students. Namely, the postgraduate perceptions as concerns satisfaction with BLS are evident to be a bit more positive than the undergraduate perceptions on the Self-efficacy level. As such, the postgraduate students are apparent to be better in using BLS thanks to their feeling of confidence to this system, acquiring new tools and moderate learning skills which enable them to be able to manage and organize their time in a manner appropriate to their needs. In other terms, they look to be utilizing self-efficacy more than the undergraduate students are. Such result reflects a clear image about students' perceptions influenced by Self-efficacy, which complies with the existing literature (Aguilera-Hermida, 2020; Maqableh, 2015; Liaw, 2008).

6.2. Engagement Axis

Engagement is the users' knowledge, attention, curiosity, concentration, and flow during the process (Kemp, et al., 2019). It has been found that the successful embrace of eLearning modes relies on all the users' engagement, both instructors' and learners' (Yakubu, et al., 2019). According to the UTAUT framework, expectancy effort is one of the factors bearing on individual's behavioral intention to use technology, which refers to an individual's likelihood to participate in a specific behavior (Venkatesh, et al., 2003). Baber (2020:290) held the opinion that absence of physical socialization in online learning makes online student engagement to be a stronger factor of the student's perceived learning outcome. Thereof, the engagement axis was listed in the existing survey to observe involvement activities, level of attendance, grades and concentration.

According to the findings of this study, Engagement axis enjoys a relative high positive association to students' satisfaction, with a statistically significant impact. In other terms, Engagement seems to be a crucial predictor of students' satisfaction with the BLS. Additionally, the postgraduate perceptions as to Engagement are spotted not to be different from the undergraduate perceptions. Undergraduate and postgraduate students also show to be moderately able to attend the online classes in which they feel fairly encouraged to participate in line with the existing literature (Aguilera-Hermida, 2020; Carvalho, et al., 2011; Goi & Ng, 2008; Hamid, et al., 2020; Heirdsfield, et al., 2011) .

6.3. Usefulness Axis

Usefulness is technology functionality (Parker & Martin, 2010:137). Senel and Senel (2021) described that BLS provides the benefits for assessment like instant feedback, ease of editing, submitting/responding, control and storage, providing student participation, motivation and statistical data, enriching assessment tools and products and re-use. Thereof, the productivity, efficiency, performance, motivation and assessment are the main indicators employed in this research to scrutinize the usefulness of BLS pursuant to students' viewpoints in an effort to recognize their satisfaction.

Usefulness axis has the highest positive correlation with students' satisfaction towards BLS. It positively influences students' perceptions with satisfaction and has the highest effective contribution to students' satisfaction with the BLS. Furthermore, there is no statistically significant difference between students' perceptions on the level of Usefulness axis, the postgraduate perceptions as to the satisfaction with the transformation towards BLS are not different from the undergraduate perceptions.

BLS plays a high role in spurring highly their learning performance and in providing highly an auxiliary evaluation tool, wherein they could follow easily their evaluation via exam's grades provided on the BLS platform or feedbacks from academic staff any time, namely BLS can be characterized as a satisfying learning evaluation vehicle. Consequently, it can be asserted that they both, undergraduate and postgraduate, feel the usefulness with using BLS in the same line with (Evişen, et al., 2020) who perceived that online learning or LMS is useful during COVID-19.

6.4. Communication and Ease of Use Axis

BLS allows communication through announcements, email, virtual classroom, and discussions (Bradford, et al., 2007). Dhawan (2020) stated in his SOWC Analysis that immediate feedback is one of the strengths of online learning. Furthermore, ease of use is "how simple it is to become skillful in using the technology" (Parker & Martin, 2010:137). Aguilera-Hermida, et al. (2021) stated that ease of use is a strong factor for utilization of online learning. Therefore, the communication and ease of use was included in this paper as one of the axes.

Communication and Ease of Use axis has a moderate positive association with students' satisfaction, and a statistically significant effect. Wherein it also possesses the effective contribution but to a lesser extent than the Usefulness and Engagement axes, that is, it influences positively, to a certain extent, students' satisfaction with the BLS. In some sense, Communication and Ease of Use axis sounds to be a somewhat significant predictor of students' satisfaction with BLS. Furthermore, there is a statistically significant difference between undergraduate and postgraduate students. Postgraduate students' perception is evident to be a bit more positive than the undergraduates' perception. Such means that they are abler to communicate readily with each other or with their academic staff/staff. BLS allows them to make effectively discussion sessions via the beneficial virtual classroom feature, submit their active inputs and get timely to the information, feedbacks and announcements provided by academic staff/staff. Hence, BLS usage enables the students to catch up with the announcements and information on time. It also allows to access readily to instruction available resources and materials to support the learning and teaching process remotely.

6.5. Challenges Axis

Having some technical problems in LMS is possible owing to the transition of educational process method. The problems caused by distance education have been discussed by several scholars in the midst of COVID-19 time (Emiroglu, 2021, Bentata, 2020). Moreover, Bataineh, et al. (2021) indicated that majority of students confronted challenges and obstacles with online learning style. Giray (2021) raised questions on the challenges, positive and negative facets of online learning among COVID-19 to evaluate students' satisfaction. This axis then is chosen to attempt to reach out to learn about obstacles.

Despite an ineffectual association between Challenges and Satisfaction, Challenges axes confirms having a statistically significant impact on students' perceptions towards satisfaction. In addition to that, it has a statistically significant disparity between undergraduate and postgraduate students' perception. As well, postgraduate students and their perceptions as to the satisfaction with BLS are revealed to be a bit more positive than the undergraduate perceptions. The challenges or changes, except a sense of time-consumption and isolation, and a cost internet access coped by the postgraduate students seem to be less than those made by the undergraduate students.

It turns out that the harsh transformation into BLS explicitly has no challenges that influence the satisfaction level, even has opportunities such as increasing the time spent with family, self-improvement and practicing new activities, which contribute to adjust some students' habits and activities amid COVID-19 period. As well, these changes are spotted in the undergraduate students less compared to postgraduate students.

6.6. Satisfaction Axis

Satisfaction is how convinced or pleased a user is with an information system (DeLone & McLean, 2003). The current and future use of LMS depends on the extent to which students are satisfied about their experience towards this kind of a system (Findik-Coşkunçay, et al., 2018). Another study (Shahzad et al., 2021) deduced that user satisfaction is significant in terms of eLearning, in some sense, there is positive relationships between eLearning and user satisfaction. Therefore, the axis of satisfaction is listed within the survey to rate undergraduate and postgraduate students' satisfaction in regard to the completely transformation to BLS and is used as dependent variable in the research model. To this end, the respondents were told to reply on four questions related to satisfy with contents, functions, interaction of BLS.

On the satisfaction axis level itself the postgraduate students or to the undergraduate students perceptions are not different from each other. Namely, it equally enables them to interact, to access to contents and to use functions satisfactorily and efficiently.

As the Usefulness enjoys a relative high positive correlation with students' satisfaction and the Challenges has a somewhat weak positive correlation to students' satisfaction over the BLS. Further, the Usefulness, Engagement, Communication and Ease of Use, Self-efficacy and Challenges respectively have an effective on students' satisfaction about the BLS, i.e. statistically significant influence. The Usefulness axis shows to be the highest effective contribution to students' satisfaction and the Challenges axis shows to be the least. Stated differently, the Usefulness axis is the most crucial predictor of students' satisfaction towards the BLS, in contrast, the Challenges axis is deemed the least students' satisfaction predictor with the BLS amongst COVID-19 disease period. As a result, it can be claimed that these five axes are considered as satisfaction indexes. It can be said that the axes emerging in this research are consistent with some factors stated by (Heirdsfield, et al., 2011; Siagian, et al., 2020; Sofi & Laafou, 2020).

In the light of the above, as was expected, it can be claimed that higher education students, both undergraduate and postgraduate have felt manifestly a high tendency of approval towards satisfaction with BLS. The transformation process into the BLS confirms to be satisfactory, with clear superiority and more firm preference for the postgraduate students as compared with their peers in the undergraduate, in terms of Self-efficacy, Communication and Ease of Use and Challenges. A clear superiority of the postgraduate students' perceptions on the overall axes level as well.

Yet some challenges such as absence of interaction and social life, is not because of using BLS itself, but over COVID-19 quarantine and lockdown measures which affect psychological status of students, as some researches. With respect to university, the causes of the success might be stemmed from a good implementation process by university administration, having dependable infrastructure, instant support services provided by academic staff/staff, along with the good knowledge capacities of academic staff.

An ease of use and communication, accessibility, flexibility, availability, affordability, transferability, increased self-efficacy, interactivity, saving-time moderately and positive changes in students' life are shown to be the most traits BLS enjoys, unlike,

there some drawbacks exist, among them a sense of isolation, lack of concentration, the reluctance of attendance, plus vulnerability of participation.

On the other hand, all demographic dimensions other than gender, the kind of device favored, place of the living and the willingness in using BLS in the future, have an effect on the undergraduate and postgraduate students. As well as, due to the fact that the number of undergraduate students is more than that of postgraduate, it is expected and logic that the undergraduate students were getting ahead of the postgraduate as regards demographic dimensions at large.

7. CONCLUSIONS AND RECOMMENDATIONS

The transformation into BLS during COVID-19 disease period appears to be satisfactory for higher education students, more for postgraduate students. Usefulness, Engagement, Communication and Ease of Use, Self-efficacy, and Challenges axes respectively have an effect on students' perceptions concerning satisfaction with the BLS. Usefulness creates the highest contribution to students' satisfaction while the Challenges axis does the least contribution. Moreover, all demographic dimensions except gender, the kind of device favored, place of living and the willingness in using BLS in the future, influence all higher education students.

Hence, these outcomes may lead to some recommendations for practitioners in delivering education by BLS for future terms. Universities should be working more on enhancing an intention and readiness to utilize BLS. It would be beneficiary to adopt micro-learning activities such as raising quizzes and questions to students before, during and at the end of the class. Grading systems could be diversified. Customization efforts can be increased such as, involving the students in setting up their calendar. In order the increase the efficiency of usage of technological devices, small electronic information brochures or publication of an electronic handbook in the form of drawings or video could be offered. Periodic meetings can be held between the students and administrators to discuss the problems and difficulties.

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ANALYSING GENDER EQUALITY AND EMPOWERMENT IN TURKISH COMPANIES: AN EXPLORATORY CASE TO ACHIEVE UNITED NATION'S SUSTAINABILITY GOAL

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ABSTRACT

Purpose- United Nations' Sustainability Goal 5, "Achieving Gender Equality and Empower All Women and Girls," is a critically important topic in today's sustainability agenda. This exploratory case study aims to delve into the current status of gender equality and women's empowerment in Turkish businesses. Furthermore, it seeks to propose a roadmap with thematic areas that can guide companies in fulfilling Goal 5.

Methodology- For this qualitative research, the study engaged professionals in Türkiye, specifically in the manufacturing and logistics industries in Istanbul. The research employed both preliminary and face-to-face interviews to gather insights from experts in the field of sustainability and those working on SDG 5. The preliminary phase involved two managers, while the subsequent face-to-face interviews involved five key experts. A total of ten open-ended questions were posed to representatives from five companies, comprising sustainability managers and specialists from the manufacturing and logistics sectors.

Findings- Sustainable Development Goal 5 (SDG 5) literature revealed various themes related to gender equality and empowerment, encompassing gender-neutral decision making, a person's well-being, creating safe spaces, gender equality role in value chain, environmental impact, ethical considerations, awareness, and empowerment linked to leadership. The qualitative research findings were significant to shape a future plan. Based on the research results, ten thematic areas for companies was developed by the authors. Roadmap Thematic Areas for Companies: Breaking gender stereotypes for gender-neutral career, promoting social sustainability through training opportunities, implementing gender-neutral recruitment practices, adopting gender-neutral policies in all decision making processes, establishing an egalitarian environment within the value chain and permissions, addressing global deficiencies in training to eliminate gender prejudices and promoting access to health and medicines, maintaining work-life balance, supporting advancement of employees with trainings, considering benefits of society on environmental impacts and raising public awareness by ensuring ethics.

Conclusion- The development of Sustainable Development Goal 5 (SDG 5) relies heavily on social, economic, and environmental factors, particularly concerning leadership. This case study underscores the need for Turkish companies to prioritize gender equality and women's empowerment initiatives, as their efforts will contribute to broader sustainability endeavors within the country. By actively embracing the proposed roadmap's strategies, businesses can pave the way for a more inclusive and sustainable future for all individuals in Türkiye.

Keywords: Gender equality, leadership, sustainability, SDG5 target, workplaces
JEL Codes: M14, Q01, J16

1. INTRODUCTION

Women around the world face significant social, economic, and legal barriers to equality. Compared to men, women are more likely to be unemployed, are more represented in low paying jobs, and hold less entrepreneurial, management, and leadership positions (BluePrint, 2018). According to United Nations, each Sustainable Development Goal (SDG) contains specific target that can be both measured and tracked over time. Like a global checklist, these goals allow us to check our progress as we approach to 2030 deadline, which is 7 years ahead. The SDG 5 target is mentioned with the aim of achieving gender equality and empowering all women and girls. There are nine targets under SDG 5; those are; ending discrimination, ending violence, ending harmful practices, recognizing and valuing unpaid work, ensuring full participation in public life, ensuring access to sexual and reproductive health and rights, ensuring equal economic resources, promoting

women's empowerment through technology, sounding policies and legislation, and the time to act is now (UN Women, 2022). This study aims to propose policy implications of companies to advance Goal 5 in leadership by ensuring gender equality (McKinsey, 2022).

This article will begin with detailed literature review highlighting the significant social, economic, and legal barriers that women face globally, which lead to inequalities in employment, representation in high-paying jobs, and access to leadership positions. It will emphasize the importance of the United Nations' Sustainable Development Goal 5, which aims to achieve gender equality and empower women and girls. The article will then outline the nine specific targets under SDG 5, focusing on areas such as ending discrimination and violence, recognizing unpaid work, promoting reproductive health rights, and ensuring equal economic resources.

Afterwards, the study will study the role of companies in advancing Goal 5, particularly in the context of leadership positions. It will propose policy implications and strategies that companies can adopt to foster gender equality within their organizational structures. These may include measures to address unconscious biases in hiring and promotion, implementing flexible work arrangements to support work-life balance, providing leadership training and mentorship opportunities for women, and promoting diversity and inclusion in decision-making processes.

2. LITERATURE REVIEW

Empowerment in business terms is defined as "a way to delegate the job from the managers to the employees and make employees more powerful in decision making process within the job they make". Besides, empowerment for societies is defined as the ability to enjoy human rights, assure livelihoods, declining of unpaid work that hinders the enjoyment of rights, and pointed participation as leaders and actors in their communities (Esquivel, 2016). Gender equality and empowerment is worth to discuss. Empowering women is a key area for companies and business schools to promote sustainable growth (McElhaney & Mobasseri, 2012). Enhancing women's self-confidence and taking an active part in the answer of problems is ensured by the empowerment of women (Infante & Darmawan, 2022). Urgent action is needed to achieve gender equality by 2030 to eliminate many roots causes of discrimination that continues to limit women's rights in the private and public spheres (Alwis, 2019). Filho et al. (2022) prove that, although the case studies presented show positive interventions for the contribution of SDG5 to SDGs, it remains clearly underpowered. There are other goals as well. Investigating SDG5 relationship with the other 16 SDGs substantiated to be promising and challenging.

According to Eurostat (2022), SDG 5 aims to achieve gender equality by ending all forms of violence, discrimination, and harmful practices against girls and women in both private and public spheres. It also calls for women's equal opportunities and full participation in leadership at all levels of economic and political decision-making. UNStats (2023) confirms that target 5.5 refers to the proportion of females in the total number of persons employed in managerial positions. This indicator proposes using two different measures jointly, including the share of females in middle and senior management, and the share of females in total management. However, relying solely on the share of women in total management is fallacious.

Levin (2021) provides evidence that women's involvement in decision-making is essential for the planet, as there is a clear link between pro-environmental behavior and women's leadership. Seo, Huang & Han (2017) underline that built-in and hidden mechanisms of gender-based social status contribute to the slower advancement of women to senior management compared to men. Rauf (2022) mentions that girls and women still face barriers to making their own choices and shaping the course of their lives.

For instance, Caughey (2021) demonstrates that occupations indeed conceal a great deal of heterogeneity in terms of job descriptions and titles. Blackburn & Jarman (2016) found that women's occupations generally paid less. Freeland & Harnois (2020) provide evidence that cultural sentiments have both indirect and direct effects on real occupational wage differences while controlling for other individual and occupational factors.

According to Kalmaz & Lisaniler (2022), high and persistent occupational gender segregation limits women's mobility between occupations, negatively affecting women's labor force participation and leading to the division of the labor market into male and female occupations. Beckwith (2016) emphasizes that bringing inclusive business high on the agenda is the challenge now. Wach (2012) highlights the point that governments and NGOs should allocate more resources to enable 'Inclusive Business' as a method of managing development goals. More impartial and better-quality assessments are required to determine the effect of business approaches on development. ILO (2022) stresses that equal rights are necessary for all people, and consequently, companies should focus on gender-sensitive programming in the value chain. UNWOMEN (2022) emphasizes that young leaders have stressed the immediate need to prioritize the leadership of young women and adolescent girls at the center of the agenda to ensure their needs, voices, and demands are heard loud and clear."

Companies should make more effort on reaching Goal 5 in leadership and empowerment. Khushk, Zengtian & Hui (2023) mentioned that female CEOs are generally found to be innovative. When CEOs who are female come on board, organizations are more likely engage in activities that are creative. This study also proves that female CEOs who head organizations are more likely engage in environment friendly practices. Kiefner (2022) also proves that SDGs are integrated much deeper and

broader into corporate strategy if there are more female managers because managers who are female show more tendency to have ethical standards, greater stakeholder engagement, and they influence on group decision making. These are requirements for applying the SDGs in strategy that is corporate.

3. DATA AND METHODOLOGY

In this exploratory research, we used qualitative research methodology 'face-to-face interview' technique to learn the thoughts of the key experts in production and logistics companies and convey how leadership can be developed in ensuring gender equality in the SDG5 target. In accordance with the SDG5 target, it is aimed to expand how gender equality is achieved in companies and provide solutions. The preliminary interview was held with two managers within the field before data collection process. Their feedback helped us to maintain questions to explore the subject manner. Five key experts in the field of sustainability and working on SDG 5 were interviewed. A total of ten semi structured open-ended questions were posed to representatives from five companies of sustainability managers and specialists in the manufacturing and logistics sectors during face-to-face interviews. In the analysis phase, situation determinations were made, and a case study which has the characteristics of exploratory research, was created. In the following Table 1, information of key experts as respondents are shown.

Table 1: Information of Key Experts as Respondents

Age	Gender	Company	Position	Department	Sector	Work Experience in this Company (years)	Total Work Experience (years)
34	F	Borusan Logistics	Standardization and System Development Manager	Standardization System Development	Logistics	7	11
29	F	White Durables Company*	Sustainability Specialist	Sustainability Directorate	Manufacturing	2	2
57	M	Pharmaceutical Company*	Marketing Partner	Human Resources	Manufacturing	22	35
23	F	Energy Providing Company*	Sustainability Analyst	Asset Management & Sustainability	Manufacturing	2	7
33	F	Logistics Company*	Sustainability Strategy Leader	Corporate Sustainability and ESG	Logistics	2	10

*Name of the companies are confidential.

4. FINDINGS

This case explores the perspectives of the business professionals regarding gender equality in leadership and empowerment to reach more sustainable organizations. In this study preliminary interviews were conducted with two managers to gather general information and their answers were informative and supportive for the data collection as mentioned above. According to the key experts in the field of sustainability and working in the province of İstanbul in Türkiye, ten themes were named and conceptualized via analysis of findings as shown below in Table 2. There is no importance of rank order of the themes in the table.

As a general finding, companies' main issue is found to be as the lack of considering and accepting sustainability in a multidimensional way. Therefore in order to create an awareness, it is crucial to conduct research on gender equality and sustainability. Companies that work towards these goals will not only leave a livable environment for the future generations, but will also affect other companies in this direction by building awareness. Thus, in this study, it is aimed not only to increase

the number of female employees in business-life, but also get information from experts in the field, starting from decision making and addressing the value chain, global, and ethical issues. By doing so, it is aimed to set an example for companies in the production and manufacturing sectors, and to raise more awareness.

Ten main themes were named and conceptualized via analysis of findings.

Theme 1: Identifying Methods to Strengthen Women's Leadership

Women face difficulties in accessing technical and innovative roles. This may reduce job satisfaction (Ashcraft, McLain & Eger, 2016). Currently, there is a digital shift exposed by external circumstances. If leaders and organizations comprehend better the mechanisms behind this will change, it will relieve them to enhance awareness and long-term strategies. That is, it may give positive contribution to environmental and social change (Kuzior et al., 2022). Most companies must take highly targeted, specific steps to rectify their deteriorated digits, so companies need to monitor outcomes to be certain they're fair and eradicate biased aspects of their assessment process. For instance, companies may ensure that they don't simplistically "check the box". That is, low quality programs may be more detrimental than doing nothing at all. Companies should form an estimate of the fairness of benefits of programs (McKinsey, 2022). An inquiry was made about what kind of methods could be developed in the workplace in order to empower women. Almost all of the respondents mentioned that stereotypes hinder the advancement of women. They stated that this situation led to the separation of women's and men's jobs. According to a respondent from Borusan Logistics:

"We gave vocational qualification training to our all employees and some of them started to employ as operator drivers."

A respondent working at another logistics company commented as follows:

"We currently have 7 active female truck drivers, and I am delighted with this situation. I am satisfied those women, especially in this sector, are receiving support. We make it a point to inform our male drivers that women are equally capable of doing the same job as men, such as being chauffeurs, and we ensure that everyone works comfortably together."

The respondent working at a leading company in the energy sector added:

"Because I am an engineer, I become a role model of others."

As observed, respondents believed that eliminating stereotypes would be effective in promoting gender-neutral career choices.

Theme 2: Social Responsibility Perception and Practices in Workplaces

Corporate social responsibility (CSR) includes a range of ways in which companies probe their environmental and social impacts. Companies are gradually addressing the agenda called gender equality. However, there is a shortage in participation of women and skilled labour in workforce (Grosser, 2009). That is, cultural values, economic stability and growth, and social cohesion issues are all considered to be relevant such as health and well-being, and education and services. Encouraging social sustainability may be achieved through an integrative environment that allows socially and culturally diverse groups to live together (Weingaertner & Moberg, 2014).

In another dimension, social sustainability in business includes contributing to promoting gender equality and reducing inequality as the current objective. If organizations proceed to discriminate against women in managerial positions, it cannot be mentioned that social sustainability can be achieved. In other words, gender equality is a key direction for social sustainability such as sustainable leadership (Ramos et al., 2022). Sustainable leadership is a type of leadership that is carried out in the long term and is based on acting ethically and fairly with all stakeholders. Sustainable leadership fosters the exchange of views and ideas, thus nurturing the educational context (Bulmer, Riera & Rodriguez, 2021). Sustainable change can be achieved through women's creative, innovative perspective, leadership attitude, social awareness, and good ability to identify opportunities (Pierli, Murmura & Palazzi, 2022). Conceiving diversity of livelihood may be a fruitful analytical tool for aspects of social sustainability like gender equality, social cohesion, demographics, and inclusion (Segerstedt & Abrahamsson, 2019).

It was concluded above those removing stereotypes is very crucial for gender neutral career. In addition, in the questioning conducted to eliminate gender inequality by ensuring social sustainability, respondents stated that they thought training on gender equality from an early age would be effective in breaking prejudices and that they implemented practices for this purpose. For instance, the respondent at Borusan Logistics expressed her thoughts as follows:

"We, as Borusan Logistics, made the following project; creating an awareness in gender equality via children. The more awareness we can create at children, the more successful it will be for the future, so, for example, we organized a painting

contest. We have prepared a video about gender equality for our children aged 5 to 7, a short video. We asked the children to draw a picture with what they comprehended from this video and what they understood when they said what is gender equality. We also dressed the picture of our winning child on two of our trucks. Therefore, we will see these trucks on the roads in the near future with a project that will tell us how we actually see gender equality on the roads through the eyes of children."

A respondent working at another logistics company expressed their practice as follows:

"We ensured that our employees learn about gender equality at the Sustainable Life Film Festival."

The respondent at a pharmaceutical company described their practice as follows:

"For example, we are visiting universities. Personal development training, human resources trainings were given by expert trainers to the students at the universities in the east and southeast of the Black Sea."

Thus, the participants indicated that incorporating educational opportunities for young people and children is effective in promoting social sustainability.

Theme 3: Importance of Gender-Neutral Recruitment

Evidence indicates that in the short term, quotas can encourage an increase in the number of women as board members. For instance, a 2015 law introduced a 30% quota for women on boards with a deadline of 2016. This resulted in a significant increase in the representation of women on boards, rising from 16% to 35% between 2011 and 2018 (OECD, 2020). In the most prominent listed companies, women held 30.6% of board positions in 2021. However, it is still predominantly men who occupy positions on boards in the largest companies. On the other hand, the data provides compelling evidence. This level of representation has been achieved through a steady increase of 22.4 percent since 2003. It demonstrates that legislative action has a positive effect on women's representation on boards (Eurostat, 2022).

It was resulted above that the provision of educational opportunities is highly effective in social sustainability. Furthermore, inquiries were made about what kind of recruitment policies are appropriate. Respondents thought that gender neutral recruitment practices were effective. For instance, Borusan Logistics explained its practice as follows:

"We follow a recruitment policy based on equity and inclusiveness, ensuring that the selected candidates are well-suited for the job and align with its requirements."

The respondent, who works at another logistics company, explained their practice as follows:

"We can contact the drivers, encouraging them with the message that they can do it. We have initiated women's employment here to empower women."

The respondent, who works at a leading company in the energy sector, added:

"Requiring CVs without applicant photos can be one of the solutions to promote gender equality and diversity inclusion. For example, at our company, we are actively involving people with hearing difficulties by providing sign language training. Our orientations are conducted in sign language to ensure inclusivity."

As a result, respondents stated that implementing gender-neutral recruitment practices would be effective.

Theme 4: Elimination of Prejudices in Decision Making

Corporate cultures, traditional gender roles, and lack of support for balancing care responsibilities in work are some of the reasons why women are underrepresented in decision making processes (Eurostat, 2022). One key to addressing the gender-environment nexus is environmental justice. That is, women and youth, involving those in indigenous societies, are frequently not justly represented nor involving in environmental policy making and decision-making processes. An environmental rights-based approach is essential to achieve the objectives of the 2030 Agenda. Despite young people's awareness of climate change and inequalities, they seldom involved in decision making (OECD, 2021).

Above, it was concluded that recruitment would be effective when considered regardless of gender. Moreover, in order to ensure equal opportunities in leadership, inquiries were made about what kind of practices can be implemented in the decision-making process. Respondents generally stated that creating values in an egalitarian way and increasing the number of female employees can be effective. For instance, the respondent at Borusan Logistics added:

"Borusan is a very well-established company with various initiatives, such as 'Borusan Equals' and 'Gender Glasses.' These programs have now become an integral part of the company's culture. In the event of an incident that violates the principles and values of equality outlined in the "Orange Book," it can be assessed by the Ethical Committees. Therefore, while our culture

is being created, people are given a lot of training, we have many trainings related to the leadership faculty or specific to individual leaders."

A respondent working at a leading company in the energy sector emphasized the significance of wellbeing and conveyed her thoughts as follows:

"Well-being is also crucial. For example, when woman worker is ill, they can take leave and go".

The respondent, working at a pharmaceutical company, talked about the appointments at the point of decision making and conveyed his thoughts as follows:

"It is possible for everyone involved to have a say in decisions related to appointments, salaries, and rotations for all individuals within the decision-making bodies."

In conclusion, they mentioned the necessity of adopting a gender-neutral approach in all decision making processes.

Theme 5: The Role of the Value Chain in Achieving Gender Equality

Businesses and economic activities are conceptualized by the value chain. That is value chain is part of chains, systems of different linked production and exchange activities, holistic networks, and managing in unlike geographical areas such as national, local, and international, not as separate units or functions. The main aim is, for instance, to increase profits for certain stakeholders, improving working conditions, and women's access to the market. Gender inequalities are vital to addressing and comprehending the weakest links within value chain. However, gender analysis predominantly the weakest point in most value chain analyses. Gender analysis mostly ignored in most value chain manuals. Gender analysis ensures a starting point for more correct poverty, motivations, and power relations. Comprehending and conceptualizing these dimensions are critical not only for gender, but also sustainable pro- poor growth and advancement strategies themselves. Procuring that analysis is able to determine and encourage the strongest links. For this reason, it requires the aggregation of gender analysis at all levels. Converting this analysis into the strongest advancement process also requires the fair and full participation of women as well as men. Participation is required not only in design, but also in monitoring and practice (ILO, 2007). For instance, women's participation in food security and biodiversity may be made possible by implementing gender smart solutions. That is, small scale farming in agricultural value chains may enhance women's participation. This has positive effects on health, poverty reduction, and food security (OECD, 2021).

It was concluded above that a gender-neutral approach should be adopted in all decision-making processes. An inquiry was made about what kind of steps can be taken to procure gender equality in the value chain. Respondents mostly thought that providing more comfortable spaces in the value chain, rewards, leaves, and fringe benefits could positively affect women's employment. For instance, a respondent working at Borusan Logistics explained their implementations as follows:

"We have a driver's manual here that outlines a set of rules to be followed. This manual is of utmost importance because every individual representing our company, including employees, suppliers, or their suppliers, must adhere to these guidelines. Looking at the international and external aspects, we have dedicated supplier development teams to accurately assess the suppliers' expectations. These teams work continuously to add value and contribute to our suppliers, while also constantly analyzing their performance. For instance, we conduct periodic evaluations through a process called 'Voice of the Supplier,' where we actively seek feedback from our suppliers about their experience with us."

The respondent, who works at another logistics company, expressed the system they use as follows:

"The safety of all drivers is important for us. With our vehicle's location reporting device, we can be in contact and track the driver's whereabouts at any time, ensuring prompt assistance in case of any problems."

In addition to the other participants, the manufacturing company developed a solution proposal as follows:

"Supply chain is also a part of the ecosystem. Therefore, a gender equality index based on global reporting standards can be created and the score of the supplier can be calculated based on the performance of the supplier".

The respondent, who works at a leading company in the energy sector, made the following additions by referring to the awareness of gaining a profession:

"Your human competencies should also be given from childhood. The concept of assigning gender-based traits like "lion son" or "delicate daughter" should be eliminated from the value chain. For instance, we take care to buy our suppliers from women. When we do these, other companies want to do them as well. Gaining awareness of this is a big point. If we change together in sustainability, then we will make progress".

As a result, the respondents stated that the elimination of prejudices along with the provision of comfortable spaces, permits and fringe benefits can create an egalitarian environment in the value chain.

Theme 6: Comprehending Gender Based Leadership Barriers

It is essential to comprehend the present status of women leaders to understand gender-based leadership barriers and challenges. Despite significant progress in several areas, women in CEO positions in companies around the world still are in the minority. Across the globe, women hold fewer than 5 % of CEO positions in grand corporations. The proportion of top women leaders was found to be the highest in Central Asia and Eastern Europe at 8 %. This was followed by Southeast Asia with 8 % and North Africa and Middle East with 7 %. Southern Asia and Sub-Saharan Africa were ranked at 5 %. Europe, North America, and Oceania each had 4 %. Latin America and East Asia were the two regions with the lowest percentage of female CEOs with %3 (Goryunova, Scribner & Madsen, 2017).

Support for solutions and strategies to bridge the gender gap should come not only from activists, civil society, and the gender equality community, but also from female leaders from private sector (UN Foundations, Nowrojee, 2022). We are all need to comprehending unconscious bias, listen more, and calling it out when it is seen. (Barry et al., 2017).

It was concluded above that elimination prejudices, providing comfortable spaces, permits, and fringe benefits can create an equitable environment in the value chain. In addition to this, an inquiry was made about what the global challenges could be while achieving gender equality. They stated that the problems faced by companies globally could be access to health, medicines and education. As a solution to this, they thought that beneficial results could be obtained by providing trainings to eliminate prejudices. Borusan Logistics conveyed their practice as follows:

"For instance, Borusan Logistics, which carries out significant works in the field of social responsibility, payed attention to a sincere and small solidarity wishes of a village teacher from Anatolia in 2011. Borusan cared so much that. It embraced all the problems of Atmaca Village Primary School in the Kızıltepe district of Mardin. We still are in solidarity with book donations and so on."

A respondent, who works in a leading company in the energy sector, expressed her thoughts as follows:

"The significance thing is to make a good risk assessment. Continuously reading global reports. It is essential to comprehend their impact on our business and our environment".

As a result, they stated that there might be a global lack of training programs aimed at eradicating prejudice and implementing practices that ensure equal access to health and medicines.

Theme 7: Work Life Balance in Leadership

Active leadership is required to enhance a vision and shared company values for the future, construct concurrence around that vision, and then build and practice strategies to procure it. This type of leadership is significant for sustainability as it provides that everyone is working together towards the identical target and covetable consequences are achieved. In terms of sustainability, this means engaging in eco-friendly and ethical implementations as part of individual lifestyle and being at the foreground of company's sustainability problem. That is, communication is key. For instance, actively interacting keeps everyone on the same page and working towards the same target, cutting down any complication around the company's sustainability exertions. The active inclusion of company senior management and CEOs in sustainability initiatives increases the likelihood that employees will be motivated to the same. Creativity also permits leaders to contact their vision for sustainability giving inspiring a call to action (Long, 2022). For instance, Teknosa that wants to support its women employees in their career paths, continues to make a difference with the "Teknosa's Mother Mentors" project, which is introduced in 2020 to enable them to learn from each other's experiences. The project is proposed to assist women, working mothers especially, to transmit their experience in how to strike a work-private life balance. Thus, female colleagues are assisted to benefit from the mentoring tool (Teknosa, Annual Report, 2021).

Furthermore, an inquiry was made about what companies can do to achieve gender equality in work life balance. Most of the companies stated that ensuring work life balance during working hours is their corporate culture. For instance, a respondent who works at a leading company in the energy sector explained the practice they do about well-being in addition to working hours as follows:

"We have the opportunity to come together in the game room for our well-being. While you may enjoy working hard, sometimes you might feel drained of energy. That's why we have common living areas here, recognizing the importance of employee happiness. I feel part of this family. Our leaders are also committed to enhancing their skills and doing what they love even better. For instance, our company supports postgraduate education by covering the fees. We believe in constantly

improving ourselves in various areas, and the more training and development you pursue, the more valuable you become to the company. Here, personal growth and professional development are highly valued and rewarded".

As a result, respondents emphasized the importance of maintaining a work-life balance during working hours.

Theme 8: The Importance of Equal Right, and Equal Pay in Leadership

Despite the increasing integration of the Sustainable Development Goals (SDGs) into their business strategies, only a few organizations accurately measure their contributions to the SDGs and communicate about it. According to a recent research report by KPMG, 75% of the world's 250 largest companies discuss their impact on SDGs, and 39% refer to SDGs in their CEO/Presidents' messages. However, it is crucial for organizations to be transparent and accountable regarding their contributions to the SDGs, including their indicators and objectives. Setting clear and explicit goals aligned with the SDG goals and targets allows organizations to better track their sustainability performance over time and reaffirm their priorities related to the SDGs (Junior, Fien & Horne, 2019).

For instance, providing women with socio-economic opportunities and access to life-enhancing services that help address inequality are supported by Vodafone. It has a number of commitments to improve the lives of 50 million women living in emerging markets and to connect them mobile by 2025. These commitments are as follows:

*Assisting skills and education,

*Enhancing wellbeing and health,

*Facilitating economic empowerment,

By 2025, their aim is to be the best employer for women worldwide (Vodafone Group Plc, 2019).

Under the guidance of its Equality, Diversity, and Inclusion Policy, Anadolu Efes company in Turkey (EU's 5th largest brewer) provides equality to all its employees, from recruitment to all human resources procedures including salary, career, training, and financial opportunities. Anadolu Efes' Human Resources Policies help them build a diverse and inclusive talent base with global view. With the vision presented by this policy, they promote inclusive leadership and contribute to the improvement of their employees by providing equal opportunities to everyone. Anadolu Efes has been saying "professions do not have a gender", since the day it was founded and advocates equal opportunities for everyone. They collaborated with universities in 2021 to break the gender-based prejudices of young people about job descriptions. In order to introduce role model women to the business world and to provide mentoring and coaching to female students, especially female colleagues in the sales and production departments, visited the campuses of different universities (Anadolu Efes, Sustainability Report, 2021).

It was concluded above that it is crucial to maintain work life balance during working hours. Furthermore, an inquiry was made on how the SDG 5 target could be developed in leadership. Respondents generally emphasized the significance of enabling equal rights at all levels. They thought it was effective for individuals within the company to internalize it. Manufacturing company commented as follows:

"All relevant KPIs (Key Performance Indicator) needs to be measured, targets set, and internally adapted and disclosed to public in companies' reporting. As it often quoted: 'You cannot manage what you cannot measure'."

A respondent at a pharmaceutical company referred to the trainings and conveyed their practice as follows:

"We offer training opportunities even if their position advances. We provide personal development, leadership, and coaching trainings. It doesn't matter if it's a man or a woman".

The respondent, who works at a leading company in the energy sector, stated that gender equality starts with language and commented as follows:

"Primarily, gender equality starts with language. In our company, these issues are taken care of in HR applications. However, it's important to acknowledge that the greatest need in some places might be access to health and education. This may require collaboration with various groups. It's also essential to consider that the audience in Norway differs from the audience in Turkey, and thus, approaches to gender equality may need to be tailored accordingly."

A respondent working at a logistics company expressed their implementation as follows:

"There is an institution that is conducting a social responsibility project. Through this initiative, the goal is to encourage young girls to pursue football, promoting gender equality. The aim is to challenge the perception that certain careers, such as football, truck driving, and civil engineering, are exclusively for men."

As a result, they emphasized the importance of supporting employees' advancement through training and development opportunities.

Theme 9: Reflection of Environmental Factors on the Business World

Environmental factors disproportionately affect women around the world such as deforestation, desertification, climate change, inquire sanitation, growing water scarcity, and other infrastructure. This is particularly the case in rural communities and developing countries, where women have more restricted access to natural resources. Out of 231 none such indicators in the SDG framework, 114 are related to the environment, of which only 20 are gender specific and/or sex disaggregation, making up only 9% of the total. Across OECD countries, women incommensurably bear the burden of caring and unpaid domestic work. Around the world, almost 94% of agricultural workers are in informal employment. Women are overrepresented in part time jobs or low paid seasonal and unpaid jobs are therefore likely to be excluded from social protection systems (OECD, 2021). As 2017-2021 data explains, women are less likely to own a mobile phone than men in 52 of the 80 countries and territories (UNStats, 2022).

It was above conclusion that the significance of supporting the advancement of the employees with training. In addition, an inquiry was made about what kind of challenges were encountered in the sustainability process. Respondents mostly thought that taking the environmental factor into account while achieving the goals had an equalizing effect on leadership. For instance, the respondent from Borusan Logistics shared their business conduct and then expressed their thoughts on the problems that companies may face globally:

"Climate, people, innovation" issues have become a part of our business conduct. Accordingly, the targets were given. In fact, our top management team has Sustainability goals in their own performances. Globally, companies are experiencing a difficulty as follows; you have a business goal, you have a profitability goal that you need to achieve, you have a target of turnover, you have a customer target. In addition to these goals, we have to say, protect the environment, protect the society, or digitize your workplace and create efficiency and protect the society and environment here, along with this efficiency. Therefore, after achieving their business goals, many companies may say; I've already achieved my business goal, why should I do these, why should I have to do it. As long as we proceed without this awareness, we are actually heading towards an abyss."

A manufacturing company talked about the ethical line and expressed its thoughts as follows:

"Companies should report transparently about the confirmed cases, reported through ethical line with all confidentiality. Furthermore, while implementing company policies and making employee engagement surveys, employees can be asked about what kind of culture and approach the company has towards gender equality and what can be improved."

A respondent working in the energy sector emphasized the importance of informing the society and expressed her thoughts and practices as follows:

"For instance, when working in the field of climate across all sectors, it is crucial to raise awareness within society about this issue. In the energy sector, we often focus solely on professional deficiencies, but it is important to recognize that climate change will likely impact women the most, affecting their access to water and hygiene products, among other things. We need to prioritize clean energy sources. As a company, we support green energy, and by using green energy, we contribute to a cleaner environment and a more sustainable future indirectly."

As a result, they talked about the significance of acting by considering the environmental factor while developing the targets and considering how the benefits will affect the society.

Theme 10: Raising Awareness and Giving Importance to Ethics

Proactive, harmonious, and conscious efforts of all stakeholders are needed in order to achieve gender equality in workplace and to achieve the associated economic and social benefits. That is governments, in advisory with employers' and workers' organizations, women's organizations and other key partners, play a significant role in making gender equality a reality in the workplace (ILO, 2021). However, many companies are faced with reduced productivity as a consequence of losing talented female staff. This problem becomes worse when the manager loses women in the ranks leading to leadership positions. Solutions to this problem in implementation involve mentoring, flexible working policies, and more engagement. Research also displays that both women and men employees are less willing to switch jobs if they have a positive sense of an organization's "diversity climate" (Deloitte, 2018).

Providing significant economic and welfare benefits to society may be achieved by mainstreaming gender into climate action and other environmental policies. Environmental justice has been recognized by the global community as a fundamental

human right. However, the environmental rights, intersectionality of women, the rights of indigenous women and youth need to be examined with more attention. Enhancing the attendance of women in green innovation may create high skilled jobs and boost entire productivity. Sustainable infrastructure such as energy, water, transport, etc. Plan with women's requirements in mind may increase women's labour force participation and economic empowerment, and increase wellbeing for whole population (OECD, 2021). Furthermore, enabling women's well-being and restraining more job loss must involve cutting down on their stress at work. This can be achieved through development, recognition, communication, incentives, events, rules, and guidelines.

- o Development: Involve well-being goals in personal development.
- o Recognition: Celebrate and share wellbeing achievement.
- o Communication: Generate messaging that represents the beliefs of a high performing and net growing culture.
- o Incentives: Prop participation in activities that bring results.
- o Events: Raise awareness of net thriving culture and alter behaviors.
- o Rules and Guidelines: In the five elements, arrange policies toward wellbeing.
- o Facilities: Make a design of facilities for mental and physical health, socialization, and collaboration (GALLUP, Gandhi & Robison, 2021).

In the above sections, significance of acting by considering the environmental factor while developing the targets and considering how the benefits will affect the society was mentioned. Moreover, inquiries were made about how the problems that emerged during the implementation process could be solved. Respondents mostly thought that it would be beneficial to give significance to ethics and raise awareness about sustainability awareness to the society. A respondent working at Borusan Logistics gave an example of their implementation as follows:

 "We shall increase communication as much as possible and get feedback from our stakeholders. How do we achieve this? We have such practices as possible regarding the culture of giving feedback. Here we work together with the 'Sustainable Development Association'. We're involved in their 'Be Sensible' project. Again, this year, we are organizing the 'Green Children's Festival'. In many of our locations, we will be organizing festivals this year, where our employees and suppliers, together with their children, will have workshops, theatres, and educational activities to raise awareness of sustainability with them, where they can also have fun. We have a project called 'Love Begins with Language'. Love is in the language in the beginning, there were stickers everywhere, on glasses etc."

 A respondent working at another logistics company expressed their practice as follows:

"According to feedback from our female truck drivers, we are working on how to improve this. We attach great importance to R&D. We continue our efforts to improve these, relying on technology and R&D, evaluating the feedback from our employees, looking at other works done by people in the world, at looking at what we can add to it."

 A respondent at the manufacturing company expressed her thoughts as follows:

"Developing an equal workplace and society is contingent upon education and awareness. Gender equality-based trainings can foster empathy and raise awareness by illustrating the daily challenges women face. In addition to the general lack of awareness regarding gender equality, Africa faces a persistent issue where access to water is limited. People, particularly women, have to walk many kilometers each day to collect water for their families. This burden prevents women from fully participating in life and hinders their leadership opportunities, especially in such regions."

A respondent, working at a local pharmaceutical company, emphasized the significance of improvement works, and expressed his thoughts as follows:

"The problems that arise in practice should be identified and addressed. For example, the proposed improvement works by the plot group and any decisions to be made are submitted to senior management as proposals. These practices aim to be both ethical and impactful on business results."

A respondent who works in a leading company in the energy sector, expressed her thoughts as follows:

"I think social impact analyzes are valuable."

As a result, respondents emphasized the significance of giving importance to ethics and raising awareness of the society.

Table 2: Summary of Findings

Themes	Key Experts' Perspective And Evaluation
Theme 1: Identifying Methods to Strengthen Women's Leadership	Removing stereotypes would be effective for gender-neutral career choice.
Theme 2: Social Responsibility Perception and Practices in Workplaces	Effective to include training opportunities for young people and children to ensure social sustainability.
Theme 3: Importance of Gender-Neutral Recruitment	Realization of recruitment would be effective considering gender neutrality.
Theme 4: Elimination of Prejudices in Decision Making	The necessity of adopting a gender neutral approach in all decision making processes.
Theme 5: The Role of the Value Chain in Achieving Gender Equality	Elimination of prejudices along with the provision of comfortable spaces, permissions, and fringe benefits can create and egalitarian environment in the value chain.
Theme 6: Comprehending Gender Based Leadership Barriers	There may be a global deficiency in trainings to eliminate prejudice, practices that support access to health and medicines.
Theme 7: Work Life Balance in Leadership	The importance of maintaining work life balance during working hours.
Theme 8: The Importance of Equal Right, and Equal Pay in Leadership	The significance of supporting the advancement of the employees with training.
Theme 9: Reflection of Environmental Factors on the Business World	The importance of acting by considering the environmental factor while developing the targets and considering how the benefits will have an impact on the society.
Theme 10: Raising Awareness and Giving Importance to Ethics	The importance of ensuring ethics and raising public awareness.

5. CONCLUSION

It is seen that progress in leading against gender discrimination in the manufacturing and logistics companies provides more benefits to both the environment and the society. Women leaders are keen on social sustainable projects in business life a lot. In addition to increasing women's participation in management positions; leadership plays an important role in promoting gender equality and advancing the SDG5 target.

Achieving this can only be possible by adopting gender equality in the corporate culture and developing appropriate technologies. If companies want to achieve environmental, social, and economic success with SDG5 goal, they need to raise awareness in the entire corporate culture, training should be developed. Neutral career choice and decision making process should be implemented. They should be aware about global deficiencies. Well-being is another issue that companies care about in the interviews. It is crucial to ensure provision of comfortable spaces, permission, and fringe benefits to create egalitarian environment in the value chain. Work life balance is a significant issue, companies achieved this with organizing working hours. Furthermore, companies thought that when they implemented any action, environmental factor need be considered on this. They all provide standards because those companies' experts working on sustainability issues. Another significant dimension is ethics, as all the companies interviewed adhere to ethical standards, fostering a more gender-equal culture within their organizations.

In this study, qualitative research method was used and thus face-to-face interviews were held in Istanbul/Türkiye. In future studies, high rate of respondents can be reached by using the survey method. One of limitation of this research was the sample size, which was restricted due to the exploratory nature of the case study and the qualitative research analysis. In future studies, number of employees/managers to be interviewed can be increased and in-depth interview method can be used. Additionally, this study focused on manufacturing and logistics sector companies, and future studies could incorporate the service sector as well.

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