Does social compliance affect the remaining safety culture in supply chains? Framework in the textile industry

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ABSTRACT – REZUMAT

Does social compliance affect the remaining safety culture in supply chains? Framework in the textile industry

Social Compliance audits aim to ensure a safe and healthy working environment, focusing on child labour, occupational health, safety, and discrimination. Safety culture, encompassing attitudes and behaviours promoting workplace safety from top management to employees, is of paramount importance. This study examines the impact of social compliance audits on safety culture in three textile factories located in different provinces of Türkiye, selected based on audit effectiveness. Questionnaires were administered to 280 participants, and path analysis using SPSS v28 and SPSS Amos v26 programs was conducted. The analysis reveals that social compliance significantly influences safety culture through factors such as safety climate, performance, risk awareness, and fatalism. Audited factories demonstrate a strong alignment with safety culture compared to non-audited ones, with safety performance being the most influential aspect. Positive relationships between safety climate and performance are observed across all three factories.

In conclusion, this study highlights the responsibility of factory management for employee health, safety, social rights, and quality of life. It emphasizes the positive impact of proactively fulfilling compliance measures on both employees and the company. The authors suggest that making social compliance audits mandatory across various sectors, not just textiles, could enhance product quality and employee satisfaction. Further research is needed to explore the significance of these audits on management and employee performance.

Key-words: *safety culture, social compliance, safety management, path analysis, textile*

Conformitatea socială are efect asupra culturii de siguranță în lanțurile de aprovizionare? Studiu de caz în industria textilă

Auditurile de conformitate socială urmăresc să asigure un mediu de lucru sigur și sănătos, concentrându-se pe subiecte precum munca minorilor, sănătatea în muncă, siguranța și discriminarea. Cultura siguranţei, care cuprinde atitudini și comportamente care promovează siguranța la locul de muncă, de la conducerea de top până la angajați, este de o importanță capitală. Acest studiu examinează impactul auditurilor de conformitate socială asupra culturii siguranței în trei fabrici textile situate în diferite provincii ale Turciei, selectate pe baza eficacității auditului. Chestionarele au fost administrate la 280 de participanți și s-a efectuat analiza traseului utilizând programele SPSS v28 și SPSS Amos v26. Conformitatea socială influențează semnificativ cultura siguranței prin factori precum climatul de siguranță, performanța, conștientizarea riscurilor și fatalitatea. Fabricile auditate demonstrează o aliniere puternică la cultura siguranței în comparație cu cele neauditate, performanța în materie de siguranță fiind cel mai influent aspect. Relații pozitive între climatul de siguranță și performanță sunt observate în toate cele trei fabrici.

În concluzie, acest studiu evidențiază responsabilitatea conducerii fabricii pentru sănătatea angajaților, siguranța, drepturile sociale și calitatea vieții. Subliniază impactul pozitiv al îndeplinirii în mod proactiv a măsurilor de conformitate atât asupra angajaților, cât și asupra companiei. Autorii sugerează că obligativitatea auditurilor de conformitate socială în diferite sectoare, nu doar în textile, ar putea îmbunătăți calitatea produselor și satisfacția angajaților. Sunt necesare cercetări suplimentare pentru a explora importanța acestor audituri asupra managementului și performanței angajaților.

Cuvinte-cheie*: cultura siguranţei, conformitate socială, managementul siguranței, analiza traseului, textil*

INTRODUCTION

Social compliance audit is a continuous progress in the workplace. In 2013, after the Rana Plaza disaster in Bangladesh, the importance of social compliance audits was realized, albeit in a bad way [1]. For social compliance audits, brands aim to prioritize employee health and safety in their supply chains both with their audit standards (INDITEX etc.) and with audits such as BSCI (Business Social Compliance Initiative), SEDEX (Supplier Ethical Data Exchange), SA (Social Accountability) 8000. Social compliance is a very comprehensive audit that investigates several topics such as child labour, forced labour, health and safety, freedom of association, discrimination, national legal working hours, management systems and compensation. Each of the topics is aimed at making workplace conditions better than before. Safety culture is a management system in which a safe working environment is created by proactively preventing hazards or risks that may occur in the workplace by involving everyone from the highest level to the lowest level in a workplace [2]. It can be understood that there is a

good safety culture in the workplace from how much the management is involved in safety measures, how good the communication between the employees or the management with the employees is, and the importance given to the ideas and opinions of the employees regarding the risks and hazards that may occur in the working environment [3].

This study aims to reveal the state of safety culture in textile supply chains where social compliance audits aiming to ensure that employees receive their social rights are carried out and whether social compliance audits have an impact on the formation of safety culture or not. The study was carried out by face-to-face survey method at different times in 3 different textile production factories located in 3 different provinces of Tekirdağ, Kastamonu and Kahramanmaraş within the borders of Turkey. While preparing the social compliance questionnaire, the amfori BSCI manual audit booklet [4] available on the internet database as open access was used.

GENERAL INFORMATION

Social compliance

Social compliance refers to an organization's adherence to certain social standards, including those related to child and forced labour, human trafficking, workers' health and safety, salary and overtime and freedom of speech and association. Social compliance has become an important issue for multinational companies that source products from suppliers in developing nations [5]. Social compliance audits can have two objectives which are management stuff and accounting stuff. Management staff is for assessing the risks, managing stakeholders, seeking out opportunities and efficiencies and maintaining legitimacy. Contrary to management, accounting stuff is for maintaining democracy, and sustainability purposes [6].

A social compliance audit is one type of social accounting which means an extension of disclosure into providing information about employees, products, community services and the prevention and reduction of pollution [7]. There are rules of social accounting to be conformance such as deals with measurement, recording and communication. These rules are also applied to social compliance. But, in social compliance, these rules affect not only the organization's policies or practices but also the supply and distribution chains [5]. Besides the widely comprehensive effectiveness, social compliance is a continuous progress.

During the 1990s, several advocacy campaigns and media investigations uncovered widespread labour violations within global supply chains of the light industry. These violations encompassed a range of issues such as the use of child labour, sexual harassment, mandated overtime work, minimum and overtime wage violations, and union-busting tactics [8]. Initially, buyers in the apparel global value chains denied responsibility for the actions of their suppliers [9].

Buyers based in developed nations have faced criticism for relocating their operations to developing or non-developed countries, in pursuit of exploiting low-cost labour and relaxed social and environmental regulations [1, 10]. In the past, several incidents of supplier non-compliance have led to buyers being criticized for failing to manage their suppliers' social obligations [11]. These can be examples of the incidents in the Rana Plaza building complex in Bangladesh collapsed on 4th April 2013 [12] and a fire in an apparel factory in Pakistan (i.e., the Baldia factory) that killed 260 people in 2012 [1].

There are several audits for social compliance such as Business Social Compliance Initiative (BSCI), Supplier Ethical Data Exchange (SEDEX) Social Accountability (SA) 8000, Initiative for Compliance and Sustainability (ICS), Worldwide Responsible Accredited Production (WRAP), Customs Trade Partnership Against Terrorism (C-TPAT), Responsible Jewellery Council (RJC) and International Labor Organizations (ILO) Ethical Trading Initiative. The list of what each of audits focus on is shown in table 1.

Social compliance audits have become more important for both suppliers and buyers after the accidents in the textile industry. However, the implementation of social compliance audits plays an important role not only in the textile sector, but also in the pharmaceutical sector, marine systems, and even in the United States, where the C-TPAT audit originated, in providing security against terrorist incidents at customs.

Looking at the audit topics of social compliance audits in general (table 1), it is seen that they are mainly based on unionization, fair wages, ethical business behaviour, occupational health and safety, child labour, discrimination, working hours and environment.

Globally, around 160 million children, including 63 million girls and 97 million boys, are currently in child labour, which is nearly 10% of the total child population worldwide. Shockingly, almost 50% of these children, equivalent to 79 million in absolute terms, are involved in hazardous work that directly puts their health, safety, and moral development at risk [13].

A study conducted in the United States shows that the occurrence of discrimination in the workplace was highest among black women with a rate of 25%, while white men reported the lowest rate of 11%. According to the reports, blacks reported a 60% higher rate of discrimination as compared to whites, and women reported a 53% higher prevalence of discrimination compared to men [14].

International Labour Organization estimates that there are around 340 million occupational accidents and 160 million victims of work-related illnesses worldwide annually [15].

Safety culture

Culture is defined in the Cambridge Dictionary [16] as "the way of life, especially the general customs and beliefs, of a particular group of people at a particular time". It is also defined in the Dictionary [17] as "the behaviours and beliefs characteristic of a particular

Table 1

LIST OF THE SOCIAL COMPLIANCE AUDITS					
No.	**Amfori BSCI**	**SA 8000**	**ICS**	**SEDEX**	**WRAP**
1	Social Management System & Cascade Effect	Child Labour	Management System, Transparency and Traceability	Child and Young Labour Law	Compliance with Laws and Workplace Regulations
2	Workers Involvement and Protection	Forced Labour	Minimum age, Child Labour and Young Workers	Labour Law	Prohibition of Forced Labour
3	The Right of Freedom of Association and Collective Bargaining	Health and Safety	Forced Labour	Health and Safety	Prohibition of Child Labour
4	No Discrimination, Violence or Harassment	Freedom of Association	Discrimination	Freedom of Association	Prohibition of Harassment or Abuse
5	Fair Remuneration	Discrimination	Disciplinary Practices, Harassment or Ill Treatments	Discrimination	Compensation and Benefits
6	Decent Working Hours	Disciplinary Practices	Freedom of Association and Grievance Mechanism	Disciplinary Practices	Hours of Work
7	Occupational Health and Safety	Working Hours	Working Hours	Working Hours	Freedom of Association and Collective Bargaining
8	No Child Labour	Remuneration	Wages and Benefits	Wages & Compensation	Health and Safety
9	Special Protection for Young Workers	Management System	Health and Safety	Environment	Prohibition of discrimination
10	No Precarious Employment				Environment
11	No Bonded, Forced Labour or Human Trafficking				Customs Compliance
12	Protection of the Environment				Security
13	Ethical Business Behaviour				

group of people, as a social, ethnic, professional, or age group". The root of culture comes from the word "cultivate" [17]. The word "cultivate" has many definitions such as "to prepare and work on (land) to raise crops; till", "to promote or improve the growth of (a plant, crop, etc.) by labour and attention". And it is also defined as "to develop or improve by education or training; train; refine" [17]. It is stated that It is crucial to establish a work environment that encourages top-level performance and enables swift and efficient reactions to unforeseen situations [18].

It is not to be wrong if it is said that safety culture is a kind of product that can be "cultivated" in an organization like planting seeds to earth.

However, there is no exact definition of safety culture as stated by some researchers [2, 19, 20], according to the International Nuclear Safety Advisory Group (INSAG), a committee established by the International Atomic Energy Agency (IAEA) in the aftermath of the 1986 Chernobyl accident, the development and maintenance of a "safety culture" was identified as crucial in addition to formal procedures that have been properly reviewed and approved [21, 22]. The term safety culture was in a report of the Three Mile Island accident in 1979 by the U.S. Nuclear Regulatory Commission (NRC) however it is not labelled as "safety culture". It is said that "the only theme that runs from our conclusions is that the main shortcomings in commercial reactor safety today are management issues, not hardware problems" [23].

Safety culture is assessed by Beus et al. [24] likely to be harder to change some things in the organization's contrary to safety climate. According to Guldenmund's proposed model [2], safety culture can be conceptualized as having three layers. The core layer pertains to fundamental assumptions about safety, while the middle layer involves espoused values and attitudes. Finally, the outermost layer comprises behavioural manifestations and physical symbols, such as safety posters and signage. The concept of safety culture is frequently associated with the notion of "deep" meaning [25]. Additionally, safety culture is influenced by individual attitudes, behaviours, habits, and the organizational culture and style" [26].

Some of the definitions of safety culture are given in table 2.

Even though safety culture does not have a certain definition, it can be summarized as the fact that safety culture is emphasized by the beliefs, behaviours, attitudes, and habits of an organization and it can remain involving the organization individually and collectively [26, 33].

Safety climate is considered as a subcomponent of safety culture's structure [34, 35]. Safety climate is defined by Zohar [36] for the first time as "a unified set of cognitions [held by workers] regarding the

Table 2

DEFINITIONS OF SAFETY CULTURE		
Definition	**Author**	**Measurement**
The values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organization's health and safety management	Health and Safety Executive [27]	Qualitative
The set of shared assumptions, values, beliefs, and behaviours that shape the safety-related decisions and actions of an organization's members, and that affect the safety performance	Choudhry et al. [28]	Quantitative/ Qualitative
Values, beliefs, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organization's health and safety management	Cooper et al. [29]	Quantitative/ Qualitative
The integration of core principles such as the preventability of accidents, line management's responsibility for safety, safety as a condition of employment, and management's accountability for employee safety.	Cox and Cox [30]	Qualitative
organization's psychological, behavioural, and contextual capabilities to anticipate, monitor, respond, and learn to manage safety risks and create an ultrasafe organization.	Feng et al. [31]	Qualitative
The concept of safety culture has its roots in extensive research on organizational culture and climate, where culture encompasses the values, beliefs, and underlying assumptions of an organization.	Flin et al. [32]	Quantitative/ Qualitative

safety aspects of their organization". Neal and Griffin [34] is defined as the measurement of the concept of safety culture as combining safety communication (i.e. if there is an open exchange of information regarding safety), management values (i.e. if management gives places for high priority for safety), safety training (i.e. if the training is accessible, relevant, and comprehensive) and safety systems (i.e. if safety procedures are perceived to be effective in preventing accidents) [37].

The key differentiating factor between the two types of safety performance behaviour lies in the fact that compliance pertains to task-oriented behaviour, while safety participation encompasses voluntary extra-role behaviour initiated by employees [38].

Aim of the study

This study aims to determine the effect of the effective role of social compliance audits in ensuring occupational health and safety, which is an important parameter of social compliance audits carried out to control problems such as gender inequality, discrimination, lack of occupational health and safety, and low wages, on the safety culture in workplaces.

METHODS

Study design

This study is conducted in three different locations and textile factories. The factories are selected according to their harmony with social compliance audits. One factory is still in the system and there is no preparation for social compliance. The other factories were selected as workplaces that have been undergoing social compliance audits for many years and have an acceptable level of approval.

Of the research literature review in Türkiye and the World, many reports about social compliance audits such as BSCI, SEDEX, SA 8000, ICS, and Inditex Audits, many articles about safety culture, social compliance, the relationship of safety culture and social compliance have been searched and interviewed with the three of social compliance auditors to be making a simple research model. To reveal how importance the of safety in textile workplaces, national and world statistics such as European Stats, International Labour Organization (ILO) statistics and Türkiye Social Security Institution, are investigated. According to the research conducted and interviews, the parameters of social compliance audits can be categorized under six headings which are management, occupational health and safety, child and young labour, freedom of unionization, human rights, and payments. Those are also the main values that provide a safety culture in the workplace. 'Safety culture' is part of the term 'management and organizational', although it is generally referred to as an element of organizational culture [39]. The unions play an important role in maintaining and enhancing occupational safety and health conflict with employers in general [40]. In a study conducted on female workers by Shin et al. [41], it shows that a monthly well-paid salary has a positive effect on safety participation and compliance.

The research model of the study is demonstrated in figure 1. Briefly, those which are the main parameters of social compliance generate social compliance. Social compliance directly affects safety culture. Safety culture is affected by two unobserved which are safety climate and safety performance and one observed sub-dimension which is risk awareness.

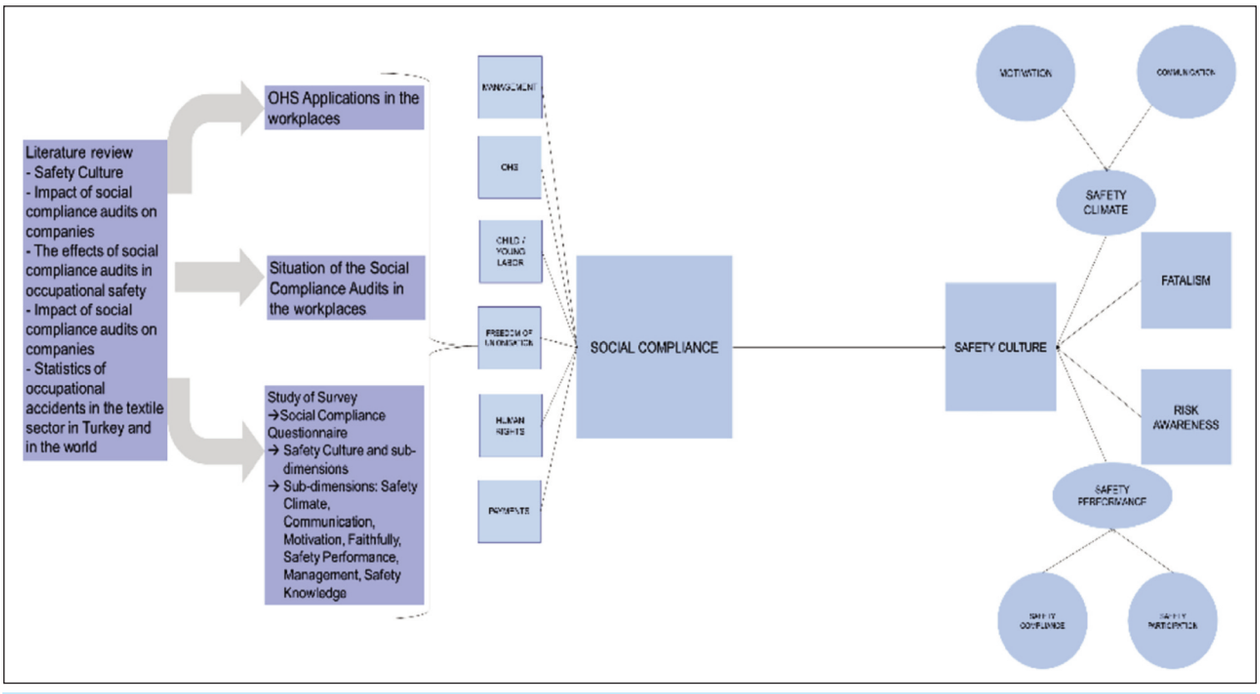

Fig. 1. Researching model

Selected questionnaire and scale

The Social Compliance questionnaire consists of a total of 17 questions. The survey questions are based on the headings specified in the Amfori BSCI audit manual [4], which is available online, and "critical" questions are prioritized.

Questionnaire questions were prioritized, with the lowest 1: Strongly Disagree and the highest 5: Strongly Agree, with the lowest 1: Strongly Disagree and the highest 5: Strongly Agree.

Safety climate and safety performance scales were developed by Griffin and Neal [34], a Turkish adaptation study conducted by Sakallı et al. [42] and used as the determinant of safety culture in this study. In the research, it has been stated that safety culture is a whole of behaviours, attitudes and perceptions of a working environment, whereas safety climate is a superficial and observable phenomenon. [27, 36].

The fatalism scale developed by Alev [43] was used to examine how effective they think beliefs are in the event of accidents and the effect of this on safety culture.

Risk awareness is shaped by knowledge, intuition, control, experiences, and personality-based attitudes [44]. To show the way that effects of risk awareness on safety culture, the risk awareness scale developed by Alev [43] was used.

The safety climate scale is composed of management and communication sub-dimensions. Safety performance is composed of safety attendance and safety compliance.

Samples

This study has been analysed by using a face-to-face survey method in three different textile companies in three different locations in Tekirdağ, Kastamonu and Kahramanmaraş provinces within the borders of Turkey. A total of 309 employees participated. A total of 91 employees from the company located in Tekirdağ, 101 people from the textile factory in Kastamonu and 88 people from the textile factory in Kahramanmaraş participated in the survey study.

While selecting the factories, since the effect of social compliance audits on the safety culture was wanted to be investigated, the factories were preferred by considering the status of the selected factories in terms of social compliance. The factory located within the borders of Tekirdağ province has not yet entered any social compliance audit. The factories located in Kastamonu and Kahramanmaraş have been undergoing social compliance audits for many years and last passed the audits in December 2022.

Data analysis tools

Path analysis

Path analysis is an analysis that examines the relationship networks between observed (measured) variables [45]. The purpose of path analysis is to make inferences by estimating the importance and magnitude of the relationship assumed to be between variables. Path analysis was formed as an extension of multiple regression models. In path analysis, not only the causality between variables but also the method called causal modelling, the relationships between variables can be investigated and predicted [46].

Path analysis is more suitable for analysing more complex models than other types of analysis because both direct and indirect effects can be studied and multiple relationships between factors can be analysed simultaneously to generate models [47]. Although path analysis is similar to regression analysis, it differs from regression analysis with some

features. One of these features is that the number of dependent variables is always one in regression analysis. On the other hand, in path analysis, more than one dependent variable can be defined simultaneously.

In this study, IBM SPSS AMOS Version 26.0 was used to determine and evaluate the suitability of the model and to perform path analysis.

Compliance criteria tests

Chi-square (x2) analysis is one of the most basic measurement methods that test the fit of the applied model. The chi-square is conceptually a function of the difference between this fit-measured covariance matrix the model covariance matrix and the sample size. Chi-square statistics vary according to the size of the sample. This analysis gives significant results in measurements with large sample ($N \geq 200$) values. For this reason, it is stated that the chi-square degree of freedom ratio X^2/DF provides an evaluation of the fit of the model [48].

Many fit indexes determine the fit of the model. The fit indices included in this study are the goodness of fit index (*GFI*), one of the fit indexes based on residues, which is the index of the amount of variance and covariance explained by the model. The *GFI* value is related to the number of samples. The higher the sample size, the higher the *GFI* value. The *GFI* value ranges from 0 to 1. It is "accepted" to have *GFI* values between $0.90 \leq GFI < 0.95$; It is defined as a "good fit" indicator when it is between $0.95 \leq GFI \leq 1.00$. This means that covariance is calculated among observed variables [48, 49].

GFI equation 1 is the following:

$$GFI = 1 - \frac{X_m^2}{X_b^2} \quad (1)$$

of the tested model, *b*; the GFI fit index is calculated as above to show the independent model.

Comparative fit index (*CFI*) is the most used index value among fit indices based on independent models. If the *CFI* value is greater than 1, it is evaluated as 1. *CFI* takes values ranging from 0 to 1. Values between $0.95 \leq CFI < 0.97$ are acceptable fit; $0.97 \leq CFI \leq 1$ indicates good fit [48].

CFI equation 2 is the following:

$$CFI = 1 - \frac{X_m^2 - sd_m}{X_b^2 - sd_b} \quad (2)$$

of the tested model, *b*; independent model, *sd*; the *CFI* fit index is calculated as above to show the degrees of freedom.

The standardized root mean square residual (*SRMR*) is the square root of the sum of the squares of the residues in the correlation measurement [48]. In other words, it is the standardized difference between the observed covariance and the estimated covariance. The fact that the value obtained as a result of the measurement is close to zero indicates the perfect fit. Values below 0.05 also indicate a good fit, while $0.05 \leq SRMR \leq 0.10$ indicates an acceptable fit [48].

SRMR equation 3 is the following:

$$SRMR = \sqrt{\frac{2}{p(p+1)} \sum_{i \leq j} \{[s_{ij} - \sigma_{ij}(\theta)]\}^2 / s_{ii} s_{jj}} \quad (3)$$

Table 3

GOODNESS OF FIT INDEX CRITERIA	
Goodness of Fit Index	**Recommend level** [48, 50–52]
GFI	> 0.90
CFI	> 0.90
CMIN/DF	< 2.0
SRMR	< 0.05
RMSEA	< 0.05
AGFI	> 0.90

Table 3 explains the recommended level of goodness of fit index criteria.

Ethic

This research is related to the PhD thesis, and it was approved by the Ethics Committee of Applied Sciences Institute of Marmara University with the decision number 21.10.2022-388101/2000000485.

RESULTS

Demographic results

The result of the reliability analysis of the questionnaire study is shown in table 4. It is calculated as 0.89. It was stated that Cronbach's Alpha Coefficient is not reliable if $0 < R2 < 0.40$; $0.40 < R2 < 0.60$ indicates low reliability; $0.60 < R2 < 0.80$ indicates highly reliable; $0.80 < R2 < 1.00$ indicates high reliability [53]. Based on this, it can be inferred that the answers given to the survey questions of this study are highly reliable.

Table 4

RELIABILITY ANALYSIS		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**No. of items**
0.893	0.906	45

In table 5, the total number of the research and the related numbers of the factories are shown. A total of 280 persons have attended this research. 142 persons (50.7%) of them are women and 138 persons (49.3%) of them are men. Between 25 and 34 persons have the highest percentage of participating in this research with 31.8%. Over 55 persons have the lowest percentage with 3.9%. According to table 5, most of the participants are from the factory in Kastamonu with 101 persons.

Table 5

TOTAL DESCRIPTIVE STATISTICS									
Various (n=280)		Tekirdağ		Kastamonu		Kahramanmaraş		Total	
		N	%	N	%	N	%	N	%
Sex	Woman	10	11	75	74.3	57	64.8	142	50.7%
	Man	81	89	26	25.7	31	35.2	138	49.3%
Age	18–24	14	15.4	16	15.8	11	12.5	41	14.6%
	25–34	35	38.5	28	27.7	26	29.5	89	31.8%
	35–44	20	22	39	38.6	29	33	88	31.4%
	45–54	19	20.9	16	15.8	16	18.2	51	18.2%
	55+	3	3.3	2	2	6	6.8	11	3.9%
Total		91	100	101	100	88	100	280	100%

Table 6

FIT CRITERIA AND INDEXES OF PATH ANALYSIS OF THE FACTORIES			
	Factory		
Models	Tekirdağ	Kastamonu	Kahramanmaraş
CMIN	0.000	0.000	0.000
DF	14	15	15
P	***	***	***
CMIN/DF	16.747	17.968	18.181
GFI	1.000	1.000	1.000
CFI	1.000	1.000	1.000
SRMR	0.000	0.000	0.000
RMSEA	0.418	0.412	0.444
AGFI	0.36	0.499	0.355

Note: *** Expresses that the p-value is less than 0.01.

Table 7

REGRESSION ANALYSIS OF THE FACTORY IN TEKIRDAĞ				
Relationship			Estimate	P
Safety culture	←	Risk awareness	–0.009	0.784
Safety culture	←	Safety climate	0.541	***
Safety culture	←	Safety performance	0.693	***
Safety culture	←	Fatalism	0.139	***
Safety culture	←	Social compliance	0.178	***

Note: *** Expresses that the p-value is less than 0.01.

Table 8

COVARIANCE TABLE OF THE FACTORY IN TEKIRDAĞ				
Relationship			Estimate	P
Safety performance	↔	Risk awareness	0.471	***
Safety performance	↔	Fatalism	0.209	0.014
Risk awareness	↔	Fatalism	0.592	***
Safety climate	↔	Social compliance	0.207	***
Safety performance	↔	Social compliance	0.148	0.010

Note: *** Expresses that the p-value is less than 0.01.

In table 6, the criteria and indexes of the factories are shown. In a study conducted by Bayram [48] and Bentler [51], it is the perfect fit if *GFI*, *CFI* and *AGFI* values are more than >0.90 equal to 1.000 and *CMIN*, *SRMR* and *RMSEA* values are lower than 0.05. Bayram [48] explains this situation as the fact that the reason why it is given more than one (at least 5 different) fit index values in SEM applications. If more of the fit index values are above the acceptable limits, the other values which are not acceptable do not cause a problem for the model.

As indicated in table 6 in the section of Method, *CMIN, GFI, AGFI, SRMR*, and *CFI* values are saturated and show a good fit for each of the factories [48, 51, 52].

In table 7, regression analysis of the factory in Tekirdağ shows that there is no relationship between risk awareness and safety culture. On the other hand, it shows that social compliance has a positive and significant relationship with safety culture. Therefore, all parameters which are risk awareness, Safety Climate, Safety Performance and Fatalism have significant relationships with Safety Culture.

When looking at table 8, shows the covariance between the parameters and social compliance. There is a significant relationship between social compliance and the safety culture parameters which are safety performance and safety climate. And there is also a relationship between safety performance and risk awareness. It can be seen from the table that fatalism has covariance with safety performance and risk awareness. It explains that social compliance has a more effective safety culture indirectly via safety climate and safety performance.

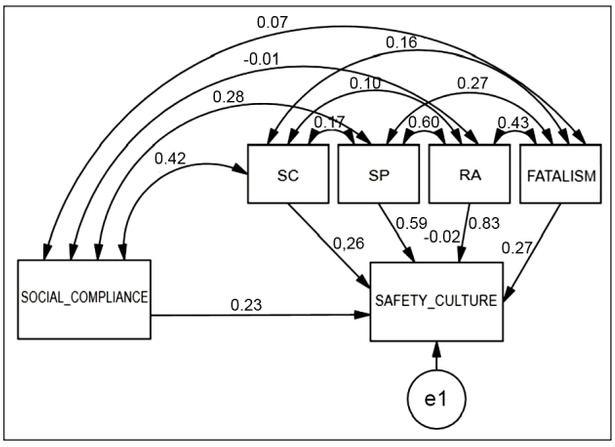

Fig. 2. Path analysis of effecting the safety culture in Tekirdağ factory (SC – Safety Climate, SP – Safety Performance; RA – Risk Awareness)

In figure 2, explains the relationships between social compliance and safety culture. Social compliance has direct effects on safety culture with 0.23. Safety culture is positively affected by all the parameters and social compliance with 0.83 which is a very high score. Risk awareness negatively affects safety culture with –0.02. Risk awareness and safety performance have strong correlations and safety performance directly affects safety culture with 0.59. There is a relationship between safety climate and fatalism with 0.16. The analysis shows that fatalism affects safety culture with 0.27. There is a relationship between risk awareness and fatalism at 0.43. Safety Climate directly affects safety culture with 0.26. Social compliance has a positive relationship with safety climate and safety performance with respectively 0.42 and 0.28. There is an almost neutral relationship between social compliance and fatalism.
This model, explains that social compliance directly quiet affects safety culture. On the other hand, it is explicitly seen that it is more effective indirectly on safety culture via safety climate and safety performance.
Regression analysis values that belong to the factory in Kastamonu are shown in table 9. The score of the value shows it's significant statistically if the score is $0.01 < p < 0.05$ and it is highly significant statistically if the score is $p < 0.01$ [54]. It shows that all parameters which are Awareness of Risk, Safety Climate, Safety Performance and Fatalism have relationships significantly with Safety Culture. Social Compliance has a significant relationship with Safety Culture significantly.
Covariances between the parameters for the factory in Kastamonu are given in table 10. It shows that there is a linear relationship between social compliance and risk awareness, safety climate, and safety performance. And it shows that there is also a linear relationship between risk awareness and safety performance.

Table 9

REGRESSION ANALYSIS OF THE FACTORY IN KASTAMONU

Relationship			Estimate	P
Safety culture	←	Risk awareness	–0.080	***
Safety culture	←	Safety climate	0.234	***
Safety culture	←	Safety performance	0.693	***
Safety culture	←	Fatalism	0.163	***
Safety culture	←	Social compliance	0.069	0.037

Note: *** Expresses that the p-value is less than 0.01.

Table 10

COVARIANCE TABLE OF THE FACTORY IN KASTAMONU

Relationship			Estimate	P
Safety climate	↔	Risk awareness	–0.112	0.026
Safety performance	↔	Risk awareness	0.246	***
Safety performance	↔	Social compliance	0.075	0.010
Risk awareness	↔	Social compliance	-0.131	0.034
Safety climate	↔	Social compliance	0.079	0.008

Note: *** Expresses that the p-value is less than 0.01.

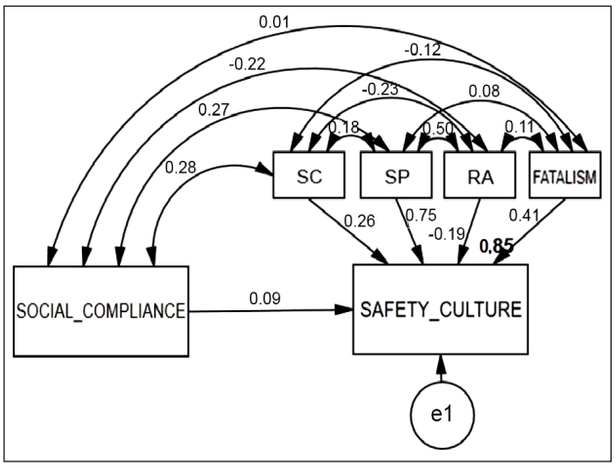

Fig. 3. Path analysis of effecting the safety culture in the Kastamonu factory (SC – Safety Climate, SP – Safety Performance; RA – Risk Awareness)

Figure 3 explains the relationships between social compliance and safety culture. Social compliance has direct effects on safety culture with 0.09. Safety culture is positively affected with 0.85 which is a very high score. Risk Awareness affects negatively with –0.19. But risk awareness and safety performance have strong correlations and safety performance directly affects safety culture with 0.75. There is a

negative relationship between safety climate and fatalism with –0.12 which explains that the one who has a low score for fatalism is the one who has a high score for safety climate. The analysis shows that fatalism affects safety culture with 0.41. There is no strong relationship between risk awareness and fatalism. Safety Climate directly affects safety culture with 0.26. Social compliance has a positive relationship with safety climate and safety performance with respectively 0.28 and 0.27. There is an almost neutral relationship between social compliance and fatalism.

It can be said for the factory in Kastamonu that social compliance, directly and indirectly, affects safety culture. Safety performance is the most effective parameter of safety culture. Risk awareness is more effective in a safety culture via safety performance.

The value of p for regression analysis should be less than 0.05 for strong evidence. But if it is above 0.05, then the hypothesis is not rejected. If value lies between $0.05 \leq p < 0.10$, it means there is some evidence although not strong [55, 56]. In table 11 the regression analysis of the factory in Kahramanmaraş shows that social compliance has a positive relationship and there is some evidence of their positive relationship with safety culture. Therefore, all parameters which are Risk Awareness, Safety Climate, Safety Performance and Fatalism have significant relationships with Safety Culture.

Table 11

REGRESSION ANALYSIS OF THE FACTORY IN KAHRAMANMARAŞ

Relationship			Estimate	P
Safety culture	←	Risk awareness	–0.153	0.008
Safety culture	←	Safety climate	0.196	***
Safety culture	←	Safety performance	0.714	***
Safety culture	←	Fatalism	0.39	***
Safety culture	←	Social compliance	0.085	0.062

Note: *** Expresses that the p-value is less than 0.01.

Covariances between the parameters for the factory in Kahramanmaraş are given in table 12. It shows that safety climate has a linear relationship with social compliance and safety performance, and fatalism has a linear relationship between safety performance and risk awareness. Safety Performance also has a linear relationship with risk awareness.

Figure 4 explains the relationships between social compliance and safety culture. Social compliance has direct effects on safety culture with 0.09. Safety culture is positively affected by the parameters with 0.86. Risk Awareness was affected negatively with –0.15. But risk awareness and safety performance

Table 12

COVARIANCE TABLE OF THE FACTORY IN KAHRAMANMARAŞ

Relationship			Estimate	P
Risk awareness	↔	Fatalism	0.560	***
Safety performance	↔	Fatalism	0.236	***
Safety performance	↔	Risk awareness	0.335	***
Safety performance	↔	Safety climate	0.045	0.038
Social compliance	↔	Safety climate	0.080	***

Note: *** Expresses that the p-value is less than 0.01.

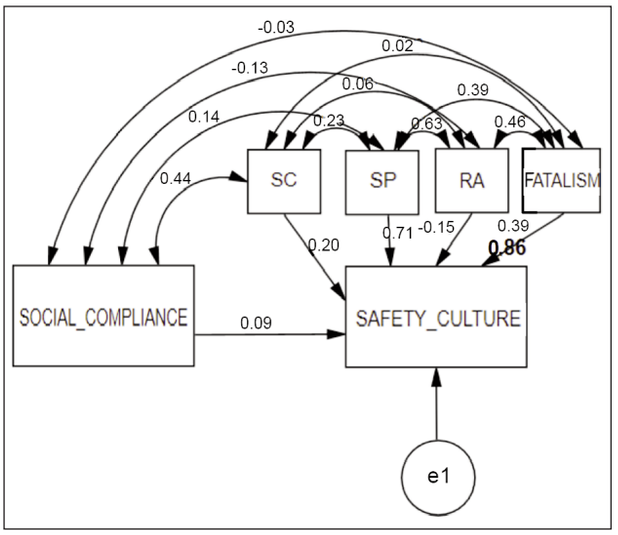

Fig. 4. Path analysis of effecting the safety culture in the Kahramanmaraş factory (SC – Safety Climate, SP – Safety Performance; RA – Risk Awareness)

have strong covariance and safety performance directly affects safety culture with 0.71. There is a weak relationship between safety climate and fatalism with 0.02. The analysis shows that fatalism affects safety culture with 0.39. There is quite a strong relationship between risk awareness and fatalism. Safety Climate directly affects safety culture with 0.20. Social compliance has a positive relationship with safety climate and safety performance with respectively 0.44 and 0.14. There is a negative relationship between social compliance and fatalism.

DISCUSSION AND CONCLUSIONS

In conclusion, social compliance affects safety culture not only directly but also indirectly via safety climate and safety performance in three different textile factories. But for the factory in Tekirdağ where there is no social compliance audition, it shows in table 7 that risk awareness does not effectively on safety culture. Safety culture is mostly related to risk awareness in many industries [57–59]. This could have several meanings. One of them is that workers are

aware that management does not take action to reduce the risks even if the workers report the risks in the workplace. Another may mean that employees exhibit unsafe behaviour due to insufficient risk awareness. In another perspective, as a result of a study conducted by Li et al. [60], it was revealed that agricultural workers with high-risk perceptions exhibited unsafe behaviour. Based on this, it may mean that employees do not comply with the safety culture because they know the job very well. On the other hand, the results of the factory in Kastamonu show that all the parameters positively affect safety culture. The managements for both factories play the role of social compliance auditions.

Safety performance and safety climate influence safety culture more than others when social compliance affects them.

In research conducted by Toksöz et al. [61], it states that legal requirements and occupational health and safety are the criteria with the highest importance levels with 30% importance in the distribution of social compliance score. In another research conducted by Azim et al. [62], the study has suggested that adherence to compliance standards can lead to greater employee satisfaction and engagement within an organization. The research indicates that creating a positive work environment and fostering employee commitment and engagement are crucial components for the success of businesses [63]. Another study shows that there is a strong link between the cooperation and communication between management and employees, their commitment to awareness, training and OHS practices [64].

It can be understood that management attitudes play an important role in effecting commitment and occupational health and safety practices.

As a result, when this study and literature studies are examined, the management of the factories is responsible for the health, safety, social rights and quality of life of the employees. This study shows that due to this responsibility, fulfilling their compliance to ensure employee health and safety without waiting for the social compliance audits carried out by the companies will have a positive impact on both the employee and the company.

However, it is thought that making social compliance audits mandatory not only for the textile sector but also for many different sectors with certain conformities by governments will increase product quality as well as employee satisfaction.

In future studies, researchers will be useful in revealing the importance of these audits by examining the impact of social compliance audits on management and the impact on employee performance.

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