

Factors affecting the corporate reputation of Bartın forestry organization

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Abstract: This study was carried out to identify and improve the corporate reputation of the forestry organization of the Bartın province (Bartın Forestry Enterprise Directorate, Ulus Forestry Enterprise Directorate, and Bartın Nature Conservation and National Parks Branch Directorate) in the eyes of external stakeholders. A survey form consisting of three parts was prepared. The survey forms were filled with 308 people from the external stakeholders of the forestry organization (sector enterprises, public institutions, NGOs, auction customers, city and village people) through face-to-face interviews and e-mails. The collected data were evaluated via descriptive statistics, correlation analysis, factor analysis, and the Kruskal-Wallis H test. The analysis of the answers of 55 statements/questions having a 5-point Likert scale and the evaluations performed indicated that the corporate reputation level of the Bartın forestry organization in the eyes of external stakeholders is at a "medium-high" level with a Likert score of 181.07. In addition to the six dimensions (emotional attraction, products and services, financial performance, vision and leadership, work environment, and social responsibility) developed by Fombrun (1996), "institutional relations" as a seventh dimension was used to measure corporate reputation. The factor analysis showed that the most important factors affecting the corporate reputation of the forestry organization, in order of importance are: 1) Institutional relations, 2) products and services, 3) vision and leadership, 4) financial performance, 5) social responsibility, 6) work environment and 7) emotional attraction. The results showed that 68.92% of the corporate reputation of the forestry organization of the Bartın province was explained by these seven factors. Besides, while the total corporate reputation differs significantly at the level of 99% according to the stakeholder group to which the participants belong, their activity area, relationship with the forestry organization, the number of employees, duty, and gender of the participant, it does not differ according to the age and education level of the participants. Finally, some improvement directions were identified to increase the corporate reputation of the forestry organization in the province of Bartın.

Keywords: Corporate reputation, Forestry organization, External stakeholders, Sustainable forestry, Bartın

Bartın ili ormancılık örgütünün kurumsal itibarını etkileyen faktörler

Özet: Bu çalışma, Bartın ilindeki ormancılık örgütünün (Bartın Orman İşletme Müdürlüğü, Ulus Orman İşletme Müdürlüğü ve Bartın Doğa Koruma ve Milli Parklar Şube Müdürlüğü) dış paydaşları gözünde kurumsal itibarını belirlemek ve bunu artırmaya yönelik katkılar sağlamak amacıyla yapılmıştır. Bu amaçla üç bölümden oluşan bir anket formu hazırlanmıştır. Anket formları, ormancılık örgütü dış paydaşlarından (sektör işletmeleri, kamu kurumları, STK'lar, ihale müşterileri, şehir ve köy halkı) 308 kişi üzerinde yüz yüze görüşme ve e-mail yöntemiyle uygulanmıştır. Elde edilen veriler betimleyici istatistikler, korelasyon analizi, faktör analizi ve Kruskal-Wallis H testi ile değerlendirilmiştir. Anket formundaki 5'li Likert ölçekli 55 önermeye/soruya verilen cevapların analizine ve yapılan değerlendirmelere göre, Bartın ili ormancılık örgütünün dış paydaşlar gözündeki kurumsal itibar düzeyinin 181,07 Likert puanı ile "orta-yüksek" düzeyde olduğu saptanmıştır. Çalışmada, kurumsal itibarı ölçmede, Fombrun (1996) tarafından geliştirilen altı boyuta (duygusal cazibe, ürün ve hizmetler, finansal performans, vizyon ve liderlik, çalışma ortamı, sosyal sorumluluk) ek olarak, "kurumsal ilişkiler" şeklinde yedinci bir boyut daha kullanılmıştır. Faktör analizi sonucunda ormancılık örgütünün kurumsal itibarını etkileyen en önemli faktörler önem sırasına göre; 1) Kurumsal ilişkiler, 2) Ürün ve hizmetler, 3) Vizyon ve liderlik, 4) Finansal performans, 5) Sosyal sorumluluk, 6) Çalışma ortamı ve 7) Duygusal cazibe şeklinde belirlenmiştir. Böylece Bartın ili ormancılık örgütünün kurumsal itibarının %68,92'sinin bu yedi ortak faktörle açıklandığı saptanmıştır. Ayrıca toplam kurumsal itibar, katılımcıların mensup olduğu paydaş grubuna, faaliyet alanına, ormancılık örgütü ile ilişkisine, çalışan sayısına, katılımcının görevine ve cinsiyetine göre %99 düzeyinde anlamlı farklılık gösterirken, katılımcıların yaşına ve eğitim düzeyine göre farklılık göstermediği tespit edilmiştir. Elde edilen bulgulara dayanarak Bartın ilindeki ormancılık örgütünün kurumsal itibarını artırmaya yönelik birtakım öneriler geliştirilmiştir.

Anahtar kelimeler: Kurumsal itibar, Ormancılık örgütü, Dış paydaşlar, Sürdürülebilir ormancılık, Bartın

1. Introduction

The forestry sector operates in a supply-demand relationship with the other sectors constituting the macroeconomic structure. It gives input to many sectors and receives input from some sectors. In addition, it is in interaction with various segments and stakeholders of

society. The forestry organization, which is the representative of the sector, produces many goods and services that society expects from forest resources (Daşdemir, 2012).

The forestry organization can achieve its long-term goals only if it has a good corporate reputation and perception among its stakeholders and keeps good relationships with its stakeholders. This can only be possible if the expectations of

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the stakeholders of the institution are identified correctly and met successfully. Therefore, being aware of its corporate reputation, especially in the presence of external stakeholders, is important for the forestry organization producing both goods and services to increase the effectiveness of its activities.

While product quality is the source of positive consumer perception in production organizations, corporate reputation creates a positive consumer perception in service organizations. Producing goods and services is not enough to constitute a positive corporate reputation. Organizations have to meet the emotional expectations of consumers (Yurtsever, 2013) too. The organization should create awareness and ensure that its stakeholders feel safe and valuable and define the concept of corporate reputation accurately and properly.

Corporate reputation refers to a set of emotions created by many factors such as the corporate culture, corporate policies, behaviors, and positive or negative signals that the business has created over a long time and made its all stakeholders feel (Özbay and Selvi, 2014). In addition, corporate reputation is defined as the emotional evaluations such as good or bad and weak or strong of the institution's employees, customers, investors, and society for the institution name (Fombrun, 2018). Institutions must earn the trust and belief of their stakeholders. Nowadays, institutions give great importance to their reputation as well as the quality of their products and services. They adopt a transparent, fair, reliable, and solution-oriented management style to seek to gain a reputation from their stakeholders. Corporate reputation is also related to the corporate image and corporate culture.

The importance of corporate reputation has been increasing day by day. Recently, corporate reputation, which is an intangible concept, has become a value that provides tangible benefits and is one of the most valuable intangible values of institutions. As the awareness of reputation that highly contributes to the value of an institution in terms of financial, market share, and human resources increases, the importance of the variables affecting reputation is increasing (Sakman, 2003). A good reputation for stakeholders provides opportunities such as talented employees, quality product/service production, customer potential, preference by investors, competitive advantage over competitors, and high profitability for organizations. As a result of these benefits, identifying corporate reputation becomes a substantial issue.

To identify the corporate reputation of organizations operating in many fields in the eyes of their stakeholders, an approach consisting of six basic dimensions (emotional attraction, products and services, financial performance, vision and leadership, work environment, and social responsibility) and developed by Fombrun (1996) has been generally used (Yurtsever, 2013). Yet, the relationships of organizations with their internal and external stakeholders are also important factors affecting corporate reputation. Organizations, due to their dynamic nature, need effective communication with their internal and external environment to carry out their activities. Effective communication is one of the main factors affecting the efficient operation of the organization. Organizational communication assumes the role of cooperation in establishing a common consensus among organizational members and managers and in achieving organizational goals, by undertaking tasks such as providing information to the individual and the organization,

motivating individuals, and controlling and coordinating individual and organizational efforts (Karaçor and Şahin, 2004).

An organization should constantly keep its communication network open to its stakeholders and fulfill its social duties and goals in cooperation with both its inside and outside stakeholders (Dilsiz, 2008; Türker, 2010; Gezmen, 2014). Therefore, it would be wise to introduce a new dimension measuring "institutional relations" to corporate reputation measurement models. Considering the high number and diversity of the external stakeholders of the forestry organization, improving the relations of the forestry organization with the external stakeholders will contribute to the increase of its corporate reputation, the motivation and productivity of the employees. Consequently, it will contribute to the increase in production levels, the achievement of the objectives of the organizations, the development of the country at the macro level, and the increase of social welfare.

There are some studies examining corporate reputation measurement models (Fombrun et al., 2000; Gardberg and Fombrun, 2002; Barnett et al., 2006; Argenti, 2013; Özbay and Selvi, 2014), investigating the relationship between corporate reputation and corporate performance (Sayılı et al., 2009), and measuring corporate reputation in different organizations in the six basic dimensions mentioned above (Groenland, 2002; Oktar and Çarıkcı, 2012; Yurtsever, 2013). Many studies investigate and identify the benefits of corporate reputation to organizations in different countries (Friman, 1999; Bennett and Kottasz, 2000; Devine and Halpem, 2001; Haywood, 2005; Thomas, 2007). Some studies consider the relations and views of different segments of society with the forestry organization (Erdönmez and Yurdakul Erol, 2009; Ekizoğlu and Yıldırım, 2010; Yurdakul Erol and Yıldırım, 2017), and some studies (Eroğlu and Solmaz, 2012; Gedik et al., 2015; Birben et al., 2018; Yılmaz and Gedik, 2019a; 2019b; Daşdemir and Karıcı, 2021) examines the corporate reputation of the forestry organization in terms of external stakeholders in general in six dimensions and from different perspectives in Turkish forestry. However, no research, to the best of our knowledge, examines the corporate reputation of the forestry organization of Bartın in the eyes of its external stakeholders using seven basic dimensions (emotional attraction, products and services, financial performance, vision and leadership, work environment, social responsibility, and institutional relations). Thus, this study is original in terms of both its context and potential to contribute to the practice and literature.

Consequently, this study was conducted to identify and improve the institutional reputation of the forestry organization in the Bartın province (Bartın Forestry Enterprise Directorate, Ulus Forestry Enterprise Directorate, and Bartın Nature Conservation and National Parks Branch Directorate) in the eyes of external stakeholders. In the study, the corporate reputation of the forestry organization of Bartın in the eyes of external stakeholders (sector enterprises, public institutions, NGOs, auction customers, city and village people) was identified and evaluated using seven dimensions that consist of a new dimension called "institutional relations" and the six dimensions discussed above (emotional attraction, products and services, financial performance, vision and leadership, work environment, social responsibility).

2. Material and method

2.1. Study area

The study was conducted in the Bartın province considering the purpose and resources of the research. This study area is chosen as it has forest assets that are over Turkey's average (OGM, 2021), all forestry units are organized throughout the province, it is intense in terms of forestry activities, and the forestry organization is the sixth largest sector that contributes to the provincial economy (Daşdemir and Seğmen, 2009). Bartın has a total area of 2,143 km² and four districts: Merkez, Amasra, Kurucasıle, and Ulus (Figure 1). There are three institutions conducting forestry activities in the Bartın province, 64% of which (135,437 ha) are forested (OGM, 2022): the Bartın Forestry Enterprise Directorate (BFED), the Ulus Forestry Enterprise Directorate (UFED), and the Bartın Nature Conservation and National Parks (BNCNP) Branch Directorate. There are 50 neighborhoods, 263 villages, 194 sector enterprises, 76 public institutions, 43 NGOs, 25 auction customers, and 201,711 people (including 93,813 city people and 107,898 village people) as external stakeholders (TÜİK, 2022).

The BFED, which is affiliated with the Zonguldak Regional Directorate of Forestry, has 11 Forest Management Chieftaincies. Its study area is 140,923 ha in total, of which 56% is forested (48% is normal forestland, 0.83% is degraded forest) and 44% is deforested (BOİM, 2022). The UFED has 10 Forest Management Chieftaincies. Its study area is 66,640.20 ha in total, of which 74% is forestland and 26% is clearing. 86% (42,385.80 ha) of the forest area is normal grove, 12% (5,692.60 ha) is degraded grove, and 02% (1,378.80 ha) is treeless forestland (UOİM, 2022). The field of activity of the BNCNP Branch Directorate is limited to the province of Bartın and serves under the 10th Regional Directorate of the General Directorate of Nature Conservation and National Parks.

2.2. Research data

The study was conducted to determine the corporate reputation of the forestry organization (BFED, UFED, and BNCNP Branch Office) in the Bartın province. The research data were collected by conducting a survey with the sector enterprises, public institutions, NGOs, (non-governmental organizations), auction customers, and citizens living in the city center and villages that are identified as the most important external stakeholders of the Bartın forestry organization.

To obtain the data, a questionnaire form consisting of three parts was developed. *In the first part* of the questionnaire, there were six questions regarding the stakeholder group, activity area, relationship with the forestry organization, duty, age, and education level of the participants. *In the second part*, a total of 55 propositions/questions are used to measure and evaluate the corporate reputation of the forestry organization in the eyes of external stakeholders in the seven dimensions (Emotional attraction - 5 questions, products and services - 8 questions, financial performance - 6 questions, vision and leadership - 9 questions, work environment - 8 questions, social responsibility - 8 questions, and institutional relations - 10 questions). Participants' level of agreement with these propositions was scored between 1-5 points on a 5-point Likert scale (1-I never agree, 2-I agree a little, 3-I agree, 4-I agree more, 5-I agree completely) and measured with a 5-point equally spaced scale (Daşdemir, 2019). The 5-point Likert Scale was preferred in this study because it has been applied in many areas, and its application and evaluation are practical. *In the third part* of the questionnaire, the views and suggestions of the stakeholders on increasing the reputation of the forestry organization were included.

2.3. Obtaining the data

In the study, the following formula that calculates the sample size in limited societies was used to determine the number of interviewees by external stakeholder groups (Daniel and Terrell, 1995; Daşdemir, 2019):

$$n \geq \frac{Z^2 \times N \times p \times q}{N \times D^2 + Z^2 \times p \times q}$$

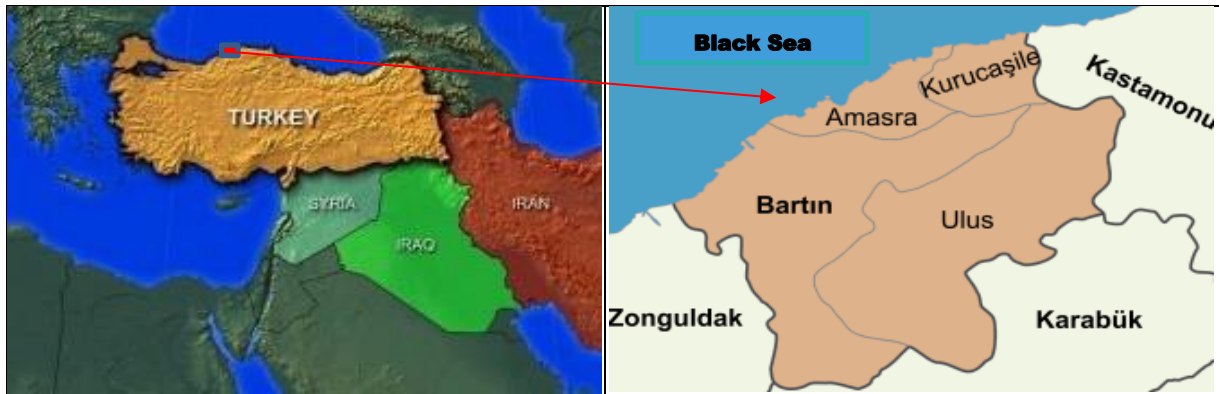


Figure 1. Study area

In the formula, n is the sample size, N is population size (according to the stakeholder group, populations are in Table 1), Z is the confidence coefficient ($Z=1.96$ for 95% confidence level), p is the probability of finding the feature to be measured in the population (0.5), q is the probability that the feature to be measured is not found in the population ($q=1-p=0.5$), and D is sampling error (10%). The sample sizes (n) found via the above formula in terms of external stakeholders of the forestry organization of Bartın and the numbers of stakeholders interviewed are given in Table 1. According to these results, at least 252 participants should be interviewed in terms of all external stakeholders. Yet, in the study, this number was exceeded and a total of 308 participants were interviewed. In some stakeholder groups (sector enterprise, NGO, auction customer), the number of interviewees determined by the formula could not be conducted due to various reasons. However, since the ratio of the number of interviewees in these stakeholder groups to the research population size is greater than 10-15% predicted for small societies (Arıkan, 2004), a sufficient sample size has been reached that represents the society.

To validate the survey questions, a preliminary questionnaire was applied. According to the feedback from the preliminary survey application, the survey questions were finalized and the final survey application was started. Questionnaires were mostly conducted through the face-to-face interview method in May-November. Yet, the questionnaire forms were sent by e-mail to the stakeholders who were not available for face-to-face meetings due to the Covid-19 pandemic and other personal reasons. Thus, 86% (266 people) of 308 participants were interviewed face-to-face and 14% (42 people) were surveyed by e-mail. The participants to be surveyed within each stakeholder group were determined according to the random sampling method (Kalıpsız, 1988; Daşdemir, 2019).

2.4. Evaluation of data

In the study, three null hypotheses were established: H_{01} "the corporate reputation of the Bartın forestry organization is not good in the eyes of external stakeholders", and H_{02} "the factors affecting the corporate reputation of the Bartın forestry organization and their level of influence

cannot be explained", and H_{03} "the corporate reputation of the Bartın forestry organization is not different according to some features of external stakeholders (stakeholder group, activity area, relationship with the forestry organization, number of employees, duty, age, gender, and education level).

Descriptive statistics (percentage, arithmetic mean, and standard deviation), correlation analysis, factor analysis, and the Kruskal-Wallis H test were used to evaluate the obtained data and control the assumptions of the study. The Cronbach Alpha test was applied to understand whether the 5-point Likert scale propositions were consistent and reliable with each other (Kalaycı, 2014; Büyüköztürk, 2015). The corporate reputation level of the forestry organization of Bartın was identified according to the average of the scores given by the participants to 55 propositions/questions collected in seven dimensions.

On the other hand, the relations between the corporate reputation variable, which was created by adding the scores given to 55 questions by the participants, and some features of the stakeholders were analyzed by correlation analysis. Factor analysis was performed to identify the factors affecting the corporate reputation of the forestry organization of Bartın in the eyes of external stakeholders, their impact levels, and corporate reputation dimensions. In addition, whether the corporate reputation of the forestry organization of Bartın differs according to some features of external stakeholders was checked via the Kruskal-Wallis H test and different groups were determined by the Games-Howell Post Hoc multiple comparison test (Kalıpsız, 1988; Özdamar, 2002; Daşdemir, 2019). Microsoft Excel and SPSS 22.0 (Statistical Package for Social Sciences) package programs were used for the analysis and evaluation of the data.

3. Results and discussion

3.1. Findings on some features of stakeholders

The findings regarding the stakeholder group, activity area, relationship with the forestry organization, number of employees, duties, age, gender, and education level of the 308 participants are presented in Table 2.

Table 1. Population size and sample size by stakeholder groups

No	Stakeholders	Population size (N)*	Sample size via the formula	Number of interviewees (n)	Share in the total sample (%)	Ratio of number of interviewees to population size (%)
1	Sector enterprise	194	64	32	10.39	16.49
2	Public institution	76	42	58	18.83	76.32
3	NGO	43	30	10	3.25	23.26
4	Auction customer	25	20	9	2.92	36.00
5	People (City + Village)	201 711	96	199	64.61	0.10
	Total		252	308	100.00	

* N shows the number of institutions in the 1st, 2nd and 3rd stakeholder groups, and the number of people in the 4th and 5th stakeholder groups.

Table 2. Some features of stakeholders

Feature	Groups	Number	Percent	Min.	Max.	Average (\bar{x})
Stakeholder group	1.Sector enterprise	32	10.39			
	2.Public institutions	58	18.83			
	3.NGO	10	3.25			
	4.Auction customer	9	2.92	1	6	4.20
	5.City people	114	37.01			
	6.Villagers	85	27.60			
Activity area	1.Timber-woodworking and furniture	15	4.87			
	2.Construction, ship, machinery and mining	6	1.95			
	3.Food and bakery products production-marketing	5	1.62			
	4.Textile and decoration	2	0.65			
	5.Transport	4	1.30			
	6.Infrastructure services	11	3.57			
	7.Production and trade	24	7.79	1	13	10.24
	8.Social services	23	7.47			
	9. Agriculture, dairy and aquaculture	5	1.62			
	10. Information, regulation and support	5	1.62			
	11. Forest products production and trade	9	2.92			
	12.City people	114	37.01			
	13.Villagers	85	27.60			
Relationship with the forestry organization	1.Processing by purchasing products of the forestry organization	30	9.74			
	2.Buying and selling products of the forestry organization	9	2.92			
	3.Providing raw materials to the forestry organization	8	2.60			
	4.Working in wood production, afforestation, etc. jobs	3	0.97			
	5.Providing services to the forestry organization	2	0.65			
	6.Using forest products	36	11.69	1	12	7.40
	7.Using/utilizing forest areas	91	29.55			
	8.Ecotourism and hunting in forests	7	2.27			
	9.Collecting non-wood forest products from forests	50	16.23			
	10.Buying seeds, saplings, etc. from the forestry organization	5	1.62			
	11.Unrelated	27	8.77			
	12.Other	40	12.99			
Number of employees	1 person	199	64.61			
	2-9 people	36	11.69			
	10-49 people	36	11.69	1	500	22.82
	50-249 people	34	11.04			
	≥250 people	3	0.97			
Duty	1.Manager in public	64	20.78			
	2.Manager in private	32	10.39			
	3.Private business owner	20	6.49			
	4.NGO worker	12	3.90			
	5.Officer	44	14.29			
	6.Worker	40	12.99	1	10	4.88 (Officer)
	7.Self-employment	29	9.42			
	8.Retired	14	4.55			
	9.Agriculture-livestock worker	37	12.01			
	10.Unemployed	16	5.19			
Age (year)	20-30	32	10.39			
	31-40	84	27.27			
	41-50	112	36.36	21	78	44.0
	51-60	58	18.83			
	≥61	22	7.14			
Gender	1.Male	212	68.83			
	2.Female	96	31.17	1	2	1.31
Education level	1.Primary education	93	30.19			2.65
	2.High school	62	20.13			(High school-Associate degree)
	3.Associate degree	35	11.36	1	5	
	4.Bachelor degree	96	31.17			
	5.Graduate school	22	7.14			

Table 2 reports that the majority of the participants belong to the city and village societies, the relationship of the stakeholders with the forestry organization generally is those who use the forest areas for recreational activities, and the other stakeholder groups consist of approximately 23 people, except the public stakeholder group consisting of one person, the average age of the participants is 44 years, the majority of them are male and high school-associate graduates.

3.2. Analysis of answers to corporate reputation scale questions

To test the reliability of the 5-point Likert scale, the α value was found to be 0.983 as a result of the Cronbach Alpha test performed both for each of the 55 propositions and according to the scale averages. Since this value was higher than 0.80, the questionnaire scale was "highly reliable". Thus, the propositions in the scale were reliable for statistical analyzes and evaluations.

In the study, 55 propositions with a 5-point Likert scale were grouped under the main headings/dimensions of *emotional attraction, products and services, financial performance, vision and leadership, work environment, social responsibility, and institutional relations*, and the minimum, maximum, and mean (\bar{x}) values and standard deviation (s) of the Likert scores of the propositions by groups are given in Table 3.

As seen in Table 3, the total corporate reputation of the 308 external stakeholder participants of the Bartın forestry

organization is 181.07 ± 37.932 points ($\bar{x} \pm s$) according to the sum of the average scores given to each question between 1-5. The average of all questions is 3.29 ± 0.689 . The theoretically expected corporate reputation level score between 55 and 275 was classified into three levels considering all 55 questions. The middle class was also divided into three sub-classes to use in difference auditing considering that the accumulations are generally concentrated at the medium level (Table 4).

Table 3. Descriptive statistics on answers to corporate reputation scale questions

Group	Proportions	Likert Scale Score			
		Min.	Max.	\bar{x}	S
Emotional attraction	Q1	I am aware of the existence of the forestry organization and I know what it does			
	Q2	The level of appreciation and respect for the forestry organization is high			
	Q3	Forestry organization is an honest, fair and reliable institution			
	Q4	1.00	5.00	3.37	0.835
	Q5	It is different from other institutions and is more important			
Products and services	Q6	The type and amount of goods and services produced are sufficient			
	Q7	The quality of the goods and services produced is high			
	Q8	Produces goods and services without harming the environment and ecosystem			
	Q9	Utilizes resources in the best way in the production of goods and services			
	Q10	1.00	5.00	3.23	0.748
	Q11	Produces goods and services in accordance with customer demand			
	Q12	Open to innovations and changes in the production of goods and services			
	Q13	There is continuity in the production of goods and services			
Financial performance	Q14	Uses the right methods in the marketing of goods and services			
	Q14	It is a financially strong institution			
	Q15	High potential to increase financial strength in the future			
	Q16	It has rich resources and best manages them			
	Q17	1.17	5.00	3.45	0.820
	Q18	Better financial performance than other institutions			
Vision and leadership	Q18	Makes new investments to increase its financial strength			
	Q19	Contributes to local and national economy			
	Q20	The forestry organization has a strong vision and goals			
	Q21	It is an expert and well-managed institution			
	Q22	It is more successful than other institutions and leads them			
	Q23	There is a transparent, participatory and fair management style			
	Q24	1.00	5.00	3.20	0.767
	Q25	It is an institution with a clear corporate identity and values			
	Q26	It is an institution that changes, develops and renews itself			
Work environment	Q26	The process of making decisions and implementing decisions is fast			
	Q27	Sensitive to the resolution of complaints and problems			
	Q28	Gives importance to honesty and ethical behavior			
	Q29	The legal regulations regarding its activities are appropriate and sufficient			
	Q30	Planning, execution, and controlling activities are appropriate and sufficient			
	Q31	Tools, buildings, and equipment are modern and sufficient			
	Q32	It has a knowledgeable, experienced and talented management and staff			
	Q33	1.00	5.00	3.28	0.767
Social responsibility	Q34	It has an efficient and peaceful work environment that values its employees			
	Q35	There is a work environment that motivates and rewards success			
	Q36	Gives importance to developing its employees, and offers career and social opportunities			
	Q37	Gives importance to the occupational health and safety of its employees			
	Q37	Fulfills its responsibilities towards its stakeholders			
	Q38	Conducts social responsibility projects and supports projects			
	Q39	Gives importance to protecting the environment and natural life			
	Q40	Sensitive to social problems and public health			
	Q41	1.44	5.00	3.36	0.772
Institutional relations	Q42	Follows policies and strategies in accordance with society's expectations			
	Q43	Considers the opinions of stakeholders in decision-making processes			
	Q44	Provides support to the society in situations such as crisis and natural disaster			
	Q45	It reduces unemployment by providing new job opportunities			
	Q46	It contributes positively to forest villagers and rural development			
	Q46	Communication, cooperation, and relations with public institutions are good			
	Q47	Communication, cooperation, and relations with local governments are good			
	Q48	Good communication and relations with the urban community			
	Q49	Good relations with forest villagers and rural community			
	Q50	1.30	5.00	3.24	0.762
	Q51	Good communication and relations with forest product industries			
	Q52	Good communication and relations with NGOs			
	Q53	Good communication and relations with the media			
	Q54	Good relations with stakeholders in production and marketing processes			
	Q55	Carries out information and consultancy services in the best way			
Average corporate reputation score		1.24	5.00	3.29	0.689
Total corporate reputation score		68	275	181.07	37.932

\bar{x} : Arithmetic mean; S: Standard deviation

Table 4. Reputation level classification according to corporate reputation score

Corporate reputation level	Total corporate reputation score	Sub classing		Average corporate reputation score
		Level	Score	
Low	55-128	-	-	≤2.49
Medium	129-202	Low-Medium	129-153	2.50-2.83
		Medium	154-178	2.84-3.16
		Medium-High	179-202	3.17-3.49
High	203-275	-	-	≥3.50

According to these results, the "financial performance" dimension has the highest score with 3.45. This is followed by "emotional attraction" with 3.37 points, "social responsibility" with 3.36 points, "work environment" with 3.28 points, "institutional relations" with 3.25 points, "products and services" with 3.23 points", and "vision and leadership" dimension with 3.20 points. According to the scores given to the survey questions, the highest level of reputation is in the dimension of "financial performance" and the least in the dimension of "vision and leadership" in the eyes of the external stakeholders of the forestry organization of Bartın. However, these results showed that the difference in reputation level between the dimensions was not very high, and they were almost close to each other. Therefore, it was determined that the corporate reputation level of the Bartın forestry organization in the eyes of external stakeholders is at the "medium-high" (3.23-3.45 points).

3.3. Relationships between institutional reputation and some features of participants

The relations between some features/variables of the external stakeholders of the Bartın forestry organization (stakeholder group, activity area, relationship with the forestry organization, number of employees, duty, age, gender, education level) and its corporate reputation were examined by Spearman's nonparametric correlation analysis. The "corporate reputation" variable was defined as the sum of the scores of the answers given by the participants to the 5-point Likert scale questions, and the relations between it and some features of the participants were analyzed (Table 5).

Table 5 reports a significant negative correlation ($r=-0.230^{**}$) at the 0.01 confidence level between the level of corporate reputation and the stakeholder groups. This correlation shows that corporate reputation is gradually decreasing in accordance with the ranking of sector enterprises, public institutions, NGOs, auction customers, and city and village citizens, the highest corporate reputation is in sector enterprises and the lowest corporate reputation is among villagers. In this respect, Yılmaz and Gedik (2019b) found that the corporate reputation of the İstanbul Regional Directorate of Forestry is positive in terms of customers, the public, and users of the resort, respectively.

The significant negative correlation of 0.01 confidence level ($r=-0.241^{**}$) between the level of corporate reputation and the activity area, in accordance with the ranking of 13 activity areas in Table 2, shows that corporate reputation is the highest in the timber-woodworking and furniture area and it decreases as one move towards the villagers.

Table 5. Correlation analysis results

Variables	Corporate reputation
Stakeholder group	-0.230**
Activity area	-0.241**
Relationship with the forestry organization	-0.044
Number of employees	0.264**
Duty	-0.218**
Age	0.051
Gender	-0.243**
Education level	0.093

** : Significant correlation at the 0.01 confidence level

There is a significant negative correlation ($r=-0.218^{**}$) at the 0.01 confidence level between the level of corporate reputation and duty. This correlation shows that the reputation of the forestry organization is highest in the eyes of the managers in the public and the lowest in the eyes of the unemployed. It is understood that the corporate reputation of the forestry organization is gradually decreasing in accordance with the order of duties as a manager in public, manager in private, business in private, NGO worker, officer, worker, self-employed, retired, agriculture-livestock worker, and unemployed. In this regard, Ergenç (2010) determined that there was a strong relationship between the personal reputation of the institution leader and the corporate reputation.

A significant negative correlation ($r=-0.243^{**}$) between the level of corporate reputation and gender at the confidence level of 0.01 indicates that the corporate reputation of the forestry organization is higher in men's eyes than in women. Although in this study, no significant relationship was found between the age and education level of the participants and corporate reputation, it was found that the participants had a higher rate of positive corporate reputation views as the age and education level of the participants increased and they moved away from the cities in another study (Yılmaz and Gedik, 2019b).

In addition, a significant positive correlation at the 0.01 confidence level between corporate reputation and the number of employees ($r=0.264^{**}$) means that as the number of employees of the stakeholder group increases, the corporate reputation of the forestry organization is perceived higher. In other words, the corporate reputation of the forestry organization is higher in the eyes of large institutions, businesses, and NGOs. On the other hand, no significant correlation was found between the corporate reputation and the relationship of the participants with the forestry organization, their age, and education level (Table 5).

3.4. Factors affecting corporate reputation and its dimensions

Factor analysis was performed to determine the factors affecting the corporate reputation of the Bartın forestry organization in the eyes of external stakeholders, their level of influence, and its dimensions. For this, each of the 55 propositions/questions with a 5-point Likert scale in the questionnaire was accepted as a variable. The Kaiser-Meyer-Olkin (KMO) and Bartlett Sphericity tests were used to determine the suitability of Likert scaled variables for factor analysis. Since the KMO coefficient was $0.969 > 0.60$, and the result of the Bartlett Sphericity Test ($\chi^2 = 15086.36$; Sig. = $0.000 < 0.05$) was significant, the variables were found suitable for the analysis (Büyüköztürk, 2015).

The *Principal Component* factor derivation method, the *Varimax* rotation (orthogonal) method, and *Kaiser Criterion* (Kaiser, 1958) were used while performing the factor analysis, and seven common factors were derived, with an eigenvalue of > 1 and explaining 68.92% of the total variance. Factor loads greater than 0.50 in absolute value were taken

into account in naming and interpreting the factors (Harman, 1967; Bennet and Bowers, 1977; Mucuk, 1978; Daşdemir, 1996). The variance values before and after the rotation regarding the common factors are given in Table 6, the most important factors (dimensions) affecting the corporate reputation of the Bartın forestry organization, and information about them in Table 7.

Table 6. Variances on common factors derived by factor analysis

Factor	Initial variance			Variance at the end of rotation		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	28.69	52.16	52.16	8.44	15.34	15.34
2	2.57	4.67	56.82	6.35	11.54	26.88
3	1.77	3.22	60.04	5.69	10.34	37.21
4	1.38	2.51	62.56	5.08	9.24	46.45
5	1.30	2.36	64.92	4.96	9.02	55.47
6	1.19	2.17	67.09	4.57	8.31	63.79
7	1.01	1.83	68.92	2.82	5.13	68.92

Table 7. Factors affecting the corporate reputation of the Bartın forestry organization

Variable no	Factors, and variables constituting the factors	Factor load	Effect level of the factor	
			Quantity	%
Factor 1: Institutional relations			8.44	15.34
Q48	Good communication and relations with the urban community	0.73		
Q52	Good communication and relations with the media	0.71		
Q47	Communication, cooperation, and relations with local governments are good	0.68		
Q46	Communication, cooperation, and relations with public institutions are good	0.68		
Q53	Good relations with stakeholders in production and marketing processes	0.68		
Q54	Carries out information and consultancy services in the best way	0.67		
Q51	Good communication and relations with NGOs	0.65		
Q49	Good relations with forest villagers and rural community	0.63		
Q55	Promotion and public relations studies are sufficient	0.62		
Q50	Good communication and relations with forest product industries	0.55		
Factor 2: Products and services			6.35	11.54
Q12	There is continuity in the production of goods and services	0.70		
Q11	Open to innovations and changes in the production of goods and services	0.70		
Q10	Produces goods and services in accordance with customer demand	0.65		
Q9	Utilizes resources in the best way in the production of goods and services	0.65		
Q7	The quality of the goods and services produced is high	0.64		
Q13	Uses the right methods in the marketing of goods and services	0.59		
Q8	Produces goods and services without harming the environment and ecosystem	0.55		
Q6	The type and amount of goods and services produced are sufficient	0.55		
Factor 3: Vision and leadership			5.69	10.34
Q22	It is more successful than other institutions and leads them	0.67		
Q25	It is an institution that changes, develops and renews itself	0.66		
Q21	It is an expert and well-managed institution	0.62		
Q26	The process of making decisions and implementing decisions is fast	0.61		
Q20	The forestry organization has a strong vision and goals	0.61		
Q23	There is a transparent, participatory and fair management style	0.52		
Q24	It is an institution with a clear corporate identity and values	0.51		
Factor 4: Financial performance			5.08	9.24
Q14	It is a financially strong institution	0.70		
Q31	Tools, buildings, and equipment are modern and sufficient	0.66		
Q17	Better financial performance than other institutions	0.65		
Q15	High potential to increase financial strength in the future	0.64		
Q1	I am aware of the existence of the forestry organization and I know what it does	0.62		
Factor 5: Social responsibility			4.96	9.02
Q39	Gives importance to protecting the environment and natural life	0.67		
Q40	Sensitive to social problems and public health	0.61		
Q45	It contributes positively to forest villagers and rural development	0.60		
Q43	Provides support to the society in situations such as crisis and natural disaster	0.58		
Q19	Contributes to local and national economy	0.53		
Q38	Conducts social responsibility projects and supports projects	0.52		
Q44	It reduces unemployment by providing new job opportunities	0.52		

Table 7. continued.

Variable no	Factors, and variables constituting the factors	Factor load	Effect level of the factor	
			Quantity	%
Factor 6: Work environment				
Q29	The legal regulations regarding its activities are appropriate and sufficient	0.57	4.57	8.31
Q34	There is a work environment that motivates and rewards success	0.56		
Q35	Gives importance to developing its employees, and offers career and social opportunities	0.55		
Q33	It has an efficient and peaceful work environment that values its employees	0.55		
Q36	Gives importance to the occupational health and safety of its employees	0.54		
Factor 7: Emotional attraction				
Q2	The level of appreciation and respect for the forestry organization is high	0.66	37.91	68.92
Q3	Forestry organization is an honest, fair and reliable institution	0.62		
Q4	The corporate identity and image of the forestry organization is always appreciated	0.60		
Total			37.91	68.92

The above results report that the seven factors having 15.34%, 11.54%, 10.34%, 9.24%, 9.02%, 8.31%, and 5.13% impact levels, respectively, explain the 68.92% of the corporate reputation of the forestry organization. These seven factors are a good fit for the purpose of the study and the grouping design of the propositions in the questionnaire, except for some changes. In the study, the corporate reputation was tested by seven dimensions (emotional attraction, products and services, financial performance, vision and leadership, work environment, social responsibility, and institutional relations).

According to Table 7, the first dimension (Factor 1) is the most important factor affecting corporate reputation. It includes the variables Q48, Q52, Q47, Q46, Q53, Q54, Q51, Q49, Q55, and Q50, which are listed according to the level of importance and whose common features are related to the communication of the institution. These propositions, which were under the relationships dimension in the survey, were obtained in the same dimension, in a different order. Therefore, "Institutional Relations" with stakeholders is identified as the most important factor affecting the corporate reputation of the Bartın forestry organization.

Factor 2, which includes the variables Q12, Q11, Q10, Q9, Q7, Q13, Q8, and Q6 in order of importance, is a secondary factor affecting corporate reputation. These propositions, which are under the dimension of products and services in the survey, were obtained in the same dimension, in a different order. For this reason, the second most important factor affecting the corporate reputation of the Bartın forestry organization is "Products and Services". In this regard, Yurtsever (2013) determined that the negative evaluation of the product and services factor by the students had a negative impact on the corporate reputation of the university. Likewise, Yılmaz and Gedik (2019b) determined that product and service quality had a great impact on corporate reputation. Similarly, Gümüş and Öksüz (2009) determined that the institution's production of quality products increases the corporate reputation in the eyes of the stakeholders and that institutions with a good reputation also produce quality products.

Factor 3, which is third-degree important, includes the variables Q22, Q25, Q21, Q26, Q20, Q23, and Q24 (Table 7). These propositions, which are under the dimension of vision and leadership in the survey, were obtained in the same dimension, in a different order. Therefore, "Vision and Leadership" was obtained as the third-degree important factor affecting the corporate reputation of the Bartın forestry organization. In this regard, Karatepe (2008) states that the leaders who know that reputation is the most important

reason for the existence of the institution and enable the institution to act together with this vision increase the corporate reputation. Likewise, Yılmaz and Karahan (2010) determined that vision-oriented leadership behavior had a positive effect on employee performance.

Factor 4 consists of variables Q14, Q31, Q17, Q15, and Q1. In the survey form, three propositions (Q14, Q17, and Q15) in the Financial Performance group, Q31 in the work environment group, and Q1 in the emotional attraction group came together and structured in a new dimension. Since the common feature of the propositions in this group is mainly related to the financial power of the forestry organization, this dimension called "Financial Performance" is the fourth important factor affecting the corporate reputation of the forestry organization. Thus, it was emphasized that financially strong organizations will have a higher reputation in the market than their competitors (Karaköse, 2006; Üçok, 2008). In addition, Fombrun (2018) stated that reputation was both a reason for and outcome of financial performance.

Factor 5, which consists of the variables Q39, Q40, Q45, Q19, Q38, and Q44, was obtained by combining 6 out of 9 propositions in the social responsibility group in the survey in a different order. Therefore, the "Social Responsibility" dimension, which means that it can be measured with these six statements rather than 9 statements in the survey, is a fifth-degree important factor affecting the corporate reputation of the forestry organization. In this regard, Oktar and Çarıkcı (2012) identified social responsibility as the fourth dimension that affects the reputation of Süleyman Demirel University.

Factor 6 consists of variables Q29, Q34, Q35, Q33, and Q36 including in the work environment group in the survey. Only five of the eight propositions in the work environment group in the questionnaire formed a dimension as a result of factor analysis. Therefore, this dimension, which was understood to be reasonable and logical to measure with 5 variables (Q29, Q34, Q35, Q33, and Q36) and is called "Work Environment", is a sixth-degree important factor affecting the corporate reputation of the forestry organization. On the other hand, Öksüz (2008) emphasized that a good work environment will enable the employee to do her job willingly and reduce the rate of absenteeism. Likewise, Fombrun (2018) stated that companies with an attractive work environment have a higher level of corporate reputation.

Factor 7 was formed by the combination of three of the 5 propositions included in the emotional attraction group in the questionnaire. This dimension, which was understood to be sufficient to measure only with the variables Q2, Q3, and Q4, and called "Emotional Attraction", is the seventh-degree

important factor affecting the corporate reputation of the forestry organization. However, Oktar and Çarıkcı (2012) determined that emotional attraction is the most important factor affecting the corporate reputation of Süleyman Demirel University in the first place.

3.5. Auditing the difference in corporate reputation according to some features of the stakeholders

The Kruskal-Wallis H test was applied to control whether the corporate reputation of Bartın forestry organization differs according to some features of external stakeholders and different groups were determined by the Games-Howell test. The results of the difference in corporate reputation, which was defined as the sum of the scores given to the 5-Likert scale questions, according to the stakeholder group, activity area, relationship with the forestry organization, number of employees, duty, age, gender, and education level of the participant are given in Table 8.

Table 8 reports that while corporate reputation differs significantly at the level of 99% according to the stakeholder group, activity area, relationship with the forestry organization, number of employees, duty, and gender of the participants, it does not differ according to age and education level. In this regard, Yılmaz (2015) determined that the corporate reputation of the participants showed a significant difference according to gender, marital status, and age, but did not show a significant difference according to education level and tenure.

According to these results, while the first group consisting of NGOs, city people, villagers, public institutions, and sector enterprises thought that the forestry organization had a "medium" corporate reputation, the group consisting of auction customers thought that it had a "high level" corporate reputation. The opinions of the participants also differ according to the activity areas. As a result of the statistical analysis, while the participants employed in the 6th (infrastructure services) and 11th (forest products production and trade) activity areas in Table 2 thought that the corporate reputation of the forestry organization was "high", the participants in other activity areas thought that the corporate

reputation of the forestry organization was "medium level" (Table 8).

Corporate reputation also differs significantly at the 99% trust level according to the relationship of the participants with the forestry organization. Accordingly, those who have the 5th, 7th, 9th, 6th, 11th, 2nd, 12th, 4th, and 8th rows in Table 2 think that the corporate reputation of the forestry organization is "medium". Those who buy and process the products of the forestry organization" in the 1st place, "buy seeds, saplings, etc. from the forestry organization" in the 10th place and supply raw materials to the forestry organization" in the 3rd place think that it is "high". Therefore, those who buy goods directly from the forestry organization, provide input to it and have a relationship based on commercial gain, find the corporate reputation of the forestry organization higher than the other participants.

The opinions of the participants on corporate reputation also differ in terms of the number of employees. While the individual (single person) participants from the city and village people think the corporate reputation of the forestry organization is "medium", representatives of public institutions, NGOs, sector enterprises, and auction customers think the corporate reputation of the forestry organization is "medium-high". This difference is due to the fact that the sector enterprise, public institution, NGO, and auction customer participants know the forestry organization better and are in a close relationship.

The opinions of the participants on corporate reputation are also different according to their duties (Table 8). In this respect, two different groups were formed. While the unemployed, officer, NGO worker, agriculture-livestock worker, self-employed, private business owner, and workers in the first group see the corporate reputation of the forestry organization at a "medium" level with an average of 173.51 points, managers in public, retired, manager in private in the second group see it at "medium-high" level with an average of 194.65 points. In other words, managers in the public and private sector and retirees see the corporate reputation of the forestry organization as higher than those in other positions due to factors such as education, length of service, and experience.

Table 8. Results of auditing difference in corporate reputation

Feature/Variable	Kruskal-Wallis H Test		Different Groups According to Post Hoc Multiple Comparison Test (Rankings in groups and within groups are by importance)			
	Khi-square (χ^2) Value	DF	No Group Elements	Corporate reputation	\bar{x}	N
1.Stakeholder group	32.14**	5	1 NGO, city people, villagers, public institution, sector enterprise 2 Auction customer	Medium High	180.89 227.67	299 9
2.Activity area	42.12**	12	1 Employees in the 9th, 12th, 13th, 8th, 10th, 1st, 7th, 2nd, 4th, 3rd and 5th activity area in Table 2 2 Employees in the 6th and 11th activity area in Table 2	Medium High	186.23 222.02	288 20
3.Relationship with the forestry organization	37.95**	12	1 Those who have the 5th, 7th, 9th, 6th, 11th, 2nd, 12th, 4th, 8th row in Table 2 2 Those who have the 1st, 10th and 3rd row in Table 2	Medium High	180.64 203.00	265 30
4.Number of employees	26.72**	4	1 Single people 2 2-9 people, 10-49 people, 50-249 people, ≥ 250 people	Medium Medium-high	174.54 196.79	199 109
5.Duty	29.14**	9	1 Unemployed, officer, NGO worker, agriculture-livestock worker, self-employed, private business owner, worker 2 Manager in public, retired, manager in private	Medium Medium-high	173.51 194.65	198 110
6.Gender	18.19**	1	1 Female 2 Male	Low Medium	122.34 169.06	96 212
7.Age	1.49	4	Corporate reputation is not different according to age groups			
8.Education level	3.79	4	Corporate reputation is not different according to education level			

** : Significant at the 0.01 confidence level ($p < 0.01$); DF: Degrees of freedom; \bar{x} : Arithmetic mean; N: Number of participants

There were also differences in terms of corporate reputation according to the gender of the participants. Accordingly, while women find the corporate reputation of the forestry organization at a "low" level with a score of 122.34, men find it at a "medium" level with a score of 169.06 (Table 8 and 4). This difference is usually because men have a relationship with the forestry organization and they know the forestry organization better.

4. Conclusion and suggestions

In this study, the corporate reputation of the Bartın forestry organization (BFED, UFED, and BNCNP Branch Office) in the eyes of external stakeholders was determined, the factors affecting corporate reputation were identified and the difference in corporate reputation according to some features of the participants was audited. The study performed with 308 participants showed that the corporate reputation level of the Bartın forestry organization in the eyes of external stakeholders was at the "medium-high" level with a Likert score of 181.07. Thus, the null hypothesis H_{01} "the corporate reputation of the Bartın forestry organization is not good in the eyes of external stakeholders" was rejected and it was determined that its corporate reputation was at a "medium-high" level.

In this study, "Institutional Relations" is identified as the seven dimensions to the six dimensions (emotional attraction, products and services, financial performance, vision and leadership, work environment, and social responsibility) that are generally considered in the literature. Analysis and evaluations showed that the seven factors explaining 68.92% of the corporate reputation of the Bartın forestry organization are (the values in parentheses indicate impact level): 1) Institutional relations (15.34%), 2) Products and services (11.54%), 3) Vision and leadership (10.34%), 4) Financial performance (9.24%), 5) Social responsibility (9.02%), 6) Work environment (8.31%), and 6) Emotional attraction (5.13%). Thus, the corporate reputation of the forestry organization was explained in seven dimensions, both different from the literature and as a contribution to the literature. Therefore, the null hypothesis H_{02} as "the factors affecting the corporate reputation of the Bartın forestry organization in the eyes of external stakeholders and their level of influence cannot be explained", was rejected.

In addition, while the corporate reputation of the forestry organization differed with a 99% significance level according to the stakeholder group, activity area, relationship with the forestry organization, number of employees, duty, and gender of the participants, it was not different according to the age and education level of the participants. Thus, the null hypothesis H_{03} as "the corporate reputation of the Bartın forestry organization is not different according to some features of the external stakeholders (stakeholder group, activity area, relationship with the forestry organization, number of employees, duty, age, gender, and education level)" was rejected.

In conclusion, based on the presented results and the suggestions of the participants, the forestry organization should show the necessary sensitivity to sustainable forest management to increase the corporate reputation of the Bartın forestry organization in the eyes of external stakeholders, conduct R&D studies taking into consideration the expectations of the stakeholders and implement the results in

practice, keep good relationships with stakeholders, perform effective promotion, information and awareness-raising activities in a way that spreads to all segments of the society, organize activities such as nature trips and social responsibility projects should, should support non-wood forest products as a source of income for forest villagers and make improvements, and develop policies that prevent migration from rural areas and provide employment. The results of the study contribute to increasing the corporate reputation of the Bartın forestry organization in the eyes of external stakeholders, increasing production and efficiency, achieving the goals of the forestry organization, and increasing the country's development and social welfare at the macro level.

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