

The impact of corporate social responsibility activities on eliminating regional development disparities

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Article Info	Abstract
<p>Research Article</p> <p>Received: 9 September 2025 Revised: 25 March 2026 Accepted: 27 March 2026</p> <p>Keywords: Corporate social responsibility, Regional development, Logistic regression, Statistical regional classification, Stakeholder theory</p>	<p><i>This study investigates the impact of corporate social responsibility (CSR) activities on reducing regional development disparities. Using survey data collected through face-to-face interviews with 400 small-scale manufacturing firms in five provinces in Türkiye, the study employs a multiple logistic regression model. The findings reveal a statistically significant relationship between CSR activities and firms' perceived responsibility for regional development. Factors such as legal, ethical, and voluntary responsibilities, innovation, market size, collaboration, and CSR awareness significantly influence this perception. Results indicate that as CSR engagement increases, firms adopt broader developmental responsibilities beyond economic roles. The study concludes that CSR can serve as an effective mechanism to mitigate regional inequalities and enhance inclusive development.</i></p>

1. Introduction

The idea of development, which gained prominence especially after World War II, remains significant today. It is demonstrated through many examples showing ongoing development gaps across countries, regions within countries, and even between neighboring city centers. Likewise, the idea of corporate social responsibility (CSR) arose during the same period and is regarded as at least as important as development. Companies are crucial parts of economic decision-making and are not viewed in isolation from other community segments. Their economic strength gives them a clear advantage. If they use this strength to support the community's growth, they can secure their long-term survival and play a key role in improving both the community and the environment.

The aim of this study is to determine whether there is a statistically significant relationship between firms' CSR activities and regional development. It is hypothesized that firms' CSR efforts positively influence regional growth. In this context, the responsibility levels of goods-producing companies operating in five provincial centers within the TR5 Western Anatolia and TR7 Central Anatolia regions were examined, with particular focus on regional development and CSR activities. The concept of CSR, which is essential for promoting regional growth, was defined by Bowen (1953) as all of a company's activities that benefit both the organization and the wider community, contributing to societal progress. While there are different perspectives on CSR aspects, the most widely accepted framework is Carroll's four-part model, often called the "social responsibility pyramid" (Carroll, 1991).

According to Carroll (1991), the economic responsibilities of firms include boosting productivity, staying competitive, ensuring business continuity, and maximizing shareholder profits. Additionally, firms are expected to meet their legal obligations by complying with laws and regulations established by central and local authorities during their operations. Ethical responsibilities involve respecting and safeguarding the rights of consumers, employees, shareholders, and other stakeholders. Voluntary responsibilities encompass acts such as charity work. Actions focused on improving human welfare and promoting goodness originate from a sense of voluntary responsibility (Carroll, 1991).

* The study was approved by the Ethics Committee for Social and Human Sciences Research of Muğla Sıtkı Koçman University on September 13, 2021, with reference No: 210376/336.



Figure 1. Carroll's social responsibility pyramid
Source: Carroll (1991)

2. Literature review

The number of studies aimed at understanding the relationship between two important concepts is quite limited. When examining domestic research, it is clear that there are no experimental studies; there are few studies (e.g., Bedük & Ganiyusufoğlu, 2012; Demir, 2025; Engin & Akgöz, 2013; Kuşat, 2012; Sarıkaya & Kara, 2007) addressing the connection between CSR activities and sustainable development from a theoretical perspective. Meanwhile, the few studies conducted abroad have primarily explored this relationship using results from narrow-scope field research. Although the importance of this issue is recognized in the literature, most existing studies remain descriptive, lacking a strong conceptual foundation and empirical diversity. This underscores the need for research that systematically investigates how CSR contributes to regional development.

Previous studies (e.g., Bedük & Ganiyusufoğlu, 2012; Ebner & Baumgartner, 2006; Engin & Akgöz, 2013; Fudge et al., 2021; Heikkurinen & Bonnedahl, 2013; Kolk, 2016; Kolk & Tulder, 2010; Kuşat, 2012; Lu et al., 2020; Popa, 2015; Sarıkaya & Kara, 2007; Shayan et al., 2022; Sheehy & Farneti, 2021; Xia et al., 2018) established a theoretical framework that shows the link between sustainable development and CSR. These studies emphasized the importance of firms' CSR activities for sustainable development. Rondinelli and Berry (2000) examined the practices of 38 multinational companies in achieving sustainable development goals through content analysis of environmental performance reports. Their results indicated that the growth of companies' understanding and practice of social responsibility positively influenced sustainable development. Similarly, Gorski et al. (2014) assessed the CSR levels of companies in Romania's central development region using cluster analysis. They found that although companies were familiar with the concept of CSR, they were still in the early stages of implementation and largely unaware of their potential role in regional development.

Adamek (2014) analyzed the CSR practices of 229 firms in the Moravian Silesian and Zlín regions, showing that CSR activities significantly improved regional competitiveness and development. In Ghana, Baah et al. (2015) conducted a content analysis of corporate websites and found that CSR activities were aligned with outdated development goals, while ignoring the country's current development needs. Mbilima (2019) studied CSR decision-making, performance, stakeholder participation, and the impact of CSR activities on local development among mining firms in North-West Zambia through observations, interviews, and content analysis. The study confirmed the positive role of CSR activities in national development. Yogiia et al. (2019) examined 421 firms in Indonesia's Palawan Regency and Riau Province and found that CSR activities, when conducted in collaboration with the local government, positively affected regional development.

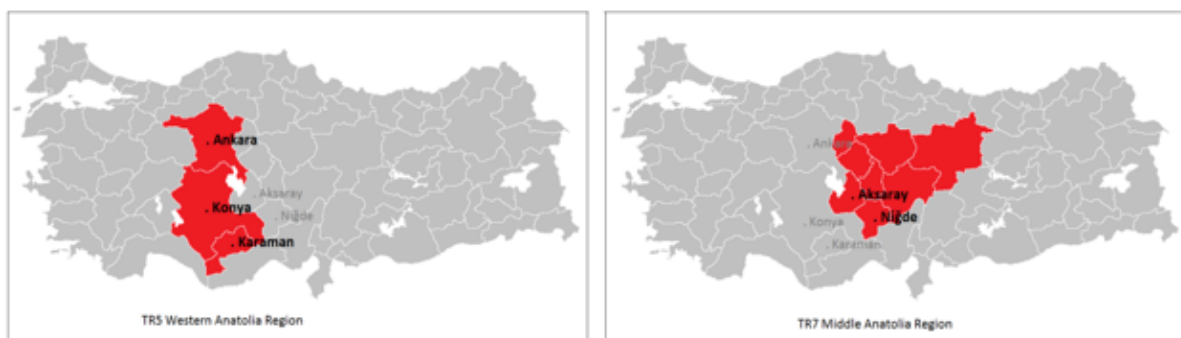
Bahar and Nas (2021) studied the CSR activities of the Konya Sugar Beet Growers Cooperative (known as Torku) and evaluated their influence on regional development. Using interviews as a qualitative data collection method, they discovered that although the Cooperative is a non-profit organization, its zero-waste production processes helped create integrated facilities, boost employment and production, reduce reliance on external sources, and enhance environmental sustainability. Moreover, partnerships with universities and TÜBİTAK strengthened human capital capacity, while joint R&D projects enabled the domestic production of key products, such as yogurt culture, potato starch, and pharmaceutical sugar, for the first time.

Oshiostea et al. (2023) conducted detailed interviews with employees of Total operating in Niger. Their study revealed that the company focused on human capital development and worked with communities and NGOs as part of CSR efforts. However, they also found that the firm was lacking in generating value and reducing environmental harm. Suharto et al. (2023) analyzed the influence of corporate social responsibility (CSR) and tourism development on regional growth using quantitative methods. The research, centered on PT Berau Coal, utilized multivariate analysis and WarpPLS-based structural equation modeling (SEM). Results indicate that CSR programs significantly support regional development, while tourism initiatives promote regional financial independence. Additionally, the study highlights that increasing the share of regional original income (PAD) in development financing could further enhance financial independence.

The methods used in the literature are mostly limited to content analysis, small-scale field research, and interviews. Large-scale, comparative, and experimental studies are quite rare. This methodological limitation emphasizes the need for research that systematically examines the impact of CSR on regional development. Most existing literature has focused on the relationship between CSR and sustainable development at a theoretical level, with few empirical findings. In Turkey, there are no experimental or large-scale field studies on this topic. Furthermore, the role of companies in regional development through CSR activities has not been sufficiently explored in the literature. This study aims to fill this gap; it makes a unique contribution to the literature through its empirical approach and emphasis on CSR in regional development.

2.1. Model specification

This study seeks to investigate whether firms' activities within the scope of corporate social responsibility (CSR) contribute to reducing regional development disparities. The central hypothesis posits that CSR-based initiatives undertaken by firms positively impact regional development. As the first study of its kind, it is expected to fill an important gap in the literature. The research focuses on small-scale, goods-producing firms operating across various sectors in five neighboring provinces situated within the TR5 Western Anatolia and TR7 Central Anatolia regions.



Note. The Ministry of Development's status ended in 2018. Its duties and powers were transferred to the Presidency's Strategy and Budget Directorate.

Figure 2. Regions in Turkey according to the level 1 classification

Source: Ministry of Development (2013)

The study is limited in scope, as it excludes firms located outside the provincial centers under consideration, firms operating solely in the service or trade sectors, and goods-producing firms with fewer than 10 or more than 100 employees.

3. Methodology

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the Ethics Committee for Social and Human Sciences Research of Muğla Sıtkı Koçman University on September 13, 2021, with reference No: 210376/336.

3.1. Research method, sample type model

The research universe comprises 9,119 firms, of which 5,260 are located in Ankara, 3,121 in Konya, 247 in Karaman, 300 in Aksaray, and 191 in Niğde. In this context, where N : denotes the universe size, n : sample size, d :

sampling error, and t : theoretical value of the significance level from the t -distribution table, the sufficient sample size required to represent the universe is calculated as follows:

$$n_o = \left[\frac{s.t}{d} \right]^2 = \left[\frac{0,5 \cdot 1,96}{0,05} \right]^2 = 384,16$$

when the correction formula is applied;

$$n = \frac{n_o}{1 + \frac{n_o}{N}} = \frac{384,16}{1 + \frac{384,16}{9.119}} = 369 \text{ is calculated.}$$

The firms were selected using a two-stage sampling approach. In the first stage, a non-random purposive sampling method was employed, guided by the maximum diversity criterion. In the second stage, the disproportionate quota sampling method was applied, resulting in a total of 400 firms -80 from each province- being included in the study.

The Socio-Economic Development Index data published by the Ministry of Industry and Technology classifies Ankara as a first-degree developed province, Konya as a second-degree developed province, Karaman as a third-degree developed province, Aksaray as a fourth-degree developed province, and Niğde as a fifth-degree developed province. Two models were created during the analysis. The first model examined the relationship between firms' CSR activities and the development levels of the provinces in which they are located. The second model examined the relationship between firms' responsibility levels in regional development and their CSR activities, regardless of province. Since no statistically significant link was found between firms' CSR activities and their provinces' development levels in the first model, only the findings from the second model were considered in this study.

The study obtained at least 15 answers for each predictor variable category at a 95% confidence interval and a 5% significance level. The data collected were subsequently analyzed using a multiple logistic regression model.

3.2. Dataset

The data set was constructed from the CSR scale developed by Maignan and Ferrel (1998; 2001a; 2001b) which is based on Carroll (1991:42)'s CSR pyramid, environmental performance indicators established by the Global Reporting Initiative (GRI, 2020), social performance indicator standards determined at the United Nations Conference on Trade and Development (UNCTAD, 2020), and study-specific questions designed to ensure contextual relevance were incorporated.

Table 1. Dependent and independent variables used in the mode

Dependent variable	Independent variables
Level of responsibility in regional development	X ₁ : Market area
	X ₂ : Procurement preference
	X ₃ : Number of certificates such as TSE, ISO etc.
	X ₄ : Number of institutions cooperated with
	X ₅ : Number of innovations in the last year
	X ₆ : CSR understanding
	E ₁ : Economic responsibilities*
	E ₂ : Economic responsibilities**
	Y ₁ : Legal responsibilities*
	Y ₂ : Legal responsibilities**
	A ₁ : Ethical responsibilities*
	A ₂ : Ethical responsibilities**
	G ₁ : Voluntary responsibilities*
G ₂ : Voluntary responsibilities**	

Note. * Factors obtained from the CSR scale developed by Maignan and Ferrel (1998; 2001a; 2001b), ** Factors obtained from other sources (GRI, UNCTAD), and questions developed considering them relevant to the study, ***40 questions in a scaled structure were asked to the participants, and eight factors were produced from these questions.

The data set contains 55 questions: 15 categorical and 40 scaled. Eight factors were obtained by taking the arithmetic mean of 40 questions in the scaled structure. These factors were classified considering the four dimensions of CSR. According to the scale developed by Maignan and Ferrel, the factors were created as economic responsibilities 1, legal responsibilities 1, ethical responsibilities 1, and voluntary responsibilities 1; according to the scale obtained from other sources (GRI, UNCTAD, and the scale developed by the authors), the factors were

created as economic responsibilities 2, legal responsibilities 2, ethical responsibilities 2, and voluntary responsibilities 2. A total of 14 questions, six of which were categorical, were included in the analysis as independent variables. The dependent and independent variables used in the created model are shown in Table 1.

A total of 513 firms were initially contacted through face-to-face interviews. However, 113 firms either declined to participate or were excluded due to missing data. Since sufficient observations could not be obtained in the center of Niğde, firms located in the Bor district were included in the study. Additionally, because the number of firms with 10–100 employees in Niğde and Karaman provinces fell below 80, an extra 15 firms with over 100 employees were added to the sample.

In the study, the dependent variable was defined as the perceived level of firms' responsibility in regional development. Participants were asked to indicate their perception of this responsibility by selecting one of four response options. The findings show that 10% of respondents stated that firms have no direct responsibility in regional development, while 42% indicated that firms hold only economic responsibilities. Furthermore, 27% of participants expressed that firms have both economic and social responsibilities, whereas 21% believed that firms are responsible in all aspects. This distribution shows that a significant portion of participants view firms' responsibilities as limited to the economic dimension, while a notable segment recognizes a broader, more comprehensive responsibility for regional development (Figure 3).

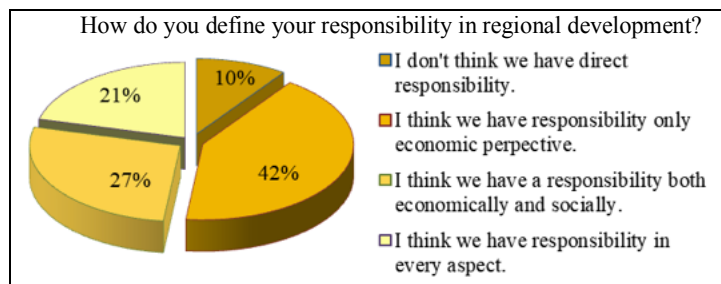


Figure 3. Percentage distribution of answers regarding the level of responsibility in regional development

When participants were asked about their views on CSR activities, the findings showed different levels of awareness and understanding of the concept. Ten percent of respondents said they had never heard of CSR before, while 20% reported hearing of it but lacking knowledge about what it involves. In contrast, 22% believed CSR activities are beneficial for society, and 12% viewed them as advantageous for companies. The largest group, 36%, believed CSR activities serve both societal and corporate interests. This distribution suggests that about one-third of the participants lack knowledge of the concept, while most recognize the various benefits of CSR (Figure 4).

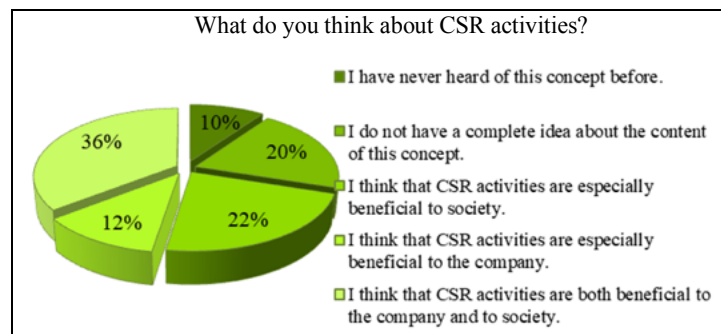


Figure 4. Percentage distribution of answers regarding CSR activities

To achieve a balanced number of observations, the analysis was conducted by combining certain response categories in some of the independent variables included in the model. Additionally, variables such as the types of documents owned by firms, the types of innovations implemented, and the institutions with which they cooperated were initially included in the analysis, but no statistically significant results were obtained. Therefore, these factors were reintroduced into the model by considering their quantitative presence rather than their categorical type, which produced statistically significant findings.

3.3. Analysis and findings

The analysis method employed a multiple logistic regression model. The most fundamental characteristic of the multiple logistic regression model is that it allows the analysis of dependent variables with more than two categories in a qualitative structure. For the analysis, the dependent variable must have at least three categories, and there

should be no ranking or correlation between these categories (Çokluk, 2010). In the first stage, preliminary research was conducted, and validity and reliability analyses were applied. Based on results, certain questions were removed from the study scale, while others were revised and reintroduced. Participant responses were directly recorded in the Google Form environment to prevent data loss. Once a sufficient number of observations had been collected, validity and reliability tests were repeated for the scale items. The factor analysis yielded a KMO value of 0.963, and Bartlett's test of sphericity with a significance level of 0.000 indicated that the dataset is both valid and reliable.

Table 2 presents the LR statistics and the information criterion. The probability ratio (LR) test yields a value of 0.000, which is less than 0.05, indicating that the variables are appropriate for the model. After including the variables, the explained variance is evaluated using various information criteria.

Table 2. Model fitting information

Model	Model suitability criteria			Probability ratio test (LR)		
	AIC	BIC	-2 Log Likelihood	Chi-Square	St. Err.	Sig.
Intercept only	1024,671	1036,645	1018,671			
Final	866,753	1094,266	752,753	265,918	54	0,000

Note. AIC: Akaike Information Criterion, BIC: Bayesian Information Criterion

When examining Table 3, the Pearson value is less than 0.05, and the deviance value is greater than 0.05, indicating that the data are compatible with the model. Additionally, it is noted that dividing the Pearson chi-square value by the degrees of freedom ($1592.854/1143 = 1.14$) yields a number close to 1. This indicates that there is no complete separation problem in the model and no overdispersion.

Table 3. Model goodness of fit

	Chi-Square	SE	Sig.
Pearson	1592,854	1143	0,000
Deviance	752,753	1143	1,000

Note. SE: Standard Error

Table 4. VIF test results

Variable	VIF	1/VIF
Economic1	4,14	0.241788
Economic2	3,78	0.264885
Legal1	3,34	0.299395
Voluntary1	2,94	0.340272
Legal2	2,00	0.499235
Voluntary2	1,87	0.535133
Certificate	1,56	0.639494
Innovation	1,45	0.690773
Cooperation	1,40	0.714493
Ethic1	1,19	0.842833
CSR	1,16	0.861489
Procurement	1,12	0.892803
Market	1,12	0.894822
Mean VIF	2,08	

Note. VIF: Variance Inflation Factor

VIF values range from 1.12 to 4.14. The average VIF is 2.08. These results indicate that there is no serious multicollinearity problem in the model. The highest VIF value was observed for the economic independent variable, but it remained below 5, indicating moderate correlation.

As a result of the Hausman-McFadden test, the chi-square value was found to be 19.65; the estimated value was found to be 0.9878, and the IIA assumption, which is the most important validity condition of the model, was met (Akkuş & Özkoç, 2016). It is seen that the obtained model meets all validity and reliability conditions, and there is no separation problem. Firms that think they 'only have an economic role in regional development' were designated as the baseline in the analysis. Dummy variables that were not statistically significant were eliminated from the model to make it as simple as possible. The results of the analysis are shown in Table 5.

Table 5. Multiple logistic regression analysis results

		Number of obs = 400 LR chi ² (39) = 252.16 Prob > chi ² = 0.0000 Log likelihood = -383.25642 Pseudo R ² = 0.2475					
Multinomial logistic regression		Dummies	RRR	SE	z	P> z	(% 95 CI)
Non-direct responsibility	Legal2	0.52	0.25	0.25	-1.34	0.181	0.20 1.36
	Voluntary2	0.86	0.40	0.40	-0.32	0.748	0.35 2.14
	Economic2	0.74	0.33	0.33	-0.68	0.497	0.30 1.79
	Ethic2	0.72	0.32	0.32	-0.73	0.466	0.30 1.73
	Market1	0.71	0.44	0.44	-0.55	0.580	0.21 2.40
	Procurement1	1.32	0.53	0.53	0.68	0.499	0.59 2.91
	Innovation1	1.81	0.85	0.85	1.27	0.205	0.72 4.52
	Innovation2	1.48	1.21	1.21	0.48	0.634	0.30 7.33
	Certificate2	1.81	0.80	0.80	1.34	0.181	0.76 4.31
	Organisation1	1.87	0.76	0.76	1.54	0.124	0.84 4.14
	CSR2	1.57	0.77	0.77	0.92	0.358	0.60 4.08
	CSR3	2.97	1.78	1.78	1.82	0.069	0.92 9.61
	CSR4	0.13	0.14	0.14	-1.92	0.055	0.02 1.04
	Constant	22.49	34.43	34.43	2.03	0.042	1.12 451.72
Only economic responsibility (base category)							
Economic and social responsibility	Legal2	0.15	0.06	0.06	-4.81	0.000	0.07 0.32
	Voluntary2	3.09	1.06	1.06	3.30	0.001	1.58 6.05
	Economic2	0.91	0.31	0.31	-0.29	0.775	0.46 1.78
	Ethic2	1.26	0.41	0.41	0.69	0.488	0.66 2.40
	Market1	2.22	0.74	0.74	2.38	0.017	1.15 4.29
	Procurement1	1.39	0.43	0.43	1.05	0.296	0.75 2.55
	Innovation1	2.40	0.90	0.90	2.32	0.020	1.15 5.02
	Innovation2	3.26	1.51	1.51	2.56	0.011	1.32 8.08
	Certificate2	2.01	0.68	0.68	2.07	0.038	1.04 3.90
	Organisation1	1.09	0.36	0.36	0.28	0.779	0.57 2.09
	CSR2	3.56	1.58	1.58	2.86	0.004	1.49 8.50
	CSR3	6.86	3.59	3.59	3.68	0.000	2.46 19.15
	CSR4	3.13	1.22	1.22	2.93	0.003	1.45 6.72
	Constant	3.04	3.60	3.60	0.94	0.347	0.29 30.99
Responsibility in every aspect	Legal2	0.05	0.02	0.02	-6.35	0.000	0.02 0.13
	Voluntary2	2.76	1.10	1.10	2.54	0.011	1.26 6.03
	Economic2	1.43	0.61	0.61	0.83	0.406	0.62 3.31
	Ethic2	2.26	0.93	0.93	1.99	0.047	1.01 5.06
	Market1	2.60	1.02	1.02	2.44	0.015	1.21 5.60
	Procurement1	2.07	0.75	0.75	2.00	0.045	1.02 4.21
	Innovation1	2.21	0.99	0.99	1.77	0.076	0.92 5.34
	Innovation2	3.48	1.95	1.95	2.22	0.026	1.16 10.46
	Certificate2	1.16	0.52	0.52	0.34	0.737	0.48 2.79
	Organisation1	2.10	0.78	0.78	2.00	0.045	1.02 4.34
	CSR2	4.88	2.60	2.60	2.97	0.003	1.72 13.88
	CSR3	3.97	2.72	2.72	2.97	0.044	1.04 15.19
	CSR4	5.41	2.81	2.81	3.25	0.001	1.95 14.98
	Constant	1.64	2.35	2.35	0.34	0.732	0.09 27.41

b = consistent under Ho and Ha; obtained from mlogit
 B = inconsistent under Ha, efficient under Ho; obtained from mlogit
 Test: Ho: difference in coefficients not systematic
 chi²(36) = (b-B)'[(V_b-V_B)⁻¹](b-B) = 19.65
 Prob>chi2 = 0.9878

Note. RRR: Relative Risk Ratio, SE: Standard Error, CI: Confidence Interval

The results of the multiple logistic regression analysis reveal significant associations between firms' CSR activities and their responsibility for regional development. Table 6 summarizes the coefficients and relative risk ratios (RRR). The results specifically emphasize that factors such as legal responsibility, voluntary responsibility,

ethical responsibility, market size, level of innovation, certification ownership, corporate collaboration, and CSR perception influence how responsibility for regional development is perceived. No statistically significant difference was observed at the 1% and 5% levels between respondents who believed that firms have no direct responsibility for regional development and those who considered them economically responsible.

Table 6. Summary results

Independent variables	Dummies of independent variables	Dependent variables categories		
		Non direct respon- sibility	Only economic re- sponsibility	Eeconomic and so- cial responsibility
Factors	Economic1	-	-	-
	Economic2	-	-	-
	Legal1	-	-	-
	Legal2	-	p<0,01	p<0,01
	Ethic1	-	-	-
	Ethic2	-	-	p<0,05
	Voluntary1	-	-	-
Market	Voluntary2	-	p<0,01	p<0,01
	Market1: national/global	-	p<0,05	p<0,05
	Market2: local/regional*	-	-	-
Procurement	Procurement1: from the same city	-	-	p<0,05
	Procurement2: from surrounding provinces	-	-	-
	Procurement3: from outside the region/by importing*	-	-	-
Innovation	Innovation1: one innovation	-	p<0,05	-
	Innovation2: at least two innovations	-	p<0,01	p<0,05
	Innovation3: no innovation*	-	-	-
Certificate	Certificate1: one certificate	-	-	-
	Certificate2: two certificates	-	p<0,05	-
	Certificate3: at least three certificates	-	-	-
	Certificate4: no certificate*	-	-	-
Organisation	Organisation1: one collaboration	-	-	p<0,05
	Organisation2: at least two collaborations	-	-	-
	Organisation3: no collaboration*	-	-	-
CSR	CSR1: I didn't hear/I don't know*	-	-	-
	CSR2: benefit of community	-	p<0,01	p<0,01
	CSR3: benefit of firm	-	p<0,01	p<0,05
	CSR4: benefit of both firm andcommunity	-	p<0,01	p<0,01

Note. * Was determined as the reference category and excluded from the model.

The factors economic1, legal1, ethical1, and voluntary1 were derived from the CSR scale developed by Maignan and Ferrel (1998; 2001a; 2001b). Furthermore, no statistically significant relationship was identified between the perceived level of responsibility in regional development and these factors, nor with the economic2 factor (Table 6).

Responsibilities tend to be more responsive to legal obligations than their counterparts. When both findings are considered together, it can be concluded that firms that perceive responsibility only in economic terms are more attentive to their legal duties than other firms. Voluntary2: The results show that as firms' positive perceptions of their voluntary responsibilities increase, the likelihood of perceiving themselves as having economic and social responsibilities in regional development is 3.09 times higher than that of those who view their role as only economic. Similarly, the probability of considering themselves responsible in all respects is 2.76 times greater. Taken together, these findings suggest that stronger voluntary responsibility orientations significantly expand firms' perceived role in regional development. This outcome resonates with the principles of Stakeholder Theory, which emphasizes that voluntary commitments beyond legal and economic obligations strengthen firms' relationships with stakeholders and enhance their contribution to broader societal and developmental goals.

Ethic2: The analysis shows no significant statistical difference between firms that see their role in regional development as both economic and social and those that see it as only economic. However, as firms' commitment to their ethical responsibilities grows, the likelihood of perceiving themselves as responsible in all respects is 2.26 times higher than among firms that limit their role to economic responsibilities. In other words, a stronger ethical

responsibility outlook broadens firms' view of their role in regional development. This finding supports the Triple Bottom Line framework, which highlights that ethical and social aspects complement economic factors, encouraging firms to adopt a more comprehensive view of their development responsibilities.

Market: The likelihood that firms with a national or global market size view themselves as economically and socially responsible in regional development is 2.22 times higher than that of those that see themselves only as economically responsible, and the likelihood of them seeing themselves as responsible in all aspects is 2.60 times higher. As firms' market size increases, so does their sense of responsibility for regional development. This also aligns with previous empirical studies that emphasize that firms embedded in larger, more competitive markets tend to assume broader developmental responsibilities to maintain legitimacy and stakeholder trust.

Procurement: The analysis shows no statistically significant difference between firms that see their role in regional development as solely economic and those that view it as both economic and social. However, firms that primarily procure intermediate goods from suppliers within their own province are 2.07 times more likely to see themselves as responsible in all aspects compared to firms relying on suppliers outside the region or abroad. This finding demonstrates a clear and significant link between procurement choices and perceptions of responsibility for regional development. It suggests that firms embedded in local procurement networks tend to assume a broader development role, underscoring the importance of local supply chains in boosting regional economies. This outcome aligns with empirical evidence, such as Yogiia et al. (2019), who found that cooperation with local stakeholders enhances regional development and supports Stakeholder Theory, which emphasizes the importance of local relationships and networks in shaping firms' social and developmental commitments.

Innovation: Firms that reported making one innovation are 2.40 times more likely to see themselves as responsible for regional development, both economically and socially, than firms that reported no innovation. Furthermore, firms that reported making at least two innovations are 3.26 times more likely to see themselves as responsible for regional development, economically and socially, than firms with no innovation. Additionally, these firms are 3.48 times more likely to see themselves as responsible in all aspects of regional development than non-innovating firms. Overall, the findings indicate that as firms' levels of innovation increase, their perception of responsibility for regional development also rises. These results align with the empirical evidence from Rondinelli & Berry (2000), who emphasized that innovative CSR practices contribute positively to sustainable development goals.

The analysis shows no statistically significant difference between firms that view themselves as only economically responsible for regional development and those that see themselves as responsible for all aspects of regional development. Similarly, no significant differences were found between firms with no certificates and those with one or at least three certificates. However, firms holding two certificates are 2.01 times more likely to see themselves as both economically and socially responsible compared to firms with no certificates. These findings suggest a positive relationship between the level of certificate ownership and firms' perceptions of responsibility in regional development. Certification may serve as an institutional mechanism that strengthens firms' accountability, aligning with the Institutional Theory, which highlights the importance of formal standards and compliance structures in shaping organizational behavior.

Institution: There is no statistically significant difference in the level of responsibility in regional development between firms that cooperate with one institution and those that do not cooperate with any institution. However, the likelihood that firms claiming to collaborate with at least two institutions see themselves as responsible in all aspects of regional development, compared to firms that report not cooperating with any institution, is 2.10 times higher for perceiving themselves as responsible across all areas rather than only in economic terms. These findings indicate that increased institutional collaboration broadens firms' perceptions of their role in regional development.

CSR: Compared to firms unfamiliar with CSR activities or unaware of their content, firms that see CSR activities as benefiting the community are 3.56 times more likely to perceive themselves as both economically and socially responsible in regional development than to see themselves solely as economically responsible. They are also 4.88 times more likely to consider themselves responsible in all aspects rather than only economically responsible. Companies that believe CSR activities benefit the firm are 6.87 times more likely to see themselves as both economically and socially responsible in regional development than to see themselves only as economically responsible; additionally, they are 3.97 times more likely to consider themselves responsible in all respects than only economically responsible. Finally, firms that perceive CSR activities as benefiting both the company and the community are 6.87 times more likely to see themselves as economically and socially responsible, and 3.97 times more likely to view themselves as responsible in all respects compared to firms unfamiliar with CSR activities or unaware of their content. Overall, the results suggest that as firms increase their CSR activities, their role in regional development also expands. This supports Stakeholder Theory, which emphasizes balancing the interests of both

firms and communities. It also aligns with empirical evidence such as Baah et al. (2015), who identified limitations in CSR practices meeting national development needs, and Yogiaa et al. (2019), who found that CSR involving local stakeholders improved regional development outcomes.

4. Conclusions

4.1. Theoretical implications

Considering that CSR activities require sacrifices beyond the usual economic operations of firms, the lack of any difference in CSR activities between those who do not see themselves as directly responsible for regional development and those who see themselves solely as economically responsible highlights the strong link between development and CSR practices. The analysis revealed significant relationships among firms that perceive themselves as economically and socially responsible, those that see themselves as responsible in all respects, and those that consider themselves only economically responsible, especially regarding legal responsibilities, voluntary responsibilities, market size, level of innovation, and perspectives on CSR activities. Additionally, notable differences in coefficients were observed between firms that identify as economically and socially responsible and those that consider themselves responsible in all respects, with the latter more likely to view CSR activities as beneficial to both the firm and the community. Furthermore, firms that regard themselves as responsible in all respects in regional development showed significant differences in procurement preferences, collaboration with other institutions, and ethical responsibilities. Overall, the model's findings point to five key results regarding the role of CSR in regional development.

- There is no statistically significant difference in CSR activities between firms that see themselves as only economically responsible and those that do not feel any direct responsibility for regional development.
- A significant difference in CSR activities exists between companies that see themselves as solely economically responsible and those that consider themselves both economically and socially responsible.
- Firms that see themselves as solely economically responsible differ considerably in CSR activities from those that consider themselves responsible in all aspects.
- A notable difference in CSR activities exists between firms that see themselves as economically and socially responsible and those that view themselves as responsible in all aspects.
- As firms' CSR activities increase, their perspective on responsibility in regional development broadens to encompass broader dimensions beyond purely economic obligations.

These results add to the literature by empirically confirming Institutional Theory (legal compliance shaping responsibility), Stakeholder Theory (multi-actor collaboration expanding responsibility), and the Triple Bottom Line framework (innovation and ethical practices combining economic, social, and environmental aspects). Importantly, the findings indicate that CSR activities can act as mechanisms to reduce regional development gaps, as firms with broader responsibility perceptions are more likely to adopt practices that benefit both the firm and the community.

4.2. Practical implications

When a community is seen as a whole made up of individuals, it is inevitable that positive or negative changes in individuals will reflect on the community. Therefore, community development can be achieved through fostering individual growth. Firms play a major role in economic decision-making, and their economic power gives them a significant advantage in guiding the community, along with the responsibility that comes with that power. While company owners monitor their internal and external environments during their business activities, this may initially seem like an increased cost. However, in the long run, their contributions to themselves and the community will be far more valuable than the profits they earn.

Within a free market economy, firms can expand their CSR activities through the central authority. Development efforts are sometimes directly undertaken by the central authority, and sometimes carried out through firms or collaborations. In this context, legal regulations are sometimes introduced, requiring firms to comply, while at other times attractive opportunities are created through incentives and support to guide firms toward specific goals. Besides existing regulations and incentives, new rules can be established to improve the level and capacity of firms' CSR efforts. During this process, the infrastructure that primarily supports the institutionalization of the company and the development of its human capital can be developed. The regulatory recommendations that may be implemented based on research findings are summarized as follows.

- Firms reporting higher levels of innovation are significantly more likely to assume broader responsibility. Therefore, R&D incentives, university collaboration programs, and patent support should be expanded to promote innovation-driven CSR. Regulations that positively influence development and economic growth, such as R&D incentives, university collaboration incentives, employment incentives, export incentives, investment incentives, energy incentives, efficiency incentives, and patent incentives, should be implemented by the central authority. However, to ensure that firms benefit from these incentives more broadly, the announcement, process, implementation, and finalization stages can be monitored by institutions like chambers of industry and regional development agencies. This way, it becomes possible to observe how many firms utilize the incentive regulations and to what extent. Such measures can further enhance the effectiveness and efficiency of small-scale manufacturing firms.
- It may be beneficial for policies that promote firms to expand their CSR efforts to be reflected in the economy. However, supporting these activities is essential for strengthening the social foundation. Therefore, evaluating development based on quality rather than just numbers or appearances will help foster positive expectations for the future, social trust, and overall well-being.
- Firms with a stronger sense of legal responsibility tend to limit their role to economic responsibilities. Therefore, legal regulations should be designed not only as compliance tools but also as enablers of broader CSR involvement, supported by incentives and institutional capacity building. Tax policies, especially indirect taxes, should be reviewed. Addressing the root causes of the informal economy is just as important as implementing measures to reduce it. While reducing the tax burden on companies may initially decrease central government revenues, offering incentives for activities that promote community benefits and lower companies' tax burdens can boost their market spending and ultimately increase government revenues. Incentive policies in this context should be varied and detailed, allowing companies to adapt based on their capacities.
- Companies operating in larger markets show broader views of responsibility. Reviewing tax policies, especially indirect taxes, and reducing burdens on companies while promoting CSR-related activities can boost their market spending and benefit communities. The effectiveness of laws in addressing social issues should be reassessed. It's crucial to remember that punitive legal regulations only affect organizations within their capacity. Additionally, adopting an approach that recognizes the beauty in every individual according to creation and integrates all segments into the community is vital, moving beyond a perspective that relies solely on restrictions. Companies working with multiple institutions are more likely to assume responsibility across all areas. Strengthening partnerships among companies, industry chambers, and regional development agencies can enhance the positive impact of CSR on regional growth.

Collectively, these implications show that increased CSR participation promotes social trust, enhances welfare, and reduces regional inequalities, creating a broader societal impact beyond economic growth. Although firms and individuals are motivated by incentives and similar regulations, the key is for individuals to take responsibility and initiative. Therefore, all individuals should develop into self-confident people who strengthen their core starting from primary school age. Recognizing the potential within each person will help them act responsibly without the need for classification, fostering personal and community growth.

4.3. Limitations and future research directions

Since this is the first study to examine the relationship between these two concepts, the success of the developed model and the data set used will become clearer in future research. The main limitation of this study is that it could not be conducted across all provinces and firms due to time constraints and research costs. Conducting future studies across different provinces, involving firms of various sizes, and including both service-producing and purely commercial firms will enable comparisons of the findings. Additionally, empirical research on the relationship between these two important concepts is nearly nonexistent. Therefore, applying the dataset and the model to further studies will help better understand their effectiveness.

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Ethical committee approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the Ethics Committee for Social and Human Sciences Research of Muğla Sıtkı Koçman University on September 13, 2021, with reference No: 210376/336.

Author contribution statement

The authors have contributed equally to this work.

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References

- Adamek, P. (2014). Corporate social responsibility as a tool for sustainable regional development: A case study in Moravian-Silesian and Zlín Region. *XVII. Mezinárodní Kolokvium O Regionálních Vědách*, 17(1), 749–756.
- Akkuş, Ö., & Özkoç, H. (2016). *Stata uygulamaları ile nitel veri analizi*. Seçkin Yayınevi.
- Baah, K. D., Tawiah, K. A., & Agbeior, V. (2015). Corporate social responsibility in Ghana's national development. *Africa Today*, 62(2), 71–92.
- Bahar, O., & Nas, Y. (2021). Bölgesel kalkınmada kurumsal sosyal sorumluluk faaliyetlerinin önemi: Torku örneği. *International Journal of Social Sciences and Education Research*, 7(1), 55–71.
- Bedük, A., & Ganiyusufoğlu, A. (2012). Social responsibility activities in businesses within the framework of sustainable development. *Journal of Sociotechnical Social and Technical Research*, 2(4), 14–34.
- Bowen, H. R. (1953). *Social responsibilities of the businessman*. University of Iowa Press.
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48.
- Çokluk, Ö. (2010). Lojistik regresyon analizi: Kavram ve uygulama. *Kuram ve Uygulamada Eğitim Bilimleri*, 10(1), 1357–1407.
- Demir, Ş. Ş. (2025). Sustainable airline choice: The role of environmental awareness, carbon offsets, and perceived corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 32(5), 6627–6640.
- Ebner, D., & Baumgartner, R. (2006). The relationship between sustainable development and corporate social responsibility. *Corporate Responsibility Research Conference*, Dublin, 4–5 September.
- Engin, E., & Akgöz, B. E. (2013). Sürdürülebilir kalkınma ve kurumsal sürdürülebilirlik çerçevesinde kurumsal sosyal sorumluluk kavramının değerlendirilmesi. *Selçuk İletişim*, 8(1), 85–94.
- Fudge, M., Ogier, E., & Alexander, K. A. (2021). Emerging functions of the wellbeing concept in regional development scholarship: A review. *Environmental Science and Policy*, 115(1), 143–150.
- Gorski, H., Fuciu, M., & Croitor, N. (2014). Research on corporate social responsibility in the development Region Center in Romania. *Procedia Economics and Finance*, 16(1), 224–233.
- GRI. (2020). *The global standards for sustainability reporting*. <https://www.globalreporting.org/how-to-use-the-gri-standards/resource-center/> (accessed September 20, 2020).
- Heikkurinen, P., & Bonnedahl, K. J. (2013). Corporate responsibility for sustainable development: A review and conceptual comparison of market- and stakeholder-oriented strategies. *Journal of Cleaner Production*, 43(1), 191–198.
- Kolk, A. (2016). The social responsibility of international business: From ethics and the environment to CSR and sustainable development. *Journal of World Business*, 51(1), 23–34.
- Kolk, A., & Van Tulder, R. (2010). International business, corporate social responsibility and sustainable development. *International Business Review*, 19(1), 119–125.
- Kuşat, N. (2012). Sürdürülebilir işletmeler için kurumsal sürdürülebilirlik ve içsel unsurları. *Afyon Kocatepe Üniversitesi İİBF Dergisi*, 14(2), 227–242.
- Lu, J., Liang, M., Zhang, C., Rong, D., Guan, H., Mazeikaite, K., & Streimikis, J. (2020). Assessment of corporate social responsibility by addressing sustainable development goals. *Corporate Social Responsibility and Environmental Management*, 28(2), 686–703.

- Maignan, I., & Ferrell, O. C. (2000). Measuring corporate citizenship in two countries: The case of the United States and France. *Journal of Business Ethics*, 23(1), 283–297.
- Maignan, I., & Ferrell, O. C. (2001a). Antecedents and benefits of corporate citizenship: An investigation of French businesses. *Journal of Business Research*, 51(1), 37–51.
- Maignan, I., & Ferrell, O. C. (2001b). Corporate citizenship as a marketing instrument: Concepts, evidence and research directions. *European Journal of Marketing*, 35(3–4), 457–484.
- Mbilima, F. (2019). Extractive industries and local sustainable development in Zambia: The case of corporate social responsibility of selected metal mines. *Resources Policy*, 74(1), 1–19.
- Ministry of Development. (2013). *İllerin ve bölgelerin sosyo-ekonomik gelişmişlik sıralaması araştırması (SEGE-2011)*. https://www.sbb.gov.tr/wp-content/uploads/2022/08/İllerin_ve_Bolgelerin_Sosyo-Ekonomik_Gelismislik_Siralama_Arastirmasi-SEGE-2011.pdf (accessed September 20, 2020).
- Oshiofite, E. E., Okoye, C. C., & Udokwu, S. T. (2023). The effectiveness of CSR in sustainable development: A case study of Total's oil exploration activities in the Niger Delta region. *Economic Growth and Environmental Sustainability*, 2(2), 57–65.
- Popa, R. A. (2015). The corporate social responsibility practices in the context of sustainable development: The case of Romania. *Procedia Economics and Finance*, 23(1), 1279–1285.
- Rondinelli, D. A., & Berry, M. A. (2000). Environmental citizenship in multinational corporations: Social responsibility and sustainable development. *European Management Journal*, 18(1), 70–84.
- Sankaya, M., & Kara, F. Z. (2007). Sürdürülebilir kalkınmada işletmenin rolü: Kurumsal vatandaşlık. *Yönetim ve Ekonomi*, 14(2), 221–233.
- Shayan, N., Kalejahi, N. M., Alavi, S., & Zahed, M. A. (2022). Sustainable development goals (SDGs) as a framework for corporate social responsibility (CSR). *Sustainability*, 14(3), 1–12. <https://doi.org/10.3390/su14031222>
- Sheehy, B., & Farneti, F. (2021). Corporate social responsibility, sustainability, sustainable development and corporate sustainability: What is the difference, and does it matter? *Sustainability*, 13(11), 1–15. <https://doi.org/10.3390/su13115965>
- Suharto, R., Hasid, Z., Ilyas, L., & Mahardika, S. (2023). The effect of corporate social responsibility and tourism development on regional development in Berau Regency. *Jurnal Ilmiah Manajemen Kesatuan*, 11(3), 1327–1334. <https://doi.org/10.37641/jimkes.v11i3.2282>
- UNCTAD. (2008). *Guidance on corporate responsibility indicators in annual reports*. https://unctad.org/system/files/official-document/iteteb20076_en.pdf (accessed September 20, 2020).
- Xia, B., Olanipekun, A., Chen, Q., Xie, L., & Liu, Y. (2018). Conceptualizing the state of the art of corporate social responsibility (CSR) in the construction industry and its nexus to sustainable development. *Journal of Cleaner Production*, 195(1), 340–353.
- Yogiaa, M. A., Wedayanti, M. D., Nurmandi, A., & Hasse, J. (2019). Regional development management through CSR in Pela Lawan District, Riau Province. *International Journal of Innovation, Creativity and Change*, 10(3), 239–255.