Enhancing B2B CSR: AI-Driven CRM and technology readiness

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Abstract: The purpose of this paper was to investigate the relationship among technology readiness, the implementation of artificial intelligence-based customer relationship management, and the promotion of the corporate social responsibility of B2B companies active in Iran's auto parts supply industry. This study has an applicative nature and is based on the descriptive survey research method. The statistical population sample for this study included 247 people, all of them managers and senior experts at the analysed companies with at least 7 years of work experience. A questionnaire was applied for collecting research data, and its validity and reliability were confirmed through the combined reliability and Cronbach's alpha indices. After collecting the necessary data in order to test four research hypotheses, the structural equation modelling method was employed by using the SmartPLS software. The results for testing the first research hypothesis showed that technology readiness has a positive effect on corporate social responsibility and that it directly predicts 0.810 (81%) of the changes related to corporate social responsibility in the context of the analysed companies. Also, the analysis of the results obtained for testing the fourth research hypothesis showed that technology readiness through artificial intelligence-based customer relationship management has a positive effect on corporate social responsibility and that technology readiness indirectly predicts 0.493 (49.3%) of the changes related to corporate social responsibility. Based on this, it can be acknowledged that the analysed companies can take steps towards improving corporate social responsibility by increasing technology readiness, strengthening their communication technology infrastructure and also by improving customer relationship management capabilities through artificial intelligence.

Keywords: Corporate Social Responsibility, Technology Readiness, Customer Relationship Management, Artificial Intelligence, B2B Companies.

1. Introduction

Today, businesses around the world face many environmental and competitive challenges (Haseeb et al., 2019). In order to cope with hese challenges, companies are seeking to use new and effective strategies in the present turbulent markets with low predictability so that they can Foster a favourable image for their business on the market by creating value for their customers. On the other hand, by creating a competitive advantage, they increase their competitiveness on the market (Rego et al., 2022). Corporate social responsibility is one of the most important concerns of many societies, and only a limited number of companies consider themselves responsible for their social performance and stakeholders, despite the economic crisis and intense market competition. (Carroll, 2021). The results of many studies show that by applying and implementing activities related to corporate social responsibility, in addition to achieving financial benefits, they can achieve benefits such as reducing employee turnover, increasing the reputation of companies, and increasing customer satisfaction (Dmytriyev et al., 2021). Today, prominent companies in the world have been able to establish a stronger position on the world markets than their competitors by complying with social responsibility and an effective management of their communication with customers and becoming powerful leaders in their industry (Saha et al., 2020).Achieving a high level of customer satisfaction has become one of the most essential goals of companies and is considered to be an important source for determining Please, specify to what kind of strategy you refer.of companies (Kurdi et al., 2020). The development and increasing use of information technology require training and preparation in information networks. Therefore, facing the leading challenges of the present era requires technological preparation in the field of information (Javed et

al., 2022). Information technology helps the comprehensive information systems of companies and this capability makes the formal structure of an organization act as a processor (Muktiarni et al., 2019). The greater the technology readiness in companies, the more the effectiveness of the customer relationship management system should increase (Flavián et al., 2022). Creating the necessary infrastructure in the field of information technology can help companies to use communication systems as good as possible. Stakeholders and customers help and prepare the foundations for achieving lofty goals such as high performance and a sustainable competitive advantage (Kaur et al., 2022). Digitization of production processes in terms of Industry 4.0 requires connection and integration in order to ensure superior value creation (Alibekova et al., 2020). Technology readiness can bring about benefits such as agility, increased productivity and full use of the capacity of information and communication technologies (ICT) for companies in various industries (Moldabekova et al., 2021). The results of various studies show that consumers consider the company's commitment to social responsibility when evaluating companies and their products (Chatzopoulou & de Kiewiet, 2021). Since corporate social responsibility means to attain business success based on respect for moral values, society and the environment, the role of customer relationship management can be considered very effective and efficient in attaining this success (Usmani et al., 2022). In the customer relationship management system, organizations often look for artificial intelligence-enabled software for a more efficient management and better customer support with the aim of retaining customers, which is a powerful tool for collecting customer data and providing this opportunity for organizations. so that they can strengthen their communication with customers and focus on better communication management (Shaikh et al., 2023). Customer relationship management systems based on artificial intelligence help to organize all customer needs (Libai et al., 2020) and review all tasks related to customer management and plan their execution, which means that by empowering customer relationship management through artificial intelligence, organizations can move in a direction that leads to the promotion of their social responsibility (Wang et al., 2022). In recent decades, information technology has become very important in the business world. Regardless of whether the business is small or large, information technology has helped the organization, manager and employees to carry out a more efficient management with regard to researching a specific problem, understanding its complexity and producing new products and services (Caputo et al., 2021). Companies use information technology to improve the way they design and manage customer relationships. Customer relationship management systems include all relationships of a company with customers (Alshurideh, 2022). The level of technology readiness in the context of an important component has influenced the degree of agility of an economy in accepting existing technologies and as a result in increasing the productivity, efficiency and competitiveness of business enterprises, and special emphasis is placed on the central capacity of information and communication technology in everyday life and in the context of production processes (Moldabekova et al., 2021). As a result, it can be acknowledged that the level of information technology readiness of a company is an important prerequisite for the capability of the customer relationship management system and ultimately the promotion of the social responsibility of companies. Today, companies are trying to find a way to penetrate the overly competitive and sometimes saturated markets by influencing consumers' sense of responsibility and humanity. But this issue is different for companies active on B2B markets. In the B2B context, not only do several important members of the business contenders participate in it, but since the customer is considered an organizational entity, there are many important members in these companies. It should be kept in mind that each of these important members plays a different role in the meantime, such as that of a buyer, decision maker and user, they interact with each other in different ways (Rustholkarhu et al., 2020). B2B customer relationship management should primarily be considered a strategic method for understanding and meeting the needs of business customers at each stage of the sales cycle (Sun et al, 2020). Field surveys in various industries, including Iran's automotive industry, show that B2B companies active in the field of auto parts production face many challenges in terms of improving social performance and social responsibility through customer relationship management. Since technology readiness and artificial intelligence-based customer relationship management are effective factors in this field and can have a transitory effect in promoting corporate social responsibility, the present study seeks to find an appropriate answer to this basic question How can corporate social responsibility be improved in

B2B companies active in Iran's auto parts supply industry through technology readiness and customer relationship management based on artificial intelligence? Since no study has been carried out in this industry so far, the results of this study can help the analysed companies improve their social performance, enhance their corporate social responsibility and benefit from artificial intelligence in customer relationship management.

2. Literature review and development of hypotheses

2.1. Technology readiness and corporate social responsibility

Technology readiness can lead to organizational changes on the path to organizational excellence (Prasetio et al., 2022). Technology readiness brings about two advantages: the availability of technology and the ability of people to use it, and it supports the successful business performance of the company, which helps companies improve their performance (Dezi et al., 2019). Companies can use new systematic technologies such as business intelligence, and in this way, managers can better control business processes, improve the company's performance and use its competitive advantages (Alnoukari & Hanano, 2017). In order to benefit from new technologies, improving technological capability and readiness is one of the basic requirements. Lee (2008) points out that improving technology readiness through training and development of information and communication technology infrastructure effectively affects technological capabilities (Lin et al., 2007).Improving technological capabilities can lay the foundation for the use of new technologies on the path to achieving the organization's sustainable development goals (Ronaghi & Mosakhani, 2022). Among these goals, the promotion of corporate social responsibility can be mentioned. Technology readiness increases the willingness of employees to adapt to new technologies and the environment (Lee, 2008). Researchers argue that companies are increasingly motivated to integrate sustainability issues into organizational strategies rather than simply seek to comply with legal requirements. Many large and medium-sized companies have implemented sustainability in their business strategies. This is because the development of corporate strategies in order to attain an excellent performance along with the good implementation of that strategy is acceptable (Such as: the strategy of maintaining current business operations), and encouraging companies to accept responsibility, especially in the field of environmental protection and the social dimensions of companies' activities in today's markets, is increasingly becoming a compulsion rather than a choice (Busse, 2016). Technology readiness, technological capability, as well as technology awareness can be decisive in this regard. Therefore, the first hypothesis of this research can be expressed as follows:

H1: Technology readiness has a positive effect on corporate social responsibility.

2.2. Technology readiness and customer relationship management based on artificial intelligence

Technology readiness is defined as a psychological factor typical of customers concerning the utilitarian and hedonistic motives in using new technologies (Cruz-Cardenas et al., 2021). Technology readiness is a personality trait that measures the orientation of the person or company towards using technology (Qasem, 2021). Today, commercial companies are under a lot of pressure from competitors and the market to produce new products and provide quality services. As a result, it is necessary to curb these pressures as quickly as possible, technology readinessand the dynamic structure of a company are essential requirements for success in curbing these pressures (Rahahleh & Omoush, 2020). Technology readiness and the improvement of technological capabilities enable companies to listen to the customer's voice in order to achieve market intelligence and identify new product introduction opportunities, to strive to attract new customers, maintain the existing customers, and target new markets (Fornell et al., 2006). Chatterjee et al. (2019) concluded in their study that data mining and artificial intelligence are two key requirements for improving the electronic customer relationship management system. In fact, by using artificial intelligence-based customer relationship management, companies can perform very detailed analyzes of the data collected from customers and make effective decisions (Foltean et al., 2019). The results of many

researches show that companies face many challenges when using artificial intelligence-based customer relationship management, and these challenges are generally solved by strengthening technology readiness and improving technology infrastructures (Rahman et al., 2023). Therefore, the second hypothesis of this research is proposed as follows:

H2: Technology readiness has a positive effect on Customer relationship management based on artificial intelligence.

2.3. Customer relationship management based on artificial intelligence and corporate social responsibility

The introduction of artificial intelligence technology into the business field has played a very important role in the transformation of the customer relationship management process. Based on this, it is possible to provide accurate answers solve customer problems and even learn new tips from systems with artificial intelligence (Sivaraks et al., 2011). Customers' access to a lot of information about products and their distribution for choosing a product in a competitive environment lead to a lack of loyalty to manufacturers. Therefore, having an effective relationship with customers and maintaining them is the most effective concept for the continuity and profitability of companies (Chen & Wu, 2016). Customer relationship management is a type of management strategy whose purpose is not only to increase profit temporarily, but also to increase customer satisfaction and increase profit in the long term, and its purpose is to maximize the profit obtained from the communication with customers. Customer relationship management has been developed as an approach based on maintaining long-term relationships with customers (Al-Dmour et al., 2019). AI systems based on big data analysis help B2B companies build customer knowledge, user knowledge, and market knowledge. Therefore, artificial intelligence-based customer relationship management systems can be useful in identifying important customers and predicting and investing in long-term relationships. This helps improve the quality of the relationship between B2B companies because B2B partners want to stay connected and interact regularly to explore potential business opportunities (Chatterjee et al., 2021). The results of different studies show that artificial intelligence-based customer relationship management provides the possibility of customizing information for companies, and This word could be removed companies can analyze the quality of their functional relationship with other partners by analyzing the collected data. (Mani et al., 2018) and take steps towards improving social communication as well as promoting social responsibility. Strong business relationships between B2B companies lead to the alignment of interests and as a result the alignment of sustainable development goals and companies' focus on promoting corporate social responsibility. In this sense, the third hypothesis of the study is proposed as follows:

H3: Customer relationship management based on artificial intelligence has a positive effect on corporate social responsibility.

2.4. Mediating Role of customer relationship management based on artificial intelligence

In recent years, the sales profession, production and knowledge sharing as well as the functions of value co-creation have been accepted as critical elements of organizational effectiveness (Higuchi & Yamanaka, 2017). Today, B2B companies face new challenges in creating value and providing products and services to customers, as well as in obtaining customer information and understanding customer needs (Schneider & Bowen, 2010). The results of different surveys show that companies that are equipped with artificial intelligence-based customer relationship management can be more effective in collecting customer-related information and surpassing their competitors (Uzir et al., 2021). In B2B companies, AI-CRM systems can be useful in identifying important customers and predicting and investing in long-term relationships (Almarzooqi, 2019). This helps improve customer relationship performance because B2B partners (Supplier Company and Buyer Company) want to stay connected and interact regularly to explore potential business prospects (Bag et al., 2021). Increasing technology readiness can reduce social sustainability problems such as non-compliance with social responsibility principles, non-

compliance with health and safety principles, as well as poor communication with partners and customers (Mani et al., 2018). Finally, it can strengthen the infrastructure for improving the functional communication of companies with partners, customers and stakeholders. B2B companies can contribute to the sustainable development of society by focusing on their corporate social responsibility and by creating strong relationships with their partners (Kapitan et al., 2019). Improving the functional communication of B2B companies with customers, stakeholders, and the general public can be achieved by improving knowledge-sharing methods, complementary assets and capabilities, and through effective governance methods, which would enable these companies to move towards promoting corporate social responsibility (Chen & Huan, 2020). This goal can be reached by enhancing technological preparation and strengthening technology and using artificial intelligence-based customer relationship management. Based on this, the fourth hypothesis of the study is proposed as follows:

H4: Technology readiness through customer relationship management based on artificial intelligence has a positive effect on corporate social responsibility.

2.5. Conceptual model

According to the purpose of the study and the investigated variables, the conceptual model of this study in Figure 1. Is shown it is necessary to explain that this model is presented based on research findings.
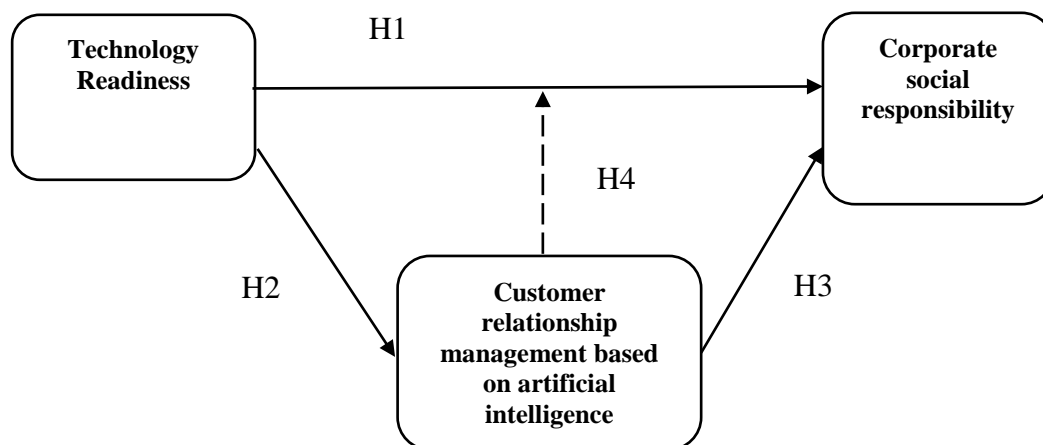
Figure 1. The proposed Conceptual Model (Source: research findings)

3. Methodology

The present research has an applicative nature and is based on the descriptive survey research method. The statistical population for this study is made up exclusively of managers and senior experts of B2B companies active in the Iranian auto parts supply industry with at least 7 years of experience. The initial estimate showed that the statistical community includes 684 people. Due to the large number of members of the statistical population, sampling was done using a simple random sampling method. Considering that the research had the character of a survey, the simple random sampling method was the best choice. The number of sample members was 247 based on the calculation made by employing Cochran's formulate a confidence level of 95%. After identifying these people, the questionnaire was distributed among them electronically, and after four weeks from the delivery of the questionnaire, 233 completed questionnaires were collected. The questionnaire for this research, in addition to the items related to the investigated variables, also included demographic questions related to 4 characteristics, namely the age group, the education level, the amount of work experience and the size of the related company. The results of the analysis of the collected data about the demographic characteristics mentioned above are presented in Table 1.

Table1. Demographic particulars (n = 233)

Demographic categories	Description	Numbers	Percentage
Age Group	25-40	64	28%
	41-55	98	42%
	Above 55	71	30%
Educational Qualifications	Bachelor's degree	52	22%
	Master's degree	146	63%
	PhD	35	15%
Work Experience (Years)	Less than 10	42	18%
	10 to 20	109	47%
	Above 20	82	35%
Firm Size	Small	18	23%
	Medium	37	47%
	Large	24	30%

3.1. Data collection

In this research, library sources were used to analyse previous research works and a questionnaire was used to collect data related to the research variables. The research data collection tool for this paper was designed in the form of a questionnaire. In this questionnaire, a 5-point Likert scale (very high, high, medium, low and very low) was used. It is worth mentioning that the questionnaire for the present research was compiled based on the research literature and based on the questionnaires previously used in relation to technology readiness, corporate social responsibility and customer relationship management based on artificial intelligence. This questionnaire is also in line with a research questionnaire including 6 items which was used in the study of Vize et al. (2013) for the variable of technology readiness, and with the 12 items used in the study of Martos-Pedrero et al. (2023) for the variable of corporate social responsibility and in order to measure the mediating variable of management. Communication with customers based on artificial intelligence was evaluated based on the 8 items used in the study of Chatterjee et al. (2021). In this research, in order to check the validity of the questionnaire items, first the face validity method was employed and then the content validity ratio was used. For this purpose, the questionnaire was given to 20 experts and they were asked about each question and about the evaluation of the relevant objective of the questionnaire, the questionnaire was commented on and approved with minor modifications. The use of the content validity ratio was already mentioned in a previous sentence. Considering that the opinions of 20 experts were used to check this ratio, the acceptable value of this ratio was determined as 0.42 based on the minimum indexable value of CVR. This mention should be removed, as it represents a repetition of a previous mention. The results of examining this ratio in relation to the 26 items of the research questionnaire showed that the obtained values were all higher than the standard value of 0.37. As a result, it can be said that the content validity of the questionnaire items was confirmed. Also, in the present study, Cronbach's alpha method was used to measure the reliability of the questionnaire items using the SPLS software version 23. The obtained value of this coefficient for each of the research constructs 0.89 for technology readiness, 0.84 for corporate social responsibility and 0.91 for customer relationship management based on artificial intelligence. Considering that these values are higher than the minimum value of 0.7, it can be concluded that the applied questionnaire has high reliability.

3.2. Data analysis methods

In this study, the partial least squares method in structural equation modelling (PLS-SEM) was used in order to analyze the data, match the research conceptual model and test the proposed hypotheses. PLS modelling is widely used in various fields including management sciences (Wen et al., 2010). The Lisrel approach focuses on covariance profiling and PLS modeling focuses on variance maximization. PLS is a variance-based approach that requires fewer conditions in comparison with similar techniques based on structural equations such as Lisrel and Imus

(Liljander et al., 2009). For example, unlike Lisrel, PLS path modelling is more suitable for real applications, especially when the models are more complex, it will be more desirable to use this approach. Predictably, the PLS path modelling method is preferred to variance-based techniques such as Lisrel (Sarstedt et al., 2014). In PLS modelling, the measurement model stage is checked through a validity and reliability analysis and the confirmatory factor loading analysis, and then, the structural model is checked by estimating the path between variables and determining the fit indices for the model (Khan et al., 2019). The advantages of using this technique include its robustness for small samples, and complex models and its application in the absence of normality of data (Hair et al., 2019).

4. The obtained findings

4.1. Descriptive statistics results

In the descriptive statistics section, each of the research constructs was analyzed according to the average, standard deviation, skewness and kurtosis indicators and based on the five-point Likert scale, the results of this study are shown in Table 2.

Table 2. Descriptive statistics for the research variables

	Average	Standard deviation	Skewness	Kurtosis
Technology readiness	4.35	0.442	-1.365	0.412
Corporate social responsibility	4.01	0.539	-1.789	0.439
Customer relationship management based on artificial intelligence	3.99	0.794	-1.225	0.403

According to the results obtained for the skewness and kurtosis indicators, considering that these values are in the range of -2 to +2, it can be concluded that the collected data related to the analysed-components follows a normal distribution.

4.2. The results for inferential statistics

4.2.1. KMO test

In this research, before using the structural equation modelling method in SmartPLS software, KMO and Bartlett`s tests were used to ensure the adequacy of the sample size. In order to conduct a factor analysis, first of all, it should be ensured that the available data can be used for analysis or not. This test is used for this purpose. If the value obtained for the KMO index is higher than 0.7 and close to 1, the desired data (sample size) is suitable for factor analysis, otherwise (if it is lower than 0.7), the results of factor analysis for the chosen data are questionable in addition, if the significance level of Bartlett's test is lower than 5%, it indicates that factor analysis is suitable for identifying the factor model. The results of this test are presented in Table 3, which shows that the sample size and the relationship between the research variables are adequate.

Table 3. Results of KMO and Bartlett's test

KMO	0.889
Bartlett's test	9721.3245
Degrees of freedom	222
Significance level	0.000

4.2.2. Structural equation modelling

4.2.2.1. The results for measurement model fitting

Based on the PLS-SEM algorithm, in the first stage, the measurement models were evaluated. The results for the evaluation of reliability criteria (Cronbach's alpha index and combined reliability), Average variance extracted and the results for measuring the factor loading

for the research variables are included in Table 4. It shows that the values obtained for factor loading are higher than 0.5, Cronbach's alpha is higher than 0.7 and the combined reliability is higher than the set criterion, i.e. 0.7. In addition, the results obtained for This criterion was not included in Table 4 show that the convergent validity values of all research variables are higher than the standard value of 0.5. The Heterotrait-Monotrait Ratio (HTMT) index was used to assess the discriminant validity of the research variables. Henseler et al. (2016) introduced this index. The HTMT index replaces the old Fornell-Larcker criterion. HTMT standard limit lies between 0.85 and 0.9. Discriminant validity is acceptable if the values of this criterion are lower than 0.9. The test results for this index are included in Table 5.

Table 4. Measurement model fitting results

Component	Item	Factor Loading	Cronbach's Alpha	Combined Reliability	Average variance extracted	R^2
Technology readiness	Digital technologies generate a perception of productivity improvement among industrial manufacturing firms	0.778	0.825	0.873	0.536	
	Using digital technologies at work is giving better results in comparison with the use of manual techniques a few years ago	0.595				
	Digital technologies provide better flexibility at work	0.790				
	Our firm has adopted advanced digital technologies before our competitors	0.682				
	Our firm provides regular training on digital technologies to its employees and demonstrates its benefits	0.775				
	Our firm has invested a huge amount in building the technology readiness	0.753				
Corporate social responsibility	Our company promotes stable employment and recognizes its importance for its employees and for the society	0.719	0.894	0.911	0.546	0.870
	Our company evaluates the work climate and the satisfaction of its employees on a regular basis	0.615				
	Our company provides its partners/shareholders with clear, complete and accurate information on its policies, decisions and activities	0.754				
	Our company has an adequate communication channel with its partners/shareholders and is receptive to their proposals	0.740				
	Our company carries out studies on customer satisfaction	0.738				
	Our company establishes prior control procedures to ensure client compliance	0.682				
	Our company contributes to the growth of producers and to preserving their profitability	0.629				
	Our company cooperates with its producers, providing technical advice for the improvement of their products	0.789				
	Our company manages waste properly	0.682				
	Our company has an energy-saving program	0.596				
	Our company adopts programs for the use of alternative energies	0.660				
	Our company has implemented a program to reduce water consumption	0.619				

Customer relationship manage-ment based on artificial intelligence	A quality implementation of AI-CRM for B2B relationship management will increase the level of enterprise customer delight	0.663	0.860	0.891	0.506	0.484
	B2B firms' strategies are aligned with AI-CRM objectives	0.631				
	We have access to data sets for the actual implementation of AI-CRM in customer management	0.730				
	Our firm has been able to integrate AI-CRM with our global IT system	0.661				
	We feel that our AI-CRM system will be able to handle the increasing pressures related to customer enquiries	0.758				
	I have faith that the implementation of AI-CRM can improve social sustainability and ultimately, the reputation of our organization	0.756				
	I am sure that AI-CRM has given us an edge over competitors who are not using such systems	0.744				
	I am sure that AI-CRM for B2B relationship management has led to an improvement in our market shares	0.733				

Table 5. Discriminant validity test (HTMT results)

	Technology readiness	Corporate social responsibility	Customer relationship management based on artificial intelligence
Technology readiness			
Corporate social responsibility	0.753		
Customer relationship management based on artificial intelligence	0.802	0.803	

Based on the values obtained for factor loading and Cronbach's alpha coefficients, the combined reliability and validity of the partner and the analysis of software outputs, and since the values for each of the above criteria for each of the latent research variables were above the quorum and threshold, the suitability of the convergent reliability and the validity of the research model can be confirmed.

4.2.2.2. Structural model evaluation

Upon fitting the measurement models, the structural model (conceptual model) was fitted and subsequently the research hypotheses were tested. The P-value, T-value, f^2, R^2, and Q^2 indices were utilized for fitting the research conceptual model.

-T-value: In the partial least squares method, various indices are applied to evaluate the structural model; one of the most important indices is the T-value. If the value of the T statistic is greater than 1.96, at the 5% error level, it indicates the correctness of the relationship between the analysed structures. The results are depicted in Figure 2.

- P-Value is for measuring the appropriateness of the proposed model for evaluating whether the test results are random or not. However, this value merely determines a cut-off point based on which it can be claimed that the findings are statistically significant. Regarding the acceptable level for this index, many researchers state that the threshold should be lower than 0.05. The results for this index are also illustrated in Figure 2.

- R^2 is an essential criterion for checking the fitting of the research conceptual model. Three values were introduced as acceptable values, namely 0.19, 0.33, and 0.67, which correspond to a weak, medium, and strong model fitting, respectively, with regard to the R2 criterion. The results of this test are illustrated in Figure 3.
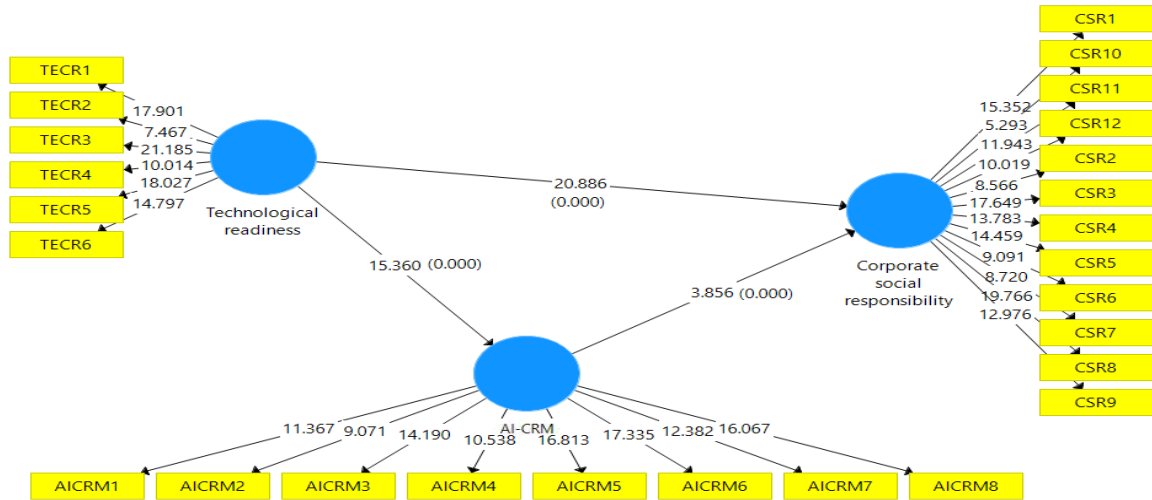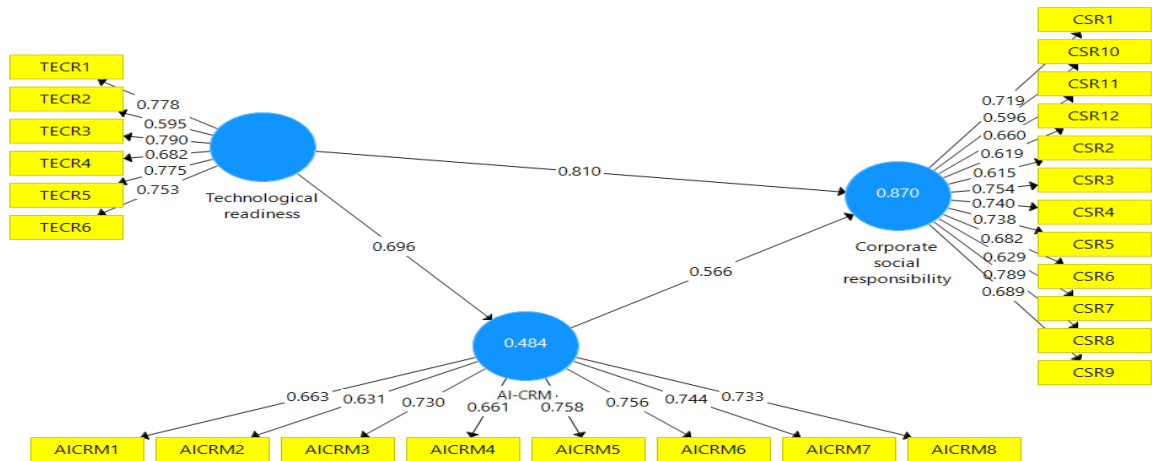

Figure 2. T-values and P-values

Figure 3. The values of R^2

Q^2: This index was first introduced by Stone-Geisser (1974) and determines the predictive power of the proposed model. However, Henseler et al. (2016) introduced three values, namely 0.02, 0.15, and 0.35, which indicate the weak, medium, and strong predictive power of the proposed model, respectively. The results for Q^2 are reported in Table 6.

Table 6. The values of Q^2

	$Q^2=(1-SSE/SSO)$
Technology readiness	0.346
Corporate social responsibility	0.359
Customer relationship management based on artificial intelligence	0.354

The results included in Table 7show that the fit of the model is good and that the model has a good predictive power.

F^2: According to Henseler et al. (2009), it is recommended to calculate the effect size (f^2) for each path coefficient in the structural model, and f^2 values exceeding 0.35, 0.15, and 0.02 are considered large, moderate, and small, respectively (Cohen-Charash & Spector, 2001). The f^2 value

indicates whether an independent construct has a notable effect on a dependent construct (Götz et al., 2010).

Table7. The values of F^2

	Customer relationship management based on artificial intelligence	Corporate social responsibility
Technology readiness	0.939	1.604
Customer relationship management based on artificial intelligence	-	0.689

4.2.3. Hypothesis testing results

Based on the research data analysis algorithm using the partial least squares method, at this stage, based on the results obtained for the T-value, P-value and path coefficients, the research hypotheses were tested. If the value of the T coefficient for each path is higher than 1.96 and the P-value is lower than 0.05, the corresponding path is confirmed at a 95% confidence level and the related hypothesis is confirmed. The results are reported in Table 8.

Table 8. Hypothesis test results

Hypotheses	β	T-Value	P-value	Result
TECR → CSR	0.810	20.886	0.000	confirmed
TECR → AI-CRM	0.696	15.360	0.000	confirmed
AI-CRM → CSR	0.566	3.856	0.001	confirmed
TECR → AI-CRM → CSR	0.493	3.753	0.001	confirmed

5. Conclusion and future research

Improving the social responsibility of an organization has a direct impact on the success of that organization. Corporate social responsibility is a set of shared human and environmental values, beliefs and knowledge among employees in performing activities aimed at production or creating added value (Pfajfar et al., 2022). Today, the issue of corporate social responsibility has become a pervasive phenomenon and even the main concern of organizations. Today, it is quite clear that organizations can preserve their position in society if they pay attention to the surrounding environment and create a balance between the interests of the organization and society. Customers, suppliers, shareholders, employees, unions, government and society, in general, are among the interest groups of organizations (Brammer et al., 2012). Therefore, the survival requirement for organizations is to accept social responsibility towards these interest groups and their satisfaction. Corporate social responsibility is the task of a forward-looking manager, and the managers of today should no longer focus on the traditional tasks of planning, organizing, leading, coordinating and monitoring, but should know the social and public dimensions of their profession, based on the effects of their organization on the environment. They should be socially and culturally aware, because it is quite obvious that every decision of a manager can affect the fate of other institutions in society during a chain process (Fallah Shayan et al., 2022). Technology readiness in an organization can help promote corporate social responsibility by enabling that organization to better understand and manage its environmental and social impacts (Sahoo et al., 2023). Technology can help organizations track and report on their environmental performance, such as energy use and greenhouse gas emissions (Li & Yang, 2022). It can also help organizations manage their supply chains more effectively, ensuring that suppliers are meeting environmental and social standards. Furthermore, technology can help organizations engage with stakeholders more effectively, including employees, customers, and different communities (Ahannaya et al., 2022). By using technology to improve transparency and accountability, organizations can build trust-based relationships with stakeholders and demonstrate their commitment to corporate social responsibility. Moreover, the communication with customers based on artificial intelligence can

influence the promotion of corporate responsibility in several ways. AI-based chatbots can provide real-time customer service in e-commerce settings and help customers obtain information or assistance (Nicolescu & Tudorache, 2022). AI-based chatbots can also solve the most frequently asked questions raised by users. Additionally, AI can track how customers feel in real time and provide companies with insights into what customers think and feel (Hill et al., 2015). According to the results obtained from the present study and to the results of previous research, it can be concluded that the increase in technology readiness along with the use of artificial intelligence-based customer relationship management in B2B companies active in Iran's auto parts supply industry can greatly increase the promotion of corporate social responsibility in these companies. Further on, the results of each of the research hypotheses were analysed.

In the context of the first hypothesis of this study, the relationship between technology readiness and the promotion of corporate social responsibility of B2B companies active in Iran's auto parts supply industry was investigated. The result of testing this hypothesis showed that the company's technology readiness has a positive effect on the promotion of corporate social responsibility and the technology readiness of the analysed companies directly predicts 0.810 (81%) of the changes related to corporate social responsibility. Based on the results obtained, it was suggested that the companies active in the analysed industry provide the necessary infrastructure to improve corporate social responsibility by developing digital technologies in different sectors. Also, these B2B companies can focus on accepting technological social responsibility (TSR), which is at the intersection of technology readiness and CSR, and on carrying out planning activities with the aim of producing and providing environmentally friendly services, and of achieving sustainable development on new markets to provide their products and services. These advantages can contribute to the stability of these companies in a highly competitive environment. Investigations show that the results for testing the first hypothesis are consistent with the results presented in the studies of Li & Yang (2022) and Managi et al. (2021). With regard to the second hypothesis of this study, the relationship between technology readiness and customer relationship management based on the artificial intelligence of B2B companies active in Iran's auto parts supply industry was investigated. The result for testing this hypothesis showed that the company's technology readiness has a positive effect on the use of artificial intelligence-based customer relationship management and the technology readiness of the analysed companies directly predicts 0.696 (69.6%) of the changes related to artificial intelligence-based customer relationship management. Based on the obtained results, it was suggested that the managers of the analysed companies, along with the creation and improvement of information technology infrastructure, can empower their employees by planning and implementing specialized training in the field of using artificial intelligence technology in customer relationship management and take steps towards the effective use of artificial intelligence by building long-term relationships with their customers and stakeholders. Investigations show that the results for testing the second hypothesis for testing the second hypothesis were consistent with the results obtained by the studies of Adam et al. (2021), Ameen et al. (2021) and Chatterjee et al. (2021). For the third hypothesis of this study, the relationship between customer relationship management based on artificial intelligence and corporate social responsibility of B2B companies active in Iran's auto parts supply industry was investigated. The results for testing this hypothesis showed that artificial intelligence-based customer relationship management has an effect on promoting corporate social responsibility, and artificial intelligence-based customer relationship management in the studied companies directly predicts 0.566 (56.6%) of the changes related to corporate social responsibility. Based on the obtained results, it was suggested that the marketing and sales managers of the analysed companies use artificial intelligence to convey their CSR-related efforts to customers more effectively, in this regard, companies can use chatbots equipped with artificial intelligence, provide customers with information about their initiatives, such as environmental protection, and answer questions about products and services. They can also use AI to create personalized marketing campaigns and highlight companies' CSR efforts for customers interested in sustainability. Investigations show that the results for testing the third hypothesis were consistent with the results obtained by Mani et al. (2018), Al-Dmour et al. (2019) and Chatterjee et al. (2021). For the fourth hypothesis of this study, the mediating role of customer relationship management based on artificial intelligence was investigated in the context of the relationship between technology readiness and social

responsibility. The results for testing this hypothesis showed that technology readiness in the analysed companies through artificial intelligence-based customer relationship management has a positive effect on promoting corporate social responsibility. And technology readiness in these companies indirectly predicts 0.493 (49.3%) of changes related to corporate social responsibility. According to the obtained results, it was suggested that the analysed companies, in order to promote their corporate social responsibility, along with strengthening technology readiness, should put the use of artificial intelligence-based customer relationship management on their agenda. It was also suggested that the data collected from customers should be analyzed through artificial intelligence-based customer relationship management, by monitoring the supply and supply chains, and by identifying patterns in customers' purchasing behavior in order to produce and provide This word should be removed sustainable products and services.

The current study, like other research and studies in the field of management and social sciences, was faced with limitations. Since this study is an exploratory study, the research findings are limited to the sample size, and the results may change if the sample size changes. Also, the existence of different opinions about the subject under study among the respondents to the questionnaire can affect the results of the research to some extent. To that, the community analysed in this paper is made up of B2B companies active in Iran's automotive parts supply industry, therefore the results obtained are specific to these companies and specifically to the automotive industry and related industries. For this reason, it is suggested that researchers in their future studies should implement the subject of this study in other organizations and manufacturing and service industries inside and outside of Iran and compare the results they will obtain with those set forth in this study. Considering that in this study, the impact of technology readiness and the use of artificial intelligence-based customer relationship management in the promotion of corporate social responsibility was investigated, it is suggested that in view of the importance of promoting corporate social responsibility among B2B companies and also of achieving a competitive advantage in the automotive parts manufacturing industry, future researches should examine the impact of information technology capabilities, new technologies, and green human resource management on corporate social responsibility. In this study, customer relationship management based on artificial intelligence was considered as a mediating variable, and on this basis, it is suggested that researchers further investigate the mediating role of other variables such as innovation capability and industry dynamics as mediating variables.

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