

A STUDY ON THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY PERFORMANCE ON CONSUMER PURCHASE DECISIONS: A CASE OF THE PHARMACEUTICAL INDUSTRY

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Abstract

This study explores the impact of Corporate Social Responsibility (CSR) performance on consumer purchasing decisions in the pharmaceutical industry, particularly in the context of global health crises. Grounded in CSR theory, we formulated and tested hypotheses regarding the direct influence of CSR performance (X) on purchasing decisions (Y) and the mediating role of consumer perception (M). A structured questionnaire was developed, assessing four dimensions of CSR performance: service quality, brand image, product quality, and welfare policies. A pre-survey of 120 questionnaires yielded 115 valid responses, demonstrating strong reliability (Cronbach's alpha > 0.7). In the formal survey, 390 questionnaires were distributed, resulting in 376 valid responses after excluding 80 respondents under 18 years, leading to a final sample size of 296. Descriptive analysis revealed a diverse demographic, with a significant portion holding a bachelor's degree or higher and a balanced income distribution. Statistical analyses, including regression and mediation analysis, indicated that CSR significantly influences purchasing decisions, particularly through brand image ($p < 0.001$) and welfare policies ($p = 0.002$). Furthermore, CSR was found to reduce consumers' risk perception ($p < 0.001$) and enhance quality perception, fostering trust in brands. The mediation analysis confirmed that both risk and quality perceptions significantly mediate this relationship ($p < 0.01$). In conclusion, CSR performance not only directly impacts consumer purchasing behavior but also enhances perceptions of product safety and quality, highlighting the importance of a strong CSR image for building brand credibility.

Keywords: *Corporate Social Responsibility Performance, Consumer Purchasing Decisions, The Pharmaceutical Industry*

Introduction

Corporate Social Responsibility (CSR) encompasses business practices that integrate social, environmental, and ethical considerations alongside economic objectives (Aguinis & Glavas, 2019). In the pharmaceutical industry, CSR is not only an ethical obligation but also a strategic tool for sustaining long-term competitiveness (Kumar, Sureka, & Pandey, 2021). Given that pharmaceutical products and services are directly linked to human health and quality of life, a company's CSR performance significantly influences its brand image and market reputation (Fatma, Rahman, & Khan, 2022). The COVID-19 pandemic has heightened public awareness of health-related products and services, increasing expectations for corporate responsibility in disease prevention, product quality, and efficacy. This shift has driven consumers to pay closer attention to how companies fulfill their social responsibilities when developing and marketing their products (He & Harris, 2020). With growing societal awareness and higher education levels, consumers are becoming more conscious of corporate social responsibility initiatives, including environmental sustainability, employee welfare, and philanthropic contributions (Kumar et al., 2021). As a result, they tend to favor companies with strong CSR commitments, particularly in industries where product safety and ethical considerations play a crucial role.

This study investigates the impact of Corporate Social Responsibility (CSR) performance on consumer purchase decisions in the pharmaceutical industry, aiming to construct an analytical model. Existing research has advanced our understanding of CSR's effects on corporate image and financial performance but has largely overlooked its direct influence on consumer choices. This gap is especially significant in the pharmaceutical sector, where ethical considerations and consumer trust are crucial.

As competition intensifies and consumers become more discerning about corporate ethics, understanding how CSR affects consumer behavior is essential. This research aims to provide insights that help businesses navigate these dynamics effectively. By integrating theoretical frameworks with empirical data, the study analyzes how various aspects of CSR—such as service quality, brand image, product quality, and welfare policies—affect consumer decisions. It also highlights the mediating roles of consumer perceptions, particularly regarding risk and quality.

Ultimately, this work enriches the understanding of CSR in brand management and its influence on consumer behavior, establishing a theoretical model that elucidates the relationship between CSR performance and consumer purchase decisions.

Overall, this study establishes a theoretical model that illustrates how Corporate Social Responsibility (CSR) performance influences consumer purchasing decisions, providing new perspectives and methods for brand management and consumer behavior research. Although existing studies have explored the impact of CSR on corporate image and financial performance, there remains insufficient analysis of its direct effects on consumer choices, particularly in the pharmaceutical industry. This sector is directly related to public health, and consumers are increasingly demanding high ethical standards and transparency from companies, making it essential to understand the specific impacts of CSR. Therefore, a deeper exploration of the role of CSR in the pharmaceutical industry not only helps fill the gaps in academic research but also provides key insights for companies to build trust and promote sustainable development. The findings will offer valuable theoretical support and practical guidance for businesses in the pharmaceutical sector and policymakers, contributing to the advancement and improvement of CSR practices within the industry.

In conclusion, this study addresses its research objectives by enhancing the theoretical framework surrounding Corporate Social Responsibility (CSR) and its influence on consumer purchase decisions. By exploring the nuances of CSR in the pharmaceutical sector, the research establishes a robust foundation for understanding how CSR initiatives can shape consumer perceptions and behaviors. This not only enriches academic discourse but also offers practical guidance for pharmaceutical companies aiming to implement effective CSR strategies. Ultimately, the findings underscore the significant theoretical and practical implications of CSR, providing valuable insights for both scholars and industry practitioners.

Objectives

1. Analyze the impact of CSR performance on consumer purchasing decisions in the pharmaceutical industry.
2. Create a model linking CSR, consumer perceptions, and purchase decisions.

Research Questions

1. How does a company's CSR performance in service quality influence consumers' purchasing decisions?
2. How does a company's CSR performance in brand image influence consumers' purchasing decisions?
3. How does a company's CSR performance in product quality influence consumers' purchasing decisions?
4. How does a company's CSR performance in welfare policies influence consumers' purchasing decisions?
5. What mediating role do consumer perceptions (risk perception and quality perception) play in the process through which CSR performance affects consumers' purchasing decisions?

Literature Review

Corporate Social Responsibility Performance: The definition of Corporate Social Responsibility Performance (CSR Performance) is not singular; rather, it is a comprehensive concept encompassing various indicators and practices. In both academic and practical contexts, CSR performance typically refers to the actual actions taken by companies regarding social responsibility and their measurable outcomes, primarily used to assess companies' efforts and effectiveness in fulfilling social responsibilities. This article categorizes CSR performance into four dimensions: service quality, brand image, product quality, and welfare policies. **Service Quality:** According to the SERVQUAL model proposed by Parasuraman, Zeithaml, and Berry (1988), service quality is a crucial factor influencing customer satisfaction. High levels of service quality not only meet consumer needs but also enhance the company's image, reflecting its responsibility towards customers. Homburg and Giering (2001) noted a positive correlation between service quality and customer loyalty, further supporting the rationale for using service quality as a measure of CSR. **Brand Image:** Research has shown that CSR activities can significantly enhance brand image and consumer trust. Du, Bhattacharya, and Sen (2010) found that companies engaging in social responsibility initiatives can strengthen brand image and consumer confidence, indicating a positive impact of CSR investments. Keller (1993) also revealed that brand image is closely related to a company's investment in environmental protection and

community development, making it an important dimension for measuring CSR performance. **Product Quality:** Product quality is widely recognized as a core standard for consumers evaluating a company's social responsibility. Aaker (1996) defined product quality as a key element of brand equity, indicating that high-quality products are a fundamental responsibility of businesses toward consumers. Kotler and Armstrong (2018) further emphasized that a company's focus on product quality reflects its commitment to social responsibility, thereby making product quality an important dimension of CSR performance. **Welfare Policies:** In this article, welfare policies refer to measures aimed at enhancing consumer welfare, particularly in fostering consumer loyalty and a sense of belonging through incentives and rewards. Kotler and Lee (2005) noted that companies can increase emotional engagement and loyalty by designing attractive consumer welfare programs. Additionally, Barnett (2007) highlighted that welfare policies, as part of CSR, can significantly enhance consumers' perceived value, trust, and loyalty towards a brand. Therefore, consumer welfare policies not only meet actual customer needs but also reflect companies' responsibilities toward consumers and society. **Consumer Purchase Decisions:** Kotler and Keller (2016) updated modern marketing practices, defining the consumer buying decision as a psychological and behavioral process involving need recognition, information gathering, option evaluation, purchase decision, and post-purchase evaluation. **Pharmaceutical Industry:** The pharmaceutical industry encompasses the development, production, distribution of drugs, and provision of medical services. Its main objective is to prevent, diagnose, and treat diseases while promoting public health. This sector plays a vital role in the global economy and directly impacts society's overall health and well-being. **Consumer Cognition:** Consumer cognition refers to the awareness and understanding that consumers have regarding products and services during the purchasing decision process. In the pharmaceutical industry, consumer cognition is particularly important for perceptions of product safety, effectiveness, and quality. It not only directly influences consumer choices but also plays a crucial mediating role in how corporate social responsibility (CSR) performance affects consumer purchasing decisions (Ge & Gretzel, 2018). In this study, the specific dimensions of consumer cognition in the pharmaceutical industry are divided into two categories: risk cognition and quality cognition. **Risk cognition:** refers to consumers' perception of the potential risks associated with pharmaceutical products or medical services. In the pharmaceutical sector, risk cognition includes concerns about drug side effects, risks of medical procedures, and product safety. A company's performance in CSR, such as strict safety controls and transparent risk information

disclosure, can effectively reduce consumers' risk cognition (Carroll & Shabana, 2010). When consumers perceive that a company places a high emphasis on safety and demonstrates a responsible attitude, they tend to develop higher trust in its products and services, thereby increasing their purchase willingness (Hansen, Siahtiri & Lee, 2018). **Quality cognition:** refers to consumers' perception of the quality of pharmaceutical products and medical services, which includes evaluations of product efficacy, service effectiveness, and technological standards. A company's CSR commitments regarding product quality, such as high standards of quality control and continuous quality improvement and innovation, can enhance consumer trust in the quality of its products and services (Du, Bhattacharya, & Sen, 2010). High-quality cognition makes consumers more willing to choose products and services from these companies (Kim & Lee, 2019).

Existing research on corporate social responsibility (CSR) primarily focuses on its impact on corporate performance, innovation, and social capital, often from an internal perspective. However, there is limited exploration of how CSR affects consumer purchasing decisions, especially in the pharmaceutical industry where high-risk and high-value products are involved. Most studies address consumer decision-making in general but overlook the specific influence of pharmaceutical companies' CSR actions on consumers' risk and quality perceptions.

Therefore, this research aims to examine the relationship between CSR in the pharmaceutical sector and consumer purchasing decisions, addressing a significant gap in the literature and providing insights for businesses and regulators.

Research Methodology

In this study, a quantitative approach was chosen as the research design. To this end, the author developed a structured questionnaire that includes closed-ended questions and Likert scale items to assess consumers' perceptions of corporate social responsibility (CSR) performance and consumption cognition. The target population for the study consists of various drug users, particularly consumers who purchase pharmaceuticals or medical supplies from pharmacies. To facilitate data collection, samples were mainly gathered through face-to-face distribution of paper questionnaires or online questionnaires. When necessary, assistance was provided to respondents in completing the questionnaires during face-to-face interactions. Before the formal survey, a pilot study was conducted, and reliability and validity analysis was performed using SPSS software. The preliminary validity of the questionnaire was ensured through

the calculation of Cronbach's alpha coefficient and exploratory factor analysis. A total of 120 questionnaires were distributed and collected, yielding 115 valid responses and 5 invalid ones (with invalidity criteria including missing responses and answers that consistently chose "7" or "1"). For the formal survey, 390 questionnaires were distributed and collected, resulting in 376 valid responses and 14 invalid ones. Additionally, 80 samples from respondents under the age of 18 were excluded, leading to a final sample size of 296 valid responses. respondents under the age of 18 were excluded, leading to a final sample size of 296 valid responses. The sample exhibits a relatively balanced gender distribution, with females accounting for 49.70% and males for 44.90%. In terms of age distribution, the highest proportion is among those aged 60 and above (42.20%), followed by the 35-60 age group (32.80%) and the 18-34 age group (25.00%). Regarding educational levels, more than half of the respondents hold a bachelor's degree or higher, indicating a strong educational background. The occupational distribution is diverse, including categories such as "Government/Public Service" (12.80%), "Students" (12.20%), and "Retirees" (14.90%). The income distribution is also relatively balanced, with high, middle, and low-income groups comprising 37.20%, 34.50%, and 28.40% respectively.

Overall, the sample in this study is well-distributed and diverse across dimensions such as gender, age, educational level, occupation, and income. This aligns well with the characteristics of consumers in the pharmaceutical industry, ensuring the representativeness and generalizability of the research conclusions.

The various constituent variables and types in this study are as follows, Independent Variable (X): Corporate Social Responsibility (CSR) performance serves as the independent variable in this research, which is divided into four dimensions: service quality, brand image, product quality, and welfare policies. The design of the service quality scale primarily references the dimensions established by Qi Liyun, Li Tengfei, and Shang Ke (2017), in conjunction with the scale developed by Hou Jin, Cai Liqiang, Kang Jianzong, and Tang Hongwei (2019), categorizing this aspect based on the SERVQUAL scale into reliability, responsiveness, assurance, etc. The design of the brand image scale mainly draws from the scales used by Song Mingyuan, Xiao Hongjun, and Qi Liyun (2013) and Liu Can (2019), with adjustments made according to the content of this study. The product quality scale design is based on relevant research by Xiu Hua (2011), with appropriate adjustments made from the consumer perspective. The welfare policy scale design was derived from the author's review of literature related to the pharmaceutical industry and welfare policies.

Dependent Variable (Y): Consumer purchase decision is the dependent variable. After weighing various factors, consumers make decisions regarding the purchase of specific medications or medical services. This decision may be influenced by CSR activities, doctor recommendations, availability, expected outcomes, and other factors (Kotler & Keller, 2016).

Mediating Variable (M): Consumer cognition (divided into risk cognition and quality cognition) serves as a mediating variable in the study of the impact of CSR performance on consumer purchase decisions. This is based on the consumer decision-making process and consumers' perceptions of product quality and risk, as discussed by Kotler and Keller (2016) in the updated 2016 edition of "Marketing Management." The specific conceptual framework diagram is shown in Figure 1.

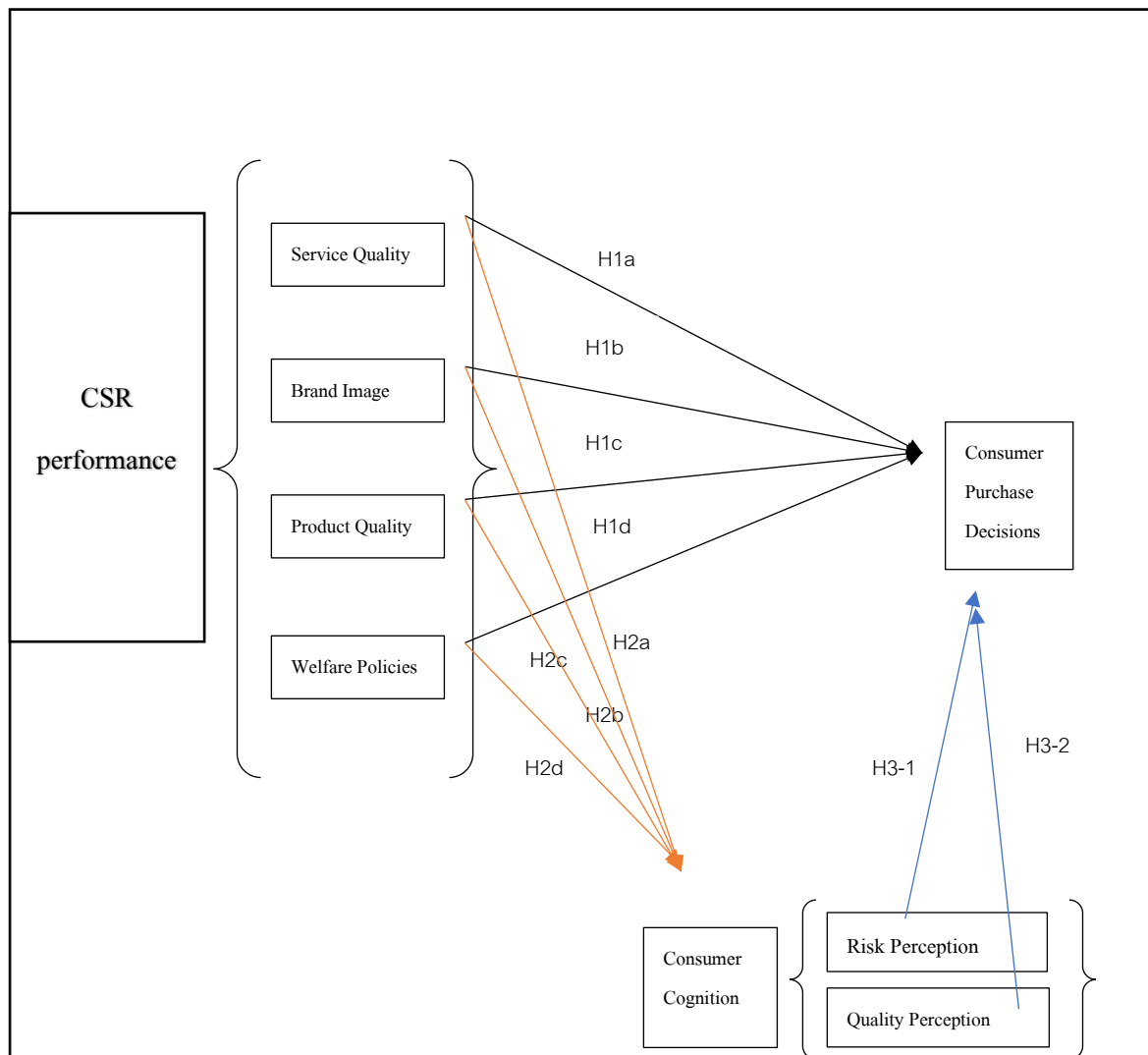


Figure 1: Model of CSR Performance on Consumer Purchasing Decisions

impact of corporate social responsibility (including service quality, brand image, product quality, and welfare policies) on consumer purchase decisions. An ANOVA (Analysis of Variance) was performed to compare differences in perceptions of corporate social responsibility factors among different groups.

Finally, mediation analysis was conducted using the Bootstrap sampling method from the product coefficient approach. This is a relatively advanced and robust method that calculates the confidence interval for indirect effects through repeated random sampling. This approach helps to determine whether the mediating effect is significant, avoids the assumption limitations of traditional regression methods, and enhances the testing power.

Research Results

In this study, the reliability of the questionnaire was assessed using Cronbach's α coefficient during the formal survey. The α values for all dimensions were found to be greater than 0.7 (see Table 1), indicating that the questionnaire possesses good internal consistency, reflecting the measurement stability and reliability of each variable. Additionally, the results of the Confirmatory Factor Analysis (CFA) showed that the standardized factor loadings for all observed variables exceeded 0.6, the Average Variance Extracted (AVE) was greater than 0.5, and the Composite Reliability (CR) values were all above 0.7. This demonstrates that the questionnaire has good convergent validity and discriminant validity at the construct level.

Furthermore, the KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy was 0.849, and the chi-square value for Bartlett's test of sphericity was 4939.421 ($p < 0.001$), confirming that the data is suitable for factor analysis. These results indicate that the design of the questionnaire is sound and capable of accurately measuring the characteristics of core variables in the study, including service quality, brand image, product quality, welfare policies, risk perception, quality perception, and consumer purchase decisions.

Table 1: Reliability and Validity Test Results

Dimension	Cronbach's α	Factor Loading Range	AVE	CR
Service Quality	0.871	0.638–0.860	0.678	0.880
Brand Image	0.859	0.655–0.863	0.663	0.867
Product Quality	0.866	0.665–0.843	0.658	0.866
Welfare Policies	0.874	0.677–0.863	0.682	0.878
Risk Perception	0.864	0.668–0.831	0.652	0.869
Quality Perception	0.868	0.660–0.845	0.671	0.874
CPD	0.863	0.660–0.861	0.654	0.860

Based on this reliability and validity, the results of the subsequent correlation analysis between variables are shown in Table 2. The study found significant positive correlations between the four dimensions of corporate social responsibility—service quality, brand image, product quality, and welfare policies—and consumer purchase decisions, with correlation coefficients ranging from 0.211** to 0.353**. Additionally, risk perception and quality perception were also significantly correlated with purchase decisions (0.355 and 0.375, respectively), indicating their potential mediating roles in the consumer decision-making process.

Table 2: Results of the Correlation Analysis

Variable	Service Quality	Brand Image	Product Quality	Welfare Policies	Risk Perception	Quality Perception	Consumer Purchase Decision
Service Quality	--						
Brand Image	0.211**	--					
Product Quality	0.260**	0.252**	--				
Welfare Policies	0.265**	0.253**	0.262**	--			
Risk Perception	0.323**	0.242**	0.304**	0.235**	--		
Quality Perception	0.284**	0.327**	0.380**	0.305**	0.311**	--	
Consumer Purchase Decision	0.288**	0.353**	0.316**	0.319**	0.355**	0.375**	--

The core results are interpreted as follows, **Service Quality**: There is a significant positive correlation with consumer purchase decisions ($r = 0.288$, $p < 0.01$), and it is also strongly correlated with risk perception ($r = 0.323$, $p < 0.01$) and quality perception ($r = 0.284$, $p < 0.01$), indicating that service quality may influence consumer decisions through cognitive factors. **Brand Image**: It shows a strong correlation with consumer purchase decisions ($r = 0.353$, $p < 0.01$) and is closely related to quality perception ($r = 0.327$, $p < 0.01$), reflecting the important mediating role of brand image. **Product Quality**: Among all variables, it has the highest correlation with quality perception ($r = 0.380$, $p < 0.01$), suggesting that product quality directly enhances consumers' quality perception, thereby influencing their purchasing behavior. **Welfare Policies**: There is a significant correlation with consumer purchase decisions ($r = 0.319$, $p < 0.01$), demonstrating the potential impact of corporate social responsibility behaviors on consumer actions. **Risk Perception and Quality Perception**: Both variables are highly correlated with

consumer purchase decisions (risk perception $r = 0.355$, quality perception $r = 0.375$, $p < 0.01$), indicating that cognitive factors play a crucial role in the decision-making process.

To further examine the impact of the four dimensions of Corporate Social Responsibility (CSR) on consumer purchase decisions, this study employed multiple linear regression analysis, using consumer purchase decisions as the dependent variable and the four dimensions of CSR performance as independent variables. The results of the regression analysis are shown in Table 3.

Table3: Regression Analysis Results

Variable	B	SE	Beta	t	p	VIF
Constant	1.321	0.284	-	4.652	<0.001**	-
Service Quality	0.130	0.048	0.148	2.703	0.007**	1.214
Brand Image	0.204	0.047	0.234	4.304	<0.001**	1.191
Product Quality	0.151	0.048	0.172	3.130	0.002**	1.271
Welfare Policies	0.173	0.054	0.176	3.182	0.002**	1.196

Model Statistics, Adjusted R^2 : 0.225, F-value: 22.444, $p < 0.001$, D-W value: 1.408.

According to the regression analysis results in Table 3, the adjusted R^2 of the model is 0.225, indicating that the four independent variables—service quality, brand image, product quality, and welfare policies—explain 22.5% of the variance in consumer purchase decisions. The F-test result is significant ($F = 22.444$, $p < 0.001$), suggesting that the model fits well overall and has statistical significance. Additionally, the VIF values are all less than 5, indicating that there is no multicollinearity issue; the D-W value is 1.408, which is close to 2, suggesting that there is no serious autocorrelation in the model. In our analysis, we used a Q-Q plot to verify the normality of the data. The data in Figure 2 show a distribution that approximately follows the diagonal line, indicating that the sample data conforms to a normal distribution.

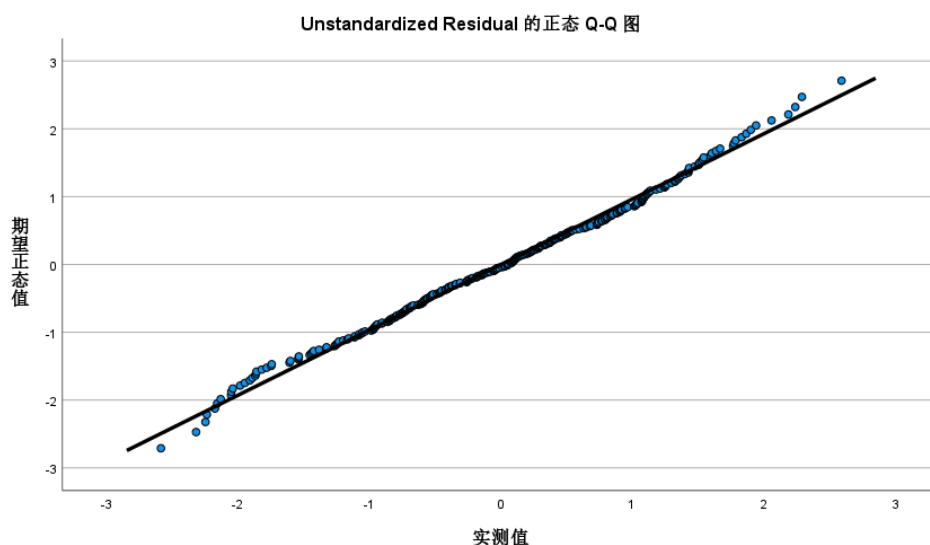


Figure 2: Q-Q Plot Comparing Sample Data to Normal Distributions.

Based on the regression analysis results, this study further conducted a mediation effect analysis using the Bootstrap sampling method from the product coefficient approach to verify whether risk perception and quality perception mediate the relationship between Corporate Social Responsibility (CSR) performance and consumer purchase decisions (see Table 4). The results show that the indirect effect of service quality on purchase decisions through risk perception is 0.124 (95% confidence interval [0.085, 0.165], $p < 0.001$), and the indirect effect of product quality on purchase decisions through quality perception is 0.132 (95% confidence interval [0.091, 0.174], $p < 0.001$). The mediation effects are significant, further indicating that risk and quality perceptions play a crucial role in the impact of CSR on consumer purchase decisions.

Table4: Results of the Mediation Analysis

Path	Total Effect (c)	Indirect Effect (a×b)	Direct Effect (c')	Conclusion
Service Quality → Risk Cognition → Purchase Decision	0.254**	0.083	0.171**	Partial Mediation
Brand Image → Risk Cognition → Purchase Decision	0.308**	0.060	0.247**	Partial Mediation
Product Quality → Risk Cognition → Purchase Decision	0.277**	0.076	0.201**	Partial Mediation
Welfare Policies → Risk Cognition → Purchase Decision	0.315**	0.069	0.246**	Partial Mediation
Service Quality → Quality Cognition → Purchase Decision	0.254**	0.080	0.174**	Partial Mediation
Brand Image → Quality Cognition → Purchase Decision	0.308**	0.083	0.225**	Partial Mediation
Product Quality → Quality Cognition → Purchase Decision	0.277**	0.100	0.178**	Partial Mediation
Welfare Policies → Quality Cognition → Purchase Decision	0.315**	0.092	0.223**	Partial Mediation

The specific results are interpreted as follows:

Risk Perception as a Mediating Variable: Service quality, brand image, product quality, and welfare policies have a partial mediating effect on consumer purchase decisions through risk perception. Taking service quality as an example, the path coefficient a is 0.316 ($p < 0.01$), the path coefficient b is 0.264 ($p < 0.01$), and the indirect effect $a \times b$ is 0.083, with a 95% confidence interval of [0.043, 0.132], which does not include zero, indicating that the indirect effect is significant. Meanwhile, the direct effect

(c' path) is 0.171 ($p < 0.01$), suggesting that risk perception plays a partial mediating role in the impact of service quality on consumer purchase decisions. The mediation results for the other variables are consistent with this finding.

Quality Perception as a Mediating Variable: Service quality, brand image, product quality, and welfare policies also have a partial mediating effect on consumer purchase decisions through quality perception. Taking brand image as an example, the path coefficient a is 0.330 ($p < 0.01$), the path coefficient b is 0.251 ($p < 0.01$), and the indirect effect $a \times b$ is 0.083, with a 95% confidence interval of [0.048, 0.123], confirming its significance. The direct effect is 0.225 ($p < 0.01$), indicating that the influence of brand image is partially transmitted through quality perception while still retaining a significant direct effect.

Furthermore, the VIF values for all paths are less than 5, eliminating multicollinearity issues; the Bootstrap sampling shows that the 95% confidence intervals do not include zero, further proving the robustness of the mediation effects.

In summary, this study verifies the partial mediating roles of risk perception and quality perception in the influence of service quality, brand image, product quality, and welfare policies on consumer purchase decisions, highlighting the importance of consumer cognition in the decision-making process.

To further explore the differences in consumer characteristics affecting purchasing decisions, this study employed One-Way ANOVA to examine the impact of different groups (gender, age, education level, occupation, income) on consumer purchasing decisions. Due to the excessive amount of data from the one-way analysis, only the significant results of consumer characteristics from the One-Way ANOVA are presented here (Table 5).

Table5: Summary of Consumer Characteristics Significance Results

Feature	Indicator	Mean \pm Standard Deviation	F Value	p Value	Significance
Age	Consumer Purchase Decision	18-24:3.80 \pm 0.70, 25-34:4.10 \pm 0.65	4.133	0.017	Significant
Education Level	Service Quality	High School:4.10 \pm 0.52, Bachelor:4.50 \pm 0.55	4.667	0.000	Significant
	Product Quality	High School:3.80 \pm 0.63, Bachelor:4.40 \pm 0.57	4.419	0.000	Significant
Occupation	Income	Employee:5000 \pm 800, Freelancer:6000 \pm 900	10.157	0.000	Significant
Risk Perception	Product Quality	High Risk:4.20 \pm 0.70, Low Risk:4.70 \pm 0.60	4.175	0.001	Significant
Quality Perception	Consumer Purchase Decision	High Quality:4.60 \pm 0.55, Low Quality:3.90 \pm 0.60	39.367	0.000	Significant

Analysis of Significant Results, **Service Quality**: Among all consumer characteristics, education level ($F=4.667$, $p<0.001$) and income ($F=10.157$, $p<0.001$) show significant differences in the evaluation of service quality. Individuals with a doctoral degree and those in the high-income group exhibit higher ratings (4.67 ± 1.25 ; 4.28 ± 1.30), while those with a high school education or lower and low-income individuals provide lower ratings (3.64 ± 1.28 ; 3.51 ± 1.31). **Consumer Purchase Decision**: Education level and income significantly influence consumer purchasing decisions ($F=39.367$, $p<0.001$; $F=72.284$, $p<0.001$). Individuals with a doctoral degree (4.66 ± 0.81) and those in the high-income group (4.67 ± 0.88) demonstrate a markedly higher purchasing tendency, while those with a high school education or lower (3.07 ± 0.94) and low-income individuals (2.98 ± 0.74) score the lowest. **Age**: Significant differences are observed only in consumer purchasing decisions ($F=4.133$, $p<0.05$), with individuals aged 18-34 showing the strongest purchase intention (4.25 ± 1.21), while the 35-60 age group exhibits relatively lower scores (3.74 ± 1.12).

Explanation of Non-Significant Results, **Occupation and Gender**: The differences attributed to occupation and gender for each indicator are not significant (p -values are all greater than 0.05). This indicates that consumers of different occupations and genders have relatively consistent perceptions of corporate social responsibility and evaluations of purchasing decisions.

The results indicate that consumers' education level and income have a significant impact on their evaluations of corporate social responsibility indicators (such as service quality, brand image, etc.) and their purchasing decisions. This suggests that businesses should pay greater attention to the needs and preferences of high-education and high-income groups when formulating marketing strategies. Additionally, the younger demographic (ages 18-34) demonstrates a higher purchasing inclination, indicating that this group may be more susceptible to the influence of corporate image.

Display of analysis results

Table 6: Display of analysis results

Hypothesis	Hypothesis Content	Hypothesis Test Result
H1a	Service quality of pharmaceutical companies positively impacts consumer purchase decisions	Supported
H1b	Brand image of pharmaceutical companies positively impacts consumer purchase decisions	Supported
H1c	Product quality of pharmaceutical companies positively impacts consumer purchase decisions	Supported
H1d	Welfare policies of pharmaceutical companies positively impact consumer purchase decisions	Supported
H2a	Service quality of pharmaceutical companies positively impacts consumer perception	Supported
H2b	Brand image of pharmaceutical companies positively impacts consumer perception	Supported
H2c	Product quality of pharmaceutical companies positively impacts consumer perception	Supported
H2d	Welfare policies of pharmaceutical companies positively impact consumer perception	Supported
H3-1	Risk perception plays a partial mediating role between corporate social responsibility performance and consumer purchasing decisions	Supported
H3-2	Quality perception plays a partial mediating role between corporate social responsibility performance and consumer purchasing decisions	Supported

Based on the overall analysis, the regression analysis and mediation effect analysis indicate that service quality, brand image, product quality, welfare policies, as well as risk perception and quality perception have significant positive impacts on consumer purchase decisions. While the direct effect of service quality on consumer purchase decisions is relatively insignificant, it influences purchase decisions through risk perception and quality perception. Pharmaceutical companies should focus on enhancing the brand image performance of their CSR (Corporate Social Responsibility) initiatives and the effectiveness of welfare policies, while also paying attention to improving consumers' risk perception and quality perception to promote consumer purchase decisions.

Conclusions

Direct Positive Impact of CSR on Consumer Purchase Decisions, Our findings confirm that CSR has a direct and significant positive impact on consumer purchase decisions in the pharmaceutical industry. Among CSR dimensions, brand image and welfare policies play a critical role. Brand image significantly enhances consumer purchase intentions ($p < 0.001$), while welfare policies also show a notable effect ($p = 0.002$). This aligns with brand equity theory (Aaker, 1991), which suggests that a strong brand image, reinforced by CSR, fosters consumer trust and loyalty. Additionally, stakeholder theory (Freeman, 1984) emphasizes that companies addressing social and ethical concerns can achieve competitive advantages. Recent studies (Fatma, Rahman, & Khan, 2015; Zhang & Ahmad, 2021) further support these findings, highlighting that CSR engagement positively influences brand perception and purchase decisions.

Positive Impact of CSR on Consumer Perception: CSR significantly influences consumer perception, particularly in terms of risk and quality assessment. Trust theory (Mayer et al., 1995) explains this relationship, as CSR practices enhance consumer trust, thereby reducing perceived risk and increasing perceived quality. Prior research (Ahn & Kwon, 2022) found that companies actively engaging in CSR are perceived as more reliable, leading to improved product evaluations. Similarly, Luo & Bhattacharya (2006) argue that CSR contributes to higher perceived product quality, reinforcing consumer confidence. Our findings extend this by identifying welfare policies as a crucial CSR dimension that shapes consumer trust in the pharmaceutical industry, particularly regarding product safety and corporate ethics.

Mediating Role of Consumer Perception: Consumer perception plays a partial mediating role in the relationship between CSR and purchase decisions, confirming that CSR's influence extends beyond

direct effects. This is consistent with signaling theory (Spence, 1973), which suggests that CSR activities serve as signals of corporate credibility, thereby shaping consumer perceptions. Mediation analysis shows that both risk and quality perception significantly enhance the CSR-purchase decision link ($p < 0.01$). Prior studies (Fatma et al., 2015; Ahn & Kwon, 2022) also indicate that CSR-driven trust and risk reduction reinforce consumer engagement. Our findings emphasize that pharmaceutical companies can enhance purchase intentions by strengthening consumer trust through socially responsible employment and patient welfare initiatives.

Conclusion and Implications: This study confirms that CSR directly and indirectly influences consumer purchase decisions in the pharmaceutical industry, with consumer perception serving as a key mediator. Companies should prioritize CSR in their marketing strategies, focusing on brand image and welfare policies to foster trust and enhance consumer engagement. By integrating CSR into corporate practices and transparently communicating social responsibility efforts, firms can strengthen their competitive position and long-term customer loyalty.

Future research should explore industry comparisons and additional moderating factors such as consumer demographics and market conditions to further validate the generalizability of these findings.

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