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Assessing Consumer Awareness of Corporate Social Responsibility Activities: A Binary Logistic Regression Analysis

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ABSTRACT

Aim of the Study: This study aims to examine the factors influencing consumer awareness of Corporate Social Responsibility (CSR) activities, focusing on demographic and behavioral variables such as age, gender, education, income, social media engagement, purchase frequency, and perceived importance of CSR. Understanding these factors is essential for businesses seeking to optimize CSR communication and enhance customer engagement with their CSR efforts.**Methodology:**Data were collected using a structured questionnaire distributed to a sample of the general population. A total of 150 questionnaires were issued, with 144 completed and valid responses retained for analysis after six

were excluded due to incomplete information. The sample was drawn using a simple random sampling method to ensure representativeness across various demographic categories. **Data Analysis:** Binary logistic regression was applied to assess the impact of the selected demographic and behavioral factors on CSR awareness. This statistical approach allows for examining the likelihood of CSR awareness as a function of multiple predictor variables, each representing distinct consumer characteristics: **Findings:** The analysis revealed that none of the demographic or behavioral variables significantly predicted CSR awareness, with all predictors showing non-significant p-values. These findings imply that traditional demographic and behavioral factors may not be sufficient for effectively targeting CSR communication, suggesting the need for alternative approaches and a more personalized CSR engagement strategy.

Keywords: Consumer Awareness, Corporate Social Responsibility (CSR), Binary Logistic Regression, Demographic Factors, , CSR Communication, Consumer Engagement.

JEL Classification:M14 - Corporate Culture; Social Responsibility, D12 - Consumer Economics: Empirical Analysis; M31 – Marketing; C35 - Discrete Regression and Qualitative Choice Models; (binary logistic regression)

I.INTRODUCTION

In recent years, Corporate Social Responsibility (CSR) has gained prominence for organizations aiming to improve their social and environmental influence in conjunction with economic performance. For CSR initiatives to be effective, consumer awareness is crucial, as it influences perceptions, brand loyalty, and purchasing behaviors. This research aims to explore the factors influencing consumer awareness of CSR activities, focusing on demographic and behavioral aspects. Using a structured questionnaire, data was collected from a sample representing the general population. A simple random sampling method ensured representativeness, with 144 valid responses analyzed to assess how factors such as age, gender, income, and social media engagement impact CSR awareness. This study's findings aim to provide insights for businesses looking to enhance the effectiveness of their CSR communication and engagement strategies.

Review of Literature

According to Vats and Mittal (2021), companies that engage in corporate social responsibility are perceived as more socially and environmentally aware, frequently making beneficial contributions to the communities adjacent to their operations. Visser's (2009) research indicates that the examination of CSR in developing nations is an intriguing and expanding area of inquiry within the discipline of CSR. This line of inquiry presents a significant opportunity for the advancement of CSR scholarship, as it has been unexpectedly under-explored. Research by

MigleSontaite-Petkevicience (2012) indicates that CSR is increasingly a key aspect shaping public view of companies. The segmentation of CSR into human, environmental, and product responsibilities ultimately impacts a company's reputation. Corporate Social Responsibility (CSR) is a self-regulatory business model that promotes responsible and transparent conduct by firms towards their stakeholders and the public. Various CSR models have been formulated over time. These models are intended for the planning and execution of the CSR process, together with the subsequent oversight and regulation of that process. The incorporation of CSR models into daily operations enhances a company's flexibility to respond to internal and external changes. This promotes the dissemination of positive sentiments and the advancement of socio-economic metrics. Social responsibility benefits individuals with limited resources. Corporate Social Responsibility (CSR) enables organizations to cultivate goodwill, distinguish themselves from competitors through social activities, enhance financing and market access, boost sales and profitability, improve brand image and reputation, foster consumer loyalty, and elevate employee job satisfaction. Dr. Rajinder Singh (2017) assessed Bharti Airtel's CSR actions in accordance with the Companies Act, 2013. An industrial unit utilizes societal resources, while society facilitates its operation. Consequently, these enterprises ought to contribute to society and its counterparts. Edward Freeman and Jeanne Liedtka (1991) contended that corporate social responsibility did not succeed in fostering a beneficial society. The notion of Corporate Social Responsibility, in all its forms, has become obsolete, and we propose its prompt abolition. Marc et al. (2010). The authors examine three theoretical frameworks for strategic corporate social responsibility (CSR), which improves a firm's competitiveness and reputation via voluntary activities. These initiatives are expected to enhance financial and economic performance. According to existing empirical findings, the authors propose that economic theories of strategic CSR hold the greatest promise for advancing this subject, although strategic leadership theories merit consideration as well.

Researchers and academics assess CSR initiatives by examining business character, the company's geographical environment, and corporate governance. Halal's, Carroll's, and Ackerman's frameworks represent conventional corporate social responsibility models. The Carroll Model (1979) describes Corporate Social Responsibility (CSR) as a business's obligation to society. It is a three-dimensional conceptual model of corporate performance encompassing four obligations: economic, legal, ethical, and discretionary. Ackerman's Model (1973) entails high management acknowledging a social issue and designating a staff specialist to investigate and propose remedies. Ultimately, specialized strategy execution The Friedman model (1962–1973) underscores that a businessman's responsibilities are social and ethical. A businessman's sole obligation is to his shareholders and

stockholders. Corporate Social Responsibility: Redefining Development Michael Blowfield (2005) observed that Corporate Social Responsibility (CSR) can be advantageous in certain instances; nevertheless, its constraints must be understood to prevent the rationale for incorporating business in development from being overshadowed by business justifications for engaging with, and circumventing, developing nations.

Methodology

This study employed a quantitative approach, using a structured questionnaire to collect data from a diverse sample of the general population. A total of 150 questionnaires were distributed, all of which were returned; however, six were excluded due to incomplete responses, resulting in a final sample size of 144 respondents. To ensure representativeness and minimize selection bias, a simple random sampling technique was used. The questionnaire was designed to assess demographic and behavioral factors potentially influencing consumer awareness of CSR activities. Data gathered from the 144 valid responses were subsequently analyzed using binary logistic regression to examine the relationships between the independent variables and CSR awareness.This study aim to investigate the factors influencing consumer awareness of CSR initiatives, focusing on demographic and behavioral variables, including age, gender, income level, education, social media engagement, purchase frequency, and perceived importance of CSR. By applying binary logistic regression, this analysis aims to uncover whether these factors significantly predict CSR awareness among consumers,

Table 1. Frequency Distribution of Sample Respondent

Factor	Level	Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	39	27.1	27.1	27.1
	Male	105	72.9	72.9	100.0
	Total	144	100.0	100.0	
Age	20-30	39	27.1	27.1	27.1
	31-40	53	36.8	36.8	63.9
	41-50	29	20.1	20.1	84.0
	Above 50	23	16.0	16.0	100.0
	Total	144	100.0	100.0	
Education	Graduates	42	29.2	29.2	29.2
	Professional	46	31.9	31.9	61.1
	Diploma	34	23.6	23.6	84.7
	Others	22	15.3	15.3	100.0
	Total	144	100.0	100.0	
Income	Below 30000pm	71	49.3	49.3	49.3
	30000 to 60000pm	42	29.2	29.2	78.5
	60000 to 90000 pm	31	21.5	21.5	100.0
	Total	144	100.0	100.0	
Social Media Engagement	Slightly	16	11.1	11.1	11.1
	Moderately	41	28.5	28.5	39.6
	Very	48	33.3	33.3	72.9
	Extremely	39	27.1	27.1	100.0
	Total	144	100.0	100.0	
Purchase Frequency with Brand	infrequent	42	29.2	29.2	29.2
	Occasional	59	41.0	41.0	70.1
	Moderately	43	29.9	29.9	100.0
	Total	144	100.0	100.0	
Perceived Importance of CSR	Slightly	5	3.5	3.5	3.5
	Moderately	50	34.7	34.7	38.2
	Very	46	31.9	31.9	70.1
	Extremely	43	29.9	29.9	100.0
	Total	144	100.0	100.0	
Awareness of CSR	Now Aware	101	70.1	70.1	70.1
	Aware	43	29.9	29.9	100.0
	Total	144	100.0	100.0	

The frequency table provides insights into the distribution of respondents based on various demographic and behavioral factors in relation to CSR awareness. For Gender, males comprise 72.9% (105 respondents), and females make up 27.1% (39 respondents), indicating a male-dominated sample. The Age distribution shows the

largest group in the 31-40 range (36.8%), followed by 20-30 (27.1%), 41-50 (20.1%), and those above 50 (16.0%). Regarding **Education**, 31.9% are professionals, 29.2% are graduates, 23.6% hold diplomas, and 15.3% are in other categories, suggesting a well-educated sample. Income shows nearly half the respondents (49.3%) earn below 30,000 per month, with decreasing representation in higher brackets. Social Media Engagement varies, with 33.3% highly engaged and 28.5% moderately engaged, implying a strong potential for CSR outreach through social channels. In Purchase Frequency, the majority buy occasionally (41%), while 29.9% are moderate purchasers. Finally, Perceived Importance of CSR reflects a high awareness, with 31.9% and 29.9% rating CSR as "Very" and "Extremely" important, respectively. Overall, CSR Awareness itself shows 70.1% are unaware, highlighting a significant gap for potential CSR engagement.

Data Analysis and Discussion

Corporate Social Responsibility (CSR) has become a vital aspect of business strategy, aiming to address the social, environmental, and economic impacts of corporate activities. For organizations, CSR efforts are not only about contributing positively to society but also about enhancing brand reputation, building consumer trust, and fostering customer loyalty. However, a critical component of CSR effectiveness lies in consumer awareness and perception of these activities. Without awareness, even the most impactful CSR initiatives may fail to engage customers or influence their behavior.

This study investigates the factors influencing consumer awareness of CSR initiatives, focusing on demographic and behavioral variables, including age, gender, income level, education, social media engagement, purchase frequency, and perceived importance of CSR. By applying binary logistic regression, this analysis aims to uncover whether these factors significantly predict CSR awareness among consumers, providing insights into how managers might effectively tailor CSR communications and engagement strategies.

Table 2 Classification Table

Observed		Predicted		
		Awareness of CSR		Percentage Correct
		Now Aware	Aware	
Awareness of CSR	Now Aware	101	0	100.0
	Aware	43	0	.0
Overall Percentage				70.1

a. Constant is included in the model.b. The cut value is .500

Table 3 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.854	.182	21.992	1	.000	.426

Table 4 Variables not in the Equation

Variables	Score	df	Sig.
Age	.097	1	.756
Gender	.070	1	.791
Level of Education	.156	1	.693
Income	.047	1	.829
Social Media Engagement	1.201	1	.273
Purchase Frequency with Brand	.005	1	.944
Perceived Importance of CSR	1.043	1	.307

The Case Processing Summary confirms that all 144 respondents were included in the analysis, with no missing or unselected cases. This ensures the data is complete and reliable for interpreting CSR awareness among respondents. The Dependent Variable Encoding indicates that the dependent variable, Awareness of CSR, is coded as a binary variable: 0 for "Now Aware" and 1 for "Aware". This encoding is essential for binary logistic regression, where outcomes are represented as binary categories.In the initial (null) model, only the constant is included, and the classification accuracy for "Now Aware" is 100% (101 out of 101 correctly classified as "Now Aware"), while none of the "Aware" cases are correctly classified. This results in an overall classification accuracy of 70.1%. Since no predictors are included in this step, this serves as a baseline to assess the improvement when independent variables are added. The constant coefficient in the null model is significant ($p < 0.001$), with a negative B-value (-0.854), indicating the log odds of being "Aware" are low when no predictors are included. This suggests that, initially, the probability of being aware of CSR activities is low.

This table shows the significance of each independent variable before entering them into the model. None of the variables (e.g., Age, Gender, Education Level, Income, Social Media Engagement, Purchase Frequency with Brand, Perceived Importance of CSR) shows statistical significance ($p > 0.05$), indicating that individually, they do not predict CSR awareness in the null model.The Omnibus Test evaluates the overall model's improvement after including all predictors. The Chi-square value is 2.367 with a significance level of 0.937, suggesting that the predictors do not significantly improve the model's fit over the null model. This implies that adding the independent variables does not provide substantial predictive power for CSR awareness in this sample.

Table 5 Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	173.222[a]	.016	.023

Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 6 Contingency Table for Hosmer and Lemeshow Test

Steps	Awareness of CSR = Now Aware		Awareness of CSR = Aware		
	Observed	Expected	Observed	Expected	Total
1	11	11.154	3	2.846	14
2	10	11.504	5	3.496	15
3	10	10.398	4	3.602	14
4	12	10.895	3	4.105	15
5	13	9.990	1	4.010	14
6	9	9.776	5	4.224	14
7	10	8.812	3	4.188	13
8	5	9.279	9	4.721	14
9	10	8.995	4	5.005	14
10	11	10.197	6	6.803	17

Table 7 Variables in the Equation

Variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Age	-.096	.204	.221	1	.638	.909	.610	1.355
Gender	.182	.429	.180	1	.671	1.200	.518	2.780
Level of Education	.127	.202	.395	1	.530	1.135	.764	1.688
Income	.034	.234	.022	1	.883	1.035	.654	1.638
Social Media Engagement	-.200	.241	.692	1	.405	.818	.510	1.312
Purchase Frequency with Brand	-.118	.273	.186	1	.666	.889	.520	1.518
Perceived Importance of CSR	-.117	.248	.223	1	.637	.889	.546	1.447
Constant	.131	1.463	.008	1	.928	1.140		

Table 8 Correlation Matrix

Variables	Constant	Age	Gender	Level of Education	Income	Social Media Engagement	Purchase Frequency with Brand	Perceived Importance of CSR
Constant	1.000	-.168	-.328	-.185	-.391	-.343	-.542	-.289
Age	-.168	1.000	-.001	-.426	-.031	-.043	.049	.016
Gender	-.328	-.001	1.000	-.085	-.027	-.155	-.185	.026
Level of Education	-.185	-.426	-.085	1.000	.109	-.034	.138	-.026
Income	-.391	-.031	-.027	.109	1.000	.104	.176	-.040
Social Media Engagement	-.343	-.043	-.155	-.034	.104	1.000	.383	-.516
Purchase Frequency with Brand	-.542	.049	-.185	.138	.176	.383	1.000	-.119
Perceived Importance of CSR	-.289	.016	.026	-.026	-.040	-.516	-.119	1.000

The Model Summary provides the -2 Log Likelihood value (173.222), Cox & Snell R Square (0.016), and Nagelkerke R Square (0.023). The low R-square values indicate that the model explains only about 1.6% to 2.3% of the variance in CSR awareness, suggesting a weak explanatory power of the predictors.The Hosmer and Lemeshow Test checks for the goodness of fit. With a Chi-square value of 11.514 and a significance of 0.174 ($p > 0.05$), the test indicates an acceptable fit, meaning that there is no significant discrepancy between the observed and predicted classifications. However, this does not imply strong predictive power, as shown by other model fit metrics.In the final model with predictors, the classification table shows that all "Now Aware" cases are correctly classified (100%), but none of the "Aware" cases are accurately classified, leading to an overall accuracy of 70.1%. This is unchanged from the null model, indicating that the added predictors do not improve classification accuracy.The coefficients, significance levels, and odds ratios (Exp(B)) for each independent variable are presented in this table. None of the variables, including Age, Gender, Education Level, Income, Social Media Engagement, Purchase Frequency with Brand, and Perceived Importance of CSR, are statistically significant (all p-values > 0.05). This means that individually, none of these variables significantly predicts CSR awareness.The odds ratios (Exp(B)) close to 1.0 for all variables suggest that these factors have minimal impact on the likelihood of CSR awareness. For example, for Age, the odds ratio is 0.909, indicating a small and non-significant decrease in the odds of being aware with increasing age. Similarly, for Social Media Engagement, an Exp(B) of 0.818 suggests a non-significant relationship with CSR awareness.The Correlation Matrix

for the predictors shows the interrelationships among them. Most correlations are weak, indicating low multicollinearity and suggesting that each variable provides distinct information.

This logistic regression analysis reveals that the model, including demographic and behavioral factors such as age, gender, education level, income, social media engagement, purchase frequency, and perceived importance of CSR, does not significantly predict CSR awareness. The Omnibus Test, low R-squared values, and non-significant coefficients across all predictors indicate that these factors collectively do not explain much variation in CSR awareness among respondents. The Hosmer and Lemeshow Test suggests an acceptable model fit, but the lack of predictive power highlights that other, unmeasured factors may be more influential in determining CSR awareness. This outcome suggests that future research might explore additional variables or different methodologies to better understand the drivers of CSR awareness.

II.CONCLUSION

This logistic regression analysis on factors influencing CSR awareness reveals that demographic and behavioral variables, including age, gender, education level, income, social media engagement, purchase frequency, and perceived importance of CSR, do not significantly predict CSR awareness among respondents. The initial classification model showed that 70.1% of respondents were correctly classified as "Now Aware," with the predictors providing no improvement in classification accuracy or model fit. Key tests, including the Omnibus Test and Hosmer and Lemeshow Test, indicated an acceptable model fit yet demonstrated low explanatory power, with R-squared values suggesting that the model accounts for only 1.6% to 2.3% of the variation in CSR awareness. None of the predictors showed significant impact individually, as indicated by non-significant p-values and odds ratios close to 1.0. This finding highlights the likelihood that other, unmeasured factors may be more relevant in influencing CSR awareness. Future studies could benefit from exploring additional or alternative variables and methodologies to better understand the drivers of CSR awareness, allowing for more effective CSR strategies and consumer engagement.

Managerial Implications

The findings suggest that the current demographic and behavioral factors studied—such as age, gender, income, education level, social media engagement, purchase frequency, and perceived importance of CSR—do not significantly influence consumer awareness of CSR initiatives. For managers, this implies that focusing solely on these demographic segments or typical behavioral traits may not be sufficient for effectively increasing CSR awareness among consumers. Since traditional demographic factors are not predictive of CSR awareness, managers

should consider more targeted and innovative communication strategies to improve CSR visibility. Using storytelling, visual content, or partnerships with influencers could reach consumers more effectively, especially on platforms where CSR messages resonate more deeply. Managers may benefit from developing CSR messages that better connect with consumer motivations. For example, messages emphasizing community impact, ethical sourcing, or employee well-being might be more appealing to audiences who prioritize social responsibility in their purchase decisions. By exploring these approaches, managers can better align CSR activities with consumer expectations and enhance CSR awareness, ultimately building stronger brand affinity and trust among consumers.

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