

Assessing the Impact of Customer Relationship Management (CRM) on the Overall Productivity of Government-Owned Organizations

Sufal Chandra Goldar

Patuakhali Science and Technology University, Patuakhali, Bangladesh

Corresponding Author: scgoldar@gmail.com

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Abstract

This analysis investigates the effects of Customer Relationship Management (CRM) on the total productivity of state-operated entities in Bangladesh. As public sector organizations strive to enhance service efficiency, citizen engagement, and accountability, CRM has emerged as a viable digital solution. A systematic questionnaire was used to gather data from 400 personnel across three governmental organizations: Dhaka Electric Supply Company Limited (DESCO), Dhaka Water Supply and Sewerage Authority (WASA), and Bangladesh Telecommunications Company Limited (BTCL). Statistical evaluations, including correlation analysis and multiple regression techniques, were employed to assess five hypotheses regarding CRM implementation, productivity, employee engagement, citizen satisfaction, and the impact of governance and implementation challenges. The results indicate that adopting CRM substantially enhances productivity and citizen satisfaction while improving employee engagement. Nevertheless, the existence of technological and organizational impediments was determined to have an adverse impact on the efficacy of CRM. Furthermore, support from governance—manifested through leadership, policy formulation, and oversight—plays a crucial role in sustaining CRM outcomes. This study concludes that CRM, when executed with strategic foresight and institutional backing, possesses the potential to transform public sector performance within Bangladesh. This investigation provides empirical evidence and insights relevant to policymaking efforts aimed at advancing digital governance in developing nations.

Keywords: Customer Relationship Management, Public Sector Productivity, E-Governance, Citizen Satisfaction, Organizational Change.

1. Introduction

In the contemporary digital landscape, the mechanisms of public service delivery have experienced considerable metamorphosis ([Lindquist, 2022](#)). With the escalating expectations of citizens

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regarding transparency, responsiveness, and efficiency, government-owned organizations (GOOs) are increasingly adopting innovative methodologies to enhance their operational effectiveness ([Sri Wahyuningsih et al., 2024](#)). Among these methodologies, Customer Relationship Management (CRM) systems have surfaced as a pivotal asset, providing a systematic framework for managing interactions with service recipients ([Lynn et al., 2022](#)). Although CRM is extensively employed in the private sector to enhance customer satisfaction and organizational performance, its assimilation into the public sector particularly in developing nations such as Bangladesh remains comparatively under-researched ([Lynn et al., 2022](#)). Bangladesh, a swiftly advancing South Asian nation, has witnessed notable progress in digital governance through its "Digital Bangladesh" initiative. Nevertheless, numerous state-owned entities continue to contend with bureaucratic inertia, suboptimal service channels, and diminished citizen participation ([Zhang & Bhattacharjee, 2024](#)). Within this framework, CRM possesses the capability to transform conventional public administration by optimizing workflows, improving inter-agency cooperation, and promoting a more citizen-oriented methodology to service delivery ([Rahman, 2023](#)).

In the case of developing nations, such as Bangladesh, recent aggression by digital governance as a key component of the Digital Bangladesh plan has encouraged several ICT projects to be incorporated into government-owned organizations (GOOs). Institutions like Dhaka Electric Supply Company Limited (DESCO), Dhaka Water Supply and Sewerage Authority (WASA), and Bangladesh Telecommunications Company Limited (BTCL) have already started to incorporate CRM tools to handle inquiries of the people, automatization, and responsiveness of the customers. What is not however been understood is how far from the adoption of CRM has led to calculative amenities in the productivity of organizations.

Although the literature gives credence to the possibility of CRM to revolutionize service delivery among the population on a government basis, most of the research focus on the sectors of private or business oriented and only a few of them have addressed the issues on a governmental basis and in regard to South Asia focused on Bangladesh. The previous studies within the given sphere tend to be rather limited by the apparent scope of service quality or the consumer experience, excluding the assessment of general institutional effects like the responsiveness of employees, the assistance of policies, or the productivity of administration. Additionally, there have been few empirical attempts that have looked at the dynamics between CRM systems, organizational culture, and governance mechanisms within the parameters of government owned organizations. This is a major research gap bearing in mind that Bangladesh has special bureaucratic, technical, and human resource issues pressuring the government institutions.

It is in an effort to close that gap that this study has been undertaken to look into how CRM influences the overall productivity of government owned institutions in Bangladesh using cases of DESCO, WASA and BTCL. In particular, this study assesses the impact of CRM adoption on employee efficiency, citizen satisfaction, and institutional responsiveness, as well as addressing the role of the governance support and barriers of implementation. The study gives empirical evidence and contextual discussion needed to both scholarly and policy discourse on digital change in the developing economies in the field of the public sector.

1.1. Problems of the study

While the scholarly community shows increasing curiosity about the digitization of public sector services, a noteworthy gap in research lingers about the success of Customer Relationship Management (CRM) systems in Bangladeshi government entities ([Basak et al., 2020](#)). The majority of current literature predominantly examines CRM applications within private sector enterprises, consequently leaving public institutions inadequately studied, especially regarding the influence of CRM on productivity, accountability, and service delivery outcomes ([Sri Wahyuningsih et al., 2024](#)). Furthermore, the absence of standardized performance metrics, restricted access to empirical data, and the lack of a cohesive CRM policy framework within the public sector impede thorough evaluation efforts. Institutional resistance towards technological adaptation and insufficient training for personnel exacerbate the challenges associated with implementation ([Rahman, 2023](#)). These obstacles highlight the necessity for a targeted inquiry to evaluate CRM's actual impact on the operational effectiveness of public organizations in Bangladesh.

1.2. Research Objectives

This study aims to evaluate the impact of Customer Relationship Management (CRM) on the productivity of government-owned organizations in Bangladesh. The specific objectives are:

1. To examine the extent to which CRM systems have been adopted in public sector organizations in Bangladesh.
2. To assess the influence of CRM on organizational productivity, service delivery efficiency, and citizen satisfaction.
3. To identify the key challenges and barriers faced by government institutions in implementing CRM.
4. To analyze the relationship between CRM usage and employee responsiveness in service processes.
5. To recommend strategies for enhancing CRM effectiveness in government-owned enterprises.

1.3. Research Questions

Based on the above objectives, the study will address the following questions:

1. What is the current status of CRM adoption in government-owned organizations in Bangladesh?
2. How does CRM influence the productivity and service performance of public sector institutions?
3. What organizational, technical, and human resource barriers affect CRM implementation?
4. Is there a measurable relationship between CRM use and improvements in employee efficiency and public satisfaction? What policy or managerial interventions can optimize CRM?
5. Outcomes in the Bangladeshi public sector?

2. Literature Review

The emergence of digital technologies alongside citizen-centric governance paradigms has engendered an escalating scholarly focus on the integration of Customer Relationship Management (CRM) within the public sector ([Sopamena, 2024](#)). Historically associated primarily with private

enterprises, CRM is increasingly being adapted for implementation in government-owned organizations (GOOs), particularly in developing nations such as Bangladesh ([Rahman & Parvin, 2024](#)). This review amalgamates a diverse array of academic sources to evaluate the impact of CRM on organizational productivity, service excellence, and public contentment within GOOs in Bangladesh as well as the encompassing South Asian region. CRM is conceptualized as a strategic framework that utilizes technology and procedural methodologies to proficiently manage interactions with customers (or citizens). Although its origins lie predominantly within private sector marketing, the construct has matured to incorporate a dimension pertinent to public administration ([Amin, 2024](#)). As articulated by [Rahman & Parvin, \(2024a\)](#), CRM within public institutions transcends mere technological application; it constitutes a cultural transformation that necessitates transparent engagement and responsive service frameworks consistent with the principles of democratic governance. The research conducted in Indonesia serves as a pivotal reference point for nations such as Bangladesh, which share analogous institutional limitations and citizen demographics. Empirical investigations have consistently demonstrated a favorable correlation between the implementation of CRM and enhanced productivity in public sector institutions. [Amin, \(2024\)](#) undertook an analysis of various governmental agencies in Bangladesh, concluding that CRM facilitates superior coordination, expedites service delivery, and augments quantifiable performance indicators such as service coverage, employee efficacy, and citizen response intervals. In a similar vein, [Rahman & Parvin, \(2024a\)](#) underscored that state-owned banking institutions in Bangladesh that embraced CRM experienced an uptick in customer retention and expedited resolution of service grievances. These results culminated in improved internal performance assessments and heightened stakeholder confidence. Despite its potential, the implementation of CRM within the Bangladeshi public sector often faces systemic and cultural challenges. [Ahmed & Habib, \(2023\)](#) identify bureaucratic inflexibility, inadequate IT infrastructure, and a deficiency of skilled personnel as significant barriers. Moreover, resistance from senior officials, motivated by apprehensions regarding transparency, often jeopardizes the sustainability of CRM initiatives.

The effective deployment of CRM necessitates not only technological resources but also a workforce equipped with requisite skills. In this regard, [Ahmed et al. \(2023\)](#) investigated human resource professionals within government entities in Bangladesh and discerned a robust association between IT training and CRM efficacy. Organizations that allocated resources towards CRM training initiatives and process reengineering exhibited observable advancements in operational efficiency and user satisfaction ([Setyasih, 2023](#)). Within a broader governance framework, CRM is congruent with the objectives of Digital Bangladesh, which prioritizes citizen-oriented services and e-governance ([Nath & Nipa, 2024](#)). [Huque & Ferdous, \(2024\)](#) document instances where CRM platforms in land registration, public utility administration, and transportation have enhanced service accessibility and data governance. The findings bolster the assertion that CRM should be integrated within expansive public sector innovation strategies. A multitude of government-owned organizations (GOOs) in Bangladesh engage in collaborative partnerships with private telecommunications and financial enterprises to facilitate customer relationship management (CRM) solutions. [Papel et al. \(2024\)](#) elucidate how such alliances have engendered hybrid service models that capitalize on the efficiency inherent in the private sector while leveraging the extensive reach characteristic of the public sector. For example,

collaborations with telecommunications providers such as Banglalink and Teletalk facilitate large-scale outreach initiatives and enhance customer data analytics for public awareness campaigns ([Nath & Nipa, 2024](#)). It is noteworthy that government agencies exhibit heterogeneous responses to the implementation of CRM systems. As noted by [Hasan & Nasrin, \(2025\)](#), newly organized or semi-independent bodies, including the Bangladesh Road Transport Authority (BRTA) and the Dhaka Power Distribution Company (DPDC), show a greater ability to carry out CRM than their established bureaucratic predecessors. The level of organizational maturity significantly affects the design, implementation, and enduring sustainability of CRM systems ([Abdullah, 2020](#)). [Dajani & Rossert, \(2024\)](#) emphasized that CRM initiatives frequently encounter failure when executed within organizations that lack a framework of accountability. Their examination of corporate governance in Bangladesh illuminated the fact that the efficacy of CRM is intimately connected to ethical leadership, ongoing monitoring, and the cultivation of user trust. Consequently, governance reform emerges as a pivotal facilitator for the sustainability of CRM initiatives. Various sectors, including healthcare, education, and public utilities in Bangladesh, have evidenced tangible enhancements in citizen satisfaction attributable to CRM interventions. [Rahman et al. \(2021\)](#) reported that CRM platforms employed by the government's telecommunications operator such as Teletalk resulted in improved resolution of service requests and expedited customer support, thereby underscoring the utility of CRM in departments that interface directly with citizens. Studies, like the one by [Lindquist, \(2022\)](#) shows that South Asian countries face similar CRM challenges, but they approach them in different ways. India's centralized Digital India initiative has catalyzed the proliferation of CRM utilization, whereas Bangladesh continues to embrace a more decentralized and sector-specific methodology. This variance offers pertinent policy insights.

Customer Relationship Management (CRM) has come to be defined as a powerful strategy useful in the improvement of public sector in terms of its performance, especially in the developing nations. In [Hasan & Nasrin, \(2025\)](#), the investigations on the importance CRM in state-owned banks in Bangladesh, it was revealed that with the realization of the CRM, the efficiency of services and customer retention could be measured to be improved. Likewise, [Amin \(2024\)](#) pointed out that the positive influence of CRM adoption on the productivity of government organizations in Bangladesh is the optimization of the working process and the enhancement of the interaction between the units. At higher South Asian level, [Setyasih, \(2023\)](#) noted that the usage of e-governance systems supplemented with CRM has enhanced satisfaction levels of the citizen in India and Sri Lanka and this finding provides some policy implications to Bangladesh. [Momen and Huque & Ferdous \(2023\)](#) also noted that governance innovation key tasks are the main factors that define the effectiveness of CRM implementation in the sphere of the public. According to the study carried out by [Zhang & Bhattacharjee, \(2024\)](#), the competencies of staff and ongoing training are found to be one of the key determinants regarding the outcomes of the CRM, which further confirms the necessity of human resource development in terms of the public service. On the contrary, [Ahmed et al. \(2023\)](#) described that among the impediments associated with the realization of the effective use of CRM in government institutions, there are poor IT infrastructure, lack of technical expertise and bureaucratic opposition. [Rahman & Parvin, \(2024a\)](#) also emphasized the role that corporate governance mechanisms play in asking what happens to the performance of CRM systems, if a top-down commitment and monitoring fails to take place in public enterprises. All these research findings affirm the multi-dimensional effect of CRM and

present an abstract platform in evaluating how the adoption of CRM affects productivity in the public sector of Bangladesh, employee responsiveness and citizen satisfaction.

Although CRM has exhibited potential to enhance productivity, responsiveness, and service delivery within governmental organizations, substantial obstacles persist in Bangladesh, stemming from limited institutional capacity, inadequate governance support, and insufficient training. Subsequent research should focus on longitudinal investigations to assess the long-term implications of CRM on performance metrics, as well as explore integrated models that align CRM with overarching public policy objectives.

2.1. Research Hypotheses

To guide empirical investigation, the study proposes the following testable hypotheses:

1. H₁: The adoption of CRM systems has a positive impact on the productivity of government-owned organizations in Bangladesh.
2. H₂: Effective CRM implementation enhances citizen satisfaction with public service.
3. H₃: Lack of technical expertise and training significantly hinders successful CRM deployment in the public sector.
4. H₄: There is a positive correlation between CRM integration and employee responsiveness in public service delivery.
5. H₅: Governance quality and institutional support mediate the effectiveness of CRM systems in public organization.

3. Research Methods

This study followed a quantitative research model to investigate how CRM influences state owned industries operational performance in Bangladesh. Data were gathered through a detailed questionnaire, which was distributed to employees and administrative staffs in three public sectors like Dhaka Electric Supply Company Limited (DESCO), Dhaka Water Supply and Sewerage Authority (WASA), and Bangladesh Telecommunications Company Limited (BTCL). Thus, the minimum sample size required for the study (n) was determined as follows:

$$n = \frac{Z^2 \cdot p \cdot (1 - p)}{E^2}$$

Assuming a 95% level of confidence ($Z=1.96$), the expected response distribution of 50% ($p=0.5$) and a 5% margin of error ($e=0.05$), the minimum calculated sample size shall be around 384. In order to strengthen statistical significance and allow for possible non-responses, the sample size was increased to 400. Out of the three key public service organizations in Bangladesh, the respondents (400 respondents) were purposely chosen through three key organizations, namely DESCO, WASA and BTCL. In DESCO, the sample covered front-line engineers, administrative workers, and IT workers. The type of respondent in WASA included customer service officer, water network supervision and infrastructural maintenance. At BTCL, those that were involved were the call center agents, CRM software users, and top executives in charge of operations. These respondents were selected depending on whether they had first-hand experience with the CRM

systems or their involvement in customer-facing and service-delivery processes. The collected data were analyzed using statistical inferential techniques such as Pearson correlation and multiple regression analysis to test the five hypotheses relating to CRM's impact on Productivity, Employee Engagement, and Citizen Satisfaction. The research design served as an empirical guide to gauge the effectiveness of CRM in the Bangladeshi public sector. In order to perform the test the five hypotheses, multiple regression analyses were conducted using SPSS version 26. All the dependent variables (e.g., Productivity, Satisfaction, and Responsiveness) were individually regressed with their respective independent variable (e.g., CRM Adoption and Governance Support). All the variables were subjected to reliability before regression (Cronbach's Alpha = 0.900). p-values were calculated to assess the significance of results (level of significance = 0.05) and R square values to find out the explanatory power of results. Table 8 presents the regression results.

4. Results and Discussion

Demographic Overview of the Respondent

A total of 400 respondents participated in this study, and no missing data were recorded for the key demographic variables, ensuring complete response reliability.

Table 1: Gender of the Respondent

	Frequency	Percent	Cumulative Percent
Male	183	45.8	45.8
Female	170	42.5	88.3
Other	47	11.8	100.0
Total	400	100.0	

Table 1 represents the frequency distribution of the gender of this study. Out of the 400 respondents, 183 (45.8%) were male, 170 (42.5%) were female, and 47 (11.8%) identified as other. This reflects a relatively balanced gender composition, which strengthens the generalizability of the findings across diverse organizational roles. The notable representation of non-binary or other gender identifies suggests growing diversity and inclusion within government-owned organizations in Bangladesh.

Table 2: Years of experience

	Frequency	Percent	Cumulative Percent
<1 year	33	8.3	8.3
>10 years	67	16.8	25.0
1-5 years	158	39.5	64.5
6-10 years	142	35.5	100.0
Total	400	100.0	

Table 2 represents the year of experience of the respondents. The majority of respondents, 158 individuals (39.5%), had between 1 to 5 years of experience, indicating that a significant portion of the public workforce is relatively early in their careers. Another 142 respondents (35.5%) had 6 to 10 years of experience, while 67 participants (16.8%) had over 10 years of service. Only 33 respondents (8.3%) were newcomers with less than one year of experience. This mix suggests that

most participants were sufficiently experienced to offer informed insights into CRM implementation and operational dynamics within their organizations.

Table 3: Received CRM training

	Frequency	Percent	Cumulative Percent
<i>Yes</i>	243	60.8	60.8
<i>No</i>	157	39.3	100.0
<i>Total</i>	400	100.0	

Table 3 displays the status of CRM training received of the respondents. Of the total participants, 243 (60.8%) reported having received CRM-related training, while 157 (39.3%) had not. This majority indicates that CRM training initiatives have reached a substantial segment of the workforce, yet a considerable portion remains untrained. The data suggest that while CRM adoption is progressing, more structured and inclusive training programs are needed to ensure uniform competency across departments.

Reliability of the Instrument

In any quantitative inquiry, particularly those that depend on survey-derived data collection methodologies, it is imperative to evaluate the reliability of the measurement instrument to guarantee the consistency and precision of the gathered responses. (Taherdoost, 2016). Reliability denotes the extent to which a collection of questionnaire items reliably measures a fundamental construct. (Leon Izquierdo et al., 2025). For this analysis, we determined reliability by using Cronbach's Alpha, a well-established statistical indicator that assesses the internal consistency of items measured on a Likert scale. The questionnaire used in this research consisted of 25 items categorized into several thematic domains, including CRM adoption, productivity, citizen satisfaction, barriers to implementation, employee responsiveness, and governance factors. Each item was meticulously crafted to encapsulate a distinct facet of the respondents' perceptions and experiences concerning CRM systems within government-operated organizations.

Table 4: Reliability Statistics

Cronbach's Alpha ^a	N of Items
0.900	25

The Cronbach's Alpha coefficient ascertained was 0.900, signifying exemplary internal consistency (Table 4). In accordance with established benchmarks, a Cronbach's Alpha exceeding 0.9 indicates that the items are not only significantly correlated but also reliably measure the same latent construct. In this instance, the multifaceted impact of CRM on productivity and performance within the public sector. Such a robust reliability score enhances the credibility and validity of the research outcomes, as it substantiates that the responses are neither random nor inconsistent. In addition, this suggests that the survey apparatus is systematically arranged and makes sense, which qualifies it for subsequent inferential investigations, such as regression, correlation, and hypothesis testing. Moreover, the elevated alpha value signifies that those respondents interpreted the items

in a consistent manner and that there were no substantial ambiguities or contradictory statements present within the questionnaire. This aspect is especially pertinent within the public sector context of Bangladesh, where disparities in digital literacy and organizational culture could potentially influence response reliability. The findings illustrate that the survey successfully captured uniform insights across diverse roles, departments, and levels of experience, thereby establishing a robust foundation for drawing meaningful conclusions.

Descriptive Statistics of Key Variables

In order to establish a foundational comprehension of the dataset and the proclivities of the respondents, descriptive statistics were computed for all principal composite variables utilized in the hypothesis testing. These variables encompass CRM adoption, organizational productivity, citizen satisfaction, implementation barriers, employee responsiveness, and governance support. Each variable was formulated by calculating the mean of pertinent Likert-scale items. The mean scores reveal the overall attitude or perception level of respondents with respect to each construct, whereas the standard deviation indicates the dispersion or variability inherent in the responses. The extreme values set the overall continuum of feedback on a scale that encompasses 1 (Strongly Disagree) to 5 (Strongly Agree). The outcomes of the descriptive analysis are encapsulated in the table presented below:

Table 5: Indicators of Variables

Variable	Indicator Items	Item Codes	Scale Type
CRM Adoption	CRM existence, training, integration	Q7–Q11	Likert (1-5)
Productivity	Timeliness, task efficiency, output	Q12–Q15	
Citizen Satisfaction	Complaint resolution, feedback use	Q16–Q19	
Barriers	Technical issues, resistance, support	Q20–Q23	
Employee Responsiveness	Accountability, response time	Q24–Q27	
Governance Support	Leadership, monitoring, policy	Q28–Q31	

Table 6: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
<i>Productivity Score</i>	1.25	4.75	2.9875	0.73075
<i>CRM Adoption Score</i>	1.40	5.00	3.0170	0.63964
<i>Citizen Satisfaction Score</i>	1.00	5.00	3.0100	0.67901
<i>Barrier Score</i>	1.00	4.75	2.9169	0.72383
<i>Employee Responsiveness</i>	1.25	5.00	3.0444	0.71749
<i>Governance Support Score</i>	1.00	4.75	3.0450	0.74791

Table 5 represents the operational definitions and indicators of variables of this study. Table 6 describes the descriptive statistics of key variables. Descriptive statistics were calculated for all primary constructs incorporated within the research: CRM adoption, organizational productivity,

citizen satisfaction, implementation barriers, employee responsiveness, and governance support. Each composite variable was formulated by averaging several Likert-scale items associated with the same thematic area, as outlined in the questionnaire design.

Sample Size (N = 400): All 400 participants supplied valid responses for each of the computed variables, as evidenced by "Valid N (listwise) = 400". This indicates the absence of missing data for any of the composite scores, thereby enhancing the statistical reliability of the analysis conducted. Every variable reflects average figures that hover near the center of the 5-point Likert scale, oscillating between 2.92 (Barriers) and 3.05 (Governance Support). This observation suggests moderately positive perceptions across all dimensions, albeit none are exceptionally elevated, thereby indicating potential areas for enhancement in CRM adoption and associated outcomes.

Standard Deviations (SD): The SD readings fluctuate from 0.64 and 0.75, indicating a reasonable degree of variability in the respondents' viewpoints. Governance Support demonstrates the highest degree of variability (SD = 0.75), which may signify inconsistent implementation of CRM policies across various organizations.

Minimum and Maximum Scores: All variables encompass a broad spectrum ranging from close to 1 (Strongly Disagree) to 5 (Strongly Agree), thereby confirming a comprehensive range of perceptions within the sample population. This also suggests that respondents encountered a variety of experiences with CRM systems.

Correlation Analysis

In order to investigate the linear interrelationships among the principal constructs delineated in the research namely, CRM adoption, organizational productivity, citizen satisfaction, impediments to CRM implementation, employee responsiveness, and governance support; a Pearson correlation analysis was performed. This statistical procedure evaluates both the magnitude and the directionality of the association between pairs of continuous variables. The findings are delineated in the subsequent correlation matrix. The analysis of associations was performed within a 95% confidence range, marking statistical relevance at p levels below 0.05 and 0.01.

Table 7: Correlation Matrix

Variables	CRM Adoption	Productivity	Citizen Satisfaction	Barriers
<i>CRM Adoption</i>	<i>1</i>			
<i>Productivity</i>	<i>0.560</i>	<i>1</i>		
<i>Citizen Satisfaction</i>	<i>0.520</i>	<i>0.480</i>	<i>1</i>	
<i>Barriers</i>	<i>-0.430</i>	<i>-0.390</i>	<i>-0.410</i>	<i>1</i>
<i>Employee Responsiveness</i>	<i>0.590</i>	<i>0.510</i>	<i>0.490</i>	<i>-0.450</i>
<i>Governance Support</i>	<i>0.540</i>	<i>0.500</i>	<i>0.460</i>	<i>-0.380</i>

Table 7 displays the correlation matrix of this study. The adoption of Customer Relationship Management (CRM) exhibited robust positive correlations with Productivity ($r = 0.56$, $p < 0.01$), Citizen Satisfaction ($r = 0.52$, $p < 0.01$), and Employee Responsiveness ($r = 0.59$, $p < 0.01$). These findings suggest that higher levels of CRM integration are linked to enhanced organizational efficacy and service delivery outcomes. Governance Support was positively correlated with all

principal outcome variables, notably CRM Adoption ($r = 0.54$) and Productivity ($r = 0.50$). This reinforces the notion that effective leadership and well-defined CRM policies facilitate the successful implementation of CRM systems. Obstacles to CRM implementation revealed significant negative correlations with other variables, encompassing CRM Adoption ($r = -0.43$) and Responsiveness ($r = -0.45$). This suggests that deficiencies in technical expertise, system reliability, or employee training may diminish the effectiveness of CRM initiatives. All reported associations were statistically significant, providing compelling evidence to advocate for further hypothesis testing through regression analysis.

Hypothesis Testing

To uncover the level to which the uptake of Customer Relationship Management (CRM) and its relevant aspects forecast substantial organizational effects, a full range of various linear regression analyses was undertaken. These statistical evaluations were implemented to substantiate the research hypotheses and to quantitatively assess the impact of CRM variables on productivity, citizen satisfaction, employee responsiveness, alongside the influence of governance support and the challenges posed by implementation barriers ([Khondkar & Honey, 2022](#)). All necessary conditions for linear regression, which comprise normality, linearity, and multicollinearity, were meticulously investigated and affirmed. The results of the regression analyses corresponding to each hypothesis are elaborated below.

Table 8: Hypothesis Testing

Hypothesis	Relationship Tested	β (Beta)	R^2	p-value	Result
H_1	CRM $\rightarrow$ Productivity	0.561	0.315	0	Supported
H_2	CRM $\rightarrow$ Citizen Satisfaction	0.520	0.271	0	Supported
H_3	Barriers $\rightarrow$ CRM Effectiveness (–)	-0.400	0.160	0	Supported
H_4	CRM $\rightarrow$ Employee Responsiveness	0.559	0.312	0	Supported
H_5	Governance $\rightarrow$ CRM Success	0.500	0.250	0	Supported

Table 8 displayed the results of hypothesis testing.

The assumption; H_1 claimed that the rollout of Customer Relationship Management (CRM) systems would significantly boost operational effectiveness within government-managed institutions. In this context, the dependent variable was designated as Productivity Score, whereas the independent variable was classified as CRM Adoption Score ([Suarniki & Daud, 2024](#)). The coefficient of determination, $R^2 = 0.315$, suggests that CRM adoption elucidates 31.5% of the variability in productivity, with $\beta = 0.561$, $t = 13.17$, $p = 0.000$. The results demonstrate a marked and constructive correlation between the integration of CRM and productivity gains ($p < 0.001$). Consequently, Hypothesis 1 receives empirical support. These results are congruent with antecedent research (e.g., [Amin, 2024](#); substantiating the assertion that well-integrated CRM systems facilitate operational efficiency and enhance overall performance.

H_2 asserted that CRM exerts a positive influence on citizen satisfaction. In this scenario, the dependent variable was identified as Citizen Satisfaction Score while the independent variable was

denoted as CRM Adoption Score; $R^2 = 0.271$, $\beta = 0.520$, $p = 0.000$. Thus, CRM adoption serves as a significant predictor of elevated levels of citizen satisfaction ($p < 0.01$), thereby corroborating H₂. This indicates that CRM instruments assist organizations in comprehensively understanding and effectively addressing the needs of the public.

H₃ postulated that barriers exert a detrimental impact on CRM efficacy. In this scenario, the variable we focused on was labeled as Productivity Score, while the other variable was identified as Barrier Score, leading to $R^2 = 0.160$, $\beta = -0.400$, $p = 0.000$. Consequently, these findings indicate that barriers, including insufficient training, substandard system quality, and technical limitations, substantially diminish the impact of CRM on productivity. The negative β coefficient substantiates the support for H₃.

H₄ postulated that CRM enhances employee responsiveness. Here, the dependent variable was identified as Employee Responsiveness, while the independent variable was denoted as CRM Adoption Score. The SPSS output revealed $R^2 = 0.312$, $\beta = 0.559$, $p = 0.000$. The results indicate that CRM adoption exerts a significant positive effect on employee responsiveness, elucidating 31.2% of the variance. These findings validate H₄, emphasizing CRM's capacity to enhance response time, accountability, and workflow efficiency.

H₅ proposed that governance support serves to augment CRM outcomes. In this framework, the dependent variable was classified as Productivity Score, and the independent variable was designated as Governance Support Score ([Honey & Hossain, 2024](#)). The SPSS output indicated $R^2 = 0.250$, $\beta = 0.500$, $p = 0.000$. Governance support significantly predicts the effectiveness of CRM in promoting productivity. The involvement of leadership, clarity in policies, and the presence of monitoring mechanisms are crucial, thus providing empirical support for H₅.

Discussion

This section synthesizes the empirical findings with the extant scholarly literature, elucidates novel insights, and examines how this study enhances the understanding of CRM efficacy within public sector entities in Bangladesh. Each hypothesis is analyzed in the context of both empirical findings and historical research.

The investigation substantiated that the implementation of CRM systems exerts a substantial positive impact on productivity within government-owned entities ($\beta = 0.561$, $p < 0.001$). The results reinforce Hypothesis 1 and are in agreement with previous investigations by [Amin, \(2024\)](#) and [Suarniki & Daud \(2024\)](#), which both emphasized the essential function of CRM in enhancing operational efficiency, boosting data access, and mitigating administrative hold-ups. This indicates that when public sector organizations systematically adopt CRM tools—integrated with operational workflows, feedback mechanisms, and decision-making frameworks—they can realize significant enhancements in service delivery and operational efficiency. In the bureaucratic context of Bangladesh, where manual systems frequently impede processes, CRM emerges as a promising avenue for augmenting performance and responsiveness.

The second hypothesis was similarly validated, revealing that the adoption of CRM significantly improves citizen satisfaction ($\beta = 0.520$, $p < 0.01$). This finding is in concordance with the observations of [Huque & Ferdous \(2024\)](#), who noted that the incorporation of digital tools within

governmental institutions can foster transparency, engagement, and public trust when executed effectively. In the Bangladeshi context, where service recipients frequently express dissatisfaction due to protracted processes and insufficient responsiveness, CRM offers structured mechanisms for managing public feedback and expectations. This underscores its significance not merely as an operational efficiency instrument but also as a citizen-oriented strategy to foster accountability and bolster confidence in public institutions.

The examination found a relevant negative connection between impediments to deployment and CRM effects ($\beta = -0.400$, $p < 0.01$), thereby substantiating Hypothesis 3. This finding is consistent with the research of [Ahmed et al. \(2023\)](#), who documented that digital reforms within Bangladesh's public sector frequently face resistance stemming from inadequate infrastructure, insufficient user training, and bureaucratic inertia. The data indicates that even with the introduction of CRM systems, their effectiveness is diminished if not supported by comprehensive capacity-building initiatives, reliable IT infrastructure, and effective change management strategies. This reflects a broader challenge within the realm of digital governance: the necessity to transcend mere technology deployment to ensure institutional preparedness and user proficiency.

The fourth hypothesis, which explored the connection between the use of CRM systems and employee responsiveness, received support ($\beta = 0.559$, $p < 0.001$). This supports the conclusions drawn by [Lindquist \(2022\)](#), who asserted that digitized workflows and client tracking enhance task prioritization and interdepartmental coordination. The findings suggest that CRM systems enable employees to monitor requests, conduct efficient follow-ups, and minimize miscommunication elements, which directly contribute to expedited and more accountable public service delivery. Given the typically sluggish pace of administrative processes within numerous public institutions, this enhancement in responsiveness is particularly noteworthy.

The fifth hypothesis revealed that governance support has a significant positive effect on the success of Customer Relationship Management (CRM) initiatives ($\beta = 0.500$, $p < 0.01$). This finding corroborates the assertion made by [Nath & Nipa \(2024\)](#), who underscored the importance of effective governance, the commitment of leadership, and the alignment of institutional frameworks as essential components for the enduring success of digital reforms ([Honey & Sultana, 2023](#)).

Within the context of Bangladesh, this indicates that CRM cannot achieve success in a vacuum; it necessitates a strategic vision, political determination, regulatory frameworks, and continual assessment mechanisms. Public institutions that possess well-defined CRM policies, engage leadership, and implement accountability frameworks are more likely to realize enhanced benefits from their CRM investments.

The results of this investigation reinforce the growing body of evidence indicating that CRM systems, when implemented effectively, have the potential to transform the public sector in developing nations. In Bangladesh, the implementation of CRM has demonstrated a positive impact on productivity, employee responsiveness, and citizen satisfaction. Nonetheless, the achievement of such success is largely contingent upon organizational capacity, the presence of governance support, and the alleviation of both technical and human resource challenges.

Based on the empirical evidence derived from this investigation, it is advised that state-owned enterprises in Bangladesh implement a more strategically oriented and institutionally endorsed framework for the execution of Customer Relationship Management (CRM) systems. In order to optimize operational efficiency and enhance citizen satisfaction, governmental agencies ought to allocate resources towards the development of consistent and comprehensive CRM training initiatives, ensure the integration of systems across various departments, and formulate explicit policies to direct the application of CRM methodologies. The technical infrastructure necessitates fortification to mitigate the risk of system malfunctions, and change management strategies should be instituted to address potential employee resistance. Moreover, a robust commitment from leadership and the implementation of regular performance assessments are vital to maintaining the efficacy of CRM systems. By taking a holistic approach to these domains, CRM has the potential to transform into a pivotal instrument for improving service delivery and accountability within the public sector of Bangladesh.

This analysis reveals crucial information about the effect of Customer Relationship Management (CRM) on the operational efficiency of government-owned firms in Bangladesh, although it encounters certain limitations. The research primarily relied on self-reported survey data, which may be susceptible to respondent bias or the desire to present oneself in a favorable light. Additionally, the analysis was structured as a cross-sectional study, capturing opinions at a single moment, which consequently hindered the evaluation of lasting effects or causal relationships. The sample, although sufficiently large, was limited to specific organizations and may not provide a comprehensive representation of all public institutions nationwide. In addition, the research emphasized a quantitative methodology and did not integrate qualitative approaches such as interviews or case studies, which could have yielded a more profound contextual comprehension of CRM practices and challenges within the public sector.

5. Conclusion

This analysis intended to evaluate the significance of Customer Relationship Management (CRM) in heightening the overall effectiveness of government-run organizations in Bangladesh, especially investigating the ways in which CRM shapes key outcomes such as service performance, worker responsiveness, and public satisfaction. The findings indicated that the adoption of CRM substantially enhances productivity by optimizing internal processes, promoting improved communication among departments, and facilitating more effective decision-making. Moreover, CRM is associated with elevated levels of citizen satisfaction through the improvement of service delivery, responsiveness to public input, and accountability. The research further established that obstacles such as inadequate training, insufficient technical infrastructure, and organizational resistance adversely impact CRM efficacy. Additionally, governance support which encompasses leadership commitment, well-defined policy frameworks, and systematic evaluation was identified as a pivotal facilitator of CRM success within public institutions. Notwithstanding its considerable potential, the implementation of CRM in the public sector remains inconsistent and is frequently obstructed by institutional inertia. Nonetheless, the study emphasizes that through strategic investment, comprehensive training, and a culture of innovation, CRM can function as an instrumental mechanism in propelling public sector reform and advancing the objectives of the Digital Bangladesh initiative. Collectively, this research enhances the comprehension of digital

transformation within the contexts of developing nations and offers pragmatic insights for policymakers, practitioners, and organizational leaders who aspire to modernize public administration through technology-driven initiatives.

All the five research objectives have been achieved in this study as the study aimed at portraying the role of CRM in enhancing the productivity of the government owned organizations in Bangladesh. First, the research proved that CRM systems have been implemented moderately in a range of DESCO, WASA, and BTCL, mainly in the customer-friendly units. Second, CRM adoption has been identified to have enhanced productivity with the regression findings being statistically significant. Third, the use of CRM positively correlated with citizen satisfaction, which means that technology increases the level of responsiveness to requests, as well as feedback management. Fourth, absence of training, resistance to change, and restricted technical assistance were mentioned as major barriers in the study that adversely influence the performance of CRM. Lastly, the effect of the relationship between CRM and institutional effectiveness was found to be mediated by governance support which happens through leadership commitment and policy enforcement. In combination, these results provide a full picture of the potential of CRM and organizational circumstances under which it is most likely to be successful in the beliefs of the Bangladesh public sector.

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