

A Structural Equation Model on Total Quality Management Adoption in Relation to Ethical Climate, Organizational Commitment and Motivating Potential of Employees in Rural Banks

Tessil Joy L. Loren, William T. Sucuahi

University of Mindanao, Davao City, Philippines

Abstract: *This study investigates the adoption of Total Quality Management (TQM) practices in rural banks in the Philippines and its correlation with ethical climate, organizational commitment, and employee motivating potential. The study collected data from 400. The study participants were selected using a stratified technique. The researcher utilized various standardized questionnaires to measure Total Quality Management Adoption, Ethical Climate, Organizational Commitment, and Employee Motivating Potential. Face-to-face surveys were conducted, and the statistical tools used were mean, Pearson r, regression, and Structural Equation Modeling. The results revealed a high level of Ethical Climate, a moderate level of Organizational Commitment, and a high level of Motivating Potential in rural banks. Rural banks exhibited a high level of Total Quality Management adoption. Significant relationships were observed between Ethical Climate, Organizational Commitment, Motivating Potential, and Total Quality Management. Ethical climate and Motivating Potential emerged as crucial predictors of TQM adoption, while organizational commitment may not have a significant impact. This study implies that rural banks in the Caraga region can utilize the best-fit model, as indicated by Hypothesized Model 5, to enhance their TQM adoption. This guide highlights the significance of ethical climate and employee motivation in fostering TQM practices.*

Keywords: Business Management, Total Quality Management (TQM), ethical climate, organizational commitment, motivating potential, structural equation modeling (SEM), rural banks, Caraga Region, Philippines

I. Introduction

Account ownership in India has increased significantly from 35% of adults in 2011 to 78% in 2021, according to the Global Findex 2021 report. However, the report also reveals that 35% of accounts in India are inactive, seven times higher than the average across developing economies. This high rate of inactive accounts suggests that there may be issues with customer satisfaction in rural banks. Research indicates that dissatisfied customers are more likely to stop using their accounts rather than closing them and may transfer to other banks as an act of discontent. To address these concerns, rural banks should focus on providing a pleasant customer experience and consider conducting customer satisfaction surveys to identify areas for improvement and reduce the number of dormant accounts (Do Customer Satisfaction Surveys Matter in Rural Banking? 2018, [1]).

For this reason, banks should rely on client satisfaction to generate profits and sustain customer loyalty. In this circumstance, banks are classified as service providers. Customers' satisfaction will determine whether a customer will return or switch to a competitor bank when a customer meets with front-line personnel and seek a particular service. Therefore, banks benefit from the TQM customer-centric mindset, as mentioned in the study of Al-Shobaki, S. D., Fouad, R. H., & Al-Bashir, A. (2010) [2]. However, the study of Talib, Raman, and Qureshi (2011) [3] stated that the practice of TQM is not easy because there are problems that the institution will encounter. One is a lack of top-management commitment and employee resistance to change due to inadequate knowledge about TQM and problem identification and resolution.

Despite the barriers and the problems in the adaptation or implementation of TQM in certain business firms, it cannot deny that TQM has a positive impact on business industries, as mentioned in the study by Talavera (2005) [4].

Moreover, she added that TQM adoption works in a third-world environment like the Philippines. The adoption of TQM can produce a high performance of employees and business firms, indicating the critical role of TQM in influencing human behavior. Moreover, according to Olalekan's (2019) [5] study, if there is a complete integration of TQM principles into the organizational functions and the TQM quality tools applied, the benefits are immense. Similarly, Rawashdeh's (2014) [6] study yielded favorable results and actual evidence of TQM's success and its impact on bank performance and competitive advantage in the Jordanian banking sector. Because, according to him, efficient TQM implementation may supply the firm with a variety of benefits such as increased people competency and machines. And there are fewer errors and faults, continual improvement of processes and outcomes, better issue solving, customer satisfaction, a better understanding of the customer, cost savings, increased profit, and greater internal communication. As a result, proper TQM implementation is seen as a strategic weapon capable of outperforming competitors in the marketplace. He went on to say that understanding it is a significant tool for commercial firms or banks when it comes to applying TQM techniques. It has the potential to boost company performance and provide a significant competitive edge.

According to the expectation theory, outputs' performance and perceived desirability result from the employee's motivation and effort to deliver quality outcomes (Ramlall, S., 2004) [7]. Also, the Job Characteristic Model (JCM) by Hackman and Oldham (1976)[8], as cited by Rahman et al. (2014) [9], assumes that to help the employee feel motivated and produce quality outputs. It is essential to create an environment that allows the employee to enjoy their work and helps them think they are doing meaningful and valuable work, as this will increase organizational commitment. Moreover, according to Martin & Cullen's (2006) [10] ethical climate theory, employees will be devoted to the business and deliver quality work if they perceive an ethical climate in the workplace. Ethical climate can influence employee commitment to the organization.

However, there is no comprehensive study of the extent to which TQM is being adopted in a third-world country such as the Philippines (Talavera, 2005) [4]. Her study also shows no studies on the TQM or the extent of TQM adoption in the Banking Industry. Thus, she stated that it is necessary to investigate TQM adoption in various industries and small and medium-sized businesses, with rural banks being one of them. Moreover, Senajon (2015) [11] claims that rural banks' assets are the essential factor in driving up the Gross Domestic Product of the Philippines. As a result, the researcher believes it is critical to conduct research on TQM adoption in Rural banks and investigate the variables affecting TQM implementation.

This study aimed to determine whether the Ethical Climates, Organizational Commitment, and Motivating Potential of employees of Rural Banks influenced the Total Quality Adoption of Rural Banks. Specifically, it aimed to: Firstly, describes the level of the ethical climate in these banks, focusing on aspects such as self-interest, company profit efficiency, friendship/team interest, social responsibility, personal morality, rules and standard operating procedures, and laws and professional codes. Secondly, the research aims to ascertain the level of organizational commitment in Rural Banks, examining affective commitment, continuance commitment, and normative commitment. Next, the study seeks to determine the level of motivating potential of employees in Rural Banks, considering factors like skill variety, task identity, task significance, autonomy (AU), and feedback. Additionally, the research seeks to identify the level of TQM adoption in Rural Banks, including aspects such as commitment to quality, employee involvement, customer focus, fact-based management, process monitoring and control, incentive and recognition systems, and continuous improvement orientation.

Furthermore, the study aims to explore the significant relationships between the ethical climate, organizational commitment, and motivating potential of employees with the adoption of TQM in Rural Banks. Moreover, the research aims to determine which exogenous variable best influences the Adoption of Total Quality Management in Rural Banks. Finally, the study seeks to determine the best fit for the Adoption of Total Quality Management in Rural Banks. The hypotheses presented are as follows: First, there is no significant relationship between the ethical climate, organizational commitment, and motivating potential of employees with the adoption of TQM. Second, no single exogenous variable best influences the Adoption of Total Quality Management in Rural Banks. Third, no model best fits the Adoption of Total Quality Management in Rural Banks.

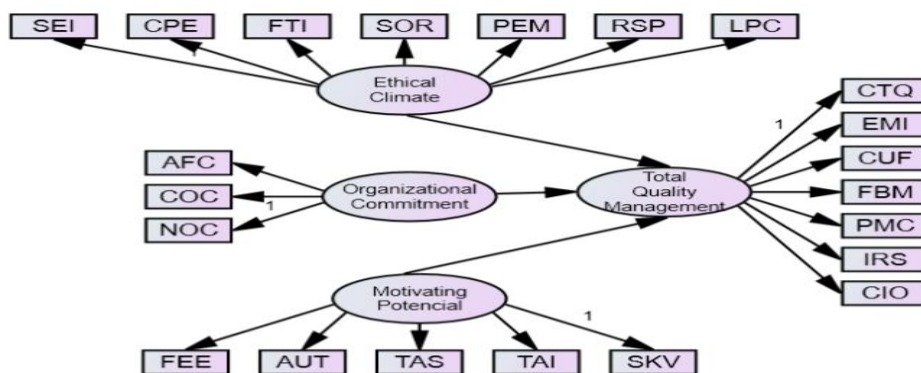
According to some literature and studies, TQM has been related to the ethical climate, organizational commitment, and motivating potential. For example, in his research entitled "The Role of Business Ethics in Improving the Quality of Job Performance," Mohammad et. Al. (2018) [12] found that developing work ethics in the workplace could increase the quality of employee performance. Furthermore, in their study titled "The Meaning and Measurement of Work Ethics: Construction and Initial Validation of a Multidimensional Inventory," Miller, Woehr, and Hudspeth (2001) [13] suggested that this study served as a springboard for future research on the relationships between work ethics and work-related behavior.

Moreover, according to Islam et al. (2021)[14], Hackman and Oldham's Job Characteristics Model was used as a tool for measuring the Motivating Potential Score (MPS), which was instrumental in understanding the extent of employees' motivation in the workplace. Their study found that positive job outcomes such as high motivation, high employee satisfaction, high performance, low absenteeism, and low turnover were associated with elevated MPS. Assuming employees were driven by the company's incentives and recognition, it could result in employee involvement, which could impact the company's successful implementation of TQM. According to Talavera (2005) [4] , employee involvement, company incentives, and recognition were signs of effective TQM adoption. Finally, according to Ana et al. (2020, June) [15] entitled "Service Quality Model, Organizational Commitment, and TQM-based Education Leadership in Organizational Development," organizational commitment was the most dominant variable that could influence the adoption of TQM.

By conceptual model, Figure 1 shows the relationship between *Total Quality Management, Ethical Climate, Organizational Commitment, and Motivating Potential of Employees*. It also shows the relationship between *Ethical Climate, Organizational Commitment, and the Motivating Potential of Employees*. The researcher will adopt the "TQM Adoption Index" instrument of Talavera, M. G. V. (2005) [4] . The extent of TQM adoption in Rural Banks will be measured using the 35-item questionnaire. As with the Ethical Climate as an independent variable, the researcher will adopt the study of Cullen, J. B., Victor, B., & Bronson, J. W. (1993) [10], titled "The ethical climate questionnaire: An assessment of its development and validity. " Ethical Climate is divided into seven dimensions, Self-interest, Company Profit Efficiency, Friendship, Team Interest, Social Responsibility, Personal Morality, Rules, Standard Operating Procedures, and Laws, Professional Codes.

Moreover, the researcher will adopt the Organizational Commitment of Abdullah, A. (2011) [16] to measure the employees' organizational commitment. In this study, the instrument is used to assess the level of organizational commitment of the Rural Bank employee in the CARAGA Region. The Organizational Commitment Questionnaire is an 18-item survey on a Likert-type scale. This questionnaire has three indicators: Affective Commitment, Continuance Commitment, and Normative Commitment.

Motivating Potential as another independent variable is measured using the Motivating Potential Score (MPS) of Hackman, J. R., & Oldham, G. R. (1976) [8]. The Motivation Potential is divided into five categories which are Skill variety (SV), Task identity (TI), Task significance (TS), Autonomy (AU), and Feedback (FB).



Legend:

- | | |
|---|---|
| <i>SEI-self-interest</i> | <i>TAI-task identity</i> |
| <i>CPE-company profit efficiency</i> | <i>TAS-task significance</i> |
| <i>FTI-friendship, team interest</i> | <i>AUT-autonomy</i> |
| <i>SOR-social responsibility</i> | <i>FEE-feedback</i> |
| <i>PEM-personal morality</i> | <i>CTQ-commitment to quality</i> |
| <i>RSP-rules, standard operating procedures</i> | <i>EMI-employee involvement</i> |
| <i>LPC-laws, professional codes</i> | <i>CUF-customer focus</i> |
| <i>AFC-affective commitment</i> | <i>FBM-fact-based management</i> |
| <i>COC-continuance commitment</i> | <i>PMC-process monitoring and control</i> |
| <i>NOC-normative commitment</i> | <i>IRS-incentive and recognition system</i> |
| <i>SKV-skill variety</i> | <i>CIO-continuous improvement orientation</i> |

figure 1. The conceptual model showing the direct relation of latent exogenous towards the latent endogenous variable

This study is valuable for supplying banking sectors with knowledge and information on the significance of applying TQM. This study could be the basis for future business and employee development plan decisions. In addition, this study might assist them in identifying and resolving specific issues brought about by implementing TQM.

This study is also advantageous to the Owner, CEO, and staff of the Rural Bank, as it assists them in planning the growth of the Banking sector. This study will reveal the current state of rural banks and could serve as the foundation for rural bank planning. Human resource management is becoming increasingly aware, based on the reactions of rural bank employees, that if employees are not motivated because they perceive some of their coworkers engaging in unethical behavior, this could result in less commitment to the organization and lower service quality. To help build strategies suited for total quality management by rural banks in the region, they plan to ascertain the motivational potential, ethical atmosphere, and organizational commitment level.

Future researchers will use the study's findings as a foundation for more research, notably on rural banks' adoption of Total Quality Management.

II. Method

2.1 Research Respondents

The researcher surveyed 400 participants for this study. According to Molwus et al. (2013) [17], an adequate sample size for structural equation modeling was between 100 and 400 respondents. Model-based methods for estimating sample size were becoming advocated, with suitable methods based on fit indices or model power analysis. Since the sample size satisfied the requirements for social science research, as indicated by Pinsonneault and Kraemer (1993) [18], the study's participants were employees of the rural bank in the CARAGA region. Stratified sampling was used in this study. The researcher applied a set of criteria to select participants deemed to be the most representative of the population and the most readily available and competent individuals (Etikan, Musa, & Alkassim, 2016, [19]). Moreover, Cheah et al. (2020) [20] stated that "sample strength derives from picking samples appropriately, rather than their sizes."

The respondents had to have been permanent bank employees for at least three years and could be either male or female. The research survey was conducted within the specified geographic area, and respondents were randomly selected based on their willingness to participate after learning the study's goal. This process ensured that all responses were accounted for in the analysis to answer the research questions. The researcher determined how responders would be selected. Caraga, a region in the Philippines classified as Region XIII, is situated on the northeastern side of Mindanao Island (DTI, 2022, [21]). It comprises five provinces: Agusan del Norte, Agusan del Sur, Surigao del Norte, Surigao del Sur, and Dinagat Islands Province, along with six cities, 67 municipalities, and 1,311 barangays.

2.2 Materials and Instrument

In this research, the survey questionnaires were adapted from journals in the internet. To assess the level of Total Quality Management Adaption, the researcher utilized a questionnaire entitled "TQM Adoption Index" instrument of Talavera, M. G. V. (2005) [4]. The questionnaire entitled "THE ETHICAL CLIMATE QUESTIONNAIRE" by Cullen, J. B., Victor, B., & Bronson, J. W. (1993) [10] was used to measure the level of the ethical climate of rural banks. Moreover, the researcher adapted Allen and Meyer's (1990) [22] Organizational Commitment Scale. This questionnaire consisted of 18 items which consisted of 6 items each for affective scale, continuance commitment, and normative commitment. To assess the employee's Motivation Potential, the researcher used Hackman and Oldham's (1976) [8] self-report instrument, the "Motivating Potential Score" (MPS), which consisted of 23 items.

The responses of the participants were interpreted using the scale as follows: A mean of 4.20 – 5.00 indicated a very high level, where the manifestations of the independent variables (ethical climate, organizational commitment, and motivating potential) and the dependent variable (total quality management of rural banks) were consistently observed or manifested. A mean of 3.40 – 4.19 indicated a high level where the manifestations of the variables were frequently observed. A mean of 2.60 – 3.39 indicated a moderate level, where the manifestations of the variables were sometimes observed. A mean of 1.80 – 2.59 indicated a low level, where the manifestations of variables were seldom observed. Finally, a mean of 1.00 – 1.79 indicated a very low level, where the manifestations of variables were almost never observed.

The research paper was initially submitted to the research advisor for feedback and recommendations to improve its presentation. Corrections were made based on the advisor's suggestions before collecting data. The final version of the paper incorporated these revisions, the errors identified, and the comments and suggestions provided by expert validators. The panel of specialists and external validators further refined and validated the final copy. Regarding the validity of the questionnaires, internal validators 1, 2, 3, 4, and 5 consistently rated the items on a scale of 1 to 5. Their mean ratings were high, indicating a very good level of validity – specifically, internal validators 1, 2, and 3 rated 4.71,

reflecting a very good evaluation. Internal validator 5 rated it at 4.29, also considered very good. Internal validator 4 provided a slightly lower but still very good rating of 4.

Additionally, the external validator's rating of 4.71 aligned with the ratings given by the internal validators, demonstrating a high level of validity. The overall average rating of the questionnaires received 4.52, indicating a very good level of validity. These ratings collectively suggest that the questionnaires used in the study were highly reliable and valid. The reliability of the research instrument was assessed using the Cronbach's Alpha test. The obtained results reveal a high level of reliability and internal consistency for the instrument. All variables, including TQM Adoption, Ethical Climate, Organizational Commitment, and Motivating Potential of Employee, demonstrate Cronbach's Alpha coefficients above 0.9, indicating excellent reliability. Furthermore, the Cronbach's Alpha values based on standardized items also exceed 0.9, further confirming the instrument's consistency.

2.3 Design and Procedure

The researcher used the quantitative, descriptive-predictive study design. Quantitative research is a technique that tried to achieve accurate and trustworthy measurements that allowed for statistical analysis, and analyzed how these varied from one variable to another (Lazaraton, A., 2005) [23]. The study occurred in the second semester of the 2022-2023 academic year. After the approval of the panel members, the following steps and procedures were undertaken by the researcher to gather data for the study. A formal permission study was requested from the Dean of the University of Mindanao graduate school and each of the President of the Rural Banks of CARAGA Region. Moreover, complete ethical standards were observed by submitting her papers to the ethics committee for checking.

Upon approval, the respondents were briefed by the researcher on the purpose of the study. Furthermore, the researcher explained all the items individually and thoroughly to ensure valid and reliable results. Finally, after accomplishing the questionnaire, the filled-in questionnaire was retrieved by the researcher for analysis and interpretation with the guidance of the statistician. Conclusions were drawn, and recommendations were formulated based on the study's findings.

The following statistical tools were used in the analysis of the data. The mean was utilized to determine the level of adoption of Total Quality Management (TQM), ethical climates, organizational commitment, and motivating potential of employees. Pearson r was employed to establish the relationships among TQM adoption, ethical climates, organizational commitment, and motivating potential of employees. Regression analysis was conducted to identify which independent variable had the most significant influence to the dependent variable. Further, Structural Equation Modeling (SEM) was employed, to determine the best fit model for TQM adoption in rural banks.

The use of the structural equation model (SEM) in this study involved specifying the structural model, estimating regression coefficients between latent variables, and assessing the model's fit to the data. Fit indices, including the chi-square statistic, Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA), were employed to evaluate the model. In factor analysis, a suggested cutoff value of 0.50 was used to eliminate attributes with low correlations with other latent factors in the final SEM. However, the appropriateness of the cutoff value can be influenced by sample size, and a range of 0.45 to 0.50 is considered suitable. The goodness of fit measures were assessed based on specific criteria, such as a p-value greater than 0.05, CMIN/DF value between 0 and 2, GFI greater than 0.95, CFI greater than 0.95, NFI greater than 0.95, TLI greater than 0.95, RMSEA less than 0.05, and P-close value greater than 0.05. These evaluation criteria were employed to ensure the adequacy and appropriateness of the structural equation model used in the study.

The study adhered to and passed the University of Mindanao Ethics and Review Committee (UMERC) protocol's assessments and standardized criteria with its UMERC Protocol No. 2022-392. This protocol ensured voluntary participation, respected the privacy and confidentiality of respondents' information, obtained informed consent, recruited participants based on inclusion criteria, minimized risks, and highlighted potential benefits. Biosafety measures were not applicable as the study did not involve biological or environmental subjects at risk. Plagiarism was avoided through plagiarism detection software, and the fabrication or falsification of data and outcomes was strictly prohibited. There were no conflicts of interest, deceit, or manipulation of the participants' welfare. The observation was conducted in public or quasi-public settings with appropriate safeguards. Permission was obtained from organizations and locations for data collection, and no online data collection was involved. The researcher, who had a background in Accounting Technology, took responsibility for data collection, interpretation, and manuscript writing, with the study undergoing revisions based on adviser and panel recommendations.

III. Result and Discussion

This part presents the collected data's results and interpretations. Discussions were sequenced based on the order of study objectives.

3.1 Ethical Climate in Rural Bank

Table 1 presents the results of a study assessing the ethical climate in rural banks. The table indicates that the rural banks generally exhibit a high ethical climate, with a mean score of 4.03.

Table 1. Level of Ethical Climate in Rural Banks

Indicators	SD	Mean	Descriptive Level
<i>Self-Interest</i>	1.11	3.25	Moderate
<i>Company Profit Efficiency</i>	0.71	4.11	High
<i>Friendship, Team Interest</i>	0.72	4.18	High
<i>Social Responsibility</i>	0.85	4.25	Very High
<i>Personal Morality</i>	0.90	3.78	High
<i>Rules, Standard Operating Procedures</i>	0.88	4.26	Very High
<i>Laws, Professional Codes</i>	0.82	4.38	Very High
Overall	0.57	4.03	High

Most indicators, including company profit efficiency, friendship and team interest, social responsibility, personal morality, rules and standard operating procedures, and laws and professional codes, are rated at high to very high levels of ethical climate. However, the indicator for self-interest receives a moderate rating, suggesting a potential for improvement in this area. The relatively low standard deviation scores across all indicators indicate a high level of agreement among respondents regarding their perceptions of the ethical climate in rural banks. Overall, the study highlights that rural banks demonstrate a positive ethical climate. The findings in Table 1 indicate a strong ethical climate within rural banks, aligning with previous research establishing a link between ethical climate and organizational performance (Kaptein& Schwartz, 2008, [24]). The banks prioritize ethical behavior, evident from high mean scores across various indicators such as company profit efficiency, social responsibility, personal morality, rules and standard operating procedures, and laws and professional codes. However, there is room for improvement in self-interest, which received a moderate rating. The variability in perceptions of self-interest among respondents may stem from individual experiences, perspectives, or potential communication and transparency issues within the organization. This moderate rating of self-interest is consistent with the study conducted by Sunardi, S. and Pradesa, H.A. (2018) [25] titled "An empirical evidence of ethical climate index in rural banks from Board of Directors Perspective." The study suggests that rural bank employees assign low ratings to self-interest due to its association with low collective moral character and motivation. It emphasizes that collective moral sensitivity, reflecting awareness of ethical issues and stakeholders' interests, is the most significant component of the ethical climate index in rural banks.

3.2 Organizational Commitment in Rural Banks

Table 2 presents the level of organizational commitment in rural banks, measured through affective commitment, continuance commitment, and normative commitment. Affective commitment shows a moderate level, indicating employees have a moderate emotional attachment and loyalty to the organization, with a mean score of 3.36 and a standard deviation of 0.83. Continuance commitment also displays a moderate level, reflecting employees' perceived costs and benefits of leaving, with a mean score of 3.34 and a standard deviation of 0.90.

The level of organizational commitment in rural banks can be characterized as moderate overall, encompassing emotional attachment, perceived costs and benefits, and moral obligation (mean score = 3.39, SD = 0.75). Notably, normative commitment stands out with a high level, indicating a strong sense of moral obligation to the organization (mean score = 3.48, SD = 0.84). This finding suggests that employees in rural banks firmly believe in upholding their commitment based on ethical or moral considerations (Meyer & Allen, 1997, [26]).

Table 2. Level of Organizational Commitment in Rural Banks

Indicators	SD	Mean	Descriptive Level
<i>Affective Commitment</i>	0.83	3.36	Moderate
<i>Continuance Commitment</i>	0.90	3.34	Moderate
<i>Normative Commitment</i>	0.84	3.48	High
Overall	0.75	3.39	Moderate

The findings align with previous research in the banking industry, highlighting the importance of organizational commitment to employee satisfaction and retention (Anis et al.; A. A., 2011, [27]). Employees who commit to their

organization tend to experience higher job satisfaction and are likelier to stay with it longer. Normative commitment, driven by shared values and beliefs, significantly predicts employee behavior (Meyer & Allen, 1997, [26]). On the other hand, continuance commitment, related to perceived costs of leaving, is evident in rural banks, with employees perceiving negative consequences for their personal life if they were to leave the organization (Alvesson, M., &Sveningsson, S., 2003, [28]).

3.3 Motivating Potential in Rural Banks

Table 3 displays the motivating potential in rural banks based on indicators such as skill variety, task identity, task significance, autonomy (AU), feedback, and overall motivating potential. The results indicate that rural banks offer employees a motivating work environment.

Table 3. Level of Motivating Potential in Rural Banks

Indicators	SD	Mean	Descriptive Level
<i>Skill Variety</i>	0.82	3.82	High
<i>Task Identity</i>	0.95	3.79	High
<i>Task Significance</i>	0.98	3.34	Moderate
<i>Autonomy (AU)</i>	0.92	3.44	High
<i>Feedback</i>	0.87	3.80	High
Overall	0.77	3.64	High

Skill variety, with a mean of 3.82, and task identity, with a mean of 3.79, are rated highly, indicating that employees in these banks experience diverse tasks and a sense of completeness in their work, contributing to their motivation. While task significance is moderately rated at 3.34, it still holds some motivational value. Autonomy, with a mean of 3.44, and feedback, with a mean of 3.80, are also high, indicating that employees in rural banks enjoy a considerable level of autonomy and receive regular feedback, positively influencing their motivation. Overall, the combined indicators show a mean motivating potential of 3.64 in rural banks.

Moreover, this finding aligns with other studies, according to the study of Singh and Pandey (2018) [29], that Motivation holds significant importance in organizations. It encourages individuals to exert extra effort and enhances efficiency, effectiveness, and employee retention.

3.4 Adoption of Total Quality Management of Rural Banks

Table 4 presents the level of adoption of Total Quality Management (TQM) in rural banks using various indicators. These indicators include commitment to quality, employee involvement, customer focus, fact-based management, process monitoring and control, incentive and recognition system, and continuous improvement orientation.

The results show that commitment to quality, employee involvement, process monitoring and control, and continuous improvement orientation exhibit a very high level of adoption, with mean values above 4.0. Customer focus and incentive and recognition systems also have a high level of adoption, with mean values above 3.0. Fact-based management, on the other hand, demonstrates a moderate level of adoption, with a mean value of 3.27. Overall, the level of adoption of TQM in rural banks is high, as indicated by the mean value of 4.09 and a low standard deviation of 0.61. These findings suggest that rural banks consistently embrace TQM across different indicators, indicating a strong commitment to quality and continuous improvement practices.

Table 4. Level of Adoption of Total Quality Management of Rural Banks

Indicators	SD	Mean	Descriptive Level
<i>Commitment to Quality</i>	0.82	4.28	Very High
<i>Employee Involvement</i>	0.63	4.48	Very High
<i>Customer Focus</i>	0.74	4.11	High
<i>Fact-Based Management</i>	1.11	3.27	Moderate
<i>Process Monitoring and Control</i>	0.81	4.24	Very High
<i>Incentive and Recognition System</i>	0.91	3.99	High
<i>Continuous Improvement Orientation</i>	0.82	4.24	Very High
Overall	0.61	4.09	High

These findings align with previous research indicating the positive impact of TQM on organizational performance (Kaynak & Hartley, 2008,[30]). TQM practices have been associated with improved customer satisfaction, reduced defects, enhanced process efficiency, and increased employee satisfaction and are particularly effective in the service industry, including rural banks.

Despite the high adoption of TQM practices, certain areas require improvement, such as fact-based management. The level of adoption in this area is moderate, indicating room for enhancing the utilization of techniques for diagnosing quality problems and improving production processes. Fact-based management is crucial in making data-driven decisions and enhancing organizational performance (Davenport & Harris, 2017, [31]). Therefore, rural banks could benefit from further developing their fact-based management practices to leverage TQM's benefits fully. Future research could delve deeper into the impact of TQM practices on rural banks' organizational performance and explore strategies for enhancing their adoption.

3.5 Correlation between Ethical Climate and Adoption of Total Quality Management

Table 5.1 shows the significance of the relationship between ethical climate and the adoption of Total Quality Management (TQM) in rural banks. For instance, the relationship between self-interest and commitment to quality has a significance level of .044, indicating a statistically significant but relatively weaker association compared to other relationships. Overall, the table suggests that various aspects of ethical climate, including company profit efficiency, friendship/team interest, social responsibility, personal morality, rules/standard operating procedures, and laws/professional codes, significantly influence the adoption of different TQM practices. Additionally, the overall TQM adoption is significantly related to ethical climate factors.

In relation to the null hypothesis, the table provides evidence that there are statistically significant relationships between ethical climate dimensions and the adoption of TQM in rural banks. The null hypothesis would assume no relationship between these variables, but the presence of significant correlation coefficients with associated p-values lower than the chosen level of significance (typically 0.05) suggests that the null hypothesis can be rejected. This indicates that ethical climate has a meaningful impact on the adoption of TQM in rural banks.

Table 5.1. Significant Relationship between Ethical Climate and Adoption of Total Quality Management

Ethical Climate	Adoption of Total Quality Management							Overall
	Commitment to Quality	Employee Involvement	Customer Focus	Fact-Based Management	Process Monitoring and Control	Incentive and Recognition System	Continuous Improvement Orientation	
Self-Interest	.044	.182**	.230**	.349**	.106*	.340**	.176**	.294**
	.375	.000	.000	.000	.032	.000	.000	.000
Company Profit Efficiency	.524**	.487**	.412**	.391**	.595**	.482**	.648**	.689**
	.000	.000	.000	.000	.000	.000	.000	.000
Friendship, Team Interest	.265**	.502**	.449**	.206**	.350**	.407**	.343**	.478**
	.000	.000	.000	.000	.000	.000	.000	.000
Social Responsibility	.636**	.315**	.273**	.264**	.582**	.142**	.561**	.536**
	.000	.000	.000	.000	.000	.004	.000	.000
Personal Morality	.150**	.317**	.282**	.234**	.155**	.222**	.132**	.289**
	.002	.000	.000	.000	.002	.000	.007	.000
Rules, Standard Operating Procedures	.616**	.338**	.257**	.268**	.590**	.120*	.564**	.531**
	.000	.000	.000	.000	.000	.015	.000	.000
Laws, Professional Codes	.277**	.507**	.414**	.169**	.392**	.291**	.346**	.449**
	.000	.000	.000	.001	.000	.000	.000	.000
Overall	.510**	.541**	.478**	.404**	.563**	.417**	.566**	.673**
	.000	.000	.000	.000	.000	.000	.000	.000

This finding is consistent with previous research showing a positive relationship between ethical climate and organizational outcomes such as employee behavior and performance (Treviño, Weaver, & Reynolds, 2006, [32]). The dimensions of ethical climate measured in this study, such as self-interest, social responsibility, and personal morality, have been found to influence employee behavior and decision-making in previous research (Victor & Cullen, 1987, [33]). Similarly, the dimensions of total quality management measured in the study, such as commitment to quality, employee involvement, and continuous improvement orientation, have been linked to improved organizational performance in previous research (Dean & Bowen, 1994 [34] ; Kaynak, 2003, [35]). The finding that the self-interest dimension of ethical climate is related to commitment to quality in the adoption of total quality management is consistent with previous research that has found a positive relationship between self-interest and motivation (Gagné& Deci, 2005, [36]). However, the lack of significant relationships between other dimensions of ethical climate and dimensions of total quality management adoption suggests that other factors may be at play in the relationship between these constructs. The study highlights the importance of an ethical climate in adopting total quality management in rural banks. Organizations can implement and maintain total quality management practices that improve performance and customer satisfaction by fostering a culture of ethical behavior and decision-making.

3.6 Correlation between Organizational Commitment and Adoption of Total Quality Management

The results presented in Table 5.2 indicate that organizational commitment is positively related to adopting TQM practices, consistent with previous research. For instance, Valmohammadi's (2011) [37] study on the impact of TQM implementation on the organizational performance of Iranian manufacturing SMEs found that affective commitment was positively related to implementing TQM practices in organizations. Valmohammadi also found that TQM implementation positively impacted organizational performance, including improvements in customer satisfaction, employee satisfaction, and profitability. These findings suggest that TQM practices can improve organizational performance. The positive relationship between affective commitment and TQM implementation indicates that emotionally committed employees are more likely to support and participate in such initiatives. Therefore, promoting affective commitment among employees can be crucial in fostering the adoption of TQM practices and improving organizational performance.

Table 5.2. Significant Relationship between Organizational Commitment and Adoption of Total Quality Management

Organizational Commitment	Adoption of Total Quality Management							Overall
	Commitment to Quality	Employee Involvement	Customer Focus	Fact-Based Management	Process Monitoring and Control	Incentive and Recognition System	Continuous Improvement Orientation	
Affective Commitment	.254**	.222**	.250**	.326**	.288**	.366**	.302**	.402**
Continuance Commitment	.390**	.070	.152**	.349**	.310**	.182**	.364**	.372**
Normative Commitment	.392**	.097	.111*	.363**	.389**	.221**	.374**	.399**
Overall	.394**	.145**	.194**	.394**	.374**	.289**	.395**	.444**

Furthermore, the positive relationship between organizational commitment and TQM adoption can be explained by several mechanisms. Firstly, employees who are committed to their organization are more likely to support organizational changes, including adopting TQM practices (Nguyen, T. T. N., & Luu, T. M. N., 2019, [38]). Secondly, committed employees are more likely to participate in quality improvement initiatives and take ownership of the TQM process (Al-Tit, 2015, [39]). Finally, organizational commitment is positively related to adopting and successfully implementing TQM practices, which in turn can lead to continuous improvement and improved organizational performance. (Munizu, M. (2013, [40]).

Thus, the findings in Table 5.2 provide evidence that higher levels of organizational commitment are associated with greater adoption of TQM practices in rural banks. These results are consistent with previous research

and suggest that fostering a culture of organizational commitment can be an effective strategy for promoting adopting TQM practices in organizations.

3.7 Correlation between Motivating Potential and Adoption of Total Quality Management

Table 5.3 displays the statistical analysis results on the relationship between motivating potential and the adoption of Total Quality Management (TQM) in rural banks. The findings reveal a positive correlation between motivating potential factors and TQM adoption, indicating that higher motivating potential is associated with increased TQM implementation in various aspects. The statistically significant results reject the null hypothesis and accept the alternative hypothesis, providing evidence for the importance of motivating potential in the adoption of TQM in rural banks.

Table 5.3. Significant Relationship between Motivating Potential and Adoption of Total Quality Management

Motivating Potential	Adoption of Total Quality Management							Overall
	Commitment to Quality	Employee Involvement	Customer Focus	Fact-Based Management	Process Monitoring and Control	Incentive and Recognition System	Continuous Improvement Orientation	
Skill	.254**	.366**	.349**	.304**	.351**	.359**	.350**	.455**
Variety	.000	.000	.000	.000	.000	.000	.000	.000
Task	.483**	.269**	.257**	.278**	.494**	.278**	.500**	.501**
Identity	.000	.000	.000	.000	.000	.000	.000	.000
Task Significance	.426**	.229**	.195**	.326**	.421**	.222**	.385**	.438**
Autonomy	.444**	.216**	.241**	.372**	.404**	.239**	.446**	.471**
Feedback	.495**	.279**	.274**	.358**	.536**	.313**	.468**	.538**
Overall	.502**	.319**	.308**	.388**	.524**	.331**	.510**	.569**

This finding is supported by previous research on the relationship between motivating factors and TQM adoption. For instance, studies have found that employee empowerment and involvement in decision-making are essential factors in TQM implementation (Ahire, 1996, [41]; Flynn, Schroeder, & Sakakibara, 1994, [42]). Furthermore, the positive relationship between motivating potential and TQM adoption is consistent with the Self-Determination Theory (SDT), which suggests that individuals are more likely to engage in a task when they feel competent, autonomous, and related to the task (Deci & Ryan, 2013, [43]).

The five dimensions of motivating potential in Table 5.3 (skill variety, task identity, task significance, autonomy, and feedback) align with the basic psychological needs of SDT, as they provide opportunities for employees to feel competent, autonomous, and related to their work. In addition, other studies have also found that employee autonomy and feedback are important motivators for TQM adoption. For example, a study by Bhatti, K. K., & Qureshi, T. M. (2007) [44] found that employee participation and empowerment, including autonomy and feedback, were positively related to TQM implementation.

Overall, the results presented in Table 5.3 highlight the importance of motivating the potential to adopt TQM practices in rural banks. The findings suggest that organizations can enhance their TQM implementation by providing employees with opportunities for skill variety, task identity, task significance, autonomy, and feedback. By doing so, organizations can foster a work environment conducive to employee motivation and engagement in TQM practices.

3.8 Influence of Ethical Climate, Organizational Commitment, and Motivating Potential of Employees on Adoption of Total Quality Management

Table 6 shows the impact of ethical climate, organizational commitment, and motivating potential on the adoption of Total Quality Management (TQM) in rural banks. The results reveal that ethical climate significantly and positively affects TQM adoption ($\beta = 0.518$, $t = 11.373$, Sig. = .000). This suggests that a favorable ethical climate in rural banks

increases the likelihood of adopting TQM practices. On the other hand, organizational commitment does not have a significant influence on TQM adoption ($\beta = 0.008$, $t = 0.162$, $Sig. = .872$). This implies that organizational commitment does not meaningfully impact TQM adoption in rural banks. However, motivating potential demonstrates a significant positive influence on TQM adoption ($\beta = 0.245$, $t = 4.295$, $Sig. = .000$). Higher motivating potential, which includes factors like skill variety, task identity, autonomy, and feedback, is associated with a greater likelihood of adopting TQM practices in rural banks. The results also support the alternative hypothesis, as the null hypothesis is rejected, indicating that exogenous variables can influence the adoption of TQM in rural banks.

This finding aligns with previous research demonstrating the importance of an ethical Climate in promoting organizational performance (Victor & Cullen, 1987, [33]). Similarly, Motivating Potential positively relates to TQM adoption with a standardized regression coefficient of 0.245. This finding implies that adopting TQM practices is more likely to occur in rural banks where employees are motivated to perform well and are provided with opportunities for personal growth and development. This finding is consistent with previous studies highlighting employee motivation's importance in facilitating organizational change (Kotter & Schlesinger, 1989, [45]).

Table 6. Significant Influence of Ethical Climate, Organizational Commitment, and Motivating Potential towards Total Quality Management

Exogenous Variables		Adoption of Total Quality Management			
		B	β	t	Sig.
Constant		1.154		7.403	.000
Ethical Climate		.548	.518	11.373	.000
Organizational Commitment		.007	.008	.162	.872
Motivating Potential		.194	.245	4.295	.000
R	.701				
R ²	.492				
ΔR	.488				
F	127.748				
ρ	.000				

On the other hand, Organizational Commitment is not a significant predictor of TQM adoption. This result suggests that although commitment to the organization is essential for overall job performance (Meyer & Allen, 1997, [26]), it may not necessarily drive the adoption of TQM practices in rural banks. Furthermore, the regression analysis results suggest that Ethical Climate and Motivating Potential are crucial factors that can drive the adoption of TQM practices in rural banks. Thus, rural bank managers and leaders must focus on building a positive ethical climate and enhancing employee motivation to promote TQM adoption.

3.9 Best Fit Model of Adoption of Total Quality Management in Rural Banks

This section focuses on analyzing the interactions between Ethical Climate, Organizational Commitment, and Motivating Potential in rural bank employees regarding the adoption of Total Quality Management in the Caraga Region. The generated structural model 5 in the standardized solution is pictured in the appended tables. Results denoted that the exogenous variables has a significant contribution to the endogenous variable.

Table 7 presents the goodness of fit measures for five different models. The table provides several insights into the fit of these models. All four models, 1, 2, 3, and 4, have p-values less than 0.05, indicating that they fit the data well. The CMIN/DF values for models 1, 2, 3, and 4 are between 0 and 2, which suggests that the models have a good fit. Model 5 also has a CMIN/DF value within the acceptable range, indicating a good fit. The GFI values for models 1, 2, and 3 are less than 0.95, indicating a poor fit, while models 4 and 5 have GFI values greater than 0.95, indicating a good fit. For CFI, NFI, and TLI, models 1, 2, 3, and 4 have values below 0.95, indicating a poor fit, while model 5 has values greater than 0.95, indicating a good fit. The RMSEA value for model 5 is within the acceptable range, indicating a good fit, while models 1, 2, 3, and 4 have RMSEA values greater than 0.05, indicating a poor fit. The P-close values for all models are less than 0.05, indicating that the null hypothesis cannot be rejected. In summary, based on the goodness of fit measures presented in the table, model 5 has the best fit, followed by model 4, while models 1, 2, and 3 have poor fits.

Table 7. Summary of Goodness of Fit Index

Model	P-value (>0.05)	CMIN/DF (0<value<2)	GFI (>0.95)	CFI (>0.95)	NFI (>0.95)	TLI (>0.95)	RMSEA (<0.05)	P-close (>0.05)
1	.000	9.895	.636	.680	.658	.641	.149	.000
2	.000	8.460	.669	.734	.710	.699	.137	.000
3	.000	7.876	.671	.754	.729	.723	.131	.000
4	.000	7.691	.678	.763	.738	.730	.130	.000
5	.152	1.295	.986	.997	.987	.993	.027	.935

Legend:

CMIN/DF - Chi Square/Degrees of Freedom

NFI - Normed Fit Index

GFI - Goodness of Fit Index

TLI - Tucker-Lewis Index

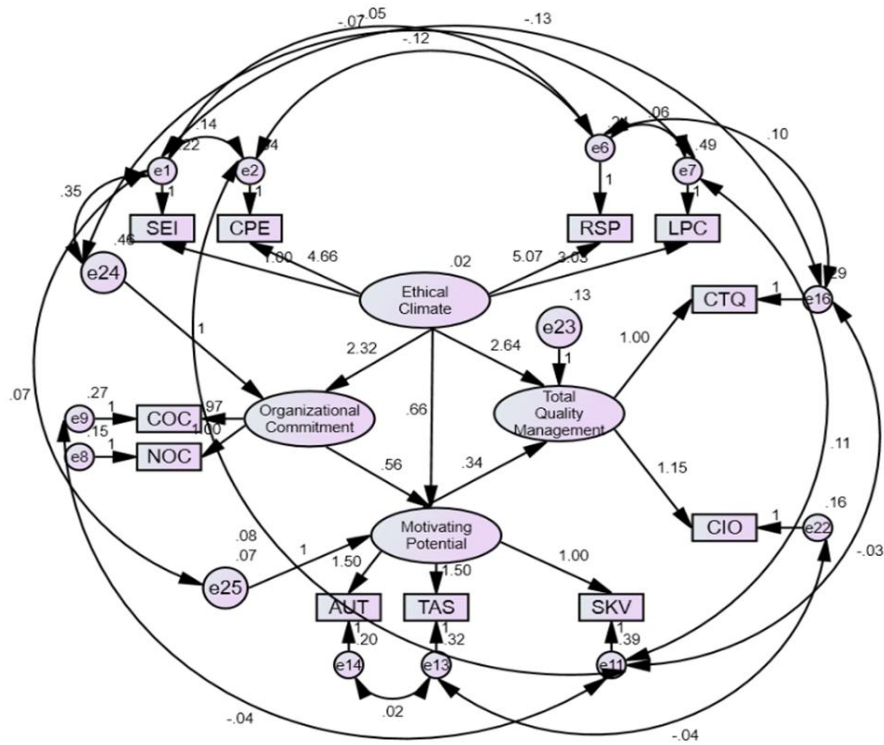
RMSEA - Root Mean Square of Error Approximation

CFI - Comparative Fit Index

Figure 2 shows the relationship between independent and dependent variables. Variables on the left side ("<---") are exogenous, while those on the right side are endogenous. Exogenous variables can also be endogenous in this study, but the original endogenous variable cannot be exogenous. The "Estimate" represents the regression weight, indicating the strength and direction of the relationship between independent and dependent variables. For example, based on the figure, Ethical Climate influences Organizational Commitment as an exogenous variable. The estimate of 2.322 suggests that a one-unit increase in Ethical Climate corresponds to a 2.322-unit increase in Organizational Commitment. Similarly, Organizational Commitment positively affects Motivating Potential with an estimate of 0.557, meaning a one-unit increase in Organizational Commitment leads to a 0.557-unit increase in Motivating Potential. Additionally, Ethical Climate positively influences Motivating Potential with an estimate of 0.656, indicating a 0.656-unit expected increase in Motivating Potential for every one-unit increase in Ethical Climate.

Moreover, Ethical Climate is estimated to have a positive relationship with Total Quality Management (estimate = 2.640), implying that a one-unit increase in Ethical Climate corresponds to a 2.640-unit increase in Total Quality Management. Motivating Potential and Total Quality Management are also estimated to have a positive and statistically significant relationship (estimate = 0.340). Notably, Organizational Commitment indirectly influences TQM adoption through other variables in the model, with an indirect effect of 0.189, indicating a smaller predictive role in TQM adoption. Furthermore, some variable indicators are not included in the figure due to their lack of significant relationship or influence on TQM adoption, unlike the remaining indicators. For example, the indicator SEI directly relates to Ethical Climate with an estimate of 1.00. The indicator CPE is estimated (4.66) to have a positive relationship with Ethical Climate, while the indicators RSP and LPC are estimated to have a positive relationship with Ethical Climate (estimate = 5.07 and estimate = 3.03, respectively).

On the other hand, based on the regression weights, it is observed NOC has a positive relationship with Organizational Commitment (NOC <--- Organizational Commitment, estimate = 1.000), COC has a positive relationship with Organizational Commitment (COC <--- Organizational Commitment, estimate = 0.975), SKV has a positive relationship with Motivating Potential (SKV <--- Motivating Potential, estimate = 1.000), TAS has a positive relationship with Motivating Potential (TAS <--- Motivating Potential, estimate = 1.500), AUT has a positive relationship with Motivating Potential (AUT <--- Motivating Potential, estimate = 1.503), CTQ has a positive relationship with Total Quality Management (CTQ <--- Total Quality Management, estimate = 1.000), and CIO has a positive relationship with "Total Quality Management (CIO <--- Total Quality Management, estimate = 1.154).



Legend:

SEI-self-interest

CPE-company profit efficiency

RSP-rules, standard operating procedures

LPC-laws, professional codes

COC-continuance commitment

NOC-normative commitment

SKV-skill variety

TAS-task significance

AUT-autonomy

CTQ-commitment to quality

CIO-continuous improvement orientation

figure 2. Best-fit model of Adoption of Total Quality Management

IV. Conclusion and Recommendations

This study aimed to investigate TQM adoption in rural banks and explore the variables influencing its implementation. Additionally, the study examined the relationship between employee motivation, ethical climate, TQM adoption, and their impact on organizational commitment and performance. The findings of this study can provide valuable insights into improving customer satisfaction and enhancing the overall performance of rural banks in the Philippines.

Based on the identified gaps and problematic issues, using a structural equation model in studying TQM adoption in rural banks and its correlation with ethical climate, organizational commitment, and employee motivating potential of employees enhanced the rigour of the research. The study strengthened its validity by systematically executing the essential steps of model specification, estimation, and evaluation. The findings indicated that rural institutions generally exhibit a relatively high ethical climate, although there is room for improvement in self-interest. Rural banks can promote a more robust culture of ethical conduct, particularly addressing the dimension of self-interest to ensure that employees act in the company's and its stakeholders' best interest.

This strategy can be achieved by establishing a solid ethical tone, emphasizing integrity, and providing moral decision-making training (Mayer et al., 2010, [46]). Furthermore, fostering a collaborative and ethical climate through transparent decision-making, regular communication, and a culture of trust is crucial in encouraging employees to voice ethical concerns and engage in open discussions (Victor & Cullen, 1987, [33]). Implementing these recommendations can also address the insignificant relationship between self-interest (an indicator of ethical climates) and commitment to quality (an indicator of TQM adoption).

The study also revealed a moderate level of organizational commitment in rural banks, consistent with findings from other studies in the banking industry, where normative commitment was more significant than affective or continuance

commitment. Rural banks can cultivate a participatory and inclusive culture to enhance organizational commitment. This idea can be achieved by promoting open communication channels, such as team meetings, suggestion boxes, and open-door policies, where employees feel comfortable expressing their opinions, ideas, and concerns about TQM initiatives (Eisenbeiss et al., 2008, [47]). Aligning the bank's mission, vision, and values and ensuring employees understand and internalize these values through effective communication and training programs can also promote normative commitment (Meyer & Herscovitch, 2001, [48]).

Implementing these might address the problems related to the insignificant influence of organizational commitment on TQM adoption and establish a significant relationship between continuance and normative commitment (indicators of organizational commitment) and employee involvement (an indicator of TQM adoption), necessitating the promotion of organizational culture aligned with TQM principles.

Moreover, the study identified a high level of motivating potential of bank employee in rural institutions, particularly regarding skill variety, task identity, autonomy, feedback, and personal growth and development opportunities. Rural banks can involve employees in decision-making processes related to their tasks to address the moderate level of task significance as an indicator of motivational potential. Seeking their input, ideas, and suggestions will make them feel valued and recognized for their expertise. This involvement can enhance their sense of significance and motivation (Hackman & Oldham, 1976, [8]). These potential motivational elements can improve TQM implementation and overall organizational performance. In this way, it can create a work environment that encouraged employee motivation and participation in TQM practices, resulting in continuous improvement and enhanced organizational performance (Pang & Lu, 2018, [49]).

Furthermore, when it comes to adopting TQM in Rural banks, it is found that there is high adoption of TQM. However, it is worth noting that fact-based management got a moderate level. Thus, Staff training in data analysis and interpretation is crucial to address moderate-level fact-based management as an indicator of TQM in rural banks. Training programs and workshops, as demonstrated in the study by AlAwadhi & Morris (2009) [50], can be conducted to enhance employees' skills in analyzing data, identifying trends, and drawing meaningful insights for informed decision-making. Regarding the relationships between ethical climate, organizational commitment, motivational potential, and adopting TQM practices in rural banks in the Caraga Region, nurturing a culture of ethical behaviour and decision-making, promoting organizational commitment, and fostering motivational potential can positively influence adopting TQM practices in organizations. This intervention leads to enhanced organizational performance and customer satisfaction, consistent with the research conducted by Gimenez-Espin et al. (2013) [51]. Therefore, rural banks can prioritize these factors and invest in strategies that promote ethical behaviour, organizational commitment, and motivational potential to improve the implementation of TQM and achieve desired results.

Furthermore, the study demonstrated a significant correlation between ethical climate and adoption of TQM practices in rural banks. It was also found that organizational commitment positively correlation TQM adoption, with emotionally committed employees more likely to support and engage in such initiatives. Additionally, the motivational potential was identified as a significant factor in adopting TQM practices in rural banks, emphasizing the importance of providing opportunities for skill variety, task identity, task significance, autonomy, and feedback as essential motivators for TQM adoption. With that it is crucial to foster a culture of ethical behaviour, organizational commitment, and motivational potential. By providing employees with opportunities for autonomy, skill variety, task identity, task significance, and feedback, organizations can improve their TQM implementation.

Furthermore, regression analysis results indicated that ethical climate and motivating potential have a significantly influence TQM adoption in rural institutions. In contrast, organizational commitment does not have a considerable effect. Thus, rural bank managers and leaders can focus on fostering a positive ethical climate and increasing employee motivation to promote TQM adoption.

The best-fit model for adopting TQM in rural institutions, as shown in the hypothesized model 5, is a reliable guide for rural banks in the Caraga region to enhance their TQM adoption and overall performance. Based on the study's findings, rural bank managers and leaders can concentrate on fostering a positive ethical culture, boosting employee motivation, and facilitating organizational commitment to enhance the adoption of TQM. By adopting a holistic approach to organizational improvement that incorporates ethical leadership practices, rural banks can create a positive work environment that promotes TQM adoption and enhances performance outcomes. To further support the improvement of TQM adoption in rural banks, rural banks can adopt the structural equation model 5.

In summary, rural banks can enhance their adoption of TQM practices by employing the proposed strategies, including staff training in data analysis, fostering ethical leadership and a collaborative, ethical climate, cultivating a participatory organizational culture, promoting normative commitment, and focusing on motivational potential. Emphasizing ethical behaviour alongside these strategies can further strengthen TQM implementation and improve organizational performance (AlAwadhi & Morris, 2009, [50]; Mayer et al., 2010, [46]; Victor & Cullen, 1987, [33]; Eisenbeiss et al., 2008, [47]; Meyer & Herscovitch, 2001, [48]). Adopting a structural equation model can also provide a

systematic and rigorous approach to studying the correlation between TQM adoption and various factors, enhancing the research's validity and effectiveness (Fu et al., 2011, [52]).

Acknowledgements

The researcher would like to extend her heartfelt gratitude and endless thanks to the unceasing assistance and involvement of the following persons in realizing this research study.

To all the respondents, participants, and guests for giving the researcher valuable and priceless information;

To her parents, siblings, nephews, and daughter for showing their unrelenting love and support, her friends and colleagues for their useful suggestions, and her husband for the financial, emotional, and moral support;

To her program coordinator, Dr. Joel B. Tan, and thesis adviser, Dr. William T. Sucuahi, CPA, DBA Adviser, for sharing their selfless advice, constant encouragement, and knowledge that made the study realistic;

To her panelists and evaluators for sharing their helpful suggestions and insights for the betterment of the study;

And above all, to the Almighty Father Jehovah God through His Son Jesus Christ for his bountiful gift of life, wisdom, endless blessings, and strength He has given me.

REFERENCES

Journal Papers:

- [1] *Do customer satisfaction surveys matter in rural banking?* (2018, January 29).B&FTonline. Retrieved July 25, 2022, from <https://thebftonline.com/2018/01/29/do-customer-satisfaction-surveys-matter-in-rural-banking/>
- [2] Al-Shobaki, S.D., Fouad, R.H. and Al-Bashir, A., 2010. *The implementation of total quality management (TQM) for the banking sector in Jordan*. JJMIE, 4(2).
- [3] Talib, F., Rahman, Z. and Qureshi, M.N., 2011. *Analysis of interaction among the barriers to total quality management implementation using interpretive structural modeling approach*. *Benchmarking: An International Journal*, 18(4), pp.563-587.
- [4] Talavera, M.G.V., 2005. *TQM adoption and firm performance in the Philippines*. *Philippine Management Review*, 12.
- [5] Olalekan, A., *THE IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT (TQM) IN THE TELECOMMUNICATION INDUSTRY: PROBLEMS AND PROSPECTS*.
- [6] Rawashdeh, A.M., 2014. *TQM as a source of bank performance and competitive advantage empirical study in Jordanian banking sector*. *European Scientific Journal*, 10(22).
- [7] Ramlall, S., 2004. *A review of employee motivation theories and their implications for employee retention within organizations*. *Journal of American academy of business*, 5(1/2), pp.52-63.
- [8] Hackman, J.R. and Oldham, G.R., 1976. *Motivation through the design of work: Test of a theory*. *Organizational behavior and human performance*, 16(2), pp.250-279.
- [9] Rahman, M.H. and Nurullah, S.M., 2014. *A comparative study of motivating potential score of employees of public and private commercial Banks: An assessment of demographics influence*. *Global Journal of Management and Business Research*, 14(A4), pp.29-39.
- [10] Cullen, J.B., Victor, B. and Bronson, J.W., 1993. *The ethical climate questionnaire: An assessment of its development and validity*. *Psychological reports*, 73(2), pp.667-674.
- [11] Senajon, A. (2015, July). *Determining bank effects on economic growth: An artificial neural network analysis*. *Food Culture and Society*An International Journal of Multidisciplinary Research.
- [12] Mohammad, J., Quoquab, F., Idris, F., Al-Jabari, M., Hussin, N. and Wishah, R., 2018. *The relationship between Islamic work ethic and workplace outcome: A partial least squares approach*. *Personnel Review*, 47(7), pp.1286-1308.
- [13] Miller, M.J., Woehr, D.J. and Hudspeth, N., 2002. *The meaning and measurement of work ethic: Construction and initial validation of a multidimensional inventory*. *Journal of Vocational Behavior*, 60(3), pp.451-489.

A Structural Equation Model on Total Quality Management Adoption in Relation to Ethical.....

- [14] Islam, S.A., Shanjabin, S., Zaman, Z. and Nibir, M.M.A.M., 2021. *Measuring motivating potential score of diversified academic staffs of the government primary schools in Bangladesh. Asian J. Soc. Sci. Leg. Stud*, 3(5), pp.209-217.
- [16] Abdullah, A., 2011. Evaluation of Allen and Meyer's Organizational Commitment Scale: A Cross-Cultural Application in Pakistan. *Journal of Education and Vocational Research*, 1(3), pp.80-86.
- [17] Molwus, J.J., Erdogan, B. and Ogunlana, S.O., 2013. Sample size and model fit indices for structural equation modelling (SEM): The case of construction management research. In *ICCREM 2013: Construction and Operation in the Context of Sustainability* (pp. 338-347).
- [18] Pinsonneault, A. and Kraemer, K., 1993. Survey research methodology in management information systems: an assessment. *Journal of management information systems*, 10(2), pp.75-105.
- [19] Etikan, I., Musa, S.A. and Alkassim, R.S., 2016. Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), pp.1-4.
- [20] Cheah, J.H., Thurasamy, R., Memon, M.A., Chuah, F. and Ting, H., 2020. Multigroup analysis using SmartPLS: Step-by-step guidelines for business research. *Asian Journal of Business Research*, 10(3), pp.I-XIX.
- [21] Department of Trade and Industry. (2022). Profile of CARAGA 2022. <https://www.dti.gov.ph/regions/caraga/profile/>
- [22] Allen, N.J. and Meyer, J.P., 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of occupational psychology*, 63(1), pp.1-18.
- [24] Kaptein, M. and Schwartz, M.S., 2008. The effectiveness of business codes: A critical examination of existing studies and the development of an integrated research model. *Journal of Business Ethics*, 77, pp.111-127.
- [25] Sunardi, S. and Pradesa, H.A., 2018. An empirical evidence of ethical climate index in rural banks from Board of Directors Perspective. *Journal of Economics, Business, and Accountancy Ventura*, 21(3), pp.373-377.
- [26] Meyer, J.P. and Allen, N.J., 1997. *Commitment in the workplace: Theory, research, and application*. Sage publications.
- [27] Anis, A., Khan, M.A. and Humayoun, A.A., 2011. Impact of organizational commitment on job satisfaction and employee retention in pharmaceutical industry. *African Journal of Business Management*, 5(17), p.7316.
- [28] Alvesson, M. and Sveningsson, S., 2003. Managers doing leadership: The extra-ordinarization of the mundane. *Human relations*, 56(12), pp.1435-1459.
- [29] Singh, R. and Pandey, V., 2020. Effects of perceived job motivating potential on job satisfaction. *The International Journal of Indian Psychology*, 8(4), pp.996-1002.
- [30] Kaynak, H. and Hartley, J.L., 2008. A replication and extension of quality management into the supply chain. *Journal of operations management*, 26(4), pp.468-489.
- [31] Davenport, T. and Harris, J., 2017. *Competing on analytics: Updated, with a new introduction: The new science of winning*. Harvard Business Press.
- [32] Treviño, L.K., Weaver, G.R. and Reynolds, S.J., 2006. Behavioral ethics in organizations: A review. *Journal of management*, 32(6), pp.951-990.
- [33] Victor, B. and Cullen, J.B., 1987. A theory and measure of ethical climate in organizations. *Research in corporate social performance and policy*, 9(1), pp.51-71.
- [34] Dean Jr, J.W. and Bowen, D.E., 1994. Management theory and total quality: improving research and practice through theory development. *Academy of management review*, 19(3), pp.392-418.
- [35] Kaynak, H., 2003. The relationship between total quality management practices and their effects on firm performance. *Journal of operations management*, 21(4), pp.405-435.

- [36] Gagné, M. and Deci, E.L., 2005. Self-determination theory and work motivation. *Journal of Organizational behavior*, 26(4), pp.331-362.
- [37] Valmohammadi, C., 2011. The impact of TQM implementation on the organizational performance of Iranian manufacturing SMEs. *The TQM journal*, 23(5), pp.496-509.
- [38] Nguyen, T.T.N. and Luu, T.M.N., 2019. Linking transformational leadership and organizational performance: An empirical investigation of manufacturing firms in Vietnam. *Economics & Sociology*, 12(2), pp.170-191.
- [39] Al-Tit, A.A., 2015. The effect of service and food quality on customer satisfaction and hence customer retention. *Asian social science*, 11(23), p.129.
- [40] Munizu, M., 2013. The Impact of total quality management practices towards competitive advantage and organizational performance: Case of fishery industry in South Sulawesi Province of Indonesia. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 7(1), pp.184-197.
- [41] Ahire, S.L., Golhar, D.Y. and Waller, M.A., 1996. Development and validation of TQM implementation constructs. *Decision sciences*, 27(1), pp.23-56.
- [42] Flynn, B.B., Schroeder, R.G. and Sakakibara, S., 1994. A framework for quality management research and an associated measurement instrument. *Journal of Operations management*, 11(4), pp.339-366.
- [43] Deci, E.L. and Ryan, R.M., 2013. *Intrinsic motivation and self-determination in human behavior*. Springer Science & Business Media.
- [44] Bhatti, K. K., & Qureshi, T. M. (2007). Impact of employee participation on job satisfaction, employee commitment and employee productivity. *International review of business research papers*, 3(2), 54-68.
- [45] Kotter, J.P. and Schlesinger, L.A., 1989. *Choosing strategies for change* (pp. 294-306). Macmillan Education UK.
- [46] Mayer, D.M., Kuenzi, M. and Greenbaum, R.L., 2010. Examining the link between ethical leadership and employee misconduct: The mediating role of ethical climate. *Journal of business ethics*, 95, pp.7-16.
- [47] Eisenbeiss, S.A., Van Knippenberg, D. and Boerner, S., 2008. Transformational leadership and team innovation: integrating team climate principles. *Journal of applied psychology*, 93(6), p.1438.
- [48] Meyer, J.P. and Herscovitch, L., 2001. Commitment in the workplace: Toward a general model. *Human resource management review*, 11(3), pp.299-326.
- [49] Pang, K. and Lu, C.S., 2018. Organizational motivation, employee job satisfaction and organizational performance: An empirical study of container shipping companies in Taiwan. *Maritime Business Review*.
- [50] AlAwadhi, S. and Morris, A., 2009. Factors influencing the adoption of e-government services. *J. Softw.*, 4(6), pp.584-590.
- [51] Gimenez-Espin, J.A., Jiménez-Jiménez, D. and Martínez-Costa, M., 2013. Organizational culture for total quality management. *Total Quality Management & Business Excellence*, 24(5-6), pp.678-692.
- [52] Fu, W., Deshpande, S.P. and Zhao, X., 2011. The impact of ethical behavior and facets of job satisfaction on organizational commitment of Chinese employees. *Journal of business ethics*, 104, pp.537-543.

Books:

- [1.] Lazaraton, A., 2005. Quantitative research methods. In *Handbook of research in second language teaching and learning* (pp. 209-224). Routledge.

Proceedings Papers:

- [1.] Ana, N., Masrukhi, M., Samsudi, S. and Prihatin, T., 2020, January. Service Quality Model, Organizational Commitment, and TQM-based Education Leadership in Organizational Development. In *Proceedings of the 5th International Conference on Science, Education and Technology, ISET 2019, 29th June 2019, Semarang, Central Java, Indonesia*.