

Mediating Role of Organizational Innovation on Workforce Diversity and Organizational Effectiveness Among Cooperatives in Tagum City

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Abstract

This study examined how organizational innovation mediates the relationship between workforce diversity and organizational effectiveness among cooperative employees in Tagum City. A quantitative, non-experimental research design with a descriptive-correlational approach was employed. By applying Slovin's formula, the minimum number of respondents required was 304. 334 survey questionnaires were distributed through stratified random sampling, including a 10% allowance for possible non-response, yet only 316 were included in the final analysis. Data were analyzed using weighted mean, Pearson product-moment correlation, and Medgraph with the Sobel z-test. The findings showed that both organizational innovation and organizational effectiveness were rated very high, while workforce diversity was rated high. There was a significant relationship between workforce diversity and organizational effectiveness, workforce diversity and organizational innovation, and organizational innovation and organizational effectiveness. Furthermore, the result of Medgraph using the Sobel z-test of organizational innovation on workforce diversity and organizational effectiveness was significant but partial. Nevertheless, workforce diversity enhances organizational innovation by broadening perspectives and fostering a sense of belonging, ultimately boosting organizational effectiveness.

Keywords: business administration, cooperative employees, workforce diversity, organizational innovation, organizational effectiveness, mediation, Philippines

1. INTRODUCTION

In today's evolving business landscape, a company's organizational effectiveness is pivotal for survival. It spans crucial areas such as marketing, operations management, and human resources, but maintaining momentum becomes more challenging in an increasingly diverse workforce [31]. A theme interwoven with several United Nations Sustainable Development Goals (SDGs), including Goal 9: Industry, Innovation, and Infrastructure, and acknowledged as pivotal across diverse sectors, organizational effectiveness becomes increasingly challenging amid growing workforce diversity [29, 39]. The prioritization of diversity, going beyond basic requirements, aligns with Goal 8: Decent Work and Economic Growth and Goal 10: Reduced Inequalities, as companies globally seek sustainable competitive advantages and aspire to be employers of choice [20, 39]. Moreover, as part of the growing

call for sustainable urbanization and human development that aligns also with the University's agenda, a sustainable community can follow those working towards development of cooperatives in cities and regions [14, 28, 42]. Within the cooperatives, where these critical variables manifest prominently, this study investigates the relationship between workforce diversity and organizational effectiveness, and the mediating role of organizational innovation, underscoring the interconnectedness of diversity, innovation, and effectiveness in fostering inclusive cooperative environments.

Organizational effectiveness refers to how well an organization achieves its intended goals [29]. Richard (2000) further elaborates that it encompasses not only performance, but also various internal factors related to efficient operations, as well as external factors beyond economic measures, such as broader stakeholder considerations. It has been pointed out that leaders can help their organizations work better by using transformational leadership, like creating a shared vision and setting a good example through their actions [37]. Further, it is argued to attain desired outcomes, administrators must enhance their ability to motivate and guide their followers. Furthermore, they shall promote a culture of inclusivity within the workplace, involving all types of staff in the organization's evolution. Job inclusivity is demonstrated by administrators who actively listen to the ideas and viewpoints of individual employees [22]. Riordan, Vandenberg, and Richardson (2005) have highlighted that inconsistency in implementing employee involvement throughout the organization is a significant factor contributing to less-than-optimal results.

1.1.Theoretical Framework

This study is based on the Theory of Information Decision-Making, which suggests that people in diverse groups can access wider information networks outside their team. This can improve group performance because individuals tend to share more information with others they relate to [40]. Consequently, this theory proposes a positive relationship between workforce diversity and organizational effectiveness [1]. Likewise, it has a favorable impact on organizational outcomes, as a more diverse workforce can process information from various viewpoints of team members, leading to increased creativity and performance.

In addition, Theory of Strategic Choice further strengthens this study [18]. According to the study, low to moderate levels of diversity among organizational executives may hinder strategic decision-making by hindering communication and escalating conflict, which would have a detrimental effect on industrial relations, innovation, and performance. Studies suggest that having diverse team members with different thinking abilities helps improve a team's knowledge and problem-solving. Because of this, diversity gives leadership teams a wider range of ideas to spot opportunities and consider different strategies [24]. Strategic Choice Theory can help support the idea of embracing workforce diversity at every level of the organization to boost performance and overall effectiveness [32].

Furthermore, the Theory of the Optimal Distinctiveness by Brewer (1991) implies that people have two basic needs: a need for inclusion and a need for distinctiveness. The theory holds that humans try to strike a balance between these two demands. It talks about team cohesion and the connection between a good workplace culture and better employee performance, which will result in the overall effectiveness of the organization. Also, it is indicated that a big challenge for managers is reducing conflicts and employee acculturation to improve performance. Indeed, the Optimal Distinctiveness Theory seeks to enhance the diversity-related culture of businesses.

Based on the study of Odita and Egbule (2015), they have concluded that workforce diversity has a significant impact on organizational effectiveness. They further argue that managing diversity within

organizations brings about benefits by establishing an environment that is fair and secure, ensuring equal access to opportunities and challenges for all individuals, and this type of environment encourages the expression of creativity and innovation among members. Moreover, Adam-Samura (2023) further proves that there is a strong and significant relationship between workforce diversity and organizational effectiveness. The author has defined workforce diversity in three components as to gender, age, and ethnicity.

Moreover, in the study conducted by Chaudhry, Paquibut, and Tunio (2021), they have presented that workforce diversity contributes to organizational innovation. They have affirmed that employees demonstrate greater adaptability and flexibility in response to changes when they feel that their work environment values diversity, appreciates their contributions, and treats them fairly. In addition, Mohammadi, Brostrom, and Franzoni (2017) have emphasized that increased diversity in higher education is associated with a greater degree of gradual innovation. The ability to balance competing demands is recognized as a crucial factor in the survival and prosperity of organizations. Organizations might adopt hiring strategies that embrace both ethnic and disciplinary diversity to enhance the innovative capacity of the company.

Further, as discussed by Ashraf and Khan (2013), the current research has provided empirical evidence supporting the idea that a conducive organizational climate for innovation does indeed promote organizational innovation, thereby enhancing the effectiveness of firms. Regarding the inclination towards organizational innovation, the findings of the study by the authors align with the notion that work environment factors play a crucial role in fostering innovation, ultimately contributing to organizational effectiveness. For innovation to thrive within a company, its members must perceive an environment that encourages creative freedom. Within a context marked by transparent discourse, employees are more inclined to take risks and express creativity, as they perceive that the organization prioritizes the collective welfare. Moreover, as proved by Ngo (2015), there is a strong positive correlation between organizational innovation and organizational effectiveness. The author further posits that administrators need to be particularly attentive to fostering and improving an atmosphere of innovation to inspire employees, ultimately leading to a boost in overall organizational effectiveness.

Organizations that support workforce diversity can benefit from increased creativity, innovation, and problem-solving, as well as improved employee engagement, morale, and productivity [35]. The model suggests that the effects of diversity on group processes and outcomes can be either advantageous or disadvantageous, depending on the degree of inclusiveness within the group. In situations where groups demonstrate inclusiveness, diversity can improve creativity, innovation, and problem-solving through diverse perspectives and experiences. However, in situations where groups lack inclusiveness, diversity can result in conflicts, tension, and decreased performance.

1.2. Conceptual Framework

Shown in Figure 1 is the conceptual paradigm of the study. The independent variable is the workforce diversity with the following indicators: reinforce homogeneity, which is the striving for a homogenous workforce, color blindness in which qualification matters and not the background, and fairness which means people from all societal groups are equally treated [12].

The dependent variable is the organizational effectiveness with the following indicators: flexibility which means the organization flexible for change, resource in which takes into account the organization's variety of resources, planning that tells about the organization's strategic plan and vision for the future, productivity that measures how the organization meet its goals and objectives, availability

of information that takes into account the proper communication within the organization, stability that measures the retention of organization's employees and/or workers, cohesive workforce which means the proper utilization and compensation for the staff and skilled workforce the recognition of the employees and/or workers [11].

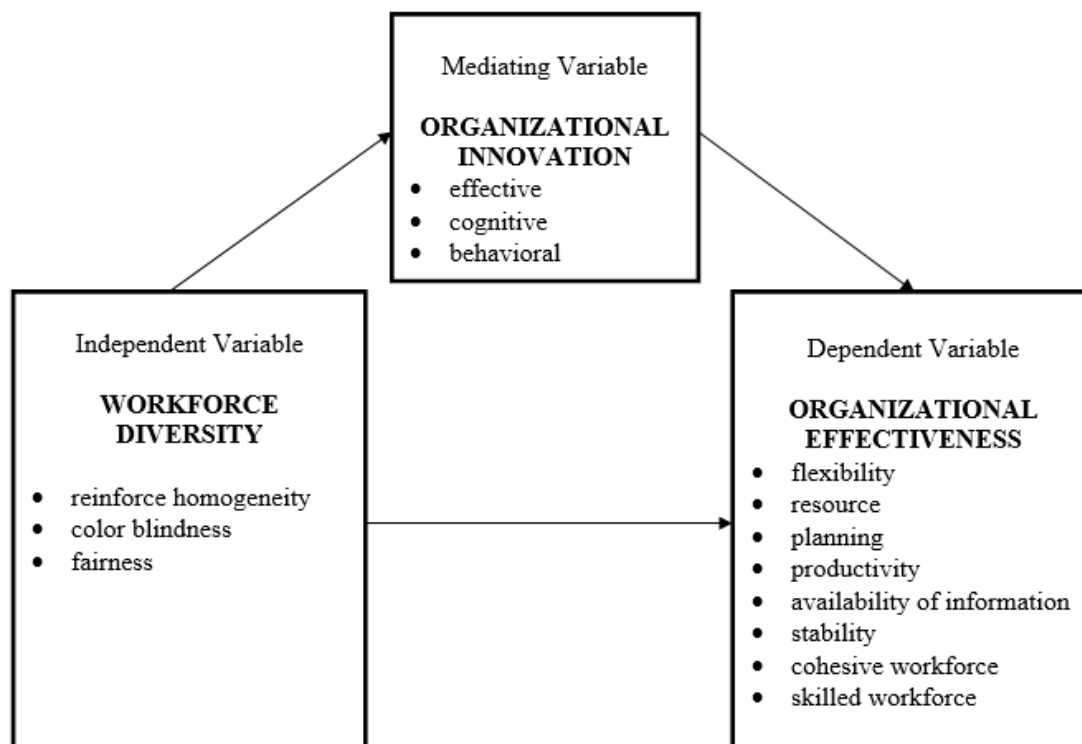
The mediating variable is the organizational innovation with the following indicators: effective which means the changes in the organization is carrying an impact or effect to the employees, cognitive in which takes into account the feelings of the employees, and behavioral which tells how the employees reacted to the changes [26].

1.3.Statement of the Problem

This study was conducted to determine the correlation of workforce diversity and organizational effectiveness among cooperatives in Tagum City, Davao del Norte, through the mediating role of organizational innovation. This study was conducted specifically to assess the level of workforce diversity, organizational innovation, and level of organizational effectiveness among cooperatives in Tagum City, Davao del Norte. This study was also conducted to determine the significant relationship between workplace diversity and organizational effectiveness, workplace diversity and organizational innovation, and organizational innovation and organizational effectiveness among cooperatives in Tagum City, Davao del Norte. Lastly, to determine the mediating effect of organizational innovation on workplace diversity and organizational effectiveness.

Also, the null hypothesis was tested at 0.05 level of significance that there is no significant relationship between the workplace diversity and organizational effectiveness, between workplace diversity and organizational innovation, and organizational innovation and organizational effectiveness among cooperatives in Tagum City, Davao del Norte; and lastly, organizational innovation has no mediating effect on workplace diversity and organizational effectiveness.

Figure 1. Conceptual Paradigm of the Study



1.4. Significance of the Study

Studying the interrelatedness of workforce diversity, organizational innovation, and organizational effectiveness within cooperatives is imperative for several reasons. Firstly, cooperatives are unique organizational entities that operate on principles of democratic governance and collective ownership, often representing diverse membership bases spanning different demographics, backgrounds, and skill sets. Understanding how diversity within these organizations influences innovation and effectiveness is essential for fostering inclusive decision-making processes, harnessing the full potential of diverse perspectives, and maximizing cooperative performance.

Secondly, as cooperative enterprises play a significant role in various Sectors, including agriculture, finance, and community development, have their ability to innovate and adapt to changing environments is critical for sustaining livelihoods and promoting economic resilience, particularly in underserved and marginalized communities. By studying the dynamics of workforce diversity, innovation, and effectiveness within cooperatives, the researcher can uncover strategies and best practices that not only enhance organizational effectiveness but also contribute to the broader goals of social equity, economic empowerment, and sustainable development [39, 42].

The researcher found some studies discussing workforce diversity and organizational effectiveness, but there is limited literature exploring how organizational innovation affects organizational effectiveness and how it may mediate the relationship between workforce diversity and organizational effectiveness. As a result, the researcher studies the emergence of diversity as an aspect, which can boost competition and competitive advantage in a market, as there are many distinct factors involved in measuring its effects on organizational effectiveness, all of which have an impact or the potential to have one. Using the mediating effects of organizational innovation, this study examines how much a diverse workforce can enhance organizational effectiveness, particularly within cooperatives.

This study adds to the existing literature by offering a reliable and valid model that explores the mediating role of organizational innovation in the relationship between workforce diversity and organizational effectiveness. Further, this study gives the cooperatives in Tagum City, Davao del Norte, an idea of the working environment of their employees that plays an important role in the delivery of the services. The management and the regular employees in the cooperatives can also benefit from this study on how to contribute to the organizational culture. Lastly, this can be of great help to future researchers in providing the context of the study.

2. Method

This section presents the design and procedure employed in this study, together with research respondents and materials, and instrument.

2.1. Research Respondents

The employees of cooperatives in Tagum City, Davao del Norte, were the subject participants of this research. The respondents of the study were taken from the total population of 1,266 employees of cooperatives in Tagum City. These respondents were the main source of data that were used to determine the mediating role of organizational innovation on workforce diversity and organizational effectiveness among cooperatives in Tagum City, Davao del Norte.

The researcher employed the stratified random sampling technique, which involves dividing the population into subgroups and randomly selecting units from each subgroup. This method is widely used in survey sampling. To create a stratified sample, the population was first divided into distinct subgroups

or strata, which are mutually exclusive and cover the entire population. It was assumed that each stratum was homogeneous. After stratification, a sample was drawn from each subgroup, typically using simple random sampling [36].

By applying Slovin's formula to calculate the sample size, the minimum number of respondents required was 304. Slovin's formula provides an easy way to determine the appropriate sample size for population estimation, especially in surveys with a 95% confidence level [38]. The researcher provided a 10% allowance for possible non-response from the respondents; therefore, 334 employees were considered for data gathering, yet only 316 employees were included in the final analysis. The samples were chosen without considering factors such as gender, marital status, educational background, or job title at the time the research was conducted.

As for the inclusion criteria, the participants were regular employees with at least one year of experience working in the cooperatives in Tagum City, Davao del Norte. The exclusion criteria for the study included regular employees with less than one year of work experience, as well as those with casual, job-order, or agency-based employment. Additionally, participation was voluntary, with no conditions other than the respondents' willingness to join without the expectation of compensation. Those who chose not to participate faced no penalties or loss of benefits. Respondents were free to withdraw at any time and could discontinue their participation without any consequences.

2.2. Research Locale

This study was conducted in Tagum City, the capital of Davao del Norte. It is strategically situated in the northern part of Southern Mindanao. It plays a key economic role not only for the province but for the entire Davao Region, as it is strategically located between three large road networks. Located 55 kilometers north of Davao City, the main hub for economic activities and administration of Region XI, Tagum is home to numerous local cooperatives, making it an ideal location for this study.

2.3. Materials and Instrument

The research instruments used to collect data were adapted from various authors, with modifications made to suit the needs of the current study. The variables and the corresponding authors were workforce diversity from Farmanesh et al. (2020), organizational innovation from Naveed et al. (2022), and organizational effectiveness from Eydi (2013). The adapted research questionnaires were validated by experts, and their feedback was incorporated into the questionnaire. A pilot test was conducted, and the reliability of the scales was confirmed using Cronbach's alpha coefficients. Cronbach's alpha, a commonly used indicator of internal consistency, evaluates how closely related the items in a scale or questionnaire are [16]. Forty respondents completed a pilot test of the questionnaire. Of the three variables, workforce diversity had a Cronbach's alpha of 0.928, followed by 0.953 for organizational innovation and 0.976 for organizational effectiveness.

The participants' responses were analyzed using a 5-point Likert scale. A mean range of 4.20 to 5.00 was categorized as very high, indicating that the variables were highly observed. A mean range of 3.40 to 4.19 was considered high, showing that the variables were generally observed. A mean range of 2.60 to 3.39 was deemed moderate, suggesting that the variables were occasionally observed. A mean range of 1.80 to 2.59 was classified as low, meaning that variables were less often observed. Finally, a mean range between 1.00 and 1.79 indicated that the variables were not observed at all.

2.4. Design and Procedure

This study used a quantitative non-experimental design, applying descriptive-correlational methods. Descriptive-correlational is a statistical approach used to identify and describe the relationship between

two variables. In correlational studies, there is no effort to control for an independent variable, meaning researchers cannot conclude a causal relationship from correlation alone [19]. Additionally, correlational research is a quantitative, non-experimental design. The researcher used correlational statistical analysis to assess and describe the strength of the relationship between variables or sets of scores. Correlational research is useful when exploring the connections between two or more variables within the same population or between the same variable in different populations [13].

The data was collected through a series of steps. After validating the survey questionnaires, the researcher submitted an application to the University of Mindanao Ethics and Review Committee (UMERC) for formal approval to conduct the study. Once UMERC granted approval and clearance, the researcher sought endorsement from the Graduate School dean and research adviser. A request letter was then sent to the selected cooperatives in Tagum City, Davao del Norte, for explanation and verification. After receiving approval, the researcher began the study by first conducting a pilot test of the survey questionnaire, followed by the actual survey. Through the assistance of the Human Resource Management Department of the cooperatives, the researcher personally distributed the questionnaires to make sure that the respondents understood the contents of the research survey. After the retrieval of surveys, the researcher compiled and tabulated the information gathered from the participants. Finally, data were examined and interpreted following the study's objectives.

2.5. Statistical Tools

The following statistical tools were used for data analysis and interpretation: Mean – to assess the levels of workforce diversity, organizational innovation, and organizational effectiveness; Pearson product-moment correlation – to examine the correlation between workforce diversity, organizational innovation, and organizational effectiveness; and the Sobel z-test – to evaluate the mediating role of organizational innovation in the relationship between workforce diversity and organizational effectiveness.

2.6. Ethical Considerations

The study placed strong importance on ethical considerations. To ensure compliance with ethical standards, the institution's Ethics Review Committee reviewed the survey during its initial stages before distribution. All required procedures were properly followed. Additionally, an informed consent form (ICF) approved by the UMERC was provided for the participants to read and sign, ensuring adherence to the Philippines' Data Privacy Act. As proof of ethical compliance, the researcher received an ethics certificate with Certification No. UMERC-2024-401 on May 5, 2025.

3. Results and Discussion

The results of the survey conducted are summarized and analyzed in the context of the stated problems. These findings are presented both in tabular and textual forms.

3.1. Workforce Diversity, Organizational Innovation, and Organizational Effectiveness among Cooperatives in Tagum City

Table 1 presents the descriptive statistics on the level of workforce diversity among the cooperatives in Tagum City, showing an overall mean of 4.12 and a standard deviation of 0.569, which is interpreted as high. Among the indicators, color blindness had the highest mean of 4.14 with a standard deviation of 0.680, also rated as high. This suggests that cooperatives in Tagum City prioritize employee qualifications over factors like race or ethnicity. Fairness recorded the lowest mean of 4.10 with a standard deviation of 0.638, but still received a high rating, similar to the other indicators and the overall score for workforce diversity. These findings indicate that cooperatives in the area are committed to

providing equal employment opportunities and ensuring that all groups have fair chances in recruitment and professional development.

Table 1. Level of Workforce Diversity

Indicators	Mean	SD	Descriptive Level
reinforce homogeneity	4.12	0.635	high
color blindness	4.14	0.680	high
fairness	4.10	0.638	high
overall	4.12	0.569	high

The results show that the overall extent of workforce diversity among cooperatives in Tagum City is high. This suggests that the respondents in this study that cooperatives, just like other businesses, are a reflection of a changing world and workplace. The result corroborates the study of Won, Hwang, and Chng (2020), citing that for more inclusive organizations, it attracts more workers from the market, thus also enhancing the company's reputation in the process. Due to the nature of cooperatives being diverse in nature, there is a need for cooperatives to embrace diversity. Moreover, addressing workforce diversity in the workplace is critical because it ensures everyone feels more connected with colleagues. A high level of workforce diversity creates mutual respect between employees and the organization as it also reduces biases and discrimination [8].

Further, promoting workforce diversity is crucial in attaining success. Joseph et al. (2021) suggest that incorporating and involving diverse perspectives enhances organizational strategies, improves decision-making, and strengthens the overall outcomes of the organization. In the context of cooperatives, workforce diversity enhances cooperation. A good interpersonal relationship between employees is essential for the smooth operation of organizations such as cooperatives [34]. As cooperatives are a network of individuals working collaboratively toward shared goals, fostering strong, respectful, and cooperative relationships among employees is vital for ensuring sustainable success in the operations. As shown in Table 2, the level of organizational innovation among cooperatives in Tagum City was rated as high, with an overall mean of 4.27 and a standard deviation of 0.561. Among the indicators, effectiveness received the highest mean score of 4.38 and a standard deviation of 0.551, also classified as very high. This implies that cooperatives in Tagum City support change that has a positive impact on overall performance and fosters a culture of continuous improvement. By embracing changes and innovation, it strengthens and enhances the cooperative's competitive edge and resiliency in changing markets. On the other hand, behavioral scores have the lowest mean of 4.18 with a standard deviation of 0.667, with a descriptive value of high. It suggests that cooperatives proactively seek feedback to ensure the adoption and change, and encourages participation in training and development programs to enhance employees' ability to adapt to change.

Table 2. Level of Organizational Innovation

Indicators	Mean	SD	Descriptive Level
effective	4.38	0.551	very high
cognitive	4.25	0.649	very high
behavioral	4.18	0.667	high
overall	4.27	0.561	very high

The perceived level of organizational innovation in cooperatives across Tagum City was rated very high, suggesting that these cooperatives actively promote a culture of continuous improvement in preparation for change. With this, Naveed et al. (2022) support the findings that incorporating innovation enables organizations to enhance competitive advantage and strengthen resiliency in changing markets. Moreover, this approach allows organizations to adopt fresh strategies for growth and development. Moreover, Chepchumba (2022) provided that organizational innovation plays a vital role in boosting organizational performance as effective business strategies require adapting to change to address member needs and expectations and the changing market.

Furthermore, boosting innovation within organizations can enhance the quality and quantity of services, lower costs, and minimize wastes [2]. This, in turn, improves overall performance and productivity while also increasing employee motivation and satisfaction. In the context of cooperatives, this suggests that fostering creativity and innovation can lead to efficient operation, improved service delivery, greater member satisfaction, and thus strengthening the cooperative's sustainability. Moreover, Andjarwati et al. (2022) argued that through innovation, organizations draw inspiration from others and transform these concepts into valuable outputs, driving significant changes. By enhancing the value offered to cooperative consumers, communities, and the organizational environment, innovation fosters innovation aimed at improving society's overall quality of life.

Table 3 presents the descriptive statistics on the level of organizational effectiveness among cooperatives in Tagum City, with an overall mean of 4.24 and a standard deviation of 0.561, which is classified as very high. This overall mean was calculated based on the average of all the indicators included in the study. Among these indicators, planning recorded the highest mean of 4.09 with a standard deviation of 0.533. It indicates that cooperatives in Tagum City promote a clear vision for their future growth and development and regularly review plans to ensure adaptability to changing circumstances. Moreover, it suggests that cooperatives evaluate performance based on metrics to ensure effectiveness. On the other hand, availability of information and cohesive workforce both obtained the lowest mean of 4.18, with a standard deviation of 0.666 and 0.652, respectively, described as high. This further suggests that open channels of communication and fostering of harmonious relationships between employees are often observed.

Table 3. Level of Organizational Effectiveness

Indicators	Mean	SD	Descriptive Level
flexibility	4.22	0.630	very high
resource	4.21	0.667	very high
planning	4.39	0.533	very high
productivity	4.25	0.668	very high
availability of information	4.18	0.666	high
stability	4.23	0.694	very high
cohesive workforce	4.18	0.652	high
skilled workforce	4.25	0.623	very high
overall	4.24	0.561	very high

Organizational effectiveness among cooperatives in Tagum City obtained a very high level of assessment as evaluated by the research respondents. This suggests that cooperatives have established a

very high level of perceived qualities that positively influence organizational effectiveness. As implied by Roy et al. (2005), organizational effectiveness comes from how well the organization serves its members while efficiently utilizing shared resources. In the context of cooperatives, it is not just about profitability but also about meeting the changing needs of the workforce and the community. Research indicates that the rewards an organization provides significantly impact both attracting and retaining employees while also providing participatory opportunities for all [33].

In addition, Riordan et al. (2005) concluded that organizational effectiveness happens when employees are equipped with the right knowledge, enabling them to achieve goals efficiently with minimal resources. It relied on continuous development, fostering healthy behaviors and collaboration between managers and employees. Without a good program, true organizational effectiveness cannot be achieved [37, 31]. In the context of cooperatives, without a high level of factors of organizational effectiveness, a cooperative cannot fully realize its effectiveness or deliver meaningful value to its members.

3.2. Correlation between Variables

Displayed in Table 4 are the results of the relationship between the independent (workforce diversity), dependent (organizational effectiveness), and mediating (organizational innovation) variables. Additionally, bivariate correlation analysis through Pearson product-moment correlation is employed to ascertain the relationship of the variables.

The initial zero-order correlation analysis between workforce diversity and organizational effectiveness produced a computed r-value of 0.824 at a p-value less than 0.05, indicating a strong and significant positive relationship between the two variables. As a result, the null hypothesis stating there is no significant correlation is rejected. This finding implies that within cooperatives in Tagum City, higher levels of perceived workforce diversity are associated with higher levels of perceived organizational effectiveness. Moreover, the outcome validates the study of Odita and Egbule (2015), who have concluded that workforce diversity has a role in the level of organizational effectiveness. They further argued that managing diversity within organizations brings about benefits by establishing an environment that is fair and secure, ensuring equal access to opportunities and challenges for all individuals and this type of environment encourages the expression of creativity and innovation among members. Furthermore, Adam-Samura (2023) provides additional evidence of a strong and significant correlation between workforce diversity and organizational effectiveness. Based on this, it can be inferred that organizational effectiveness has become a key aspect linked to workforce diversity.

Table 4. Correlation Matrix of the Variables

Pair	Variables	Correlation Coefficient (r_{xy})	p-value	Decision
IV and DV	workforce diversity and organizational effectiveness	0.824	<0.001	Reject H_0
IV and MV	workforce diversity and organizational innovation	0.821	<0.001	Reject H_0
MV and DV	organizational innovation and organizational effectiveness	0.654	<0.001	Reject H_0

The second bivariate correlation analysis between workforce diversity and organizational innovation pr-

duced an r-value of 0.821, with a significance level of $p < 0.05$. This indicates a strong and significant positive relationship between the two variables. Therefore, the null hypothesis stating that there is no significant relationship is rejected. The results show that workforce diversity is positively associated with organizational innovation in cooperatives in Tagum City. This implies that any change in workforce diversity is likely to result in a corresponding change in perceived organizational innovation, assuming other factors remain constant. This finding concurs with the proposition of Chaudhry, Paquibut, and Tunio (2021), who presented that workforce diversity contributes to organizational innovation. They affirmed that employees demonstrate greater adaptability and flexibility in response to changes when they feel that their work environment values diversity, appreciates their contributions, and treats them fairly. In addition, Mohammadi, Brostrom, and Franzoni (2017) emphasized that increased diversity in higher education is associated with a greater degree of gradual innovation. Organizations might adopt hiring strategies that embrace both ethnic and disciplinary diversity to enhance the innovative capacity of the company. As a result, high workforce diversity will predict high organizational innovation among cooperatives.

Lastly, the correlation analysis between organizational innovation and organizational effectiveness resulted in an r-value of 0.654 with a p-value of less than 0.05. This indicates a positive but moderate relationship between the two variables. As such, the null hypothesis stating there is no significant correlation is rejected. This finding confirms that, within the context of cooperatives in Tagum City, organizational innovation is moderately and significantly associated with organizational effectiveness. This can be associated with the study of Ashraf and Khan (2013). The current research has provided empirical evidence supporting the idea that a conducive organizational climate for innovation does indeed promote organizational innovation, thereby enhancing the effectiveness of firms. Regarding the inclination towards organizational innovation, the findings of the study by the authors align with the notion that work environment factors play a crucial role in fostering innovation, ultimately contributing to organizational effectiveness. Moreover, as proved by Ngo (2015), there is a strong positive correlation between organizational innovation and organizational effectiveness. The author further posited that administrators need to be particularly attentive to fostering and improving an atmosphere of innovation to inspire employees, ultimately leading to a boost in overall organizational effectiveness.

3.3. Test of Mediating Effect between the Variables

To assess the mediating role of organizational innovation, the study used the four-step regression method by Baron and Kenny (1986). This approach involves running several regression analyses to check if the required conditions for mediation are met. As shown in Table 5, steps 1 to 3 test whether there are significant direct relationships between the variables. If any of these are not significant, mediation is usually ruled out [21]. If all three steps show significant results, the analysis continues to step 4 to determine whether the mediation is full or partial.

As shown, step 1, represented by path c, presents the significant direct and strong effect of workforce diversity on organizational effectiveness, suggesting that a one standard deviation increase in workforce diversity leads to a 0.824 standard deviation increase in organizational effectiveness. In step 2, workforce diversity exhibits a significant direct effect towards organizational innovation, the mediator, which indicates that a one standard deviation increase in workforce diversity results in a 0.821 standard deviation increase for organizational innovation. In step 3, as shown in path b, the results indicate that organizational innovation is a significant predictor of organizational effectiveness among cooperatives. It shows that a one standard deviation increase in the mediator results in a 0.654 standard deviation

increase in organizational effectiveness.

Table 5. Regression Analysis showing the Influence of Workforce Diversity on Organizational Effectiveness among Cooperatives as mediated by Organizational Innovation

Path	Unstandardized Coefficient (B)	Standard Error (SE)	Standardized Coefficient (β)	p-value	Decision
c	0.814	0.0315	0.824	<0.001	Reject H ₀
a	0.809	0.0317	0.821	<0.001	Reject H ₀
b	0.655	0.0419	0.654	<0.001	Reject H ₀
c'	0.284	0.0413	0.287	<0.001	Reject H ₀

Baron and Kenny (1986) explain that full mediation occurs when the independent variable no longer directly impacts the dependent variable after accounting for the mediator. In contrast, partial mediation is observed when the relationship between the independent and dependent variables remains significant even after considering the mediator's effects (meaning both workforce diversity and organizational innovation still significantly predict organizational effectiveness). In step 4, represented by path c', partial mediation was found, as the effect remained significant at $p < 0.05$. This indicates that a part of the influence of workforce diversity on organizational effectiveness is mediated by organizational innovation, while other aspects are either directly impacted or indirectly influenced by factors not included in the study.

Additionally, further mediation analysis using Medgraph is required to assess the significance of the mediation effect, as paths a, b, and c were found to be correlated. This analysis involves the Sobel z-test, which in Table 6 produced a z-value of 13.330, with a p-value less than 0.05. This result indicates a partial mediation effect, meaning that the direct impact of workforce diversity on organizational effectiveness was diminished when organizational innovation was included. The positive z-value suggests that organizational innovation reduced the influence of workforce diversity on organizational effectiveness.

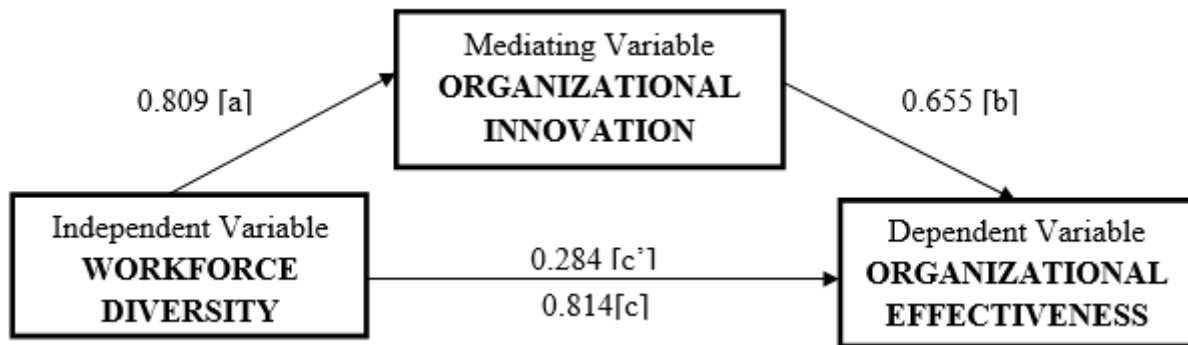
Table 6. Result of Statistical Analysis on the Presence (Absence) of Mediating Effect

Combination of Variables	Sobel z	p-value	Mediation
workforce diversity → organizational innovation → organizational effectiveness	13.330	<0.001	Partial Mediation

Furthermore, the computed effect size for the mediation test involving the three variables is displayed in Figure 2. The effect size indicates the extent to which workforce diversity influences organizational effectiveness through the indirect path. The total effect of 0.814 represents the beta value of workforce diversity on organizational effectiveness. The direct effect value of 0.284 reflects the beta of workforce diversity on organizational effectiveness after including organizational innovation in the regression. The indirect effect of 0.530 is derived from the original beta between workforce diversity and organizational effectiveness, now mediated through organizational innovation (calculated as $a \times b$, where a is the path from workforce diversity to organizational innovation and b is the path from organizational innovation to organizational effectiveness). To determine the ratio index, the indirect effect is divided by the total effect; in this case, 0.530 divided by 0.814 results in 0.65. This suggests that approximately 65% of the

total effect of workforce diversity on organizational effectiveness is mediated by organizational innovation.

Figure 2. Medgraph showing the Variables of the Study



The partial mediating role of organizational innovation on the relationship of workforce diversity and organizational effectiveness support two key ideas in this study that improving organizational innovation through workforce diversity does not cancel out the direct impact of workforce diversity on organizational effectiveness and organizational innovation is both a result of workforce diversity and a factor that enhances organizational effectiveness in cooperatives. This study highlights the significant role of workforce diversity in driving organizational effectiveness in cooperatives, with organizational innovation serving as a partial mediator in this relationship. Anchored on the Theory of Information Decision-Making, the findings affirm that a diverse workforce enhances the organization's access to varied information networks, fostering creativity and improving decision-making [40]. Moreover, a diverse workforce enriches an organization by broadening cognitive perspectives and enhancing strategic decision-making, while fostering a sense of belonging and individuality among employees. This balance strengthens team cohesion, reduces conflicts, and ultimately boosts overall organizational effectiveness [18, 7].

4. Conclusion and Recommendation

The study found that workforce diversity was generally at a high level across all its indicators, including reinforce homogeneity, color blindness, and fairness. In contrast, organizational innovation was assessed at a very high level overall. Among its indicators, effective and cognitive also received very high ratings, while behavioral was rated as high. Organizational effectiveness also revealed an overall very high assessment. The domains rated by the respondents as very high were flexibility, resource, planning, productivity, stability, and skilled workforce. On the other hand, the indicators that were rated as high were the availability of information and a cohesive workforce.

Workforce diversity, evaluated through indicators like fairness and color blindness, was rated as high overall. However, gaps such as fairness scoring slightly lower suggest the need for inclusivity training to bridge this divide. Organizational innovation, particularly effective and cognitive dimensions, received a very high assessment, signaling that cooperatives embrace change positively. Yet, behavioral aspects, including employee reactions to innovation, showed room for growth, highlighting opportunities for fostering adaptability. Organizational effectiveness indicators, such as planning and skilled workforce, achieved very high scores, while communication-related aspects like cohesive workforce lagged, suggesting areas for enhancement.

To address this issue for the employees and the management, cooperatives shall include regular inclusivity training programs to foster fairness and ensure equitable opportunities for all employees. Enhancing the behavioral aspect of organizational innovation can be achieved through workshops that encourage employee feedback and provide training on adaptability in evolving environments. For the communication-related indicators, cooperatives could establish consistent team-building exercises and robust internal communication platforms. This combination of strategies promises to align workforce diversity and innovation more closely, resulting in higher organizational effectiveness.

Moreover, the study revealed an existing correlation between workforce diversity, organizational innovation, and organizational effectiveness. This was in confirmatory with the study of Williams and O'Reilly (1998) Theory of Information Decision-Making that workforce diversity enhances creativity, decision-making, and team cohesion by broadening perspectives and fostering a sense of belonging, ultimately boosting organizational effectiveness [18, 7]. Finally, examining the interplay between workforce diversity, innovation, and effectiveness in cooperatives revealed valuable strategies and best practices that not only strengthen organizational performance but also promote social equity, economic empowerment, and sustainable development [39, 42].

The researcher proposes actionable plans that could benefit diverse stakeholders within the cooperative. For management and policymakers, it offers insights into creating more inclusive and innovative workplace policies. They can apply the findings to regulate practices that foster organizational growth and social equity. Employees stand to gain from a more connected, equitable, and productive work environment. The cooperatives can also tap the educational institutions, such as the University of Mindanao, in these initiatives by forming linkages. By partnering with the academe, such as being included in the institution's program advisory councils, they can develop and deliver specialized training programs for employees and managers, focusing on inclusivity, adaptability, and leadership. And future researchers can build on this study by exploring the long-term effects of these strategies on cooperative performance. Through sustained efforts, cooperatives in Tagum City could emerge as exemplary models of how diversity, innovation, and organizational effectiveness interplay to support long-term resilience and sustainability.

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