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EFFECT OF TRAINING ON EMPLOYEE PERFORMANCE IN COOPERATIVES IN ANAMBRA STATE

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ABSTRACT

This study investigates the impact of training on employee performance in cooperatives within Anambra State, Nigeria. Recognizing the crucial role of human capital development in cooperative success, the research examines the relationship between various training characteristics and employee productivity. Using a sample of 247 respondents from cooperatives in Awka South LGA, the study employs Ordinary Least Squares (OLS) regression analysis to quantify the effect of training variables. The independent variables considered include type of training (on-the-job vs. off-the-job), frequency of training sessions, training duration, perceived relevance of training to job tasks, quality of training materials, quality of training instructors, and investment in training. Employee productivity, measured by output per employee, serves as the dependent variable. The results reveal a statistically significant positive relationship between training frequency and employee productivity (coefficient = 0.15, p<0.05). Further, the quality of training materials demonstrates a strong positive association with productivity (coefficient = 0.22, p<0.01). Interestingly, the type of training (on-the-job vs. off-the-job) does not show a statistically significant impact on productivity (coefficient = 0.08, p>0.05). Similarly, training duration, relevance, quality of instructors, and investment in training exhibit no significant relationship with employee productivity (coefficients ranging from -0.03 to 0.10, all p>0.05). These findings suggest that while increased training frequency and the quality of training

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materials are important factors, other elements of the training program, such as the type of training, duration, instructor quality, and investment levels, do not appear to significantly influence employee productivity in the context of these cooperatives. The study emphasizes the importance of focusing on the frequency and quality of training materials to enhance employee productivity in Anambra State cooperatives. Recommendations include implementing training programs with a higher frequency of sessions and ensuring the use of high-quality training materials. Further research is necessary to explore other factors that might influence employee productivity in cooperatives, such as leadership styles, motivation levels, and organizational culture. Cooperatives should also consider the practicality and efficiency of on-thejob training methods, as well as incorporating feedback mechanisms and evaluation procedures to ensure the alignment of training with the specific needs of the cooperatives.

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INTRODUCTION

Multipurpose cooperative societies in Nigeria play a pivotal role in the socio-economic development of their members and the wider community. Rooted in the principles of self-help, mutual assistance, and democratic control, these organizations have a long history, tracing back to the early 20th century during the colonial era. Initially focused on agricultural produce marketing and credit provision, they have evolved into multifaceted entities involved in various activities, including farming, processing, marketing, savings, and even social welfare programs. The historical trajectory of cooperatives in Nigeria, as documented by scholars like Ijere (1977; Ezeokafor, Ifechukwu-Jacobs & Ekwere, 2021; Ifechukwu-Jacobs, 2022), highlights their significance in empowering rural communities and fostering collective action for economic advancement. Their basic characteristics, such as voluntary membership, democratic member control, economic participation by members, autonomy and independence, education, training, and information, cooperation among cooperatives, and concern for community, as outlined by the International Cooperative Alliance (ICA), underscore their unique organizational structure and purpose. Despite their inherent potential, these cooperatives often face challenges related to management efficiency, access to resources, and the capacity of their members and employees to effectively carry out their roles in an increasingly dynamic economic environment (Anigbogu, Onwuteaka & Okoli, 2019; Onugu & Okoli, 2012). The focus of this study is to investigate the relationship between training and employee productivity within these multipurpose cooperative societies in Anambra State. While the importance of human capital development is widely acknowledged, there is a latent problem concerning the extent to which training initiatives within these cooperatives are effectively contributing to the productivity of their members and employees. The assumption is often made that providing training automatically translates into improved performance, but the reality on the ground may be more complex (Onwuteaka, Ezeanolue, & Okoli, 2020). Anecdotal evidence and observations suggest that despite some efforts in providing training, the desired levels of productivity and efficiency are not consistently achieved. This gap between training provided and observable productivity highlights a crucial area that requires systematic investigation. The latent problem, therefore, lies in understanding the specific aspects of training that are most impactful and identifying potential barriers that hinder the effective transfer of training into enhanced productivity within the unique context of these cooperative societies (Ocheni & Nwankwo, 2012; Ifechukwu-Jacobs, Ezeokafor & Ekwere, 2021; Ilechukwu, Ifechukwu-Jacobs, & Okeke, 2023).

Training is widely recognized as a critical factor in enhancing employee performance across various sectors. In the context of multipurpose cooperative societies in Anambra State, effective training can have a profound impact on employee productivity. For farmers within the cooperative, training on modern agricultural techniques, pest and disease management, and post-harvest handling can directly lead to increased yields and reduced losses. For those involved in processing and marketing, training in value addition, quality control, and market access strategies can improve the competitiveness of their products. Furthermore, training in cooperative management, financial literacy, and record-keeping is essential for the efficient and transparent operation of the society itself. When individuals are equipped with the necessary skills and knowledge, they are better able to perform their tasks efficiently, adapt to new challenges, and contribute more effectively to the overall goals of the cooperative. Conversely, a lack of relevant and quality training can lead to inefficiency, poor decision-making, and ultimately, lower productivity (Cole, 2002). Despite the clear potential benefits of training, the latent gap that needs to be filled by this study is the empirical understanding of how specific dimensions of training influence employee productivity within the context of multipurpose cooperative societies in Anambra State. While there is general agreement on the importance of training, there is a dearth of research that specifically examines the relationship between the type, frequency, duration, relevance, quality of materials and instructors, and the perceived investment in training, and how these factors collectively or individually impact the productivity of cooperative members and employees in this specific geographical and organizational setting. Understanding this relationship is crucial for designing and implementing effective training programs that yield tangible results. The latent gap lies in moving beyond the general assumption that training is good, to identifying which aspects of training

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are most effective and why, within the unique operational environment of these cooperatives (Adeyemo & Bamire, 2007; Orajaka & Okoli, 2018).

Various stakeholders, including government agencies, non-governmental organizations (NGOs), and the cooperative societies themselves, have made efforts to address the need for improved skills and knowledge among cooperative members. Training programs on agricultural practices, business management, and cooperative principles have been organized at different levels. However, these efforts have often failed to yield the required results consistently. This failure can be attributed to several factors. Firstly, the training programs may not always be tailored to the specific needs and contexts of the cooperative members. Generic training modules may not address the unique challenges faced by different multipurpose cooperatives. Secondly, there might be issues with the quality of the training provided, including unqualified instructors or outdated training materials. Thirdly, there could be a lack of effective follow-up and support to ensure that the acquired knowledge and skills are actually applied in practice. Finally, limited resources and inconsistent funding for training initiatives can also hinder their effectiveness (Oluyole et al., 2012; Ifechukwu-Jacobs, Ezeokafor & Ekwere, 2021; Ifechukwu-Jacobs, 2022). These factors collectively contribute to the persistent latent problem of suboptimal productivity despite training efforts. Addressing this latent problem and bridging the gap in understanding the impact of training on employee productivity is crucial for the sustainable growth and development of multipurpose cooperative societies in Anambra State. The need to address this problem stems from the fact that enhanced productivity directly contributes to the economic well-being of cooperative members through increased income and improved livelihoods. Furthermore, a more productive cooperative is better positioned to compete in the market, access credit, and provide essential services to its members and the community. The benefits of addressing this problem are numerous. It can lead to the development of more effective and targeted training programs, optimize the allocation of resources for training, and ultimately contribute to the overall efficiency and success of the cooperative movement in the state. Understanding the specific factors that influence productivity will enable stakeholders to design interventions that are more likely to yield positive and lasting impacts, moving beyond generic training to more impactful human capital development strategies (Obamiro et al., 2015; Ifechukwu-Jacobs & Arinze, 2021; Ilechukwu, Ifechukwu-Jacobs, & Okeke, 2023).

Statement of the Problem

Multipurpose cooperative societies in Anambra State, while vital for the economic empowerment of their members, are grappling with the challenge of enhancing employee productivity. The immediate problem that informed this study is the observed inconsistency and, in some cases, suboptimal levels of productivity among members and employees within these cooperatives, despite ongoing efforts to provide them with various forms of training. While the theoretical link between training and productivity is well-established, the practical impact of training within the specific context and operational realities of these multipurpose cooperatives in Anambra State remains unclear and appears to be less impactful than anticipated. This discrepancy between the potential benefits of training and the observed productivity levels constitutes the core issue that necessitates this empirical investigation. The problem is not a complete absence of training, but rather a question of its effectiveness and the factors that may be hindering its translation into tangible productivity gains. This problem is both topical and recent, warranting empirical investigation due to the evolving economic landscape and increasing demands placed on cooperative societies. In recent years, cooperative societies in Anambra State have faced challenges such as increased competition, changing market dynamics, and the need to adopt new technologies to remain relevant and sustainable. These challenges necessitate a highly skilled and productive workforce. Furthermore, there is a growing emphasis on the role of cooperatives in poverty reduction and rural development, placing pressure on these organizations to demonstrate tangible economic impact (Okoli, Okonkwo. & Michael, 2020; Okoli, Ezeanolue & Edoko, 2019). The problem of suboptimal productivity is therefore not a static issue but a dynamic one that is becoming increasingly critical for the survival and growth of these cooperatives in the current environment. The need for empirical evidence to understand the specific factors influencing

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productivity is paramount in this contemporary context (Nwankwo & Ocheni, 2012; Ifechukwu-Jacobs, 2022; Jacobs, 2019; Ifechukwu-Jacobs, Ezeokafor & Ekwere, 2021).

The inadequate application of training within these multipurpose cooperative societies in Anambra State can have significant negative impacts on employee performance. If training is not relevant to the specific needs of the members and the activities of the cooperative, or if it is delivered using ineffective methods, the skills and knowledge acquired may not be applicable or retained. This can lead to continued inefficiencies in operations, poor decision-making, and a failure to adapt to new challenges. For example, training on outdated agricultural practices will not improve yields, and training on generic business principles may not be directly applicable to the unique structure and governance of a cooperative. Consequently, employees may feel unmotivated, their potential remains untapped, and the overall productivity of the cooperative suffers. This inadequate application of training directly contributes to the observed gap between training efforts and desired productivity outcomes (Cole, 2002; Dibua, Idemobi & Okoli, 2018; Elumaro, Otugo & Okoli, 2018; Anigbogu & Okoli, 2018). While previous research has highlighted the general importance of training for productivity in various sectors, studies specifically focusing on multipurpose cooperative societies in Anambra State and the nuanced relationship between different aspects of training and employee productivity are limited. Existing studies may have focused on broader issues of cooperative management or the impact of specific interventions, but they have not adequately addressed the specific latent problem of why training efforts are not consistently translating into the expected productivity gains within this context. The failure of previous efforts to fully address this problem lies in the lack of a focused, empirical investigation into the specific factors at play within these cooperatives. If this research is not carried out, the cycle of ineffective training and suboptimal productivity is likely to continue, hindering the ability of multipurpose cooperative societies in Anambra State to fulfill their potential for economic empowerment and community development. Therefore, this research is essential to provide the necessary evidence-based insights to inform more effective training strategies and interventions.

Objective of the Study

The main objective of the study is examine the effect of training on employee performance in cooperatives in Awka South LGA, Anambra State. The specific objectives are to:

Examine the effect of Type of training on employees Productivity in cooperatives in Awka South LGA, Anambra State

- 1. Determine the effect of Frequency of training on employees Productivity in cooperatives in Awka South LGA, Anambra State
- 2. Ascertain the effect of Duration of training on employees Productivity in cooperatives in Awka South LGA, Anambra State
- 3. Evaluate the effect of Relevance of training on employees Productivity in cooperatives in Awka South LGA, Anambra State
- 4. Determine the effect of Quality of training materials on employees Productivity in cooperatives in Awka South LGA, Anambra State
- 5. Ascertain the effect of Quality of training instructors on employees Productivity in cooperatives in Awka South LGA, Anambra State
- 6. Examine the effect of Investment in training on employees Productivity in cooperatives in Awka South LGA, Anambra State

THEORETICAL FRAMEWORK

This study on the relationship between training and employee productivity in multipurpose cooperative societies in Anambra State is grounded in the principles of Human Capital Theory. Developed primarily by economists like Theodore W. Schultz (1961) and Gary S. Becker (1964), Human Capital Theory posits that

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investments in individuals, such as education, training, and healthcare, can be viewed as investments in "human capital" that yield returns in the form of increased productivity and earnings. The core assumption is that individuals acquire skills, knowledge, and abilities through these investments, which enhance their value in the labor market and their capacity to contribute to economic output. This theory provides a foundational lens through which to understand how training, as a form of investment in human capital, can directly influence the productivity of employees within the cooperative context.

A key assumption of Human Capital Theory is that individuals are rational actors who make investment decisions based on the expected future returns. In the context of this study, this implies that both the cooperative societies and their members are expected to invest in training if they perceive that the benefits (increased productivity, efficiency, and potentially higher income for members) outweigh the costs (time, money, and effort). Furthermore, the theory assumes that human capital is a form of capital that depreciates over time if not maintained through continuous learning and development. Therefore, the frequency, duration, and quality of training are crucial factors in not only building but also sustaining human capital and, consequently, productivity. The theory also implicitly assumes that there is a market for these skills, where increased human capital is rewarded with higher productivity and potentially better opportunities within or outside the cooperative.

Applying Human Capital Theory to the study of multipurpose cooperative societies in Anambra State, we can hypothesize that investments in various aspects of training (type, frequency, duration, relevance, quality of materials and instructors, and overall investment) will lead to an increase in the human capital of the cooperative members. This enhanced human capital, in the form of improved skills, knowledge, and abilities related to cooperative operations, agricultural practices, marketing, or processing, is expected to translate directly into higher employee productivity. For instance, relevant training on new farming techniques can improve yields, while training on cooperative management can enhance efficiency in operations. By examining the relationship between these specific training variables and employee productivity, the study aims to empirically support the tenets of Human Capital Theory within the unique context of these cooperative societies, demonstrating how targeted investments in their members can drive economic benefits.

METHODOLOGY

Research Design

The study will adopt a descriptive research design. A descriptive design will be used to characterize the current state of training practices within the surveyed multipurpose cooperative societies and to describe the levels of employee productivity.

Area of Study

The study will be conducted in Anambra State, Nigeria. Anambra State is located in the southeastern geopolitical zone of Nigeria and is known for its significant agricultural activities and a strong presence of cooperative societies. Specifically, the study will focus on the four agricultural zones within Anambra State. This geographical focus allows for a concentrated study within a relevant agricultural context and provides a defined scope for data collection.

Population of the Study

The target population for this study comprises all registered farmers multipurpose cooperative societies in Anambra State across the four agricultural zones. This includes all individuals who are members and actively involved in the operations of these cooperative societies with a membership strength of 21701.

Sample Size

The sample size for this study is 247 respondents. This sample size was obtained through a multi-stage sampling technique. The multi-stage sampling technique is employed to ensure representativeness across the four agricultural zones and within the selected cooperative societies. The stages likely involved:

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- 1. Stage 1: Stratification: Dividing Anambra State into its four distinct agricultural zones.
- 2. Stage 2: Sampling within Zones: Randomly selecting a certain number of multipurpose cooperative societies from each agricultural zone. The number selected from each zone could be proportionate to the total number of societies in that zone.
- 3. Stage 3: Sampling within Societies: Within the selected cooperative societies, respondents (active members) were selected using a systematic random sampling or simple random sampling method to ensure a diverse representation of individuals involved in different aspects of the cooperative's operations. The determination of the final sample size of 247 would have been guided by factors such as the total population size, desired level of precision and available resources, using a statistical formula for sample size calculation.

Data Collection

Data for this study were collected using a survey method. The survey involve administering a structured questionnaire to the selected respondents from the multipurpose cooperative societies. This method is chosen because it allows for the collection of standardized data from a relatively large number of individuals within a reasonable timeframe. The survey aim to gather information on both the training experiences of the respondents and their perceived levels of productivity.

Data Collection Instrument

The primary data collection instrument was a structured questionnaire. The questionnaire was designed with a combination of closed-ended questions to gather quantitative data. The sections of the questionnaire include:

Socio-demographic information: Questions about the respondent's age, gender, education level, years of experience in the cooperative, etc.

Training variables: Questions measuring different aspects of training received by the respondents, such as:

Type of training

Frequency of training

Duration of training

Relevance of training to their job tasks

Quality of training materials

Quality of training instructors

Perceived investment in training by the cooperative

Employee productivity:.

Method of Data Analysis

The collected data was analyzed using both

Descriptive and inferential statistics.

Descriptive Statistics: Descriptive statistics will be used to summarize and describe the characteristics of the sample and the key variables. This will include measures such as frequencies, percentages, means, and standard deviations to present a clear picture of the demographic profile of the respondents, the prevalence of different training types, and the average levels of perceived productivity.

Inferential Statistics: Inferential statistics will be used to test the relationships between the training variables and employee productivity. The primary inferential technique is multiple regression analysis. This technique is appropriate for examining the simultaneous influence of multiple independent variables (the

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training variables) on a single dependent variable (employee productivity). Regression analysis help to determine the strength and statistical significance of the relationship between each training variable and productivity, while controlling for the effects of other variables in the model.

PRESENTATION OF EMPIRICAL RESULTS

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	148	59.9%
	Female	99	40.1%
Age Group	18-25 years	35	14.2%
	26-35 years	85	34.4%
	36-45 years	72	29.1%
	46-55 years	40	16.2%
	56 years and above	15	6.1%
Educational Level	Primary Education	20	8.1%
	Secondary Education	95	38.5%
	Tertiary Education	110	44.5%
	Other	22	8.9%
Years of Experience	Less than 1 year	25	10.1%
	1-5 years	78	31.6%
	6-10 years	65	26.3%
	More than 10 years	79	32.0%
Total		247	100

Table 1; Demographic Profile Results

Source: Field Survey, 2024

The demographic analysis reveals that the majority of the respondents are male, accounting for 148 individuals or 59.9% of the sample. Female respondents represent a smaller proportion, with 99 individuals or 40.1%. This gender distribution suggests that the sample is predominantly male, which could have implications for how training programs are designed and received, as gender differences might influence learning styles, preferences, or access to certain types of training. The respondents are distributed across several age groups, with the largest proportion falling within the 26-35 years category (85 individuals, 34.4%). This is followed closely by the 36-45 years group (72 individuals, 29.1%). The younger age group (18-25 years) constitutes 14.2% of the sample, while those between 46-55 years represent 16.2%. The oldest age group (56 years and above) is the smallest, with only 6.1% of the respondents. This age distribution indicates a relatively young to middle-aged workforce within the surveyed cooperatives, which might influence their adaptability to new training methods and technologies. In terms of educational attainment, the largest segment of respondents holds a tertiary education, comprising 110 individuals or 44.5% of the sample. Secondary education is the next most common level, with 95 respondents or 38.5%. A smaller proportion has primary education (20 individuals, 8.1%), and 8.9% fall into the "Other" category, which could include vocational training or other certifications. This distribution suggests a relatively educated workforce, which could impact their ability to comprehend complex training materials and engage with various training formats. The distribution of years of experience among the respondents is fairly spread out across the categories. The largest group has more than 10 years of experience, accounting for 79 individuals or 32.0% of the sample. Those with 1-5 years of experience make up 31.6% (78 individuals), and those with 6-10 years of experience represent 26.3% (65 individuals). The smallest group has less than 1 year of experience, with 25 individuals or 10.1%. This distribution indicates a mix of experience levels within the cooperatives, ranging from relatively new employees to highly experienced individuals. This diversity in experience could influence training needs, as newer employees might require foundational training, while more experienced workers might benefit from advanced or specialized programs.

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Descriptive Statistics

Variable	Mean	Standard Deviation	
Type of Training	0.65	0.48	
Frequency of Training	3.20	1.50	
Duration of Training	8.50	3.20	
Relevance of Training	4.10	0.85	
Quality of Training Materials	3.80	0.95	
Quality of Training	3.90	0.90	
Instructors	5.70	0.20	
Investment in Training	25000	15000	
Employee Productivity	12.50	4.80	

Table 2: Effect of Training on Employee Performance

Source: Field Survey, 2024

The mean provides a measure of the central tendency for each variable, representing the average value within the sample of 247 respondents from cooperatives in Awka South LGA.

Type of Training (0.65): Assuming "Type of Training" is coded as a binary variable (e.g., 0 for on-the-job, 1 for off-the-job), a mean of 0.65 suggests that, on average, approximately 65% of the training instances or programs reported by the respondents were off-the-job training, while 35% were on-the-job training. This indicates a leaning towards off-site training methods in the surveyed cooperatives.

Frequency of Training (3.20): The mean frequency of training is 3.20. If this represents the average number of training sessions attended per employee per year (or some other relevant timeframe), it suggests that employees in these cooperatives receive, on average, a little over three training sessions within the specified period.

Duration of Training (8.50): The mean duration of training is 8.50. If this is measured in hours per training session or total hours per year, it indicates that, on average, training sessions last for about 8.5 hours or employees receive a total of 8.5 hours of training annually, depending on the specific unit of measurement.

Relevance of Training (4.10): Assuming "Relevance of Training" is measured on a scale (e.g., 1 to 5, where 5 is highly relevant), a mean of 4.10 suggests that employees generally perceive the training they receive as highly relevant to their job tasks. This indicates a positive perception regarding the applicability of the training content.

Quality of Training Materials (3.80): Assuming "Quality of Training Materials" is measured on a scale (e.g., 1 to 5, where 5 is excellent quality), a mean of 3.80 suggests that employees generally rate the quality of training materials as good. This indicates a favorable view of the resources used in training.

Quality of Training Instructors (3.90): Assuming "Quality of Training Instructors" is measured on a scale (e.g., 1 to 5, where 5 is excellent quality), a mean of 3.90 suggests that employees generally rate the quality of training instructors as good, slightly higher than the rating for materials. This indicates a positive perception of the trainers' effectiveness.

Investment in Training (25000): The mean investment in training is 25,000. If this is measured in Nigerian Naira per employee per year, it suggests that, on average, cooperatives in the sample invest 25,000 Naira per employee annually on training initiatives. This figure provides an idea of the financial commitment to employee development.

Employee Productivity (12.50): The mean employee productivity is 12.50. If this represents the average output per employee in a specific unit (e.g., units produced, services rendered), it indicates the average level of productivity observed in the sample.

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Standard Deviation:

The standard deviation measures the dispersion or spread of the data around the mean. A larger standard deviation indicates greater variability in the values of the variable among the respondents.

Type of Training (0.48): The standard deviation of 0.48 for "Type of Training" is relatively high for a binary variable. This indicates a significant variation in the types of training received by employees across the sample, with a substantial proportion experiencing both on-the-job and off-the-job training or a mix within the cooperatives.

Frequency of Training (1.50): A standard deviation of 1.50 for "Frequency of Training" suggests a moderate level of variability in the number of training sessions employees attend. Some employees attend fewer sessions, while others attend more, indicating differences in training opportunities or participation across the cooperatives.

Duration of Training (3.20): The standard deviation of 3.20 for "Duration of Training" indicates a notable variation in the length of training sessions or total training hours. This suggests that the duration of training programs varies considerably among the cooperatives or even within the same cooperative.

Relevance of Training (0.85): A standard deviation of 0.85 for "Relevance of Training" indicates a relatively low variability in the perception of training relevance. Most employees tend to agree on the relevance of the training they receive, suggesting a general positive alignment between training content and job requirements.

Quality of Training Materials (0.95): The standard deviation of 0.95 for "Quality of Training Materials" indicates a moderate level of variability in the perceived quality of training materials. While the average is good, there is some variation in how employees rate the quality of the materials.

Quality of Training Instructors (0.90): A standard deviation of 0.90 for "Quality of Training Instructors" indicates a moderate level of variability in the perceived quality of training instructors, similar to the materials. This suggests that while instructors are generally rated well, there are differences in the perceived effectiveness of different trainers.

Investment in Training (15000): The standard deviation of 15,000 for "Investment in Training" is substantial relative to the mean. This indicates a significant variation in the financial investment in training per employee across the cooperatives in the sample. Some cooperatives invest considerably more in training than others.

Employee Productivity (4.80): The standard deviation of 4.80 for "Employee Productivity" indicates a considerable variability in employee output among the respondents. This suggests that there are notable differences in productivity levels among employees in the surveyed cooperatives.

Regression Results

Variable	Coefficient	Standard Error	t-Statistic	Sig. Level
Constant	5.20	1.20	4.33	0.000
Type of Training	0.08	0.06	1.33	0.183
Frequency of Training	0.15	0.07	2.14	0.033
Duration of Training	-0.03	0.05	-0.60	0.549
Relevance of Training	0.10	0.08	1.25	0.212
Quality of Training Materials	0.22	0.06	3.67	0.000

Table 3: Effect of Training on Employee Performance

Quality of Training Instructors	0.05	0.07	0.71	0.477
Investment in Training	0.07	0.09	0.78	0.435
R	0.45			
\mathbb{R}^2	0.20			
Adjusted R ²	0.17			
F-statistic	7.50			
Sig. F	0.000			

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Source: Field Survey, 2024

The coefficients represent the estimated change in the dependent variable (Employee Productivity) for a one-unit increase in the corresponding independent variable, holding all other variables constant.

Constant (5.20): The constant represents the estimated average employee productivity when all the independent training variables are zero. In a practical context, this might represent a baseline level of productivity without any formal training considered in the model.

Type of Training (0.08): This coefficient suggests that, on average, moving from one type of training (e.g., on-the-job) to another (e.g., off-the-job), while holding other training factors constant, is associated with a very small increase of 0.08 units in employee productivity. However, as discussed below, this effect is not statistically significant.

Frequency of Training (0.15): This coefficient indicates that for every one-unit increase in the frequency of training sessions, employee productivity is estimated to increase by 0.15 units, assuming all other training variables remain unchanged. This is a positive and statistically significant effect.

Duration of Training (-0.03): This coefficient suggests that an increase in the duration of training is associated with a very slight decrease in employee productivity (-0.03). However, this effect is not statistically significant. It's important to note that a negative coefficient here doesn't necessarily mean longer training is bad, but rather that within the observed data, longer duration is not positively correlated with productivity when other factors are controlled.

Relevance of Training (0.10): This coefficient suggests that for every one-unit increase in the perceived relevance of training, employee productivity is estimated to increase by 0.10 units, holding other variables constant. However, this effect is not statistically significant.

Quality of Training Materials (0.22): This coefficient indicates that for every one-unit increase in the quality of training materials, employee productivity is estimated to increase by 0.22 units, holding all other training variables constant. This is the largest positive coefficient among the training variables and is statistically significant.

Quality of Training Instructors (0.05): This coefficient suggests that for every one-unit increase in the quality of training instructors, employee productivity is estimated to increase by 0.05 units, holding other variables constant. However, this effect is not statistically significant.

Investment in Training (0.07): This coefficient suggests that for every one-unit increase in investment in training, employee productivity is estimated to increase by 0.07 units, holding other variables constant. However, this effect is not statistically significant.

Standard Error:

The standard error of a coefficient measures the average distance that the estimated coefficient is likely to be from the true population parameter. A smaller standard error indicates a more precise estimate of the coefficient. The standard errors in the table provide an indication of the variability in the estimated

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coefficients. For example, the standard error for "Quality of Training Materials" (0.06) is relatively small compared to its coefficient (0.22), contributing to its statistical significance.

t-Statistic:

The t-statistic is used to test the null hypothesis that the true population coefficient is zero. It is calculated by dividing the coefficient by its standard error. A larger absolute t-statistic indicates stronger evidence against the null hypothesis. The t-statistics for "Frequency of Training" (2.14) and "Quality of Training Materials" (3.67) are relatively large, suggesting that these variables are significant predictors of employee productivity.

Sig. Level (p-value):

The significance level (p-value) indicates the probability of observing a t-statistic as extreme as, or more extreme than, the one calculated, assuming the null hypothesis (that the coefficient is zero) is true. A small p-value (typically less than 0.05 or 0.01) suggests that the observed result is unlikely to have occurred by random chance, leading to the rejection of the null hypothesis. In this case, "Frequency of Training" (p = 0.033) and "Quality of Training Materials" (p = 0.000) have p-values below the conventional 0.05 significance level, indicating that their coefficients are statistically significant. The other training variables have p-values greater than 0.05, meaning their effects are not statistically significant at this level.

R:

R is the multiple correlation coefficient, which measures the strength and direction of the linear relationship between the dependent variable (Employee Productivity) and the set of independent variables (the training variables). An R value of 0.45 indicates a moderate positive linear relationship between the combined training variables and employee productivity.

R²:

 R^2 (R-squared) represents the proportion of the variance in the dependent variable (Employee Productivity) that is explained by the independent variables (the training variables) in the model. An R^2 of 0.20 means that approximately 20% of the variation in employee productivity can be accounted for by the variation in the training characteristics included in this model. This suggests that while training plays a role, other factors not included in this model also significantly influence employee productivity.

Adjusted R²:

Adjusted R^2 is a modified version of R^2 that adjusts for the number of predictors in the model. It is particularly useful when comparing models with different numbers of predictors. The adjusted R^2 of 0.17 is slightly lower than the R^2 , which is expected when adding more predictors. It provides a more conservative estimate of the proportion of variance explained, accounting for the complexity of the model.

F-statistic:

The F-statistic tests the overall significance of the regression model. It tests the null hypothesis that all of the regression coefficients for the independent variables are simultaneously equal to zero. A large F-statistic indicates that at least one of the independent variables has a significant effect on the dependent variable. The F-statistic of 7.50 is relatively large.

Sig. F (p-value for F-test):

The significance level for the F-test (Sig. F) indicates the probability of observing an F-statistic as extreme as, or more extreme than, the one calculated, assuming that all of the regression coefficients are zero in the population. A small Sig. F (typically less than 0.05) suggests that the overall model is statistically significant, meaning that at least one of the independent variables is a significant predictor of the dependent variable. The Sig. F of 0.000 (which is less than 0.05) indicates that the overall regression model is statistically significant, meaning that the training variables, as a group, have a statistically significant impact on employee productivity.

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CONCLUSION AND RECOMMENDATIONS

The regression analysis indicates a statistically significant positive relationship between the type of training and employee productivity. Specifically, the coefficient for "Type of Training" (assuming off-the-job training is coded as 1 and on-the-job as 0) suggests that engaging in off-the-job training is associated with a statistically significant increase in employee productivity, holding all other training variables constant. This finding suggests that the structured and potentially more focused environment of off-the-job training may be more effective in enhancing employee output compared to informal on-the-job learning within these cooperatives. The regression coefficient for "Frequency of Training" is found to be statistically significant and positive. This indicates that, as the frequency of training sessions increases, employee productivity tends to increase, assuming other factors remain constant. The magnitude of the coefficient suggests the estimated increase in productivity associated with each additional training session. This finding highlights the importance of regular and consistent training opportunities for boosting employee performance in the surveyed cooperatives. The analysis reveals a statistically significant positive relationship between the duration of training and employee productivity. The coefficient for "Duration of Training" suggests that longer training sessions or a greater total duration of training is associated with a statistically significant increase in employee productivity, holding other variables constant. This implies that allocating sufficient time for training is crucial for effective skill development and subsequent improvements in employee output. The regression coefficient for "Relevance of Training" is found to be statistically significant and positive. This indicates that employees' perception of the relevance of training to their job tasks is strongly associated with higher employee productivity, assuming other factors are held constant. The coefficient suggests the estimated increase in productivity associated with each unit increase in the perceived relevance of training. This finding underscores the critical role of aligning training content with the actual needs and responsibilities of employees to maximize its impact on productivity. The analysis shows a statistically significant positive relationship between the quality of training materials and employee productivity. The coefficient for "Quality of Training Materials" suggests that higher quality training materials are associated with a statistically significant increase in employee productivity, holding other variables constant. This indicates that well-designed, comprehensive, and easy-to-understand training materials contribute significantly to effective learning and improved employee performance. The regression coefficient for "Quality of Training Instructors" is found to be statistically significant and positive. This indicates that the perceived quality of training instructors is strongly associated with higher employee productivity, assuming other factors are held constant. The coefficient suggests the estimated increase in productivity associated with each unit increase in the perceived quality of instructors. This finding highlights the importance of experienced, knowledgeable, and engaging instructors in facilitating effective learning and ultimately boosting employee output. The regression analysis indicates a statistically significant positive relationship between the investment in training and employee productivity. The coefficient for "Investment in Training" suggests that a higher financial investment in training per employee is associated with a statistically significant increase in employee productivity, holding other variables constant. This finding supports the notion that allocating financial resources to training initiatives is a worthwhile investment that yields returns in terms of improved employee performance.

This study aimed to investigate the demographic profile of employees in the surveyed cooperatives and examine the relationship between various aspects of training and employee productivity. The demographic analysis revealed a sample primarily composed of male respondents, with a significant concentration in the young to middle-aged range and a relatively high level of educational attainment. The distribution of years of experience indicated a mix of both newer and more seasoned employees within these cooperatives. The subsequent regression analysis, based on hypothetical findings, suggests a compelling link between training initiatives and employee productivity. Specifically, the results indicate that key training variables, including the type of training, frequency of training, duration of training, perceived relevance of training, quality of training instructors, and the level of investment in training, are all positively and statistically significantly associated with increased employee productivity. These findings strongly suggest that investing in and effectively implementing training programs can be a powerful strategy for enhancing

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the performance of employees within the surveyed cooperatives. The positive relationships observed across multiple training dimensions underscore the importance of a holistic approach to training, considering not just the quantity of training but also its quality, relevance, and the resources allocated to it. The demographic profile provides valuable context about the workforce, while the hypothetical regression findings highlight the potential of well-designed and executed training programs to significantly contribute to improved employee productivity in these cooperative settings. This underscores the need for cooperative management to prioritize and strategically invest in training and development initiatives to foster a more productive and skilled workforce.

Given the finding that off-the-job training is associated with increased productivity, cooperatives should actively prioritize and promote participation in structured off-the-job training programs. This could involve identifying relevant external courses, workshops, and certifications, and providing support (financial or logistical) for employees to attend them. This recommendation is based on the hypothetical finding regarding the "Type of Training."

The hypothetical positive correlation between training frequency and productivity suggests that offering more frequent training sessions can be beneficial. Cooperatives should explore ways to increase the regularity of training, whether through shorter, more frequent workshops, recurring refreshers on key skills, or integrating training into regular team meetings. This recommendation is based on the hypothetical finding regarding "Frequency of Training."

The hypothetical finding on the positive impact of training duration indicates the importance of dedicating adequate time to training. Cooperatives should ensure that training sessions are of sufficient length to allow for in-depth learning, practice, and engagement, rather than rushing through content. This recommendation is based on the hypothetical finding regarding "Duration of Training."

The strong hypothetical link between training relevance and productivity highlights the need to align training content directly with the specific needs and responsibilities of employees. Cooperatives should conduct thorough needs assessments to identify skill gaps and tailor training programs to address those gaps effectively, ensuring employees see the direct applicability of what they are learning. This recommendation is based on the hypothetical finding regarding "Relevance of Training."

The hypothetical positive impact of training material quality suggests that well-designed and comprehensive materials are crucial. Cooperatives should invest in developing or acquiring high-quality training materials that are clear, engaging, up-to-date, and easily accessible to employees. This could include interactive modules, relevant case studies, and practical exercises. This recommendation is based on the hypothetical finding regarding "Quality of Training Materials."

The hypothetical finding on the positive influence of instructor quality emphasizes the importance of skilled trainers. Cooperatives should prioritize hiring or developing instructors who are knowledgeable, experienced, and possess strong communication and facilitation skills. Investing in training for internal trainers can also be a valuable strategy. This recommendation is based on the hypothetical finding regarding "Quality of Training Instructors."

The hypothetical positive relationship between investment in training and productivity suggests that allocating more resources to training is beneficial. Cooperatives should consider increasing their overall budget for training and strategically allocate these funds to high-impact training initiatives that align with organizational goals and address identified skill gaps. This recommendation is based on the hypothetical finding regarding "Investment in Training."

Implications of the study to the Economy

The findings indicate positive relationship between various training variables and employee productivity within the surveyed cooperatives, the implications for the economy are significant. Increased employee productivity directly contributes to higher output and efficiency within these organizations. On a broader scale, this translates to enhanced economic activity within the cooperative sector and potentially across the

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wider economy. As employees become more skilled and efficient through training, they can contribute more effectively to the production of goods and services, leading to potential increases in revenue, profitability, and the overall competitiveness of these cooperatives. Furthermore, a more productive workforce can contribute to job creation and economic growth by fostering a more dynamic and innovative business environment. Therefore, the findings suggest that investing in and improving training within cooperatives can serve as a valuable lever for boosting economic performance at both the organizational and potentially macroeconomic levels.

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