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Research Article

The Influence of Education Level, Accounting Knowledge and Accounting Training on the Use of Accounting Information Moderated by Environmental Uncertainty of Small and Medium Enterprises in the Trenggalek Region

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ABSTRACT

Examining the effects of education level, accounting knowledge, and accounting training on the use of accounting information is the goal of this study. Additionally, it seeks to determine whether environmental uncertainty moderates these associations. The study uses the Partial Least Squares (PLS) method of Structural Equation Modeling (SEM). With a coefficient of 0.328 and a t-statistic of 2.749, which are both above the crucial value of 1.96, the findings of the hypothesis test show that only Accounting Knowledge has a statistically significant effect on the usage of accounting information. Accounting training and educational attainment, however, do not appear to have a major impact. Additionally, there is no moderating effect of environmental uncertainty on the associations among education level, accounting knowledge, and accounting training with regard to the use of accounting information. According to these findings, improving accounting expertise helps encourage the use of accounting data in decision-making more than just boosting educational requirements or providing training that lacks meaningful content. In order to improve the efficient use of accounting data, the study emphasizes how crucial it is that public sector enterprises give technical accounting skill development top priority.

Keywords: Accounting Knowledge; Accounting Training; Use of Accounting Information; Environmental Uncertainty; Accounting Competence.

1. INTRODUCTION

An important economic sector that makes a substantial contribution to economic growth in both developed and developing countries are small and medium-sized enterprises (SMEs). In addition to opening up new business prospects, SMEs help boost the economy by generating jobs, increasing investment, and improving consumer purchasing power. As a result, one of the main pillars of Indonesia's economic growth is SMEs. But even with their strategic significance, growing and maintaining SMEs is a difficult task. These businesses usually face a number of internal and external obstacles. According to a study by Barbara et al. (2000), marketing, financial management, and organizational management are three crucial challenges that small businesses must overcome and that have a big influence on the expansion and development of SMEs. In a similar vein, Sih Darmi Astuti and J. Widiatmo's 2003 study emphasized typical problems like a lack of operating capital, trouble locating raw materials, poor technology, a lack of qualified human resources, and restricted access to markets and information.

The efficient use of accounting data is a key component in promoting the sustainability of SMEs. Business planning, operational control, decision-making, and performance evaluation are all aided by this data. Mitchell et al. (2000) highlighted how crucial accounting data is to small business management, especially when it comes to tracking costs, expenses, and cash flow. Furthermore, Ismail and King (2005) contended that accounting data helps SMEs make strategic choices in a market that is competitive and dynamic. This is corroborated by research by Son et al. (2006), which showed that management may handle operational issues that small businesses frequently confront by using pertinent accounting data.

Based on Gordon and Miller's viewpoints, Gudono (2007) claimed that accounting data is an essential tool for management to stay competitive. It provides pertinent and timely data for performance evaluation, control, planning, and decision-making. Additionally, in a study of 928 small firms in Australia, Holmes and Nicholls (1988) discovered that the use of accounting information is favorably influenced by a number of criteria, including business size, entrepreneurial

experience, accounting training, accounting knowledge, and educational attainment. Studies by Fitriyah (2006), Astuti (2007), and Wahyudi (2009) corroborate similar conclusions and highlight the importance of these variables in determining how successfully SMEs use accounting data in their operations. Specifically, the Trenggalek Region's Micro, Small, and Medium-Sized Enterprise (MSMEs) development has demonstrated a positive trajectory, propelled by a number of programs and initiatives that support their resilience and expansion. With environmental uncertainty acting as a moderating variable, the current study aims to investigate how MSMEs in Trenggalek use accounting information. Through determining the primary motivators for the utilization of accounting data, this study seeks to provide practical insights and suggestions to aid in the growth of MSME's throughout Indonesia.

2. RESEARCH METHOD

This study uses an explanatory survey design and a quantitative methodology to investigate both direct and indirect effects between the variables. The dependent variable is the usage of accounting information (Y), with environmental uncertainty (Z) serving as a moderating variable. The independent variables are education level (X1), accounting knowledge (X2), and accounting training (X3). Holmes & Nicholls (1988), Grace (2003), Astuti (2007), Fitriyah (2006), Lasdi & Mulia (2014), Duncan (1972), Miliken (1987), Fisher (1996), and Darlis (2002) were among the earlier research from which the indicators for each variable were taken. Academic achievement is used to determine education level; declarative and procedural dimensions are used to evaluate accounting knowledge; participation and perceived benefits are used to gauge accounting training; and statutory, budgetary, and supplemental information are used to measure the use of accounting information. Indicators pertaining to non-economic elements, external impacts, and company outlook are used to measure environmental uncertainty.

A sample size of 100 respondents is included in the study population, which is made up of 514 SME owners in the Trenggalek region. Interviews, questionnaires, and documentation were used to gather data. A strong framework for examining intricate causal interactions between latent variables is provided by structural equation modeling (SEM), which was used to analyze the data. The SEM model includes the moderating effect of environmental uncertainty in addition to the direct effects of the independent factors on the dependent variable. The purpose of hypothesis testing was to assess these linkages in order to obtain a thorough grasp of the variables influencing the use of accounting data in the setting of SMEs.

3. RESULTS AND DISCUSSION

3.1 Validity and Reliability Test

The first step entails building a measurement model (outer model) and a structural model (inner model) prior to performing additional data analysis. Making ensuring the model is in line with the researcher's conceptual framework requires this step. The theory's proposed links between constructs are reflected in the structural model, while the measurement model assesses the indicators that are employed to represent latent variables. Unlike formative models, which assume that the latent variables generate the observed measurements, this study uses reflecting indicators, which assume that the latent factors cause the observed measures. **Table 1,** which displays the findings of the convergent validity evaluation using outer loading values, provides an overview of the design of both models:

Table 1. Convergent Validity

Indicator	Outer Loading Value	Criteria
X1 * Z	1,074	Valid
X1.1	0.744	Valid
X1.2	0.720	Valid
X1.3	0.782	Valid
X1.4	0.461	Invalid
X2 * Z	1,106	Valid
X2.1	0.636	Invalid
X2.2	0.615	Invalid
X2.3	0.431	Invalid
X2.4	0.845	Valid
X3 * Z	1,097	Valid
X3.1	0.775	Valid
X3.2	0.739	Valid
X3.3	0.706	Valid
X3.4	0.728	Valid
Y1	0.789	Valid
Y2	0.696	Invalid
Y3	0.780	Valid

Z1	0.704	Valid
Z2	0.737	Valid
Z3	0.852	Valid

Most indicators satisfy the convergent validity requirement, which is often defined as a value more than 0.70, based on the outer loading data. X1.1 (0.744), X1.2 (0.720), X1.3 (0.782), and the interaction term X1 × Z (1.074) are regarded as reliable indicators. But since indicator X1.4 (0.461) is below the cutoff, it is invalid and ought to be disregarded or eliminated. Indicators X2.1 (0.636), X2.2 (0.615), and X2.3 (0.431) have low loading values and are therefore invalid for variable X2, while only indicator X2.4 (0.845) is valid. The interaction term X2 × Z is substantial (1.106) in spite of this, indicating a considerable interaction impact.

While most indicators show acceptable reliability and validity, some fall short and should be considered for refinement or exclusion to improve the accuracy and reliability of the model. In the dependent variable Y, indicators Y1 (0.789) and Y3 (0.780) are valid, while Y2 (0.696) is marginally below the cutoff and therefore considered invalid. All indicators for the moderator variable Z (Z1, Z2, Z3) show acceptable validity with values exceeding 0.70. All indicators for X3 (X3.1 to X3.4) show good validity, with outer loadings above 0.70, as does the interaction term X3 × Z (1.097). The evaluation employed composite reliability and average variance extracted (AVE) in compliance with partial least squares (PLS) methodology. A construct is deemed dependable if its composite reliability and AVE both surpass 0.70, as stated by Werts et al. (1974, as referenced in Ghozali, 2006). The results are summarized in the **Table 2**:

Table 2. Composite Variables and Variance Extracted

No	Variables	AVE	Composite Reliability	Information
1	X1	0.474	0.777	Not Reliable
2	X2	0.420	0.734	Not Reliable
3	X3	0.544	0.827	Reliable
4	Y	0.572	0.800	Reliable
5	Z	0.588	0.810	Reliable

With AVE values over 0.50 and composite reliability above 0.80, the results show that three variables—Accounting Training (X3), Use of Accounting Information (Y), and Environmental Uncertainty (Z)—display reliability. Despite having composite reliability above 0.70, Education Level (X1) and Accounting Knowledge (X2) had lower AVE scores (0.474 and 0.420, respectively). This suggests that the constructs need to be further refined since, despite having acceptable reliability metrics, they are unable to adequately capture the variance of their respective indicators. Although several constructs require development, these results confirm the model's overall adequacy. As a result, hypothesis testing with bootstrapping resampling techniques is the next step. The outcomes are shown in the **Figure 1**:

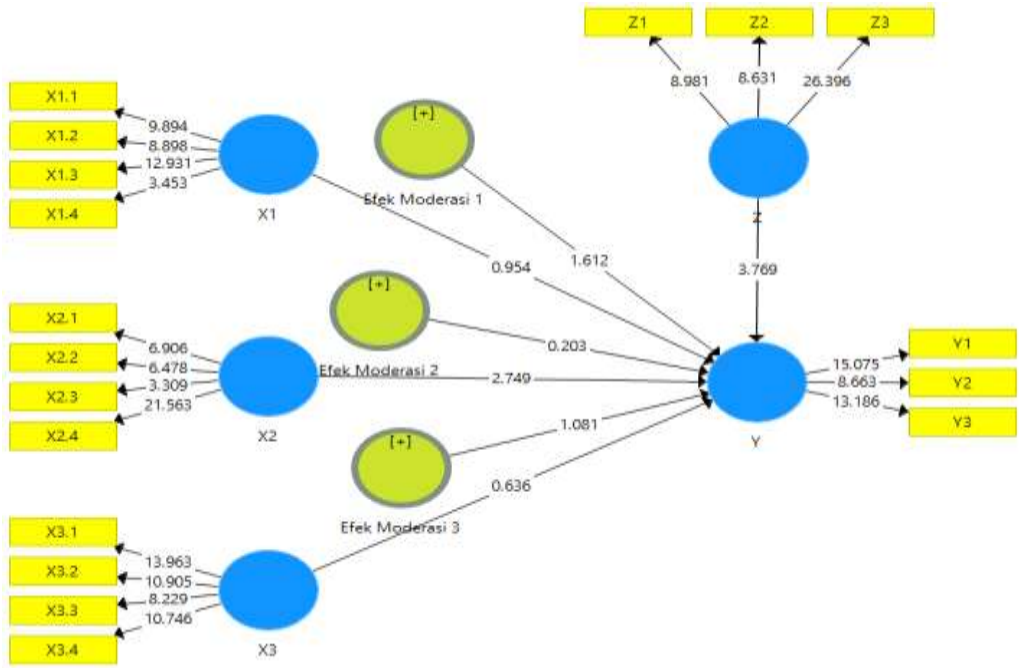

Figure 1. Bootstrapping Resampling Output

Table 3. Hypothesis Testing Results

HIP	Influence			Coefficient	t-statistic (OSTERR)	T Table	Information
H1	Education Level (X1)	→	Use Accounting Information (Y)	0.089	0.954	1.96	Rejected
H2	Accounting Knowledge (X2)	→	Use Accounting Information (Y)	0.328	2,749	1.96	Accepted
H3	Accounting Training (X3)	→	Use Accounting Information (Y)	0.081	0.636	1.96	Rejected
H4	Moderating Effect 1 → Environmental Uncertainty (Z)	→	Use Accounting Information (Y)	-0.124	1,612	1.96	Rejected
H5	Moderating Effect 2 → Environmental Uncertainty (Z)	→	Use Accounting Information (Y)	-0.021	0.203	1.96	Rejected
H6	Moderating Effect 3 → Environmental Uncertainty (Z)	→	Use Accounting Information (Y)	0.132	1,081	1.96	Rejected

Only H2 is supported by the hypothesis test: Accounting Knowledge (X2) has a considerable impact on the Use of Accounting Information (Y), surpassing the critical value of 1.96 with a t-statistic of 2.749 and a path coefficient of 0.328. This implies that those who know more about accounting are more likely to use accounting data when making decisions in public sector firms. However, with t-statistics of 0.954 and 0.636, respectively, showing no significant influence, H1 (Education Level → Use of Accounting Information) and H3 (Accounting Training → Use of Accounting Information) are discarded. In addition, the moderating hypotheses H4, H5, and H6 are denied. These hypotheses evaluate how Environmental Uncertainty (Z) influences the relationships between X1, X2, X3, and Y. Environmental Uncertainty does not significantly change the connections between the variables, as seen by their t-statistics (1.612, 0.203, and 1.081), which fall below the 1.96 criterion.

3.2 Discussion

The purpose of this study is to investigate how the Use of Accounting Information (Y) in the public sector in Kediri Regency is impacted by a number of variables, including Education Level (X1), Accounting Knowledge (X2), Accounting Training (X3), and Environmental Uncertainty (M) as a moderating variable. The following summarizes the analysis's main conclusions:

The Effect of Education Level (X1) on the Use of Accounting Information (Y)

There is no evidence to support the first hypothesis (H1), which looks at how education level affects how accounting information is used. The usage of accounting information is not significantly impacted by education level, as indicated by the t-statistic value of 0.954, which is less than the crucial value of 1.96. According to this finding, formal schooling may help people gain a general understanding of accounting, but it has little bearing on how accounting knowledge is actually used in daily operations in the public sector. Formal education alone may not be as important as practical experience and applied accounting skills.

The Effect of Accounting Knowledge (X2) on the Use of Accounting Information (Y)

Support is shown for the second hypothesis (H2), which examines how accounting knowledge affects the use of accounting information. The study surpasses the 1.96 barrier with a coefficient of 0.328 and a t-statistic of 2.749. This suggests that those who know more about accounting are more likely to use accounting data wisely when making decisions. A deeper understanding of accounting principles improves one's capacity to evaluate and comprehend financial information, resulting in more precise and well-informed choices.

The Effect of Accounting Training (X3) on the Use of Accounting Information (Y)

The impact of accounting training on the use of accounting information is examined in the third hypothesis (H3), which is disproved. Notwithstanding the possible advantages of technical skill development training, the t-statistic value of 0.636 is below the necessary cutoff. This implies that the available training courses might not have enough of an influence to encourage the efficient use of accounting data. The efficacy of such training endeavors may be constrained by elements like the caliber of training materials or delivery techniques.

The Moderating Role of Environmental Uncertainty (M) on the Relationship Between Variables and the Use of Accounting Information (Y)

They all reject the moderation hypotheses (H4, H5, and H6) that investigate whether Environmental Uncertainty moderates the associations between Accounting Knowledge, Accounting Training, and Education Level with the Use of Accounting Information. All of the moderation tests have t-statistics less than 1.96, which suggests that there is no moderating impact. This suggests that the associations between the independent variables and the use of accounting information are not substantially changed by environmental uncertainty. In the public sector context of this study, the degree of uncertainty may be too low or irrelevant to have an impact on these connections.

Implications of the Findings

The study's findings indicate that, of the variables examined, Accounting Knowledge (X2) has the biggest impact on how accounting data is used in Kediri Regency's public sector companies. Therefore, rather than just raising formal education levels or offering cursory training, improving individual competencies through deeper and more thorough accounting education is probably going to have more positive effects. Making decisions based on data and with more reliability is facilitated by having a firm grasp of accounting principles. On the other hand, the usage of accounting information was not significantly impacted by either Accounting Training (X3) or Education Level (X1). This suggests that encouraging the efficient use of accounting data in decision-making requires more than just improving educational credentials or providing training that doesn't emphasize content depth. Moreover, the link between the variables under investigation and the utilization of accounting data was not significantly moderated by Environmental Uncertainty (M). Although environmental uncertainty may have an impact on different organizational dynamics, it doesn't seem to have a big impact on how accounting information is used in this situation. All things considered, these results show how crucial it is to improve substantive accounting knowledge rather than depending only on traditional training programs or general education reforms in order to enhance the use of accounting information in the public sector.

4. CONCLUSION

The research findings indicate that there is no significant relationship between the Use of Accounting Information (Y) and Education Level (X1). Even though formal education provides a fundamental understanding, it is insufficient to motivate the best use of accounting data in the public sector. On the other hand, it is demonstrated that the Use of Accounting Information (Y) is significantly influenced by Accounting Knowledge (X2). This implies that improving the caliber of choices based on accounting data requires a deeper and more useful comprehension of accounting principles. However, the Use of Accounting Information (Y) is not significantly impacted by Accounting Training (X3). This implies that improving the caliber of choices based on accounting data requires a deeper and more useful comprehension of accounting principles. However, the Use of Accounting Information (Y) is not significantly impacted by Accounting Training (X3). This suggests that although training programs are beneficial, they might not have a significant impact on how accounting information is used effectively unless they are planned with a focused strategy that enhances pertinent abilities and knowledge. Additionally, the correlations between Education Level (X1), Accounting Knowledge (X2), and Accounting Training (X3) and the Use of Accounting Information (Y) are not moderated by Environmental Uncertainty (M). Environmental uncertainty does not substantially change the ways in which these three elements impact the use of accounting information, despite the fact that it can affect different organizational dynamics. The study concludes by emphasizing that the most important component in encouraging the efficient use of accounting data in decision-making processes is building accounting knowledge. Therefore, rather than just enhancing educational credentials or providing generalist training programs, the focus should be on enhancing people's technical accounting ability.

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