

## ORGANIZATIONAL CHANGE, ENVIRONMENTAL CHANGE AND CHANGE IN MANAGEMENT ACCOUNTING PRACTICES: A CONTINGENCY APPROACH

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### ABSTRAK

*Penelitian ini bertujuan untuk menguji pengaruh perubahan lingkungan terhadap perubahan praktik akuntansi manajemen dan dimediasi perubahan organisasi. Ketidakpastian lingkungan yang tinggi akan menuntut manajemen perusahaan untuk melakukan perubahan organisasi dan perubahan praktik akuntansi manajemen. Penelitian ini menggunakan metode survei dengan jumlah responden sebanyak 149 manajer perusahaan yang memiliki posisi level menengah ke atas pada perusahaan manufaktur di Jawa Timur, teknik analisis data menggunakan Smart PLS, untuk menganalisis jalur pengaruh langsung dan tidak langsung perubahan lingkungan terhadap perubahan praktik akuntansi manajemen. Hasil penelitian menunjukkan bahwa perubahan lingkungan berpengaruh positif dan signifikan terhadap perubahan praktik akuntansi manajemen. Perubahan organisasi berpengaruh positif terhadap perubahan praktik akuntansi manajemen, namun perubahan organisasi tidak mampu memediasi perubahan lingkungan terhadap praktik perubahan akuntansi manajemen. Orisinalitas penelitian ini adalah bahwa perubahan lingkungan secara langsung berpengaruh terhadap perubahan akuntansi manajemen, artinya jika terjadi perubahan teknologi dan tingkat kompetitif yang tinggi maka terjadi perubahan dalam praktik akuntansi manajemen dalam hal melakukan evaluasi, biaya dan pengambilan keputusan. Perubahan akuntansi manajemen ini diperkuat juga dengan adanya perubahan pada struktur dan teknologi yang digunakan organisasi/perusahaan.*

*Kata kunci: lingkungan, organisasi, praktik akuntansi manajemen*

### ABSTRACT

In this study, the impact of mediated organizational changes and environmental changes on management accounting procedures is investigated. The management of the organization will need to make administrative and management accounting practice adjustments due to the high level of environmental unpredictability. This study employs a survey approach with 149 company managers in mid-to-high level positions in East Javan manufacturing companies as respondents. Data analysis techniques using Smart PLS are used to examine the relationship between changes in the environment and changes in management accounting practices, both directly and indirectly. The findings demonstrated that modifications in management accounting procedures are positively and strongly impacted by ecological changes. Changes in management accounting procedures benefit from organizational changes. On the other hand, modifications to the practice of management accounting cannot be mediated by changes to the organization. This study is unique in that it examines how environmental changes impact management accounting practices. Specifically, it shows that changes in technology and a highly competitive market will impact management accounting methods related to evaluation, costing, and decision-making. Changes in the organization's structure and technology utilization support this shift in management accounting.

Key words: environmental, organizational, management accounting practices.

## INTRODUCTION

In order to help management make strategic decisions and evaluate the efficacy of the business, company strategy involves the identification process, gathering, selection, and analysis of accounting data. Companies employ a variety of strategies, such as the typology of prospector strategies (Djharuddin et al., 2018), differentiation strategies (Romano, 2019), which highlight rivalry in the innovation process, and sustainable innovation strategies (Pérez et al., 2013).

Environmental and technological changes are the causes of changes in management accounting practices and organizational changes (i.e. structure and strategy). Changes in management accounting practices are closely related to several factors in the organization, which are contextual variables inside and outside the company (Erserim, 2012b; Päril, 2019) such as the degree of competition, corporate size, production technology, organisational capacity, organisational strategy, and organisational structure. Beyond merely a collection of methods, management accounting encompasses conventions and values that offer guidance for making decisions (Oboh and Ajibolade, 2017), especially for growing manufacturing companies. Each part of the company has to be consistent and support each other in supporting management accounting practices, strategy and organizational structure to achieve competitive advantage and accelerate company goals (Hutaibat et al., 2011; Wahyuni and Triatmanto, 2020).

The research was conducted at manufacturing companies in East Java. According to the Central Bureau of Statistics (BPS), four sectors contribute significantly (> 10%) to the Gross Domestic Product (GDP), namely the manufacturing industry, agriculture, trade and the construction sector. Currently, the manufacturing sector is only growing by 4.2%. The cause of the low growth in the manufacturing sector is suspected to be

management's inability to anticipate changes in the organization's internal and external environment.

This research uses the Contingency Theory to explain the relationship between environmental change and organizational change in implementing changes in management accounting practices. Contingency Theory explains that changes in the corporate environment will cause changes in the organization, management accounting practices and decision-making processes (Hoque, 2011; Jacobs, 2013). Approach Contingency Theory in management accounting is based on the premise that no universally applicable accounting system applies equally to all companies (Hoque, 2011; Otley, 2016; Ojra et al., 2021). On the other hand, the accounting system will depend on specific conditions according to the conditions in which a company finds itself (Ojra et al., 2021). Changes in internal management accounting practices and Changes in the external environment surrounding the company have an impact on how it operates. The competitive environment and technological advances greatly influence management accounting practices, design and company strategy.

Contingency Theory must recognize specific accounting aspects related to certain conditions that have been determined and demonstrate high suitability (Coombs and Tachkova, 2022; Granlund and Lukka, 2017; Hoque, 2011). Contingency Theory also explains that management accounting practices can run well in organizations implementing a Management Accounting Change System (MACS) based on company characteristics and environmental factors. (Hoque, 2011; Majima, 2018). The compatibility between the environment, organization and management accounting practices and the company will accelerate the achievement of organizational goals.

According to the *Contingency Theory*, Managers must be careful in analyzing the environment in which the company is located by considering the company's internal characteristics in carrying out company

operations (Bitmiş and Ergeneli, 2011; Cheng and Fisk, 2022).

The company's internal environment will provide intense pressure to determine appropriate steps in company operations through an effective management accounting system. The management accounting system is essential in achieving the company's strategic goals or objectives, especially in processing business transactions, controlling industrial processes, and efficiently supporting communication and productivity. (Coyte, 2019; Otley, 2016; Quinn, 2014). Information from a reliable accounting system has the characteristics of broad scope, timeliness, aggregation and integration (Bui and de Villiers, 2017; Giannetti et al., 2021). The level of need for accounting information is not the same for every organization or company because several other factors influence it, namely environmental uncertainty, technological complexity, task uncertainty, strategy uncertainty, and implemented strategies (Bui and de Villiers, 2017; Hammad, 2012).

The Contingency Theory approach states that structural arrangement is also part of the company's strategy to achieve the expected company goals (Hoque, 2011). Implementing a plan with a high level of innovation supported by the organization's internal environment will increase the achievement of several company goals. (Otley, 2016).

Over time, management accounting is always subject to change. Changes in the business sector necessitate adjustments to management accounting procedures. or Management Accounting Change (MAC) in company management (Abrahamsson et al., 2011; Laitinen, 2011). Environmental change factors, technological changes, organizational structure changes and strategy changes are suspected to be causes of changes in management accounting practices. This research aims to investigate the influence of environmental changes on changes in management accounting practices through organizational change.

## THEORETICAL REVIEW

This study is predicated on the rationale that organizational changes operate as a mediator between environmental changes and changes in management accounting procedures. Management must continue to make adjustments to the organizational structure and business strategy through management accounting procedures. Technology advancements and environmental instability lead to changes in management accounting procedures (Hopper and Bui, 2016; Contrafatto and Burns, 2013a; Ojra et al., 2021). Technological advancements and environmental changes are driving a more intense competition among manufacturing enterprises, regardless of their differences. It is necessary to align changes in management accounting procedures with ecological and technical advancements (Kumarasiri and Gunasekarage, 2017).

*The contingency theory* explains that no system applies the same to different conditions or environments (Granlund and Lukka, 2017). Companies must be able to adapt to existing environmental conditions so that they can survive and grow. Companies do two things to adapt to the environment: first, management organizes the configuration of various sub-systems within the company to make company activities efficient. Second, it is essential to form parts of the company with different levels of effectiveness in dealing with environmental changes (Lin et al., 2017; Mnif and Gafsi, 2020). It depends on the characteristics of the management accounting system and various factors that influence the organization, such as environmental and technological factors, as well as a strategy (Gani and Jeremias, 2011; Vu et al., 2022) .

The design of the organizational structure in a company is greatly influenced by the need to adapt to the company's environment. Companies try to improve opportunities to survive amidst competition by adjusting to the climate outside and inside the company. Organizational structure and strategy are internal factors that can influ-

ence a company's survival and growth (Wilden et al., 2013).

### **Environmental Change and Organizational Change**

Organizations are often defined as configurations of external dimensions, such as environment and technology and internal dimensions, such as strategy, structure, culture, processes, practices and results (Diana et al., 2017; Hopper and Bui, 2016). Environmental changes will pressure organizations to change the organizational structure and strategies by adopting the organizational structure and design designs with a more robust customer orientation (Colwell and Joshi, 2013). Changing the organizational structure to decentralization in a competitive environment and technological development can increase the speed and quality of response to any information to accelerate the achievement of organizational goals (Markey et al., 2018; Omylska, 2019).

Globalization has impacted environmental and technological changes, resulting in strategy changes (Bui and de Villiers, 2017). In intense and aggressive competition with increasing customer demand and shorter product life cycles, the correct link between manufacturing strategy and operations is the key to developing sustainable competitive advantage (Gogan et al., 2015). Companies strive to gain competitive advantage by implementing customer-focused strategies such as total quality management and just-in-time. Companies need to make more significant investments in information technology in a more dynamic environment and pursue strategies oriented towards market expansion (Mikalef and Pateli, 2017).

Information technology is a foundation for applying advanced manufacturing technologies, such as just-in-time. Several empirical research studies indicate that organizations must change strategies to accommodate changes in the competitive and technological environment. Companies facing a more competitive environment and technological progress will change towards a

differentiation strategy (Robalo, 2014; Colwell and Joshi, 2013). Additionally, successful companies will align critical strategy elements with the environment (Hoque, 2011; Wu et al., 2014). The business climate has undergone substantial changes for many organisations due to new management methods, intense competition, information technology advancements, and a heightened emphasis on customer service and quality. Organizational structure will influence corporate strategy and the ability to adapt to changes in the external environment (Van der Voet, 2014). The organizational structure can change if the company implements strategic changes by environmental changes (Wu et al., 2014).

H<sub>1</sub>: Environmental changes have a positive effect on organizational change.

### **Environmental Changes and Changes in Management Accounting Practices**

Organizational environmental factors change significantly impacts the accounting system (Cadez and Guilding, 2012; Ghasemi et al., 2016; Granlund et al., 2013; Hoque, 2011). Meanwhile, the competitive environment and technology are the primary triggers for changes in management accounting practices (Alsharari, 2019; Contrafatto and Burns, 2013a; Giannetti et al., 2021; Lasyoud et al., 2018). Based on the argument that in conditions of environmental uncertainty, managers need particular management accounting information in making decisions and assisting in monitoring organizational strategy development.

The effectiveness and efficiency of the management accounting and control system (MACS) are essential for the survival of the organization; this is proven by improving quality and better customer service; the company will be able to maintain competitiveness by continuing to monitor various factors such as price competition and market share, marketing and product competition, number of competitors, and competitor behaviour, as well as achieving company goals through the use of a management

accounting system (Busco and Scapens, 2011; Fiondella et al., 2016; Colwell and Joshi, 2013).

Numerous research on management accounting have brought attention to important shifts in the field, which have an impact on the selection of efficient methods and systems for management accounting. (Erserim, 2012a, 2012b; Micheli and Mari, 2014). Reconsidering design and strategy can accelerate achieving company goals (Cadez and Guilding, 2012; Ghasemi et al., 2016; Hoque, 2011). The Contingency Theory approach shows the suitability (fit) between the environment and the organizational system that will support management accounting practices. It states that management accounting systems relate to environmental factors, organizations and decision-making styles (Granlund and Lukka, 2017; Gunarathne and Lee, 2021; Mnif and Gafsi, 2020). Adopting changes in management accounting practices is expected to be high for companies operating in advanced information technology fields, and competitive contexts are essential to corporate survival.

H<sub>2</sub>: Environmental changes have a positive effect on changes in management accounting practices

### **Organizational Change and Changes in Management Accounting Practices**

Changes in management accounting practices indicate changes in organizational structure and strategy (Abrahamsson et al., 2011; Hopper and Bui, 2016). Various organizational factors describe contextual variables within and outside the company that influence changes in management accounting practices. Management Accounting Systems (MAS) design considers strategy and structure to ensure the organization effectively provides information to decision-makers. Several empirical studies have examined the relationship between MAS contingencies, organizational structure and strategy.

The management accounting system's functions include motivating and directing

organisational improvements as well as giving managers access to current information for financial decision-making. Adapting appropriately is necessary to retain effectiveness in the face of changes in the corporate environment. The degree to which the organisation builds the capability required to manage the alignment of numerous changes helps to explain why MAS is such an effective platform for change.

Changes in management accounting practices are not always limited to the introduction of new systems (replacement of existing systems), but this can be done by changing the management accounting practices used (output or operational modifications) (Alsharari, 2019; Alsharari and El-Aziz Youssef, 2017; Hopper and Bui, 2016; Giannetti et al., 2021; Makrygiannakis and Jack, 2016; Ojra et al., 2021). These forms of change in management accounting practices can utilize the MAS typology of changes simply through additions, replacements, output modifications, operational modifications and reductions.

H<sub>3</sub>: Organizational changes have a positive effect on changes in management accounting practices

### **Environmental Changes, Organizational Changes and Changes in Management Accounting Practices**

The environment can be broadly characterized as phenomena outside the organization that have both potential and actual influence on the organization (Bouten and Hoozée, 2013; Contrafatto and Burns, 2013a). The external environment is related to technology, law, politics, economics, culture and demographics. Environmental uncertainty, influenced by high levels of competition, is an essential contextual variable in contingency-based research (Hammad, 2012). The competitive environment and technological advances, in general, have influenced manufacturing companies to make changes to management accounting practices, design and company strategy (Alsharari, 2019; Bassani et al., 2021; Bui and

de Villiers, 2017; Contrafatto and Burns, 2013b; Fiondella et al., 2016).

Environment refers to intense price competition or potential competitors (Contrafatto and Burns, 2013a). Several studies have identified that companies in a competitive business environment tend to change management accounting practices, organizational structure and strategy (Alsharari, 2019). It has also been proven that an organization's ability to conduct international trade and compete with imported goods can change management and business practices (Dhar, 2014). High economic uncertainty is an essential cause of changes in management accounting practices.

Competitive environment, technology and strategy are drivers of structural change, but do not include the role of management accounting systems in structural change then this will have an impact on the company's ability to anticipate change (Cadeaux and Ng, 2012; Hammad, 2012). Organizational structure is one aspect that influences changes in management accounting practices. Implementing a management accounting system supported by an appropriate business strategy impacts competitive advantage and achieving organizational goals (Alsharari, 2019). More advanced management accounting techniques can help employees focus more on attaining differentiation strategies, such as quality, delivery, and customer service, to fulfil customer needs (Dhar, 2014). For example, target costing helps managers focus on low costs while maintaining customer expectations in quality and functionality. The management

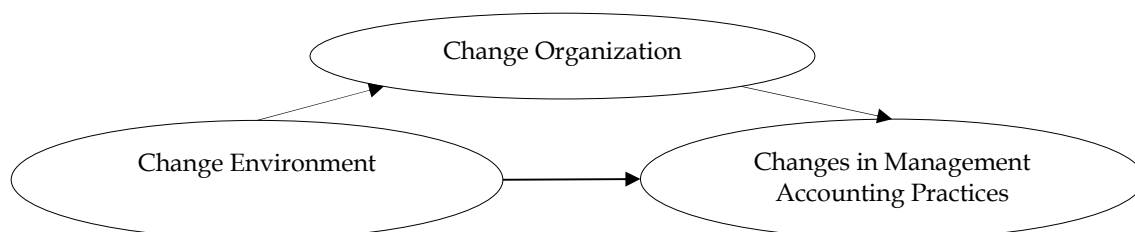
accounting system is used as a differentiation in the management system. From a business policy perspective, system differentiation can be used to determine competitive strategies.

Strategy is a significant contingency variable. A management accounting system that supports strategy will influence an organization's competitive advantage (Cadez and Guilding, 2012; Nixon and Burns, 2012). The type of prospector and analyzer strategy has a positive effect on changes in management accounting practices (Dhar, 2014). Based on this, it can be concluded that strategy is essential in designing and using management accounting systems. This conclusion aligns with the opinion that changes in management accounting practices must be by company strategy.

Using a management accounting system influences strategy changes, and system changes must be adapted to strategy changes (Cadez and Guilding, 2012; {Formatting Citation}). Several other studies have also examined the relationship between management accounting systems and strategy but have not explicitly considered the link between changes in management accounting practices and strategy (Cadez and Guilding, 2012; Hutaibat et al., 2011).

H<sub>4</sub>: Organizational changes can mediate environmental changes on changes in management accounting practices.

Based on the hypothesis proposed in the research, the research framework concept is described as follows (Figure 1).



**Figure 1**  
**Research Framework Concept**

Source: Processed Author

## RESEARCH METHODS

This research uses a quantitative and causal approach based on problem phenomena in the manufacturing industry. This research uses a survey method by collecting information on a predetermined population that meets the specified criteria (Cooper et al., 2014).

Research data uses primary data collected from manufacturing companies in East Java. The population in the study were individuals who worked in manufacturing companies as middle and upper management. The upper middle-level position is an individual in the company as department manager/head of section/ supervisor. Middle and upper-level leaders were chosen because these leaders play a role in making management decisions. After more investigation, 389 manufacturing enterprises in East Java are responsible for carrying out production procedures and converting raw materials into completed commodities. Researchers took five (5) individuals from each company, so the total population was 1,167. Of the total population, researchers distributed 1,167 questionnaires, so the census took this number. The questionnaire return rate was 25%, but 149 respondents could be analyzed; the others were declared damaged due to incomplete filling.

The data analysis technique uses path analysis with Smart PLS software, considering that PLS analyses variables with

reflective and formative indicators. Additionally, PLS can be used on data types with different scale types.

## ANALYSIS AND DISCUSSION

The respondents for this research were 149 samples. The non-response bias test compared the first 45 (30%) questionnaires received with the last 45 (30%) questionnaires. Table 1 presents the results of the non-response bias test.

Table 1 shows the test results for the difference in average indicator scores at the initial and final stages were insignificant ( $p > 0.05$ ). It can be concluded that there is no difference between respondents in the initial group and respondents in the last group.

### Homogeneity Testing

The data collection process is carried out in three ways: delivering it directly by the researcher, sending it via email or post and using a third party. Therefore, the data needs to be tested for homogeneity of variance. In finding out the collected data has the same variance. Homogeneity variance testing was done by applying Levene's equality test of error variances resulting from the independent t-test.

Table 2 shows the results of Levene's test of equality of error variances. The results show that the variables used in the research have a significance value greater than 0.05, which means they are not significant.

**Table 1**  
**Non-response Bias Test Results**

No	Indicator	T	Db	P	Initial average	Final Average	Difference
1	Competitive	0,095	88	0,925	19,31	19,36	0,05
2	Technology	0,111	88	0,912	22,40	22,49	0,09
3	Structure	0,282	88	0,779	17,49	17,36	0,13
4	Strategy	0,154	88	0,878	18,29	18,20	0,09
5	Planning	0,204	88	0,839	14,42	14,49	0,07
6	Control	1,393	88	0,167	10,02	10,49	0,47
7	Cost	0,666	88	0,507	11,16	11,40	0,24
8	Evaluation	1,446	88	0,152	9,00	9,62	0,62
9	Decision	0,500	88	0,619	17,76	17,56	0,20

Source: Research Data Processed by Smart PLS (2023)

**Table 2**  
**Results of Levene's Test of Equality of Error Variance**

No	Indicator	Through a third party	Visited directly	Email/Internet	Significance
1	Competitive	19,17	19.30	19.74	0.641
2	Technology	21.68	22.67	22.83	0.114
3	Structure	17.22	17.87	17.87	0.900
4	Strategy	17.90	18.40	18,11	0.277
5	Planning	14,19	14.57	14.53	0.167
6	Control	9.88	10.50	10.38	0.885
7	Cost	10.99	11.80	11.23	0.476
8	Evaluation	8.94	9.77	9.38	0.908
9	Decision	17.33	17.80	17.70	0.187

*Source: Research Data Processed by Smart PLS (2023)*

The results of this analysis indicate that the data obtained using different methods have the same variance. Accordingly, the data has the same variance despite receiving it differently.

#### **Validity and Reliability of Research Instruments**

Validity testing is carried out to measure whether or not an instrument is valid in expressing a construct. Validity testing uses Pearson correlation analysis with a two-tailed confidence level of 95%. A research instrument is helpful if the Pearson correlation coefficient value for each indicator to the total indicators is significant (Ghozali, 2018) and the item-total correlation value for each item is more critical than 0.30.

**Table 3**  
**Goodness of Fit Index (GoF)**

No	Variable	Communality	R2
1	Environmental Change	0.482	-
2	Organizational Change	0.432	0.975
3	Management Accounting Amount	0.291	0.278
	Average	1,571	1,634
	Goodness of Fit Index (GoF)	0.393	0.545
		0.463	

*Source: Research Data Processed by Smart PLS (2023)*

Calculating the instrument's reliability for each indicator shows that several items must be excluded so that the reliability of the items can be accepted. Table 3 shows that the Goodness of Fit Index (GoF) value is 0.463, greater than 0.36. This value means that the combined performance validation between the outer model and inner model is large (large GoF). So it can be concluded that the model has a large GoF, and the greater the GoF value, the more suitable it is for describing the research sample.

#### **Results of Analysis and Evaluation of Measurement Models**

The results of the analysis and evaluation of this research measurement model are explained in Table 4.

A path diagram equipped with path coefficients (loading path), which explains the relationship between variables, can be described in Figure 2.

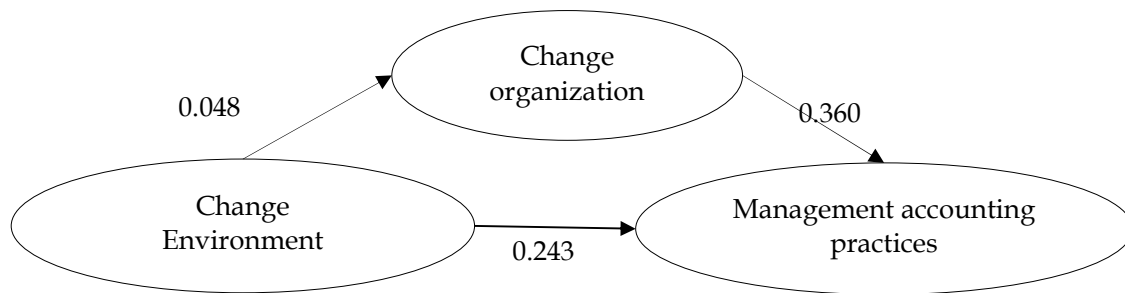
Based on the research conceptual framework, testing the structural model relationship and hypothesis testing can be carried out in two stages, namely: (1) testing the direct influence path coefficient and (2) testing the indirect influence path coefficient (mediation). Testing the direct influence of latent variables of environmental change on organizational change and changes in management accounting practices.



**Table 4**  
**Path Coefficient Test Results on the Inner Model**

No	Connection	Path coefficient	Standard Deviation	Statistics t
Variables with Variables				
1	Environment -> Organization	0.048	0.026	1,809
2	Environment -> AKM	0.243	0.092	2,623
3	Organization -> AKM	0.360	0.089	3,997

Source: Research Data Processed by Smart PLS (2023)



**Figure 2**  
**Structural Model Path Diagram**

Source: Research Data Processed by Smart PLS (2023)

Environmental change on organizational change has a coefficient in a positive direction. The calculation results show that the path coefficient is 0.048 with a t-statistic of 1.809 < 1.96, indicating that environmental changes do not affect organizational change. As measured by competitive environmental indicators and technological changes, ecological changes have no impact on organizational structure or company strategy changes.

Environmental changes on changes in management accounting practices have a coefficient in a positive direction. The calculation results show that the path coefficient is 0.243 with a t-statistic of 2.623 > 1.96, indicating that environmental changes affect changes in management accounting practices. Environmental changes that are measurable from competitive and technological changes will be followed by planning, control, cost determination, reward systems and decision-making in management accounting practices.

Organizational changes to changes in management accounting practices have a coefficient in a positive direction. The calcu-

lation results show that the path coefficient is 0.360 with a t-statistic of 3.997 > 1.96, indicating that organizational changes affect changes in management accounting practices. Measurable organizational changes from changes in structure and strategy will be followed by planning, control, cost determination, reward systems and decision-making in management accounting practices.

Based on the conceptual framework of the research, the results of testing the relationship between variables and indicators are also explained in table 5.

The environmental change variable has two indicators with a reflective relationship. The loading factor on the competitive indicator is 0.902 ( $t = 79.962$ ), and on the technology indicator, it is 0.966 ( $t = 188.645$ ). The results of this analysis explain that changes in the environment to increase competition tend to be followed by changes in the use of technology. The results of the second loading factor test were significant ( $t > 1.96$ ).

**Table 5**  
**Outer Model Test Results**

No.	Variables with Indicators	Path coefficient	Standard Deviation	Statistics t
1	Environment -> Competitive	0.902	0.011	79,962
2	Environment -> Technology	0.966	0.005	188,645
3	Structure -> Organization	0.930	0.106	8,797
4	Strategy -> Organization	0.072	0.177	0.404
5	AKM -> Plan	0.709	0.047	15,036
6	AKM -> Control	0.552	0.101	5,474
7	AKM -> Cost	0.575	0.147	3,906
8	AKM -> Evaluation	0.702	0.086	8,089
9	AKM -> Decision	0.685	0.107	6,400

Source: Research Data Processed by Smart PLS (2023)

The organizational change variable has two indicators with a formative relationship. The loading factor on the corporate structure indicator is 0.930 ( $t = 8.797$ ), and 0.072 ( $t = 0.404$ ) on the strategy indicator. The results of this analysis explain that organizational change is defined more by structure changes than strategy. The second loading factor test results were significant ( $t > 1.96$ ) only for the structure indicators.

The change in management accounting practice variable has five indicators with a reflective relationship. The loading factor on the planning indicator is 0.709 ( $t = 15.036$ ), control is 0.552 ( $t = 5.474$ ), cost determination is 0.575 ( $t = 3.906$ ), the reward system is 0.702 ( $t = 8.089$ ) and decision making is 0.685 ( $t = 6.400$ ). The results of this analysis explain that changes in management accounting practices are measured from the five indicators. The fifth loading factor test results were significant ( $t > 1.96$ ). Planning and reward systems are two indicators with higher loading factors than others. Changes in management accounting practices emphasize planning and reward systems.

### Direct Hypothesis Testing

Hypothesis testing is carried out to describe the influence of each variable tested using Smart PLS software. There are seven (7) hypotheses related in this research. The following describes each hypothesis in detail.

H<sub>1</sub>: The test results state that environmental changes do not affect organizational changes. The path coefficient of 0.048 is positive with a t-statistic of  $1.809 < 1.96$ , which means it is not significant at  $\alpha = 0.05$ . A positive coefficient means a unidirectional relationship between environmental changes and organizational changes. It can be said that hypothesis 1 (H<sub>1</sub>), which states that ecological changes influence organizational change, is rejected.

H<sub>2</sub>: The results of testing the influence of environmental changes on changes in management accounting practices show a path coefficient of 0.243 with a positive sign with a t-statistic of  $2.623 > 1.96$ , significant at  $\alpha = 0.05$ . A positive coefficient means a unidirectional relationship between environmental changes and changes in management accounting practices. The results of testing hypothesis 2 (H<sub>2</sub>), which shows that environmental changes positively affect changes in management accounting practices, are accepted.

H<sub>3</sub>: The results of testing the influence of organizational changes on changes in management accounting practices show a path coefficient of 0.360 in a positive direction and a t-statistic of  $3.997 > 1.96$ . A positive coefficient means a unidirectional relationship between organizational changes and changes in management accounting practices. The results of

testing hypothesis 3 (H<sub>3</sub>) show that organizational change positively affects changes in accepted management accounting practices.

Based on the results of direct influence testing, it can be stated that environmental changes directly influence management accounting practices, but environmental changes do not influence organizational changes. Meanwhile, changes in management accounting practices are also directly affected by organizational changes.

**Indirect influence test**

The coefficient of the indirect influence of environmental changes on changes in management accounting practices through organizational changes tested is  $0.048 \times 0.016 = 0.001$ , with a standard error of  $(0.0482 \times 0.0922 + 0.0162 \times 0.0262 - 0.0262 \times 0.0922) = 0.004$ . The t value is the ratio of the coefficient of indirect influence to the standard error, namely  $0.001 / 0.004 = 0.206$ .

The influence of organizational changes on changes in management accounting practices has a value of 0.360 (table 6). In contrast, the impact of environmental changes on changes in management accounting practices has a value of 0.243 (table 6). Based on the results of this analysis, it can be concluded that ecological change is a factor that requires more attention from companies, mainly because the environment has a high level of uncertainty.

H4: The test results state that organizational changes cannot mediate the influence of

environmental changes on changes in management accounting practices. The impact of organizational changes on changes in management accounting practices has a coefficient in a positive direction. The analysis results show that the path coefficient is 0.360 with a t-statistic of  $3.997 > 1.96$ , providing a decision that organizational changes affect changes in management accounting practices. However, the path coefficient test results from environmental change to organizational change, which has been explained in the proof of hypothesis H<sub>1</sub>, show that the path coefficient is not significant, so the results of this test show that hypothesis 4 (H<sub>4</sub>) is rejected.

**Discussion**

**Environmental Changes to Organizational Change**

The results of testing hypothesis 1 (H<sub>1</sub>) show that environmental changes do not affect organizational change. These results indicate that the presence or absence of ecological changes reflected by the competitive environment and technological progress does not affect company organization changes. The results of this research also do not show a harmonious relationship between environmental change and organizational change. Organizational change is something that must be continuously carried out by manufacturing companies.

**Table 6**  
**Sobel Test Results on the Hypothesis Model**

Variable Relationships	Regression Coefficients	Standard Error	Q
Direct Influence			
Environment -> Organization	0.048	0.026	1,809
Environment -> AKM	0.243	0.092	2,623
Organization -> AKM	0.360	0.089	3,997
Indirect Influence			
Environment -> Organization -> AKM	0.001	0.004	0.206

Note: Indirect influence:  $a \cdot b$ ; Standard error =  $\sqrt{a^2 Sb^2 + b^2 Sa^2 - Sa^2 Sb^2}$   
Source: Research Data Processed by Smart PLS (2023)

The changes in the environment for manufacturing companies are common, so manufacturing companies will continue to change their organizations under any conditions that affect their environment. Continuous changes in the environment will encourage companies to be more competitive with other companies, both similar and dissimilar companies. Companies must be able to adapt to the environmental conditions in which the company is located.

The results of this study support previous findings, which argue that the competitive environment and technology, indicators of environmental change, influence changes in organizational structure and strategy (Tuanmat and Smith, 2011). The competitive environment has not been able to influence the implementation of the plan and structure built by the organization. The market has become more competitive in the changing climate, especially in improving product quality and pricing.

Changes in the organization, whether related to changes in organizational structure or changes in strategy, can be carried out before environmental changes occur; this is done to anticipate various possibilities for healthy and unhealthy competition. According to previous research, the most crucial challenge for organizations is to utilize the changes that occur and take advantage of them as opportunities to identify the future and develop strategies (Carlstro, 2012; Hopper and Bui, 2016). Organizations must view environmental change systematically as an opportunity to build the future through continuous and slow improvement by adapting to the speed of change occurring externally to the organization.

Organizations can respond to these changes by reorganizing work processes and improving organizational design and strategy. When companies want to win the competition, they often invest large amounts, especially in the form of technological improvements and computerization, so that they can improve quality, produc-

tivity, and flexibility and reduce costs and time (Mikalef and Pateli, 2017; Struckell et al., 2022).

### **Environmental Changes Influence Changes in Management Accounting Practices**

The results of the analysis show that environmental changes have a positive effect on changes in management accounting practices. When environmental changes occur, indicated by increasingly fierce competition, the market becomes more competitive, especially in product quality and price; companies must change management accounting practices, starting from planning to making appropriate decisions for the company's survival. Apart from that, it also accelerates the achievement of optimal organizational goals. Environmental changes in manufacturing companies with high levels of competition and technological advances impact the application of management accounting practices, which are indicated by planning, controlling, determining costs, reward systems, and decision-making.

This research also shows harmony between environmental changes and changes in management accounting practices. Internal company parties need changes in management accounting practices to make appropriate and accurate decisions in anticipating environmental changes (Tuanmat and Smith, 2011). Relevant and flexible accounting information is needed for decision-making, especially regarding planning and cost control.

Contingency Theory states that a competitive environment will influence changes in management accounting practices (Granlund and Lukka, 2017; Hoque, 2011; Mnif and Gafsi, 2020; Otley, 2016). Technological changes not only have an impact on the production process but also affect the information process within the company. Accelerating data access needed by managers is very helpful in the decision-making process. The development of new technology positively impacts cost reduction because, with the development of production technology, companies no longer prio-

ritize labour. Labour is considered a burden on the company, which causes high production costs and selling prices. Automation can produce quality products at reduced costs and is also a threat to companies.

The results of this study support the results of previous research that environmental and technological uncertainty is closely related to changes in management accounting practices (Hammad, 2012). Apart from that, Waweru, and Uliana (2008) stated that contingency factors, including environmental changes, support changes in management accounting practices.

### **Organizational Changes Have a Positive Influence on Changes in Management Accounting Practices**

In carrying out management accounting practices, organizations must design an organizational structure that suits the organization's goals. In an excellent organizational structure, strategies used as decision-making tools for achieving the organization's goals will be developed, which is much needed in management accounting practice.

The results of this research analysis show that organizational changes positively affect changes in management accounting practices. Companies make changes to organizational structure and strategy that impact changes in management accounting practices. If the environment changes, there will be changes to the organizational structure and strategies the company implements. So, there is harmony between organizational changes and management accounting practices in planning, controlling, determining costs, reward systems, and decision-making. The results of this research strengthen the contingency theory used as a reference (grand theory). The results of this study indicate that organizational structure and strategy (organizational factors) are considered contextual factors in the company that have a relationship with changing management accounting practices (Alsharari, 2019).

The results of this research prove that companies that can adapt to environmental

changes, especially changes in the highly competitive environment and technological changes, will be able to defend themselves from competing companies from the same segment and different segments from similar companies, unlike implementing changes in management accounting practices that are better and more dynamic to adapt to environmental changes.

### **Environmental Change, Organizational Change, and Change in Management Accounting Practices**

The sustainability of a company depends on how the company can survive in the face of conditions of high environmental uncertainty. This condition is caused by rivalry or competition between companies, both similar and dissimilar, both in the same or different segments. When a company faces this condition, management accounting practices have a role in accelerating the achievement of company goals.

Organizational change, which is reflected by changes in organizational structure and changes in the strategy implemented, is a change that is influenced by many factors. Organizational structure and strategy changes can occur when there is a change in company ownership, company goals or other events outside the company's control.

Planning, controlling, and decision-making processes are the foundation of management accounting techniques, and they are critical to the accomplishment of business objectives. Budget, profit, production and strategic planning must be determined at the beginning of the period for future implementation within a specific period. Good planning will lead the company to the targets it has set. Likewise, a sound control system impacts the ease of implementing changes to management accounting practices. Managers in every area require precise data from several sources via an efficient and productive business accounting system in order to make decisions.

### **Theoretical Implications**

This research explains the influence of environmental changes on management accounting practices through organizational changes. The results of this research provide Evidence of the application of contingency theory, which states that no system applies in the same way in every company (Gunarathne and Lee, 2021; Otley, 2016). This research has also proven empirically about the competitive environment and technological progress, which are indicators of environmental changes that directly or indirectly influence the implementation of management accounting practices.

This research proves empirically that environmental changes significantly influence the implementation of management accounting practices. Managers or company leaders are required to be able to understand environmental changes. Companies that can adapt to environmental changes by implementing changes in management accounting practices will be able to continue to exist and survive amidst conditions of high competition. The application of advanced technology and management accounting practices must be designed to support the innovation process. The primary role of management accounting practices is to assist managers in decision-making. Appropriate management accounting practices contribute to effective resource management.

This research shows the proper alignment between environmental changes and changes in management accounting practices. Environmental factors encourage companies to constantly change in implementing management accounting practices.

The competitive environment and technological developments force companies always to think and try to make internal and external changes. A competitive environment causes companies to always compete between similar companies and companies that are not similar, both in the form of products and in the form of customer service. The occurrence of technological changes, which are marked by the up-to-date and

sophisticated technology applied by each company, also requires companies to be able to adapt to these technological changes. Alignment between the competitive environment, technological advances, strategy and organizational structure, will make implementing changes in management accounting practices easier.

### **Practical Implications**

Globalization has opened because companies in Indonesia pay more attention to competition, technological changes, changes in strategy, organizational structure and mana, and cement accounting practices, both traditional and modern, internal and external. Companies are expected to pay attention to external factors, namely environmental factors, and internal company factors, namely organizational factors and management accounting practices, to accelerate the achievement of company goals.

This research reveals that environmental changes are more dominantly shaped by indicators of changes in the competitive environment, emphasizing the number of competitors in the same market segment. These results indicate that when environmental changes occur, companies must be ready to face competition sharper in the same industry, meaning competition between companies producing similar products.

Companies operating in a competitive environment always make technological changes, especially in implementing company operational systems to make them more flexible to improve production processes and product quality.

Improve company resources to be more effective by paying attention to organizational structure. Positive interactions between internal factors are significant to maintain. The results of this research indicate that organizational changes indicated by changes in organizational structure and strategy cause changes in management accounting practices.

## CONCLUSIONS AND SUGGESTIONS

In general, the results of this investigation demonstrate that, despite the fact that management accounting practices are actually encouraged by environmental changes, organizational change occurs frequently and is relatively dynamic in East Javan manufacturing companies, regardless of whether there is environmental change or not. In addition, modifications to an organization may stimulate adjustments to management accounting procedures.

The relationship between each variable in this research can be explained as follows: Environmental cannot encourage organizational changes but can positively encourage changes in management accounting practices. This organizational change, identified with organizational structure and strategy changes, does not depend on changes in the environment. Organizational changes will be implemented by management without considering environmental changes.

The results of the study also show that the implementation of appropriate organizational structures and strategies by a business is a requirement for the effectiveness of management accounting techniques. The company's vision and goal effectively manage the knowledge, dedication, involvement, and people resources already in place.

Businesses must be able to modify their planning, controlling, cost-estimating, awarding (evaluation), and decision-making procedures in order to update their management accounting systems to account for environmental changes. Managers need to be open to competing businesses' ideas on products, customer service, cost estimation, and selling prices if they want the company to thrive.

Advice for upcoming researchers: First off, this research may benefit from the fact that the dependent variables in the model organizational change variables and accounting practice change variables are still relatively new. It is vital to retest the model and the interactions between variables by reflecting on the study variables using

various indicators in order to assess the consistency of the research findings.

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