



# The Importance and Use of Management Accounting Practices: Descriptive Study During the Covid Pandemic

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**Abstract.** This study aims to describe the importance and use of management accounting practices (MAP) in consumer goods companies during the covid pandemic. In its development, MAP is divided into four phases. Phase 1 of MAP is cost determination and financial control (CDFC). Phase 2 of MAP is the provision of information for planning and control (IPC). Phase 3 of MAP is the reduction of waste in business resources (RWR). Phase 4 of MAP is value creation through effective resources (CV). This study uses a descriptive approach. The research population is consumer goods companies in Indonesia. The sampling technique was based on convenience sampling. The number of companies that filled out the e-survey was 50 companies. The results of this study show that phase 1 of MAP called CDFC is the most important MAP during the pandemic. Phase 4 of MAP or CV is the MAP that is considered the least important during the pandemic. Phase 1 of MAP (CDFC) is the most widely used MAP by companies during the pandemic. While phase 3 of MAP or RWR is the MAP that is used the least by the company during the pandemic. Interesting findings from the results of this study are first, management tends to be conservative in managing costs. Second, MAP phase 3 or RWR is considered important, but is not used by the company. This indicates that management agrees it is important, but the management accounting system does not support its implementation.

**Keywords:** Management Accounting Practices · Covid Pandemic

## 1 Introduction

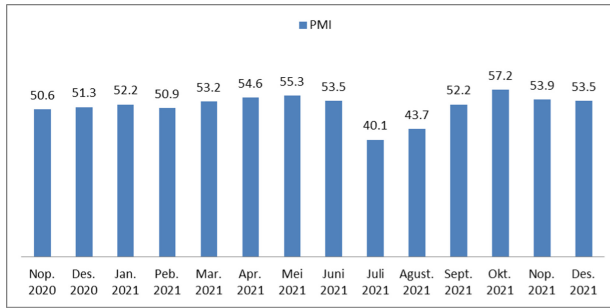
The Covid pandemic has resulted in a decline in company performance. The large and micro-scale social restrictions imposed by the government have a negative impact on the business world. This can be seen from the purchasing manager index (PMI) of the manufacturing industry for the November 2020–2021 period in Fig. 1.

The PMI is an indicator of the manufacturing sector's optimism for the Indonesian economy amid the threat of the COVID-19 pandemic. Figure 1 shows that the lowest PMIs occurred in July and August 2021 at 40.1 and 43.7, respectively. This indicates that the manufacturing sector in July–August 2021 experienced a decline in output demand.

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**Fig. 1.** Purchasing Manager Index of Indonesia. Source: databoks and bisnis.com

However, in general, the manufacturing sector is still at an expansive level with a PMI above 50 during November 2020–December 2021. Production and product demand for the manufacturing sector has increased. Business people have confidence that the threat of the COVID-19 pandemic is starting to decrease, thereby increasing future economic prospects.

PMI data in the manufacturing sector shows that business actors or management of manufacturing companies are trying to manage their business optimally. Therefore, it is important and interesting to examine the efforts and ways of management managing their operational costs during this pandemic. Operational cost management is carried out through several methods and practices in management accounting or commonly referred to as management accounting practices (MAP).

MAP is a collection of methods in management accounting to help management make business decisions. An example of break-even point analysis (BEP) assists management in setting profit targets. However, this BEP analysis has a weakness because its assumptions simplify business problems, including: the purchase price of raw materials is known certain. And there is no change in the minimum wage, and so on [1].

MAP has developed along with technological developments. The development of this MAP is divided into four stages [2]. The first stage of MAP is called cost determination and financial control (CDFC). Management accounting methods and practices in phase 1 are focused on costing and using it as a control. The second stage of the MAP is called the provision of information for planning and control (IPC). Management accounting practices in this stage include budgeting, break-even point analysis, inventory cost control models, and so on. The third stage of the MAP is called the reduction of waste in business resources (RWR). RWR consists of management accounting practices such as activity-based costing, activity-based management, and so on. The fourth stage of the MAP is creating value through the effective use of resources (CV). Management accounting methods at this stage include target costing, performance management, and so on.

The use of MAP in Indonesia has been investigated in previous studies. The most widely used MAPs are budgeting, analysis of variance, standard costs, BEP analysis, job order costing, and process costing, and so on. The most widely used management accounting methods for project evaluation are net present value, internal rate of return, and payback period. Accounting rate of return is a method that is not widely used in evaluating projects. The most widely used management accounting methods for performance

evaluation are net income and capital expenditure. Not many companies use return on investment for performance evaluation [3]. Other research on MAP in Indonesia shows that standard costs, analysis of variance, process costing, and analysis of relevant costs are the most widely used by companies. Activity-based costing and quality cost analysis are starting to be widely used by companies. The results of this study on the use of MAP in Indonesia concluded that MAP stages 1 and 2 still dominate their use by companies in Indonesia, compared to MAP stages 3 and 4 [4].

The use of MAP stages 1, 2, 3, and 4 is determined by contextual factors. Previous research has proven that first, external characteristics proxy by perceived environmental uncertainty (PEU) and customer power (CP) affect the use of MAP stages 1, 2, 3, and 4. Companies that face low PEU (high) and weak CP (strong) tend to use MAP stages 1 and 2 (3 and 4). The results of this study indicate that external environmental conditions require management to adopt a sophisticated MAP or stages 3 and 4. The MAP at this stage focuses on reducing production inefficiencies and seeks to provide added value for consumers [2].

A literature review on the factors that influence the use of MAP has been carried out [5]. The results of a review of 19 articles during the period 1981–2019 show that first, contextual factors that influence the use of MAP are the internal characteristics of competitive strategy and firm size in developed countries. Meanwhile, in developing countries, not many studies have explored the impact of contextual factors on the use of MAP. Therefore, this research attempts to fill the existing gap by conducting a descriptive study on the importance and use of MAP in consumer goods sub-sector manufacturing companies during the covid-19 pandemic. This sub-sector is the object of research because this sub-sector is negatively affected by government regulations in limiting social mobility. This has an impact on the logistics of its outputs and inputs.

This study develops the construct of the importance and use of MAP [2]. The MAP is divided into 4 stages, starting from cost determination and financial control (CDFC), provision of information for planning and control (IPC), waste reduction in business resources (RWR), to creating value through effective use of resources (CV). The instrument developed in this study asks how important MAP stages 1 (CDFC), 2 (IPC), 3 (RWR), and 4 (CV) are for the sample companies during the pandemic. Then, the next question is how often the sample companies use MAP stages 1, 2, 3, and 4 during the pandemic.

The results of a survey of 50 sample companies show that MAP stage 1 or CDFC is the MAP that is considered the most important and widely used by consumer goods companies during the pandemic. MAP stage 2 or IPC is at number 2 which is considered important and is often used by companies during the pandemic. While the MAP stage 3 or RWR is a MAP that is considered important during the pandemic. However, none of the sample companies used MAP stage 3 to deal with the pandemic. In contrast to stage 3 MAP, stage 4 MAP is considered important and used by sample companies to deal with the pandemic.

The results of this study have several implications. First, the consumer goods companies that are the samples of this study consider that stage 1 MAP is important and is used to deal with the covid-19 pandemic. This indicates that companies tend to be conservative in managing their operational activities during the pandemic. Second, MAP

stage 3 is considered important, but no company uses it. This indicates that the sample companies have difficulty implementing a management accounting system that focuses on reducing waste in business resources (RWR) or MAP stage 3. The implementation of stage 3 MAP is considered borne by the sample companies. They tend to directly apply MAP stage 4. Third, the results of this study provide benefits for business actors in the consumer goods sub-sector to use MAP stages 1 and 2 in carrying out their operational activities during the pandemic. Cost control which is the focus of MAP stages 1 and 2 can help companies manage cash flow to pay operational costs.

## 2 Literature Review

### 2.1 Management Accounting Practices

Management accounting practice is defined as an integral part of the management process in an organization, which provides information, to the business in the process of planning, evaluating, controlling, and making decisions [6, 7]. MAP is a collection of management accounting methods to support decision-making. For example: the target costing method helps management to set the selling price according to how much consumers want to buy the product. Target costing helps management to identify product features that consumers need. It can support the achievement of the company's competitive advantage by providing managerial guidance, support and creating value through resources effectively to achieve company goals.

The development of MAP also follows changes in the environment along with changes and technological advances, competitive environment, and economic recession [8]. MAP is also used as an important tool to improve efficiency and has the potential to have an important influence on performance, besides that MAP also reduces the possibility of business failure [9]. MAP is like an information system that provides relevant information to add value to the company [10].

### 2.2 The Development of Management Accounting Practices

The development of MAP is divided into four successive stages and has undergone a process of change in various business environments. Each stage includes concepts from the previous stage and incorporates additional concepts resulting from the new conditions [2, 6].

The first stage in the MAP is cost determination and financial control (CDFC) which focuses on the company's internal, especially production capacity, namely cost and financial control in standard forms, such as determining the cost of production, determining the cost per standard unit or determining the desired profit. In determining decision-making, companies tend to look at capital investments based on their payback period. Some accounting practices that develop at this stage are: plant-wide overhead rate, flexible budgeting, payback period, and accounting rate of return.

The second stage of MAP is information for planning and control (IPC), which is the development of stage one as a provider of information for planning and control purposes. In the second stage of development, MAP is more oriented to management

control oriented to manufacturing and internal administration rather than to strategic and environmental considerations. Some accounting practices that begin to develop at this stage are: departmental overhead rate, cost volume profit analysis, discounted cash flow, and stock control models.

In the third stage of MAP, technological developments begin to affect, such as the use of robotics and computerized control processes that can improve quality and reduce costs. This level is called reduction of waste in business resources (RWR) which is used to reduce waste and resources in business processes. Environmental influences and increasingly fierce market competition make the use of technology increasingly needed to increase cost efficiency, especially in the activities that occur. There are several accounting practices that use computers, such as: activity-based costing, cost of quality, activity-based budgeting, probability analysis, and non-financial performance measures.

In the fourth stage, the world is progressing in the field of technology such as e-commerce so at this stage MAP develops as a creation of value through effective resource use (CV) which creates value through the effective use of resources through the use of technology. The main focus in this stage is to maintain customer loyalty. This is related to accounting practices such as target costing, customer value analysis, industry analysis, value chain analysis, shareholder analysis, and life cycle analysis. The role of MAP in this stage is to be part of making strategic decisions by providing relevant and real-time information.

The four stages of MAP have their respective focuses with adjustments to their environmental conditions. There is a shift in focus between stages 1 and 2 with stages 3 and 4, namely from a change from being only an information provider to resource management which is an integral part of the contemporary management process. Different stages of MAP are also classified according to their sophistication. The first stage represents the lack of sophistication in MAP (not yet using technology) to the fourth stage which is the highest level of sophistication (using technology). The level of sophistication also refers to the company's ability to provide relevant information for planning, controlling, and decision-making for the creation and enhancement of company value [2].

### 3 Research Methods

This research is a quantitative descriptive study. The results of the study will describe the importance and use of MAP by manufacturing companies in the consumer goods sub-sector during the pandemic. MAP used in this research is a collection of management accounting methods that can be used by management to support decision-making. Various methods in management accounting practice in this study aim to provide a comprehensive and real understanding of the business world.

The MAP used in this study refers to covering [2]:

- a. MAP stage 1: cost determination and financial control (CDFC). The methods included at this stage are the determination of factory overhead rates with plant-wide rates and departmental rates, budgeting, flexible budgeting, performance evaluations that focus on financial performance, and evaluation of capital expenditures with accounting data.

- b. MAP stage 2: provision for information of planning and control (IPC). Management accounting methods included in this stage are factory overhead rates, budgeting, incremental/relevant cost analysis, sensitivity analysis, learning curve, strategic planning, BEP analysis, profitability analysis per segment, inventory control models, evaluation of financial and non-financial performance for activities operations, evaluation of capital expenditures, long-term forecasting.
- c. MAP stage 3: reduction of waste resources (RWR). Management accounting methods included at this stage are activity-based costing (ABC) analysis, activity-based budgeting (ABB), quality cost analysis, zero-based budgeting (ZBB), evaluation of financial and non-financial performance for both operational and employee activities, sensitivity analysis specifically for important projects, evaluation of capital expenditure.
- d. MAP stage 4: the creation of value through effective resource use (CV). Management accounting methods included at this stage are target costing, evaluation of non-financial performance related to consumers, economic value added, residual income, benchmarking, profitability analysis per segment, evaluation of capital expenditures, shareholder value analysis, industry analysis, competitor analysis, value chain analysis, product life cycle, integrated value chain analysis supplier and consumer, SWOT analysis.

The first question posed to respondents was how important each management accounting method was at each stage of the MAP during the covid pandemic. Measuring the importance of MAP using a Likert scale of 1–4 with the meaning:

- 1 = don't know
- 2 = not important
- 3 = somewhat important
- 4 = important

The second question posed to respondents was how often each management accounting method at each PAM stage was used by the company during the covid-19 pandemic. Measurement of PAM use with a Likerts scale of 1–5 as follows:

- 1 = never used
- 2 = rarely used
- 3 = sometimes used
- 4 = often used
- 5 = very often used

The data collection method used e-survey with the development of a special website for filling out questionnaires. The link used is <https://surveyepam.link> and is shared via social media to accounting/finance managers and controllers of consumer goods companies in Surabaya. The sample of this research is convenience sampling, namely the determination of the sample based on kinship with the research team. The distribution of questionnaires was carried out in the period November 2021–January 2022 to 120

consumer goods companies. Respondents who returned and filled out the questionnaire completely were 50 companies.

The analysis technique used is the frequency distribution. Conclusions were drawn based on the highest mean value of each question for the importance and use of MAP stages 1–4.

## 4 Result and Discussion

### 4.1 Frequency Distribution - Respondents

The results of data collection are 50 companies. Descriptive statistics of respondents who filled in the questionnaire consist of gender, age, education level, division/department, managerial level, and length of service at the managerial level. Figure 2 shows a pie chart of the gender and age of the respondents.

Figure 2 shows that most of the respondents or 56% are women with the most age or 64% being less than 30 years old. This means that the respondents of this study are women in the millennial generation.

Figure 3 shows the level of education and the section or department where the respondent works in the company. Figure 3, shows that the majority of respondents are undergraduate graduates, and are in the Financial Accounting department or department. This indicates that most of the companies that are respondents have not separated financial accounting from management accounting. Only 8% of sample companies have their own management accounting department.

Figure 4, shows the managerial level and the length of time the respondent has been at that level.

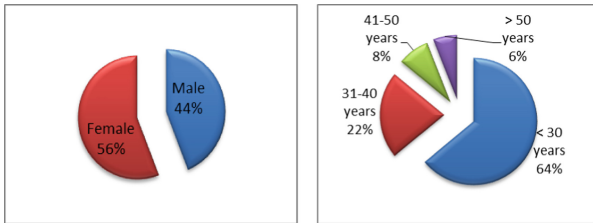


Fig. 2. Sex and Age

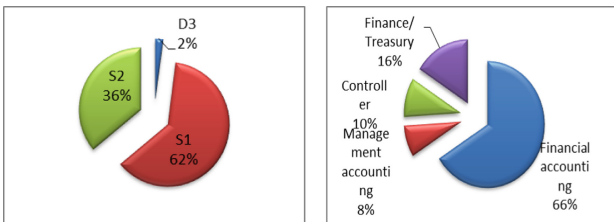
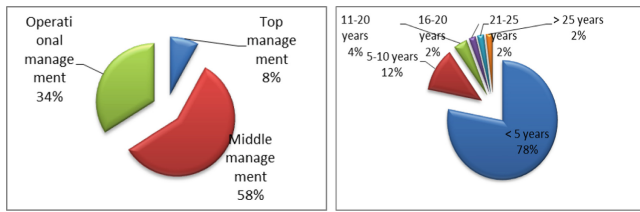
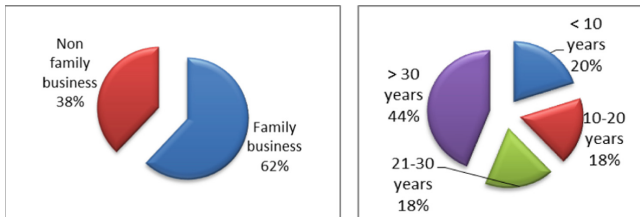


Fig. 3. Education Level and Department



**Fig. 4.** Managerial Level and the length of time the respondent is at that level



**Fig. 5.** Ownership Structure and Firms' Ages

Figure 4 shows that most of the respondents or 58% are at the middle management level, 34% are at the operational management level, and only 8% are at the top management level. The majority of respondents (78%) were at this level of management for less than 5 years. This indicates that the respondent has just received a promotion or participated in the officer development program who immediately occupied the middle management level.

## 4.2 Frequency Distribution – Firms Sample

The frequency distribution of consumer goods companies that are the samples of this study include: ownership structure, length of business, and total assets owned until the end of 2020. Figure 5 shows the ownership structure and length of business.

Figure 5 shows that the majority of companies or 62% of the sample in this study are family companies. And the sample companies have been running their business for more than 30 years as much as 44%, 21–30 years 18%, 10–20 years 18%, and less than 10 years 20%. This indicates that the consumer goods companies sampled in this study are family companies and have been in business for more than 30 years.

Figure 6 shows the size of the company as measured by total assets as of December 31, 2020.

The sample companies in this study have assets of less than IDR 500 billion are 19 companies, and ranging from IDR 500 billion–1 trillion are 18 companies. This means that the size of the sample company in this study based on its assets is quite large.

## 4.3 Results and Discussion

This research data analysis technique uses descriptive statistics that show the frequency of the importance and use of MAP in sample companies during the Covid-19 pandemic.



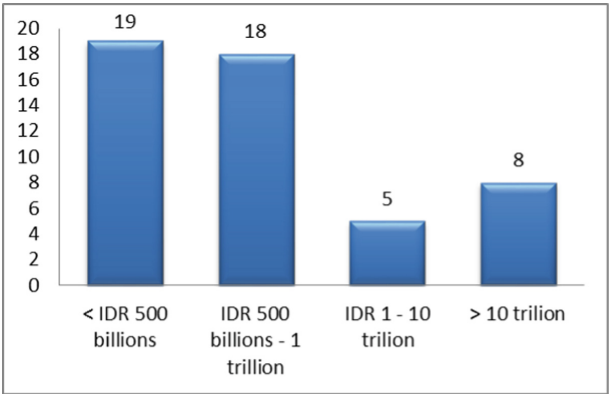


Fig. 6. Firms' Asset

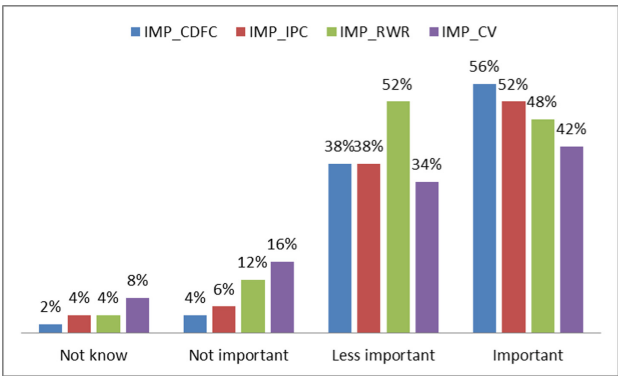
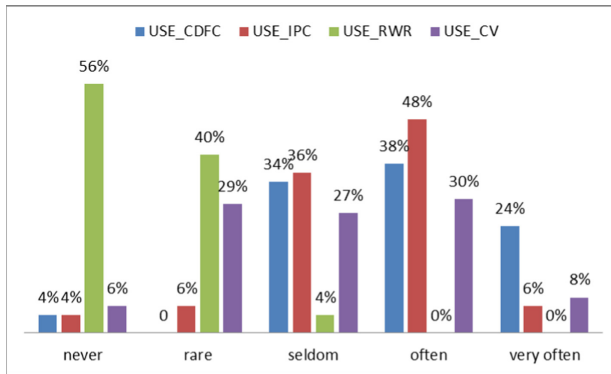


Fig. 7. Rod Diagram on the Importance of MAP

Figure 6 shows the percentage of sample companies that consider the importance of MAP.

Figure 7 shows the proportion of companies that consider the importance of MAP stages 1, 2, 3, and 4. Most of the sample companies (56%) consider that MAP stage 1 is important. The next is MAP stages 2, 3, and 4. Figure 6 interesting results for the importance of stage 3 MAP. 52% considered it unimportant, but 48% considered it important. MAP stages 1 and 2 are considered the most important by the sample companies indicating that cost control which is the focus of MAP stages 1 and 2 is an easy way for companies to deal with the pandemic. This is relevant to the characteristics of the sample companies, most of which are family companies with more than 30 years of business. These family companies have experience in saving costs when external conditions are filled with uncertainties such as during a pandemic. Therefore, cost control by companies during the pandemic is important.

Figure 8 shows the proportion of MAP use stages 1, 2, 3, and 4 during the pandemic.



**Fig. 8.** Rod Diagram on the Use of MAP

Figure 8 shows that the MAP stage 3 or RWR was never used by 56% of the sample companies, 40% said it was rarely used, and 4% said they used it occasionally. This is different from Fig. 6 which shows that stage 3 MAP is still considered important by 48% of the sample companies. This indicates that the sample firms perceive waste reduction as the focus of the Phase 3 MAP as important. However, the company considers its implementation to be up to MAP stage 4 which focuses on value creation efforts such as: activity based management (ABM), quality costs, and so on. Therefore, MAP stage 4 is still used by 30% of sample companies, and 8% stated that it is often used to deal with the pandemic.

Figure 8 shows that 38% of sample companies frequently use stage 1 MAP or CDFC. MAP stage 2 or IPC is often used by 48% of sample companies. 24% of sample companies use CDFC very often and only 6% stated that they use IPC very often. Figure 7 shows that stage 1 MAP is more popularly used by sample companies than stage 2 MAP.

The results of this study support the results of previous studies regarding the use of management accounting practices in Indonesia. Previous studies have also proven that the management accounting method used by companies in Indonesia is MAP stage 1 which focuses on determining and controlling costs [3, 4]. This study also consistently shows that MAP stage 1 or cost determination and financial control (CDFC) is widely used by consumer goods companies during the pandemic. This was confirmed by one of the respondents of this study. The respondent works as a controller in a company that produces cleaning equipment, such as: brooms, tools for mopping and so on. 30% of the raw materials needed by the respondents are imported. Import costs during the pandemic are very high. This encourages companies to look for alternative suppliers from within the country to reduce production costs. Cost control is the key word to be able to survive during the pandemic, because the company has a commitment not to lay off employees.

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