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Management Accounting in China and Southeast Asia

Empirical Studies on Current Practices

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Contents

MANAGEMENT ACCOUNTING PRACTICES IN INDONESIA

Grahita Chandrarin and Diana Zuhroh

Abstract

This study obtains empirical evidence about traditional and strategic management accounting practices (MAPs) in companies in Indonesia. Traditional MAPs include management accounting systems for costing, budgeting, performance measurement, and decision making. Strategic management accounting practices encompass activity-based management, analysis of competition, industry analysis, long-range forecasting, value chain analysis, long-range forecasting, target costing, and total quality management. Data collection uses both a questionnaire and content analysis of job vacancies published on the websites of Indonesian firms. Data analysis uses descriptive statistics based on the average intensity of use. The results show that strategic management accounting techniques for budgeting, costing and performance evaluation are still intensively used. Meanwhile, regarding strategic management accounting systems, the five most frequently used are activity-based management, analysis of competition, industry analysis, long-range forecasting, and value chain analysis. The results show that while traditional MAPs still are used intensively, strategic management accounting systems also are starting to be employed more frequently.

Keywords: traditional management accounting, strategic management accounting, budgeting, costing, performance analysis.

1 General Portrayal of Indonesia and its Economy

Indonesia is an archipelago comprising 17,508 islands located in Southeast Asia. Its total area is 1,904,569 km^2. Indonesia adheres to the presidential system of government with the head of government held by a President. The President and Vice President of the Republic of Indonesia are directly elected by the Indonesian people through general elections held every five years.

The Indonesian economic system is influenced by the developing political system. From Indonesia's independence in 1945 through the mid-1960s, its economic system was based on economic independence to avoid dependence on foreign countries; an approach in which the role of government is more dominant. Later, in the early 1970s, the Indonesian economic system was directed toward capitalism. This is indicated by, for example, the issuance of Law on Foreign Investment, which provided extensive facilities to both domestic and foreign entrepreneurs. Furthermore, Indonesia entered a reformation period, during which the Indonesian economic system used a populist economic system (*Ekonomi Kerakyatan*) based on Pancasila, foundational philosophical theory of Indonesia. Even so, the Pancasila economic system also leans toward capitalism because of the influence of the global economy. Over time, various revisions to the Law on Foreign Investment continued until the 2000s, moving Indonesia toward an economic system based on kinship (*kekeluargaan*) and mutual cooperation (*gotong royong*).

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Based on data from the Indonesian Central Statistics Agency, the Indonesian economy in 2018, measured by Gross Domestic Product (GDP) at current prices, reached IDR 14,837.4 trillion and GDP per capita reached IDR 56,0 Million or US$ 3,927.0. From a regional perspective, in 2018, Indonesia's economy was dominated by income from provinces on Java and Sumatra Islands. Java Island made the largest contribution to Gross Domestic Product, at 58.48 percent, followed by Sumatra Island at 21.58 percent and Kalimantan Island at 8.20 percent (BPS, 2019).

Meanwhile, based on sector, the Indonesian economy was still dominated by the manufacturing industry (19.86 percent), followed by wholesale and retail trade, car-motorcycle repair (13.02 percent), agriculture, forestry, and fisheries (12.81 percent), and construction (10.53 percent). Manufacturing made up the largest proportion of GDP, growing by 4.5 percent (YoY). This performance was influenced by the performance of several key industries, such as the food and beverage industries, the transport equipment industries, the textile and apparel industries, the coal and oil and gas refinery industries, and agriculture, forestry and fisheries. Significant growth was also achieved by other sectors, including trade, communication, mining, construction, pharmaceuticals, and other sectors.

Data indicates that the Indonesian Creative Economy Agency contributes significantly to GDP (Berkraf, 2019). The Gross Domestic Product (GDP) based on creative ideas reached IDR 1,009 trillion in 2017, an increase from IDR 922.59 trillion in 2016. Digital economic potentials, such as e-commerce, online game services, food delivery services, and digital video services, can drive the growth of the creative economy. The government wants the value of Indonesia's digital economy to reach US$ 130 billion, equivalent to IDR 1,888 trillion, in 2020. This value is equivalent to 11% of the national Gross Domestic Product (GDP). The number of workers involved in the creative economy reached 16.91 million workers in 2016, increasing to 17.43 million workers in 2019. The contribution of the creative economy to national GDP is estimated to reach IDR 1,105 trillion in 2018 and is expected to reach IDR 1,211 trillion in 2019 (BI, 2016).

The role of Micro, Small, and Medium Enterprises (MSMEs) in the Indonesian economy is quite high, contributing to GDP by 60.34 percent. The three biggest are food, apparel, and handicraft products. The small industrial sector can absorb a growing workforce from year to year. Meanwhile, for large manufacturing industries, the sectors that experienced the highest development are the food, chemical, and apparel sectors. In terms of employment, the construction sector is the sector capable of absorbing the largest workforce.

In terms of expenditures, household consumption is the main source of economic growth, where expenditures on food, beverage, and restaurants are the largest component of household consumption expenditures, followed by the transportation and communication sector, and household equipment and supplies. In the next source of economic growth, spending occurs in the Gross Fixed Capital Formation sector, which is driven by investments in the form of machinery and equipment, other equipment, vehicles, intellectual property products, and investment in buildings. The next expenditure is the consumption of non-profit institutions serving households (PK-LNPRT), government consumption expenditures (PK-P), and exports of goods and services.

2 Accounting System, Accounting Standards and Accounting Profession in Indonesia

For many years, the accounting system in Indonesia was influenced strongly by the Dutch accounting system; since gaining its independence in 1945, it began orientating to the United States (Radebaugh et al., 2006, 87) for its financial reporting. As of 2020, there is no existing data explaining management accounting practices in Indonesia. Based on practitioners' experience, the application of management accounting in medium to large scale companies, especially those that have gone public, is designed to provide information on the cost of production in the context of presenting inventory accounts on the balance sheet and the cost of goods sold on the income statement. No data available explains the use of MAPs for decision making, even in companies that use computers in their accounting systems (Diga and Yunus, 1997, 284).

In their exploratory research on management accounting practices in Indonesia, Jermias and Armitage (2000) conclude that management accounting plays a role primarily in the interests of achieving efficiency and decision making. However, this research also finds that the use of a management accounting system is positively correlated with performance. Meanwhile, as of 2002, management accounting in Indonesia had not yet reached an advanced or integrated level. In connection with an increased business competition, Indonesia must improve the principles and techniques in management accounting used in corporate management (Nishimura, 2005).

Accounting standards oriented to US GAAP have been used since 1973. Since 1994, accounting standards were oriented toward the International Accounting Standards; between 2012 and 2020, convergence with IFRS is underway. In connection with the existence of various business sectors in Indonesia, so far, the accounting standards in Indonesia include:

1. Financial Accounting Standards (IFRS)
2. Entity Financial Accounting Standards without Significant Public Accountability (SAK-ETAP)
3. Small and Medium Entity Accounting Standards (SAK EMKM)
4. Sharia Accounting Standards (SAK *Syariah*)
5. Government Accounting Standards (SAP PP 71 of 2010)
6. Village Financial Accounting Standards

The development of the accounting profession in Indonesia began with the issuance of Law No.34 of 1954, which governs accounting education in Indonesia. Along with the increasingly rapid business development in Indonesia, the accounting profession has become one of the important and strategic professions. Hence, a professional accountant organization that not only accommodates membership but also facilitates improving professional quality is needed. The professional organization for accountants in Indonesia is named the Institute of Indonesia Chartered Accountants, which, as of 2020, comprises several compartments, including:

1. Tax Accountant Compartment, a forum for tax sector accountants.
2. Academic Compartment, a forum for education sector accountants.
3. Public Sector Accountant Compartment: a forum for government sector accountants.
4. Sharia Accountant Compartment: a forum for sharia accountants.
5. Accounting Services Sector Compartment, a forum for accountants who practice by providing accounting services.

Additionally, there are two other accounting organizations: the IAPI (Indonesian Institute of Certified Public Accountants) and IAMI (Indonesian Institute of Management Accountants). Based on 2016 data, there are approximately 12,000 accountants in Indonesia (IAI, 2017). This number is inadequate compared to the increasing number of business sectors that are growing and developing.

3 The Need for Professional Accountants in Indonesia

Entering the 4th industrial revolution, the demand for accountants is growing along with the development of the business world, which is marked by the development of online (digital) business. With the development of the business world, more and more professional accountants are needed. In addition, the government (public) sector needs accountants too. The future need for accountants in Indonesia will be triggered by developing business and government. In general, there are two main sectors driving the demand for accountants in Indonesia: the private sector and the government sector.

Private sector

1. The increasingly high demands for company management to submit transparent and accountable finance reports that meet accounting standards underlie the greater involvement of the accounting profession as a considered competent party in the field of accounting, especially management accountants. These demands will increase the need for the accounting profession.
2. With the expected enactment of a law concerning Financial Reporting, the financial statements of companies or business entities without public accountability and Micro, Small, and Medium Enterprises (MSMEs) must be prepared by accountants.
3. Various laws and government regulations require companies with assets above 50 billion IDR or companies that go public to prepare financial reports following Financial Accounting Standards that meet the requirements to be audited by a Public Accountant. Doing so certainly requires the accounting profession, specifically management accountants. Further, audits can only be carried out by Public Accountants.
4. At present, the government is encouraging companies in Indonesia to start trading their shares on the Indonesian stock exchange. Through a variety of policy packages, the government is encouraging companies in Indonesia to become publicly listed companies, which will enable increased public participation to become domestic investors. In the future, if the policy runs effectively, there will be more companies going public by issuing its shares on the Stock Exchange, thus it will increase the demand for accountants.

Government sector

1. The law on regional autonomy obliges the financial statements of government agencies or government-owned business entities to be transparent and accountable; these must be directly audited by public accountants.
2. Audit of funds for campaign in the election of the president, heads of local government and members of the parliament.
3. State-Owned Enterprises, Regional-Owned Enterprises, and Regional Enterprises can be audited by public accountants.
4. The banking sector requires audits for customers who obtain a certain amount of credit facilities.
5. In accordance with the Presidential Regulation of the Republic of Indonesia Number 54 of 2010 concerning Procurement of Government Goods/Services, the procurement of goods and services requires a procurement of government goods/services audit. In line with the provisions, the audit is carried out by an independent party, such as an auditor who has an accounting education background.
6. According to Government Regulation No. 22 of 2014 article 30 regarding Village Funds, the allocation of village funds originating from the APBN will continue to increase. With

the increasing flow of funds to villages, Alimarwan Hanan, Indonesia's former Minister of Cooperatives, Small, and Medium Enterprises outlined that the accounting profession, which understands various matters related to the preparation of financial statements, is needed to assist the reporting and accountability process.

The implementation of various laws and government regulations does not just require the involvement of a Public Accountant as an auditor, but also the government accountant as the party responsible for preparing various reports. Thus, the need for accountants for both the private and public sectors continues to grow. The challenge confronting institutions teaching accounting is to produce quality graduates.

Although the accounting system in Indonesia was influenced strongly by the Dutch accounting system, since independence, it is increasingly modeled upon that of the United States (Radebaugh et al., 2006, 87). Until at least the 1970s, based on practitioners' experience, the application of management accounting in medium to large companies was designed to provide information on production costs in the context of presenting inventory accounts on the balance sheet and the cost of goods sold on the income statement. Not many practices relate to using accounting data for decision making, even in companies that use computers in their accounting systems (Diga and Yunus, 1997, 284).

Nishimura (2005) divides the development of management accounting into 4 stages as presented in the following table:

Table 3.1 The stages of management accounting implementation (Source: Nishimura, 2005)

No	**Management accounting**	**Method**
1	Drafting management accounting	Ratio analysis; actual costing
2	Traditional management accounting	Standard costing and budgetary control
3	Mathematical management accounting	Profit forecast variance and opportunity costing.
4	Integrated management accounting	ABC; Balanced Scorecards; Activity-based costing, and target costing.

According to Nishimura (2005), based on the feature and fundamental aspects of management accounting, Asian countries are divided into 4 regions, with Indonesia included in the ASEAN group of countries. In most ASEAN nations, management accounting practices have shifted from "management through financial accounting" to classic management accounting, such as budget control and standard costing. This shift has occurred because many local firms are small- and medium-sized; in them, although personal relationships in business management prevail, the MAPs employed by multinational companies are influential too. Thus, a dual structure exists. Advanced management accounting systems are practiced in multinationals, while less advanced management accounting is practiced in local firms.

In a study in Yogyakarta, it was concluded that the most vitally important management accounting practices are profit improvement for medium-sized businesses and budgeting for large businesses (Sunarni, 2013). Thus, MAPs in Yogyakarta's manufacturing companies are dominated by traditional management accounting techniques. It is important to promote the use of contemporary or advanced management accounting tools in order to enhance the quality of management accounting information.

Meanwhile, according to Jermias (2018), management accounting in Indonesia has evolved though the stages described by the International Federation of Accountants (IFAC), the details of which are presented in Table 3.2.

Table 3.2 The stages of management accounting implementation in Indonesia (Source: Jermias, 2018)

Stage	The Role of Management Accounting
First stage (prior to 1950)	Planning (budgeting), product cost determination, and cost control.
Second stage (1951–1965)	Shifted to the provision of information to assist managers in planning and allocating resources and the introduction of responsibility accounting.
Third stage (1966–1985)	Reduce waste through the use of process analyses and cost management.
Fourth stage (1985–present)	Create value for important stakeholders such as customers, shareholders, creditors, and employees.

Jermias argues that studies on management accounting practices in Indonesia suggest that Indonesian companies are now using management accounting systems to generate information that is used by managers to create value for important stakeholders, like customers, shareholders, creditors, and employees. Many companies also use contemporary management accounting techniques, including balanced scorecards, activity-based costing, total quality management, target costing, employee productivity, and value-based management (Jermias, 2018).

As explained in the previous section, Zuhroh (2015) obtains empirical evidence that companies located in East Java have has implemented strategic management accounting, which consists of balanced scorecard, lifecycle costing, quality cost, target costing, and ABC system (Zuhroh, 2015). However, traditional management accounting systems, including break even analysis, budget, economic order quantity, analysis of variants, and ratio analysis, are still intensively used. That means both traditional and strategic management accounting practices are employed frequently.

Krisnadewi and Erawati (2018), who study the practice of management accounting by hotels in Bali, conclude that the most commonly implemented management accounting technique is a flexible operating budget. Meanwhile, the assessment of financial performance as a benchmark of budget conformity is practiced widely too. More contemporary techniques – like quality costs, product profitability analysis, and customer profitability analysis – are rarely applied due to a lack of knowledge and the limited IT skills of human resources.

Chandrarin et al. (2019) research companies that had implemented target costing, particularly automotive, electronics, household, and consumer products industries. The study concludes that improved company performance results stemmed not just from a low dysfunctional behavior level but also by the resulting strong dynamic capabilities originating the target costing system. Additionally, this study finds that success factor as being an insignificant aspect for determining the successful implementation of the target costing system.

Prihastiwi and Sholihin also conduct a study regarding the application of management accounting systems by SMEs located in the city of Yogyakarta, Indonesia. It concludes that the use of MAPs by SMEs in Indonesia is still dominated by traditional MAPs. The use of contemporary MAPs is limited to only those that affect customer service performance (Prihastiwi and Sholihin, 2018).

From these explanations, it can be concluded that management accounting practices in Indonesia have shifted from a traditional to a strategic mode. The next question is what factors influence the shift? Rasyid et al. (2017) conclude that five variables significantly affect the adoption of new accounting tools: cost system changing, technology changes, organization climate, consumer demand, and size. Another interesting result from the study is that intense competition does not affect the adoption of new accounting tools. In contrast, Prihastiwi and Sholihin's research concludes that the qualification of internal accounting staff, participation of the owner/managers, and firm size significantly affect the use of MAPs in SMEs (Rasyid et al., 2017).

4 Research Method

Instrument and Its Distribution A uniform model of the questionnaire was prepared for use in the 7 (seven) countries covered by the survey. Then the questionnaire was created in an online format using Google Docs, both in English and Bahasa Indonesia (respondents could choose either language option). In distributing the questionnaire, the target respondent was contacted first by telephone or WhatsApp to elicit permission for their participation and at the same time to deliver a "thank you" for participating in the study. However, if the respondent asked to fill it in hardcopy form, the researcher sent a copy directly by post.

Prior to distributing the survey, the researchers filled in basic information about each company in order to save participants time in responding. Data about the companies was obtained from the Indonesian Chamber of Commerce (KADIN) and the Indonesian Institute of Management Accountants (IAMI). There were 500 respondents from the manufacturing, trade, and services sectors, covering small-, medium-, and large-scale enterprises, including some listed on the Stock Exchange.

Source of alternative data Based on the experience of previous studies with low response rates for returning questionnaires, the present study uses an alternative procedure to collect data, namely using content analysis from job vacancies. For example, a company needs human resources with capabilities in the field of budgeting, meaning that the company implements budgeting.

Data Analysis Data analysis was performed using descriptive statistics based on the average percentage of the application of management accounting systems. Content analysis of job vacancy announcements assumes that if a company needs human resources with competencies related to MAPs, then the company applies management accounting with a level of often to always.

5 Empirical Findings

This study used a questionnaire to collect the data. Respondents were managers or business owners from various sectors, including services, trade, and manufacturing. Approximately 500 questionnaires were distributed to companies throughout Indonesia, with 96 returned and were eligible for inclusion in the analysis. Thus, the response rate for the questionnaires was approximately 20%.

Here we present the results of the descriptive analysis.

Types of industry Figure 5.1 shows the results of the data processing:

Fig. 5.1 Types of industry

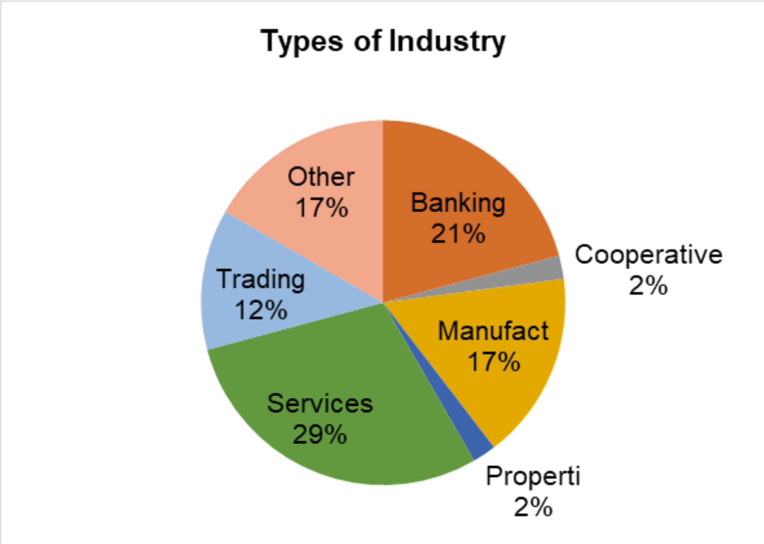


Figure 5.1 shows that respondents who returned the questionnaires are mostly from service companies (non-banks), followed by banks, manufacturing, and other types of companies, including cooperatives.

Company Size Figure 5.2 shows the results of the data processing:

Fig. 5.2 Company size

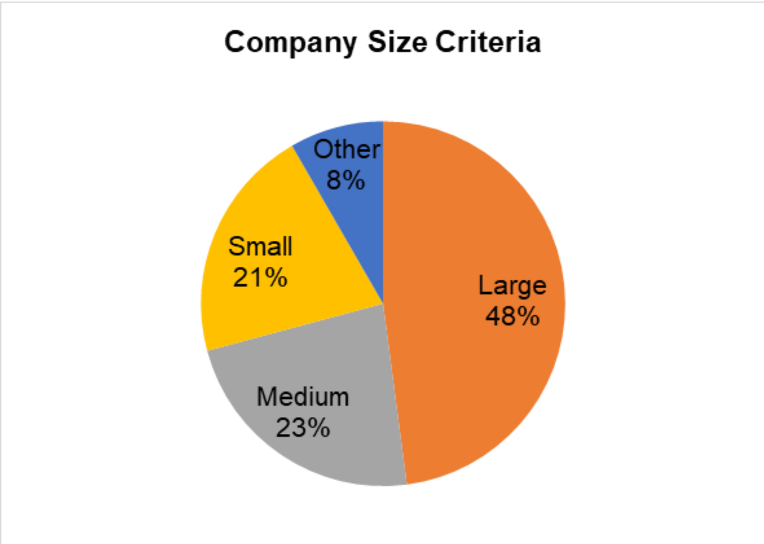


Figure 5.2 indicates that the highest number of respondents are from large-scale companies (48%), followed by medium-scale companies and small-scale companies.

Age of the Company Figure 5.3 explains the results of the data processing in terms of company age or the length of the company operation:

Fig. 5.3 Age of the company

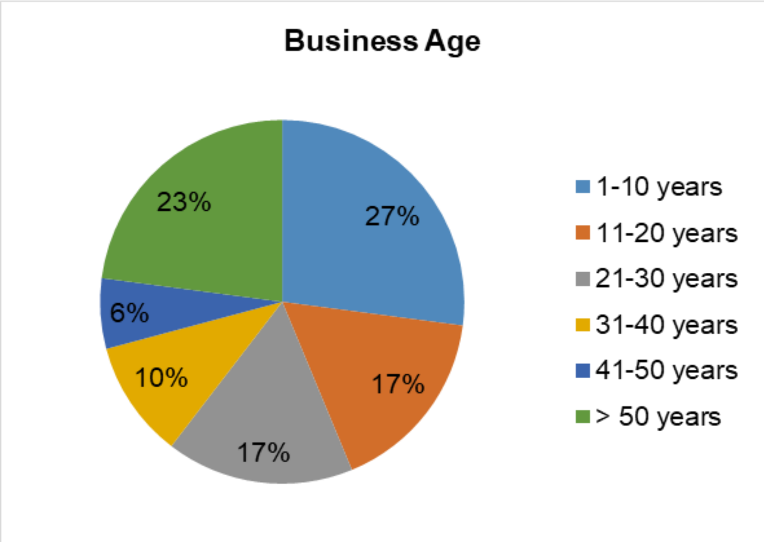
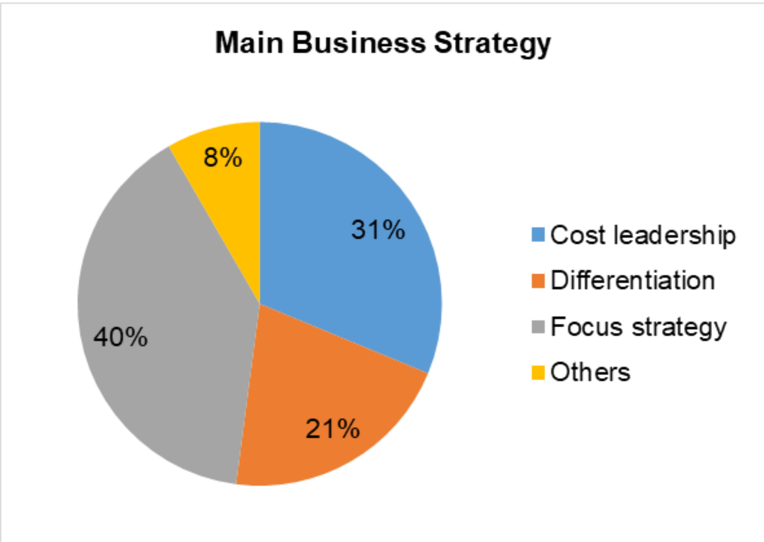


Figure 5.3 shows that the respondents are mostly from companies aged 1-10 years. These are followed by companies with an age of more than 50 years, those aged of 11-20 years, and those that are 21-30 years. Companies between 41-50 years old make up the smallest group of respondents.

Business Strategy Implementation Respondents were asked to identify the implementation of competitive strategies, these included, among others, the strategy of cost leadership, differentiation, and focus. Figure 5.4 presents the results:

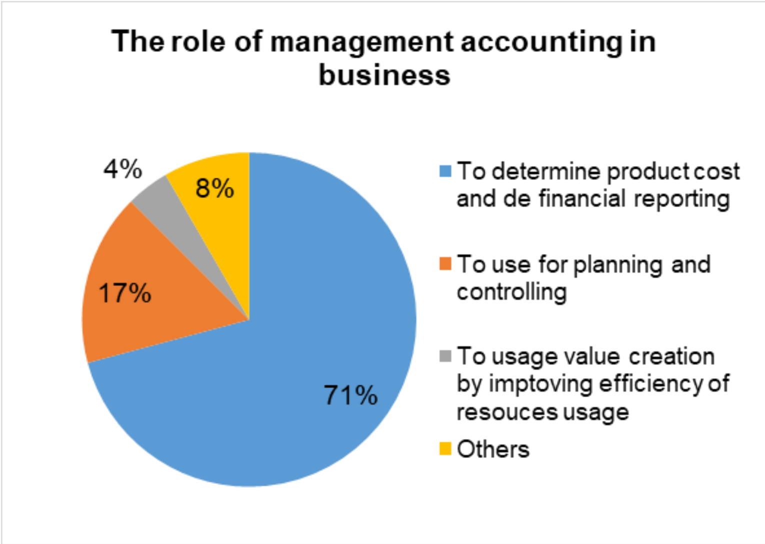
Fig. 5.4 Business strategy implementation



From Figure 5.4, it appears that the majority of respondents (40%) implement the focus strategy, which means the target market is consumers in certain segments. The second largest proportion of respondents are the ones implementing a cost leadership strategy. Respondents applying a differentiation strategy constitute the third largest proportion. There were 85 non-respondents to the question.

The Role of Management Accounting in Company Management Regarding the questions about the role of management accounting system for company management, respondents' answers are summarized in Figure 5.5:

Fig. 5.5 The role of management accounting



From Figure 5.5 it is evident that, according to responding managers of the companies surveyed, most of the companies (71%) apply management accounting systems for preparing financial statements. About 17% implement it for planning and controlling, while 8% implement it for other purposes. Last, but not least, 4% of the respondents implement a management accounting system to contribute to value creation through the efficient management of resources.

The Use of a Management Accounting System for Costing In Figure 5.6, the results of data processing related to the role of management accounting for costing are presented. Almost 62% (always and often) of the respondents use management accounting techniques for costing. Including the ones who apply this management accounting technique "occasionally," the percentage is 79%. Based on these results, it can be concluded that costing is an important management accounting technique that is widely implemented by management.

More detailed analysis shows that management accounting techniques that are always used by most respondents related to costing are standard costing and variance analysis. These results relate to the previously discussed business strategy implementation, where 40% of respondents apply the focus strategy and 31% apply the cost leadership strategy. Kaplan and Atkinson (1989: 349) state that for companies implementing a comprehensive cost advantage strategy (low-cost), analysis of variance is important to ensure that the expected profit achieved efficiently. Moreover, it is useful to ensure increased productivity.

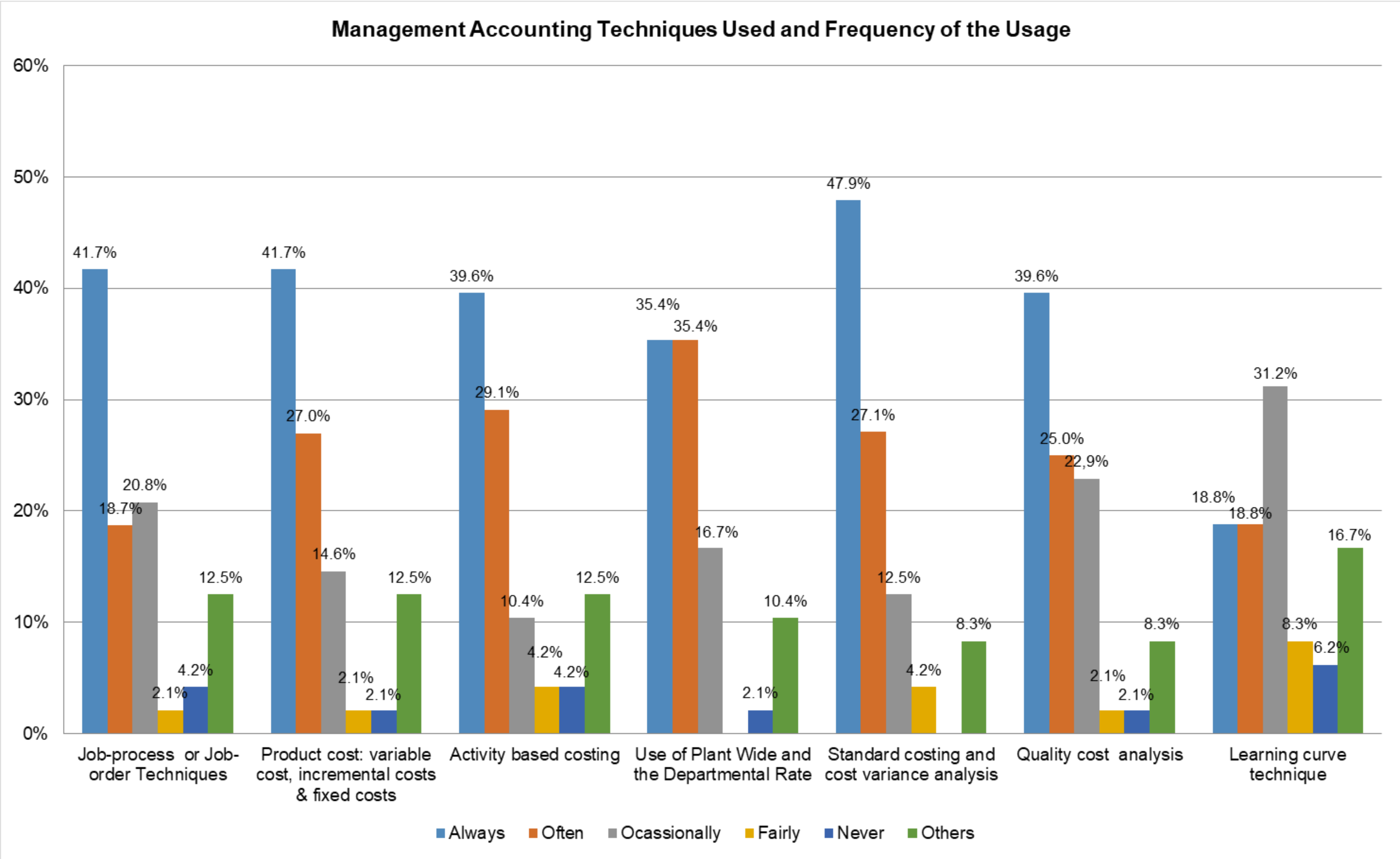


Fig. 5.6 Management accounting systems for costing

Figure 5.6 shows the use of standard costing and variance analysis, where the answers obtained were “always” and “often” for the entire samples. Thus, it can be concluded that almost all respondents apply the standard costing and variance analysis.

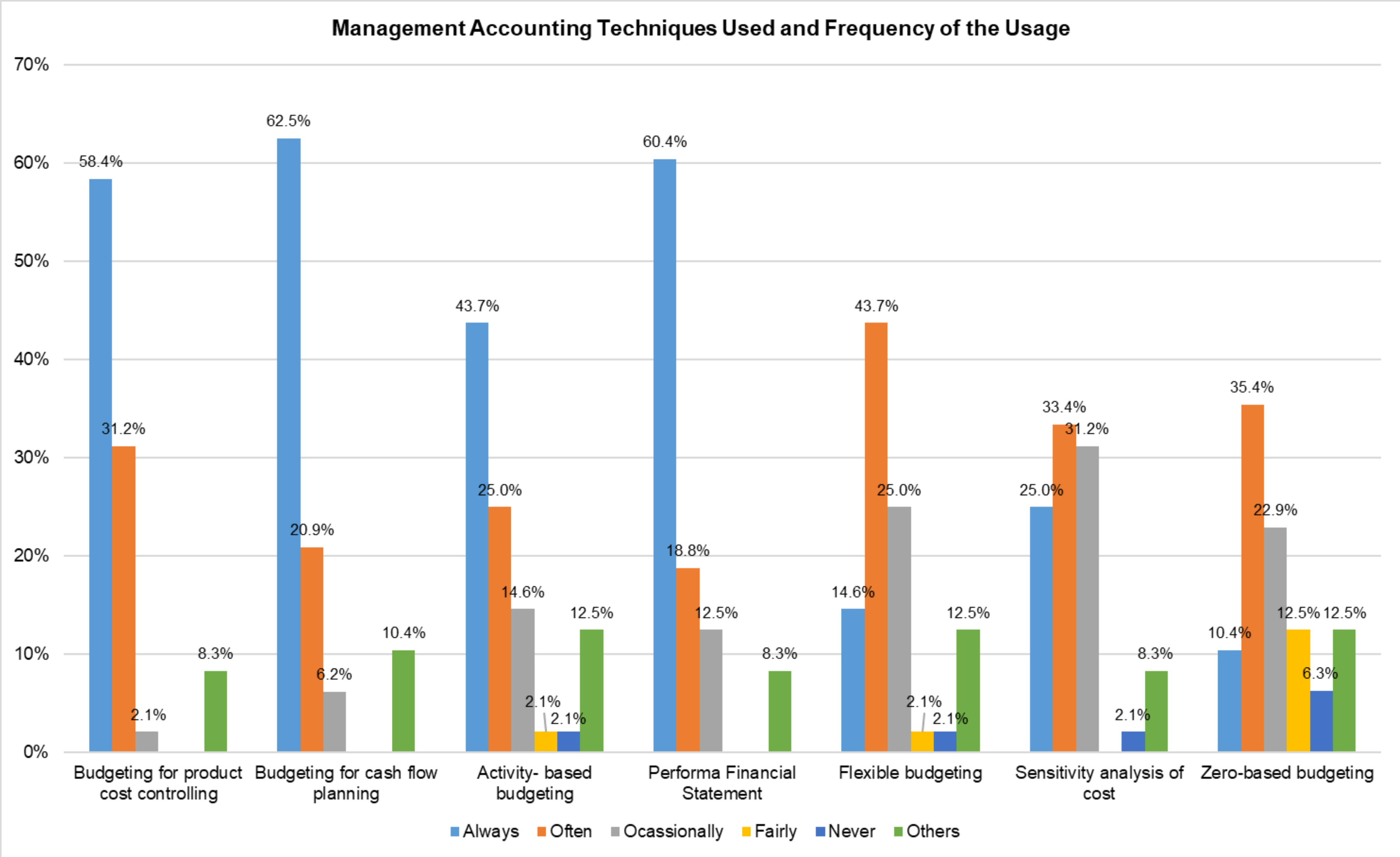
However, 11.6% of respondents answered “others,” which means they do not use the costing techniques identified in the questionnaire. The answers to the further question in the questionnaire show that most respondents did not mention the method or approach used for their costing techniques. For those respondents who provided a response, the approaches used include, among others, based on competitors, based on business segmentation, and a combination of cost and fulfillment of the best service. Some respondents use a method or approach that tends to be “subjective” because it is based on certain considerations under the policies of the owner or management.

The next most widely used management accounting technique is variable costing / full costing, followed by the use of Job order / Process Costing with the same percentage with the use of Activity-Based Costing. Regarding the use of ABC, this study found that ABC (which categorized as a strategic management accounting system) also is applied widely by companies in Indonesia.

The Use of Management Accounting Systems for Budgeting The results of data processing on budgeting are as follows:

Based on Figure 5.7, the budgeting used by respondents when detailed from the use of “occasionally” to “always” is 74.4 %. Further, 10.4% of respondents use “other” methods or approaches as a substitute for the budgeting method. The results of the further analysis of those respondents who answered “other” shows that the majority answered “none,” which means there is a possibility that respondents were not willing to answer the question or respondents did not use the budgeting method. However, some respondents gave answers: capital budgeting, business-and-risk-based budgeting, customer-order-based budgeting, external parameter analysis, macroeconomics-and-politics-based budgeting, and segmentation of business.

A more detailed analysis of the figure reveals that the budget is used mostly in connection with professional financial statements and followed by the use of budget for cash planning. Additionally, from the figure, it appears that almost all respondents use a budget with a frequency from the level of “often” to “always”; only a very small number of respondents do not use it and, most likely, they are from small and medium businesses. This research shows that budgeting is a traditional management accounting technique that still is used, a finding consistent with the results of Zuhroh (2015). In that study, budgeting is used by almost all respondents, with usage ranging from “medium” to “very intensive.”



5.7 Management accounting systems for budgeting

The Use of Management Accounting Systems for Performance Evaluation Figure 5.8 displays results related to the use of management accounting techniques for performance evaluation.

From Figure 5.8, it can be inferred that 35.2% of the sampled companies report using management accounting information for conducting performance evaluation at the “often” level. Next, are companies using it “always” at 25.3% and “sometimes” at 21%. A more detailed analysis of the use of financial performance measurements revealed that none of the respondents chose the answer "never". With these results, it is clear that measuring financial performance is important for all respondents in this study.

If an analysis is carried out on the use of each management accounting technique, the largest use (65%) is related to the use of management accounting for measuring financial performance with a level of “always” to “often.” Meanwhile, 11.7 % answered “others.” Looking closely at these result shows that the majority (77%) of respondents did not provide answers about the method or approach used for performance measurement. However, 17% of respondents use the segmentation index approach and 4% use the guest satisfaction index.

Figure 5.8 also shows that companies are beginning to use non-financial performance measurements intensely, as demonstrated by the “often” response applied to customer satisfaction, operation and innovation, and employee satisfaction. Furthermore, companies are starting to utilise the residual income and economic value-added approaches for performance measurement more frequently.

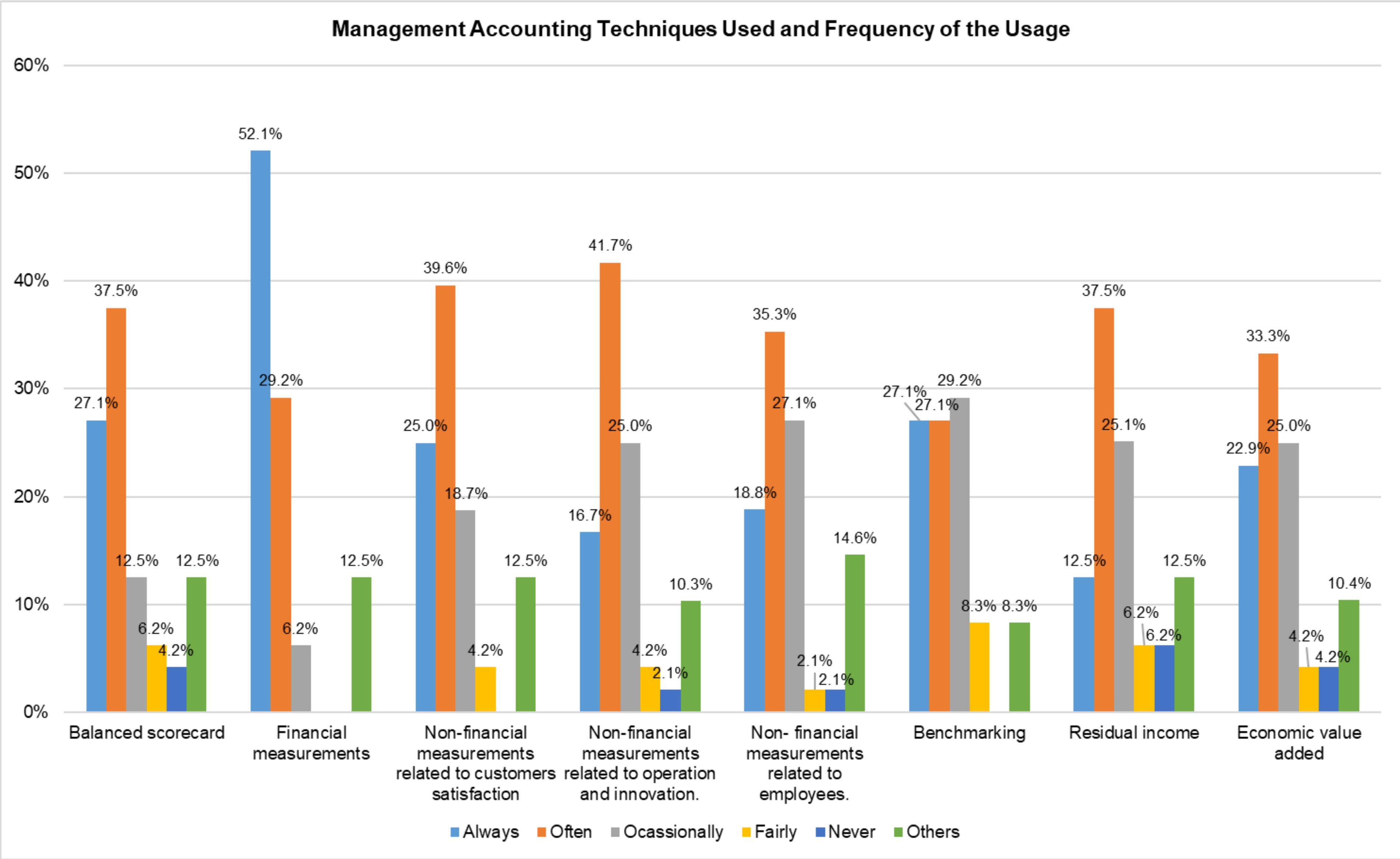


Fig. 5.8 Management accounting systems for performance evaluation.

The Use of a Management Accounting System for Decision Making Figure 5.9 shows the results related to the use of a management accounting system for decision making.

Based on Figure 5.9, about 71% report using management accounting techniques for decision making as “occasionally” to “always.” About 12% of respondents responded “other.” Looking at responses in detail shows that, of that number, almost none identified the techniques or approaches used. Thus, the answer can be considered as “not implementing.”

The analysis of each management accounting technique applied by the respondents shows that profitability analysis is “always” used by 45.8%. Following it by profit-analysis of product at 43.8, break-even point (BEP) analysis at 39.6%, and customer profitability analysis at 35.4%.

With these results, it can be seen that the analysis of capital evaluation is often used by respondents with a percentage of 45.8%. In addition, BEP analysis is one of the management accounting techniques that are still widely used today with the percentage of answers “always” at 38.6% and “often” is about 33,3%. Meanwhile, sensitivity analysis also is “often” used with a percentage reaching 41.7%. Next, the management accounting technique that is “often” used is the evaluation of capital, with a frequency of 45.8%, sensitivity analysis of cost, at 45.8%, followed by the use of incremental analysis at 37.5%.

Further, management accounting techniques that are “occasionally” used include profitability analysis, profit analysis of a product, and customer protection analysis.

Thus, it can be concluded that management accounting techniques that are “always” used are techniques or analyses related to profits. Furthermore, management accounting techniques that are “often” used are techniques or analyses related to cost. Presumably, the use of management accounting techniques is sequential, first for profit-analyses then for cost analyses.

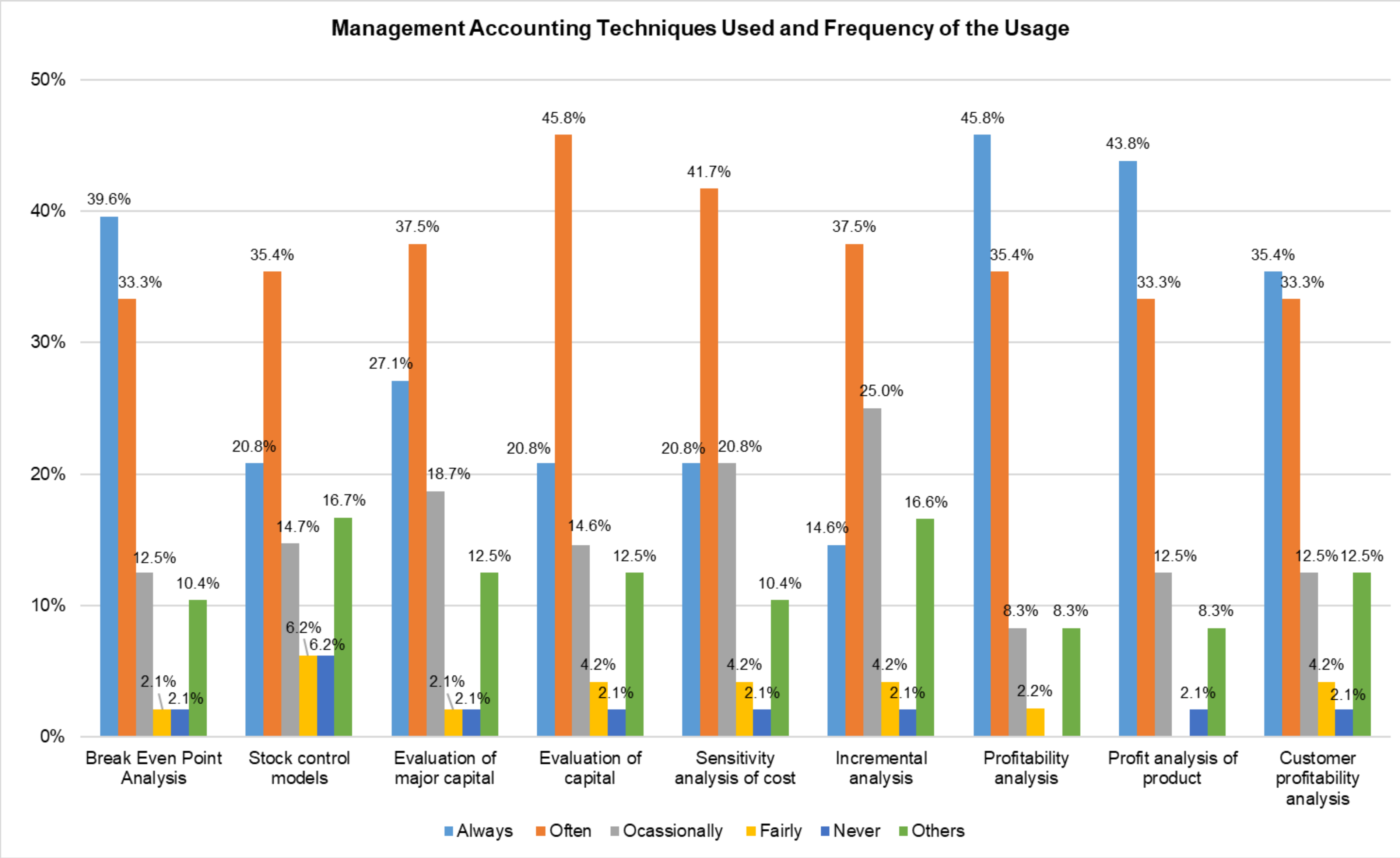


Fig. 5.9 Management accounting systems for decision making

The Use of Strategic Management Accounting Systems The results related to the use of strategic management accounting are shown in Figure 5.10.

Figure 5.10 shows results related to strategic management accounting techniques with respect to external parties, including shareholders, competition, suppliers/customers, and industry. It also presents results relating to the implementation of strategic management accounting for the company's internal interests, including value chain analysis, activity-based management, total quality management, just-in-time, target costing, lean management, and long-range forecasting. In general, the average use of strategic management accounting techniques with a range of “occasionally” to “always” is 78.7%. Respondents choosing to answer “other” make up 12.8% of the sample. A deeper analysis of these answers shows that another management accounting technique that is widely used is market segment analysis.

Further analysis on the use of each management accounting technique shows that activity-based management is “always” used by 31.2% of the sample, followed by analysis of competition, industry analysis, and long-range forecasting. Meanwhile, at the “often” level, the use of management accounting techniques with the highest percentage is value chain analysis, followed by long-range forecasting, target costing, total quality management, and activity-based management. These results indicate that value chain analysis is an important and widely used management accounting technique.

Comparing with Zuhroh (2015), regarding traditional MAPs, this study obtained empirical evidence that traditional management accounting systems are still being used, especially with respect to budgeting. As for strategic management accounting practices, Zuhroh (2015) finds evidence that manufacturing companies have implemented a strategic management accounting system and that the most intensively used MAP is lifecycle costing. Here, the most widely used MAP is value chain analysis. The difference is likely caused by differences in the research subjects. Respondents in the present study came from all types of companies, while respondents to Zuhroh (2015) came only from manufacturing firms.

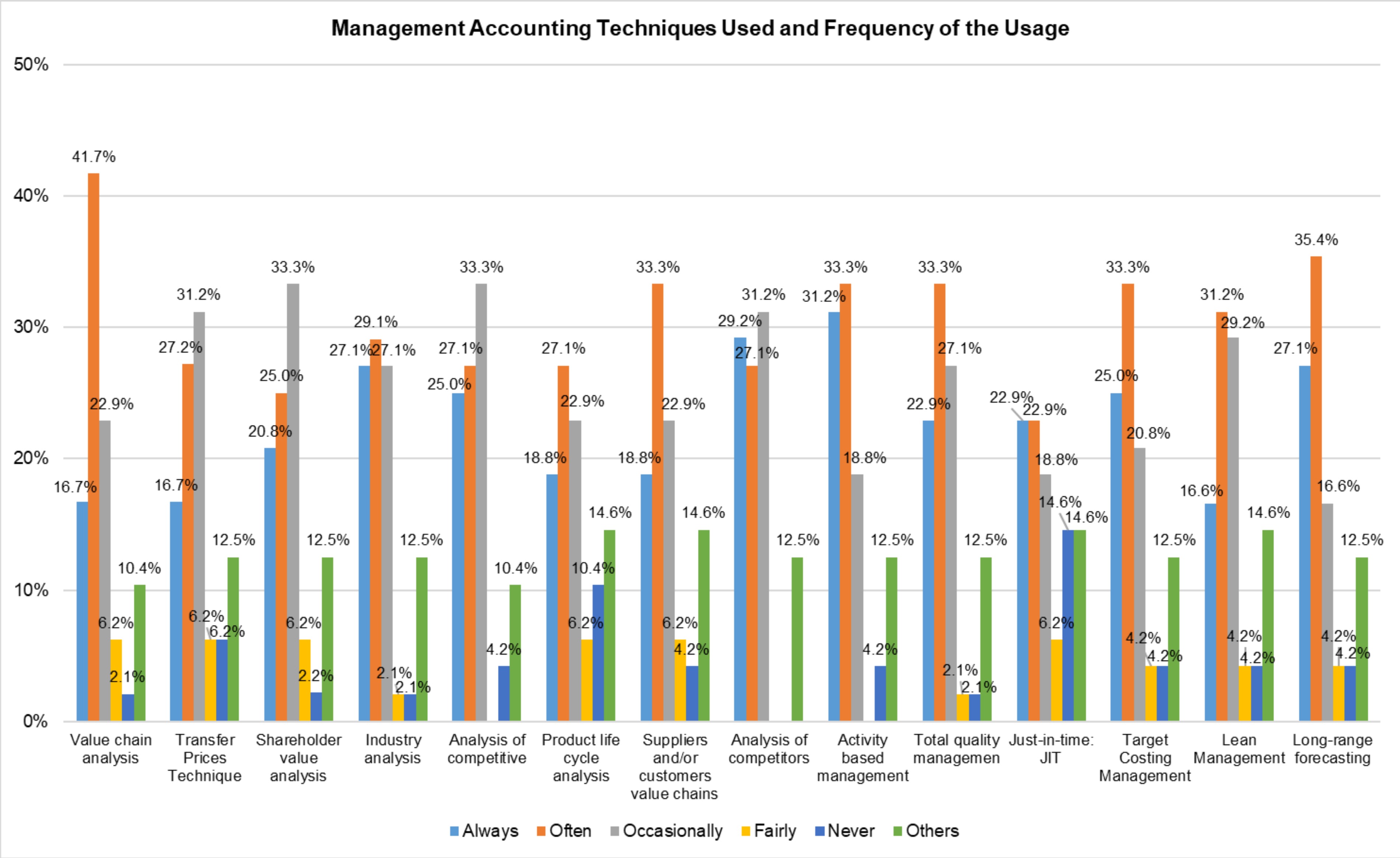
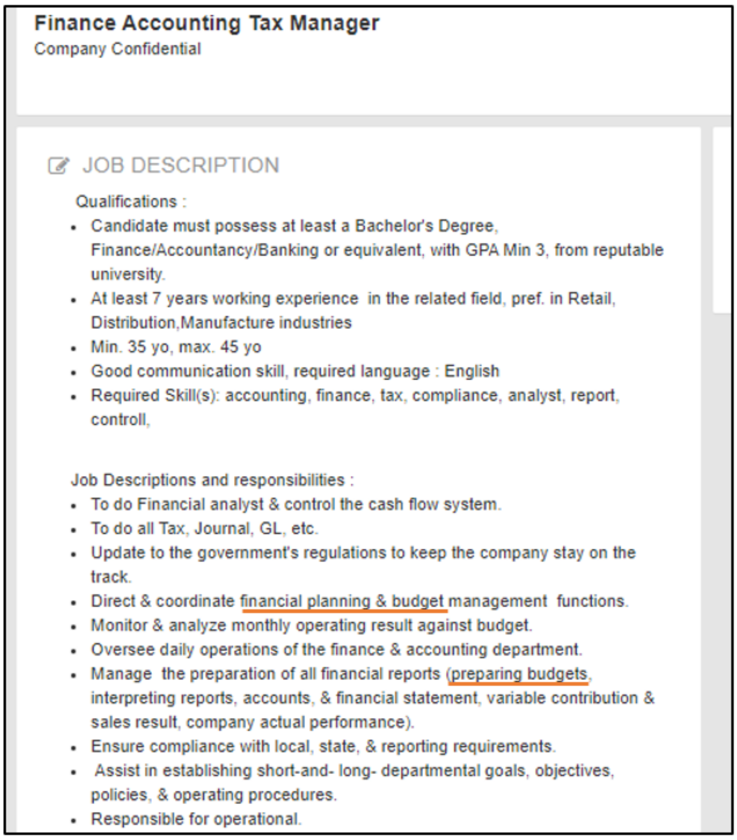


Fig. 5.10 The use of strategic management accounting systems

6 The Results of Content Analysis

Realizing the low response rate, the researchers took the initiative to obtain additional data. The alternative chosen was to conduct content analysis of job vacancies that offer positions related to management accounting. The rationale for this alternative is that if a company opens positions related to accounting practices, it can be concluded that such techniques are used in the company, even at “often” to “always” level. Job vacancy information was obtained from https://www.jobstreet.co.id/jobs/unmer.htm, the site for job vacancies in collaboration between Universitas Merdeka Malang and Jobstreet.com. Figure 6.1 shows an example of a job vacancy announcement from a company.

Fig. 6.1 Job vacancy


Finance Accounting Tax Manager
Company Confidential

JOB DESCRIPTION

Qualifications :

- Candidate must possess at least a Bachelor's Degree, Finance/Accountancy/Banking or equivalent, with GPA Min 3, from reputable university.
- At least 7 years working experience in the related field, pref. in Retail, Distribution,Manufacture industries
- Min. 35 yo, max. 45 yo
- Good communication skill, required language : English
- Required Skill(s): accounting, finance, tax, compliance, analyst, report, controll,

Job Descriptions and responsibilities :

- To do Financial analyst & control the cash flow system.
- To do all Tax, Journal, GL, etc.
- Update to the government's regulations to keep the company stay on the track.
- Direct & coordinate financial planning & budget management functions.
- Monitor & analyze monthly operating result against budget.
- Oversee daily operations of the finance & accounting department.
- Manage the preparation of all financial reports (preparing budgets, interpreting reports, accounts, & financial statement, variable contribution & sales result, company actual performance).
- Ensure compliance with local, state, & reporting requirements.
- Assist in establishing short-and- long- departmental goals, objectives, policies, & operating procedures.
- Responsible for operational.

From the example in Figure 6.1, a published job vacancy, the company needs a human resource who has the competence to prepare a budget (underscored in red) as a tool for planning, performance evaluation, and cash flow control. If the company requires HR with these criteria, it can be concluded that the company uses a budget for cost control and cash flow planning. Thus, it can be assumed that the company implements budgeting with an "often" to "always" intensity. In this way, an analysis was carried out of 101 companies in West Java, Central Java, and East Java that posted job vacancies on the website (https://www.jobstreet.co.id/jobs/unmer.htm).

The analysis shows that, of the 101 companies, 60% are manufacturing companies (including agriculture and property), 25% services companies, and 15% trading companies (retail, dealers, distributors, and wholesalers). Approximately 70% implement the low cost strategy, 25% differentiation, and the remainder are unclear. Based on size, which is determined based on the company profile, 35% are large companies, 40% medium, and 20% small companies; the remaining 5% cannot be identified.

According to an analysis of all companies whose job vacancies are observed, it can be concluded that the most needed HR are those who have the following competencies:

1. Prepare financial statements to prepare tax reporting.
2. Conduct a cost analysis.
3. Handle technical and clerical work including compiling bank reconciliation, managing receivables administration, managing cash records, and so on.
4. Develop a budget, control performance using the budget, including the use of the budget to manage cash flow.

Based on these HR needs, it can be assumed that:

1. Traditional management accounting practices are still very intensively used, especially budgeting and costing.
2. In terms of preparing financial statements, in general, the focus of the company is for tax reporting purposes. This possibility is a specific condition in Indonesia, especially for companies owned by individuals, or in situations where the dominance of the owner is still significant.

Content analysis also is carried out on the needs of human resources in the field of information technology systems. Most companies need human resources who can operate information technology systems with the characteristics of "automation," in this case, information technology systems that play a role in automating clerical work using computer software. This condition can be seen in the need for HR capable of operating software such as MYOB, Accurate, Zahir, and Microsoft Excel. The software is used to assist or replace human labor in recording transactions and preparing financial statements. Following the concepts of Jogiyanto (2005) and Venkatraman (1994), software that helps prepare financial statements is usually used to support traditional management accounting systems (for example, budgeting and costing using job orders and process costing).

From the analysis of the use of information technology systems, about 10% of companies use enterprise resource planning (ERP), which is included in the information technology system as an "enabler." The information technology system is used to handle jobs that require the involvement of strategic management accounting (Jogianto, 2005). More detailed analysis shows that companies that require HR with qualifications to be able to operate ERP are companies that are foreign-owned and large companies listed on the Indonesia Stock Exchange.

Accordingly, it can be concluded that the MAPs in companies in Indonesia have developed rapidly. The management accounting techniques implemented are a combination of traditional and strategic management accounting techniques. Thus, businesses demand information that goes beyond what traditional management accounting systems can provide. However, to better understand how the forms of implementation of each management accounting technique (both strategic and traditional), qualitative research is needed.

7 Conclusion

The Indonesian economy is driven by small- and medium-sized businesses. However, along with the increasingly dynamic economy of the country, a result of globalization, large companies, including multinational companies and government-owned companies, are growing and developing rapidly too. These all operate in harmony, supporting one another to strengthen the Indonesian economy.

The accounting system adopted by companies in Indonesia also has developed in response to changes in the country's economy and the ability of each sector to respond to these changes. Small- and medium-sized companies still use traditional management accounting systems intensively. Conversely, large-sized companies generally have implemented a strategic management accounting system in response to increasingly fierce competition. In fact, this study finds empirical evidence that traditional and strategic management accounting systems are used jointly by individual companies.

In industrial era 4.0, Indonesia's economy is influenced strongly by the development of information technology systems. The creative industry is growing rapidly, coupled with increasingly intense e-commerce. The emergence of start-ups has changed the business environment, bringing about a completely new competition model. That means practitioners of MAPs in Indonesia additionally are challenged to find new models, techniques, and systems that can respond to these changes. In the future, management accounting research should be directed to be able to find results and conclusions that can answer these challenges.

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