

Organizing information for strategic management accounting reports on the accounting information system foundation

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Abstract: On the basis of the accounting information system, strategic management accounting (SMA) is applied to organizations, overcoming inherent barriers. SMA strongly promotes the role of supporting managers in implementing strategies towards sustainable development. There are many studies in Vietnam that identify the factors forming SMA in companies. Previous studies have provided evidence of the relationship between SMA and business performance. However, the core problem that is still lacking is the organization of information for SMA reports. It is necessary to design a process of collecting, analyzing, processing, and reporting appropriate information to serve the strategic decisions of managers. This article conducts research on this issue with the aim of filling the practical gap and meeting the current practical needs of managers. As a result, the article identifies appropriate information for SMA reports and their relationships from sources inside and outside the company. The article proposes many directional solutions to collect information, apply SMA techniques to process and report useful long-term, wide-ranging information, suitable for strategic decision making.

Keywords: *Accounting information system, Organizing information, SMA techniques, Strategic management accounting.*

1. Introduction

The globalization process and competitive situation encourage businesses to shorten the product life cycle. At the same time, businesses increase the use of new information technology in their business operations. New information technology is responsible for reporting the financial situation and current results of the business, providing information for strategic planning and strategic control (Shagari et al., 2017). Information technology is a tool for organizing and operating management accounting to provide information to managers in a timely, flexible, and future-oriented manner. Management accounting is an effective part that helps managers to plan, organize, control, and make decisions (Saganuwan & ., 2013). Management accounting is developing beyond the internal scope of businesses to create customer-oriented value. Moreover, management accounting performs the task of realizing the vision, mission, and strategy of the company towards sustainable development (Honggowati et al., 2017).

Through a review of some studies on SMA in Vietnam, companies are applying SMA techniques to varying degrees (Le et al., 2020). These techniques were studied (Tran, 2023) such as (i) activity-based costing, target costing, quality costing, value chain costing, product life cycle costing; (ii) Managing strategic performance using benchmarking, balanced scorecard; (iii) Evaluating competitors. SMA reporting is the final step in providing strategic information to managers. However, there have not been many studies that specifically identify the input and output information flows of the report, especially the relationship between the information. There are a few studies on the application of SMA techniques in Vietnam. In addition, studies focus on the factors that promote the formation of SMA, and SMA increases the efficiency of business operations. Therefore, it is necessary to quickly research the organization of SMA systems in businesses to best promote the role of SMA.

According to current regulations, companies are not required to organize management accounting. The scale of companies in Vietnam is mostly small. Therefore, the application of management accounting seems to be at a low level due to the barriers of scale and limited resources. However, the digital technology platform supports SMA to spread faster and be used more in companies. Information technology and accounting information systems (AIS) currently in companies are identified as a platform to help SMA to be effective. From there, the organization of information for strategic management accounting reports is strongly supported by information technology. From the above arguments, the research of information organization for SMA reports on the basis of AIS is a necessary direction, meeting the current needs of businesses.

2. Literature Review

2.1. Development Trends of SMA in Companies

The business environment has been changing rapidly and unpredictably in recent times. This issue has greatly affected the existence and development of businesses. From there, management accounting has developed in a strategic direction to meet additional requirements for the strategic management system, supporting information for the strategic management of the companies (Potyshniak et al., 2019). The goal of businesses is gradually changing from "maximizing profits" in the short term to "sustainable development" in the long term. Some studies show that sustainable development businesses are often associated with strategies that are consistent with their goals, available resources and capabilities (Grinko et al., 2020). Therefore, management accounting develops in a strategic direction to create value. Management accounting is oriented towards long-term goals to respond to challenges and take advantage of opportunities outside the business. Management accounting shifts the focus from past events to future analysis. Management accounting quickly responds to environmental changes to provide timely and flexible information for production and management. Besides, management accounting continuously monitors the internal and external environment to ensure business survival and prevent crisis situations (Honggowati et al., 2017).

2.2. SMA Techniques

In business operations, managers must deal with changes in the external and internal environments. Therefore, there are requirements of long-term and outside information. Management accounting meets these requirements by implementing techniques for collecting and analyzing information. Techniques with long-term information or outside information can be considered as SMA techniques. SMA techniques have not yet been formally recognized. Currently, they are identified by scholars in their studies.

In fact, some SMA techniques may have been implemented in businesses a long time ago, while others have only recently appeared. In research, SMA techniques have been identified in typical studies in recent years. Few techniques are mentioned in the studies of scholars depending on their approaches. For example, SMA techniques are used for strategic management control (Stawar, 2002)

Guiliding et al., (2000) reviewed previous studies of SMA techniques and identified 12 techniques. They approached the strategic orientation as focusing on the environment, competitors. They also approached the long-term orientation in the future. Then, Guiliding et al., (2000) examined the level of use in large companies in New Zealand, the UK and the US. The results show that most SMA techniques were not used in businesses at that time. The techniques can be defined in the study of Guiliding et al., (2000) as Table 1:

Table 1.
Twelve techniques of Guilding et al., (2000).

No.	SMA techniques	Definition
1	Attribute costing	Product attributes can be considered as cost objects. Specific product attributes need to be calculated in order to attract customers. Attributes include: performance, reliability, safety, warranty agreements, level of completion, and after-sales service (Guilding et al., 2000)
2	Brand value budgeting	Brand value is determined by historical cost or royalty transfer cost. Brand value is used to make management decisions about resource allocation to enhance brand position (Guilding et al., 2000).
3	Competitor cost assessment	Competitor cost assessment provides estimates of competitors' cost such as assessments of facilities, technology, and economies of scale. Estimates are updated regularly from sources such as direct observation, common suppliers, common customers and former employees (Guilding et al., 2000).
4	Competitive position monitoring	Monitoring competitors' position in the industry by evaluating trends in competitors' sales, market share, volume, unit costs, and return on sales. This information can be used to evaluate competitors' strategies (Guilding et al., 2000).
5	Competitor appraisal based on published financial statements	Evaluating competitors by analyzing their financial statements. This technique is used to evaluate the main competitive advantages of competitors (Guilding et al., 2000).
6	Life cycle costing	Life cycle costing evaluates costs based on the length of stages in the life cycle of a product or service. These stages may include design, introduction, growth, decline, and eventual abandonment. Life cycle costing is used to recognize the importance of the research and design stages in achieving the lifetime profitability of a product (Guilding et al., 2000).
7	Quality costing	Quality costing analyzes the costs associated with the prevention, appraisal, and repair of products and services. Quality costs can be classified into three groups: prevention costs, appraisal costs, and failure costs. Quality costing is intended to direct management attention to prioritizing quality issues (Guilding et al., 2000) to create competitive advantage.
8	Strategic costing	Strategic costing uses data based on strategic and marketing information such as product positioning, development, and market penetration. Strategic costing helps managers determine superior strategies to maintain competitive advantage (Guilding et al., 2000).
9	Strategic pricing	Strategic pricing is calculated based on the analysis of competitively oriented strategic factors to decide on price. These factors include: price response of competitors, price elasticity, market growth, economies of scale, and experience (Guilding et al., 2000).
10	Target costing	Target costing changes from an internal cost monitoring objective to a forward-looking objective and linked to competitive advantage (Guilding et al., 2000). The target costing is performed during the product planning to meet consumer demand and compete with rivals. Target cost is estimated by subtracting the desired profit from the market price. The product is then designed to meet the

No.	SMA techniques	Definition
		target cost.
11	Value chain costing	Costs are allocated to the activities required to design, procure, produce, market, distribute, and service a product or service. Value chain costing helps a business identify activities that can increase customer value or reduce costs in the value chain (Guilding et al., 2000).
12	Kaizen costing	Kaizen costing is a cost reduction technique. Kaizen costs are established as a system with the goal of cost reduction, specific monthly cost reduction levels, details for each field and activity in the production process (Guilding et al., 2000).

Cravens & Guilding (1999) added three more techniques: Activity-based costing, benchmarking, and integrated performance measurement, to make a list of 15 techniques (Table 2).

Table 2.
Three techniques of Cravens & Guilding (1999).

No.	SMA techniques	Definition
1	Benchmarking	Benchmarking is the comparison of internal processes with an ideal industry standard. Benchmarking aims to improve processes to the necessary level (Cadez & Guilding, 2008; Cravens & Guilding, 1999).
2	Integrated performance measurement	Integrated performance measurement emphasizes customer needs and incorporates non-financial measures (Cravens & Guilding, 1999). Integrated performance measurement considers four perspectives: financial, customer, internal business processes, and learning and growth. Integrated performance measurement provides a status of operational performance and its relationship to corporate strategy (Cinquini & Tenucci, 2010).
3	Activity-based costing	ABC collects overhead costs for each activity and allocates these costs to products based on specific resource usage (Roztocki et al., 2004, (Culler & Burd, 2007). ABC has many advantages (Brierley et al., 2006) and can be used for long-term goals.

Next, Guilding & McManus (2002) added three techniques related to customer accounting. Guilding & McManus (2002) focused on customer management. The three techniques are mentioned as follows: (Table 3)

Table 3.
Three techniques of Guilding & McManus (2002).

No.	SMA Techniques	Definition
1	Customer profit analysis	Customer profit analysis is the analysis of revenues and costs arising from specific customers or customer groups. The analysis determines the profit earned corresponding to the customer or customer group in the company's profits (Guilding & McManus, 2002).
2	Customer lifetime profitability	The customer lifetime profitability technique estimates future revenue and cost streams for certain customers or customer groups (Guilding & McManus, 2002). This technique is a development of customer profitability analysis. Profits are estimated for the entire period of trading transactions with customers.
3	Value customers as assets	This technique determines the value of a customer to a company (Guilding & McManus, 2002). This technique estimates the present value of the expected future profit stream of a customer or group of customers.

AnTon & Thomson (2007) added the lean accounting technique (Table 4).

Table 4.
A technique of ANTON & THOMSON (2007).

No.	SMA techniques	Definition
1	Lean accounting	Lean accounting records costs along the value stream (AnTon & Thomson, 2007). The value stream incorporates all activities from design, production, purchasing, shipping and collection. LA thereby provides cost information quickly. LA is implemented to reduce costs continuously and over the long term.

Through the survey, the 19 techniques mentioned above are considered SMA techniques. These techniques can be applied appropriately to the capabilities of each company. These techniques collect information, analyze and provide information for SMA reports. Information from SMA reports effectively supports administrators in making long-term decisions towards sustainable development.

2.3. SMA Report

According to the traditional point of view, the accounting system can be divided into three forms: Financial accounting, tax accounting and management accounting based on the purpose of providing information. These three types of accounting serve different purposes. However, they all use the same database to record, measure, and report cost information (Les, Heitger; Pekin, Organ; Serge, 1992). Cost accounting systems provide information for internal management accounting reports to evaluate production efficiency, pricing, and strategic decision making by management. Management accounting reports include all activities related to facts, analysis, performance measurement, and other information to support decision making. The quality of accounting information preparation and information processing has a positive impact on overall decision making efficiency. A properly designed report will be valuable in management because it will help managers make the right decisions (Nita, 2014).

SMA was conceived to provide long-term, outward-facing information to management. The data is developed from existing accounting data, adding new elements appropriate to the context of business development strategies. Data is also built around forecasts and risks. This data is necessary information for SMA reports to meet strategic management requirements. SMA reports simultaneously analyze information inside and outside the business. Information for SMA reports comes from input and output information of SMA techniques.

2.4. Development Trends of AIS and Business Strategies

In the early 1960s, computers began to be widely used in business environments to automate tasks such as payroll, finance, etc. In the 1970s, software packages were designed to meet the specific needs of organizations (Murrell G. Shields, 2001). In the late 1980s, application suites were integrated to support most of the functions. In the 1990s, companies began using enterprise resource planning (ERP) software to solve integration problems and increase their competitive advantage. In recent times, the use of information technology to support strategic management is considered key to better exploit the synergy between business and technology. Moreover, it also helps companies cope with the increasing complexity of the global business environment. ERP is seen as a platform to support strategic business processes for the company (Light et al., 2001). However, ERP also has some limitations in terms of flexibility and the ability to meet the specific requirements of the organization (Light et al., 2001). Therefore, ERP must always be adjusted, updated, and expanded to fully meet the requirements of the management to cope with changes in the business environment. For companies that have not used ERP, they can integrate components, or custom software into the system (Thomas H. Davenport, 2001). ERP can be considered an essential component in an AIS.

AIS provides reliable accounting information for business decision making. AIS processes data to provide useful information for planning, controlling and operating business activities (Saganuwan & ., 2013). AIS is an effective tool for organizations to respond to changes from outside and inside the business (Shagari et al., 2017). The externally oriented AIS is the financial AIS. The internally oriented AIS is considered as the management AIS. Management AIS record, process and provide financial information to internal users for specific management purposes. Management AIS provide information on costs, revenues and income (Bhimani, 2004). Information from management AIS helps control, improve productivity and efficiency to gain competitive advantage (Shagari et al., 2017).

Research on AIS often focuses on the relationship between financial accounting, management accounting and information technology. These studies aim to highlight the impact of technology on operational processes, accounting processes, accounting models, and performance measurement. Many studies prove that information technology is a useful tool to manage accounting processes, automate control mechanisms, and improve the competitiveness of companies.

2.5. Relevant Information for SMA Reporting

Business strategy exists at all business, division or product levels. Business strategy refers to the way in which an organization carries out each type of activity and strives to gain a competitive advantage over competitors (Zahirul Hoque, 2004). Based on business strategy, AIS create information for management to use at different levels to achieve competitive advantage, increasing revenue (Mulyani et al., 2016). Top management uses AIS to change the direction of the company in achieving strategic advantage. AIS can provide information about products and services from a standardized database. This database can be accessed through a web browser by business partners and consumers (Mc. Leod & Schell, 2007). Middle management uses AIS to identify the right type of strategic planning information. This information is used to create benefits for the organization through service improvements to satisfy customers. These provide flexibility for customers being able to access information related to the company's products and services. Management at the operational level uses AIS to ensure that the company operates efficiently. Information that matches the decision maker's needs will improve the quality of the decision and the performance of the company.

Management AIS play an important role in generating reliable information for better short-term decisions or strategic decisions. Management AIS improve organizational performance. The advantages of management AIS include: wide scope, comprehensiveness, timeliness and integration. These advantages contribute to improving organizational performance. In most studies of the design phase of information systems (Van Helden & Tillema, 2005), three information dimensions (scope, timeliness, and integration) are the key variables. Narrow-scope information tends to be related to events within the organization and results in historical and financial data. Broad-scope information includes external,

non-financial, and future-oriented documents. Timeliness is often defined in the ability to provide information upon request and the frequency of reporting.

Several studies on the design of management AIS have examined several environmental factors (such as environmental uncertainty) and organizational attributes (such as technology, size). The results are inconsistent due to differences in cultural strategies and differences between organizations (Gani & Jermias, 2006). The information characteristics of management AIS are consistent with business strategy. Strategic business planning is an uncertain and complex task. Therefore, businesses need comprehensive and timely information to support the strategic planning process. From there, management AIS support the development and implementation of business strategies. Management AIS provide information that is broad, comprehensive, timely, and future-oriented (Wiersma, 2008). Information also comes from outside the business (Jørgensen & Messner, 2010).

The organizational management structure is complex, requiring information mechanisms to coordinate management processes (Kumar & Paramanik, 2020). A large amount of information is available inside and outside the company related to business activities in the short and long term. This information is also related to different entities such as customers, suppliers, competitors... This information has not been organized to serve strategic management decisions. Organizations need to coordinate AIS and strategic management functions: planning, analysis, control, organization (Cooper et al., 2017).

3. Research Method

3.1. Research Methodology

The general research objective is to organize information for SMA reports in companies on the basis of AIS. Specific research objectives: (i) The level of implementation of SMA in companies; (ii) Identifying appropriate information for SMA reports; (iii) Organizing integrated information for SMA reports on the basis of AIS.

Based on the methodology and framework of (Olaire, 2012), this study uses a mixed approach and qualitative research method. The research process is conducted as follows:

(i) In the first step, the authors conduct archival research to review relevant studies by international and domestic scholars. From there, the authors identify trends and SMA techniques. So, they can be used in businesses to serve strategic information needs.

(ii) In the next step, the authors study each SMA technique in depth. The authors identify the input information stream that can be collected from reliable sources, the processing method of each technique. At the same time, the authors also identify the output information needed to provide for other SMA techniques and provide SMA reports.

(iii) Next, the authors conducted in-depth interviews with experts until reaching the saturation point. This step aimed to collect more opinions: the necessity of SMA techniques, the relationship between SMA techniques, and the feasibility of organizing in a company. Based on these results, the authors conducted a re-examination through the survey. From there, the authors strengthened the evidence for the feasibility of the process of collecting, processing, and analyzing information. At the same time, the authors confirm the output information and the relationship between the information.

3.2. Data Collection

Qualitative data is collected through in-depth interviews with about 20 experts working at Ho Chi Minh City and Binh Duong province. Discuss with experts to collect views and opinions related to the research issue. The collected opinions will be classified and synthesized through a summary table.

Primary data is done from the survey. The sample includes about 100 companies. The survey is conducted in 2 ways: directly, and sending mail depending on the convenience of accessing. The survey forms will be checked, classified and calculated. The authors use statistical methods to determine the frequency and proportion of opinions of the surveyed subjects.

4. Research Results

4.1. Level of Application of SMA Techniques

The level of application of SMA techniques varies between developed and developing countries (Rashid et al., 2020). Developed countries apply SMA techniques at a high level. The number of techniques studied is large (ranging from 3 to 16 techniques). In developing countries, the number of techniques studied is small, and the level of application is low.

In Vietnam, there are not many studies on SMA. Each study usually evaluates the level of application of several SMA techniques. Conducted studies include Anh (2012), Hoang Thu Huyen (2017), Hoang Thi Huyen (2018), Manh (2019), Thu (2019).

Studies rarely approach SMA techniques in general. The recent study that assessed the application level of many SMA techniques is Tran (2023). Tran (2023) surveyed 262 joint stock companies in Vietnam. The application level of SMA techniques was calculated from level 1 - not applied to level 5 - fully applied. The results (Table 5) show that many Vietnamese joint stock companies have now applied SMA techniques. In particular, SMA techniques are used to varying degrees.

Table 5.
Level of application SMA techniques in joint stock companies.

No.	TECHNIQUES	Quantity		Rate		
		Not used	Used	Total	Not used	Used
1	Attribute costing	70	192	262	26,7%	73,30%
2	Target costing	31	231	262	11,8%	88,20%
3	Quality costing	53	209	262	20,2%	79,80%
4	Activity-based costing	30	232	262	11,5%	88,50%
5	Benchmarking	49	213	262	18,7%	81,30%
6	Integrated performance measurement	39	223	262	14,9%	85,10%
7	Strategic pricing	32	230	262	12,2%	87,80%
8	Competitor cost assessment	33	229	262	12,6%	87,40%
9	Competitive position monitoring	29	233	262	11,1%	88,90%
10	Competitor appraisal based on published financial statements	71	191	262	27,1%	72,90%
11	Customer profit analysis	43	219	262	16,4%	83,60%

Source: Tran (2023)

Currently, we realize that almost all domestic and foreign research has not conducted research on the information relationship between SMA techniques.

4.2. Information Flow for SMA Techniques

Based on the results of previous studies, 19 SMA techniques are formed, developed and practically serve for the long-term decision-making. In general, changes in the external environment of a company

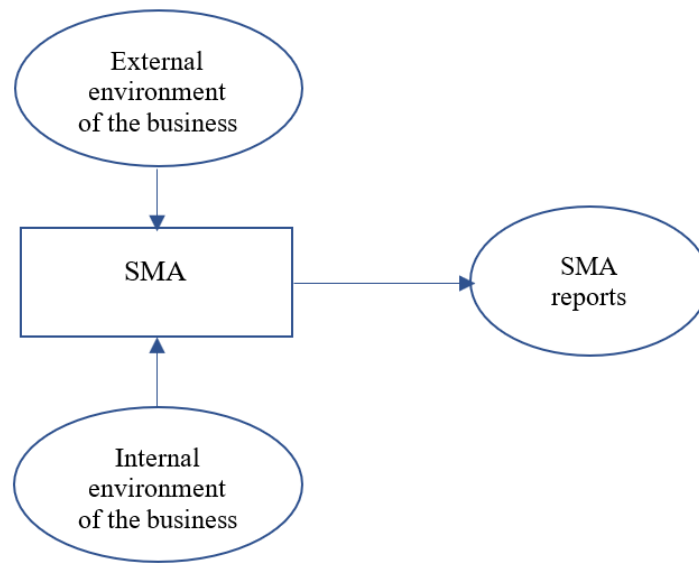


Figure 1.
Factors affecting SMA.

Motivate to develop SMA techniques in order to analyze customers, competitors, prices, and market costs. External factors also affect the internal factors in a company. Therefore, management accounting develop techniques to analyze the internal strength of the company in accordance with the strategy and new requirements. SMA techniques play the role of announcing, disseminating, implementing, and controlling the strategy through SMA reports (Figure 1).

The authors conducted in-depth interviews with experts on each SMA technique. The content focused on the necessity of each SMA technique for business and whether each technique can be applied. The content of the interviews was recorded by the authors. We then compiled all the opinions and classified them into groups: opinions that agree, opinions that disagree, additional opinions. We studied the interview results in depth and made appropriate adjustments. Techniques with similar content are grouped into one technique. Techniques that provide for the same administrator's requirements are grouped.

The next step of research is also very important. The authors study each SMA technique in depth. We look for the source of the stream of input information that can be collected. We examine how the information of each technique is analyzed. We look for paths of output information to other SMA techniques and strategic management reports. We continue to compare the similarities of the input information and the output information. We determine the relationship between the information of the SMA techniques. Through in-depth research on the input and output information flows of each SMA technique, we have designed the information flow of techniques in the input-output relationship to provide for the strategic decisions of managers (Figure 2).

The results of the survey have reinforced the evidence for the usefulness, reliability and feasibility of each information of SMA techniques. The results also identify the information relationships between techniques. This result provides the basis for integrating the techniques into AIS. These techniques can be organized into groups in order to provide for each specific requirement in a suitable stage. Businesses can organize a system of SMA techniques and a system of SMA reports into AIS.

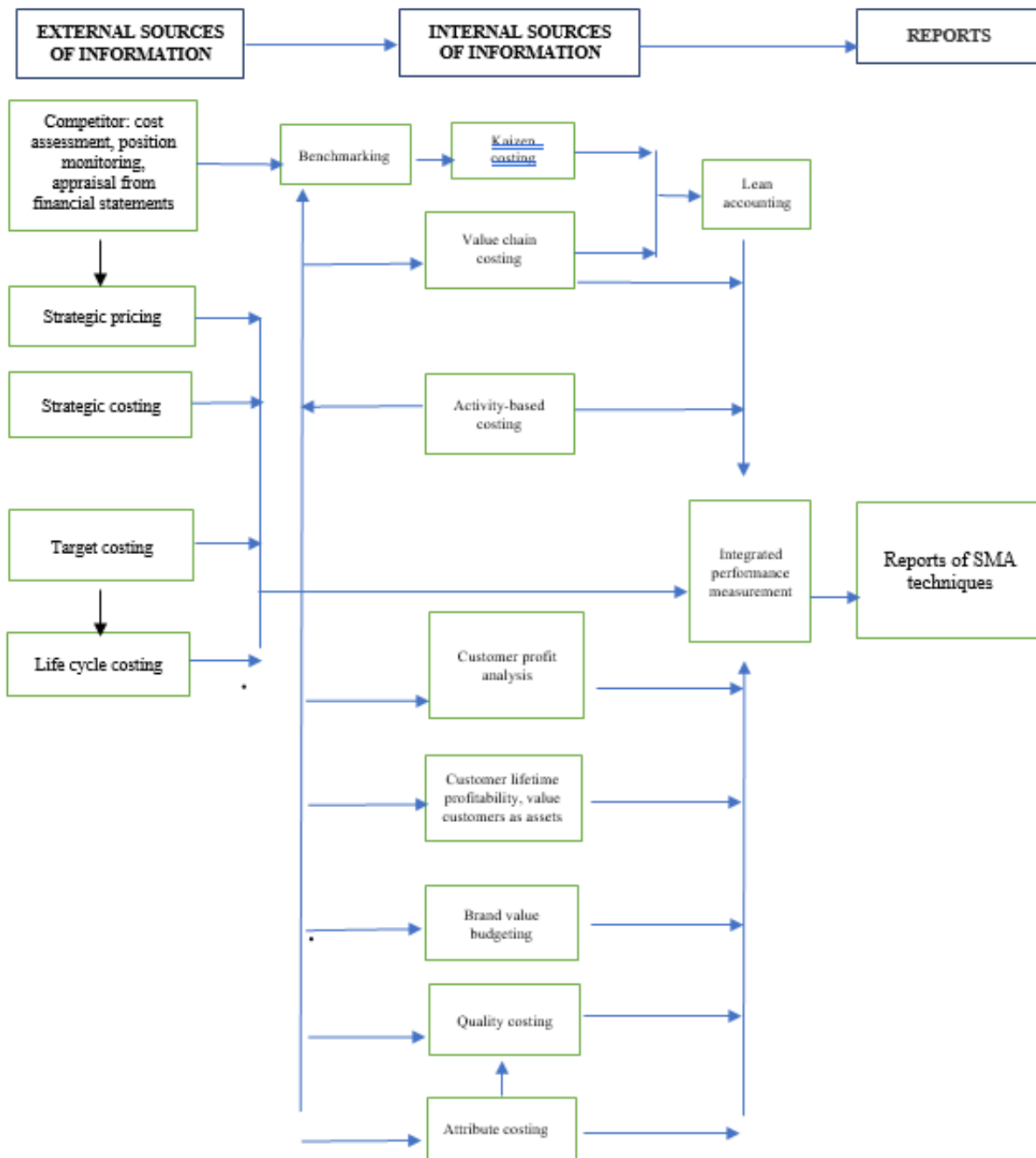


Figure 2.
Flow of SMA techniques' information.

5. Conclusion and Recommendations

Research results provide evidence about: (i) the necessity of SMA in businesses, (ii) The current status of information provided for SMA reports.

Management accounting plays a practical role in implementing the business strategy. Currently, the organization of information for SMA reports is at a low level in terms of the number and the level of

application. This situation hinders the strengths of SMA. The authors propose solutions for organizing information for SMA reports. From the results of this research, companies are oriented to organize information for SMA reports to achieve sustainable development.

- Collect necessary information from strategic requirements. This information is the direction for designing SMA reports. SMA reports use the output information of SMA techniques. Input information needs to be designed and collected corresponding to each SMA technique. Input information must also be integrated into the AIS.

- According to the requirements of managers in each specific context, SMA techniques can be organized into groups such as value creation group, long-term pricing and costing group to maintain competitive advantage, lean cost group... Information and relationships between groups refer to figure 2 and appendix 1.

- Companies develop specific steps. This process is consistent with the development of management accounting systems and AIS. Companies organize SMA techniques into groups and link them together with AIS. For information relationships between groups, refer to Figure 2 and appendix 1. The company can do this in the following order of priority:

- + Organizing the activity-based cost system. This is the most basic and important technique, which forms the foundation for other SMA techniques.

- + Organizing customer profitability analysis. These techniques include: customer profitability analysis, customer lifetime profitability analysis, customer asset valuation, brand valuation. Customers are the most important factor for businesses to maintain and develop sustainably.

- + Organizing lean accounting, include: benchmarking, kaizen costing, value chain costing. Businesses have a regular and long-term program to manage costs optimally, towards lean accounting, product quality, and customer satisfaction. So, businesses achieve sustainable competitive advantages.

- + Organizing and applying quality costs. This group includes: product attribute costs, quality costs. Product quality must always be controlled and maintained to create competitive advantage, aiming at customer satisfaction.

- + Organize an integrated performance measurement technical team. This is a comprehensive technical group to manage practical results and successfully implement strategies.

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Appendix 1.

Information on strategic management accounting techniques.

No.	Náme	Input	Output	Provide for other techniques	Provide for SMA reports
1, 2, 3	Competitor cost assessment, competitive position monitoring, competitor appraisal based on published financial statements	Facilities, technology, sales, market share, number of products, unit costs, profit on revenue of competitors, other announced by competitors.	Cost, competitive advantage, position of competitors	Benchmark	Report on costs, competitive advantages, position of competitors
4	Strategic pricing	Competitive strategy Competitor price response, price elasticity, market growth, economies of scale, and experience.	Strategic pricing maintains competitive advantage	Integrated performance measurement	Report on strategic pricing to maintain competitive advantage
5	Strategic costing	Superior strategic and marketing information helps maintain competitive advantage. Direct activities use resources to implement strategy and marketing to develop to help maintain competitive advantage.	Estimate the cost of implementing strategy and marketing to develop and maintain competitive advantage.	Integrated performance measurement	Estimated cost reports for strategy implementation and marketing to develop and maintain competitive advantage.

No.	Name	Input	Output	Provide for other techniques	Provide for SMA reports
6	Target costing	Identify products and services with specific attributes	Target costing	Integrated performance measurement	Target cost report for attribute or product
		The expected selling price of a product or service with specified attributes.		Life cycle costing	
7	Life cycle costing	Identify products and services with specific attributes in each stage throughout the product life cycle	Production costs in each stage and throughout the product life cycle.	Integrated performance measurement	The report estimates production costs in each stage and throughout the product life cycle.
		Estimate costs to ensure target costs			
8	Activity-based costing	Activities in the production and business process are related to costs and updating market information.	Activities related to cost relationships and market information updates	Value chain costing, benchmarking, kaizen cost, Integrated performance measurement	Operating expense report.
		Costs occur inside and outside the business according to the production and business process.	Actual production costs for each activity and overall.		
			Information connected to the balanced scorecard		
			Information to design targets in plans, actions according to financial aspects, customers, operating procedures, human resources		

No.	Name	Input	Output	Provide for other techniques	Provide for SMA reports
9	Value chain costing	Identify customer-oriented business operations such as designing, purchasing, manufacturing, marketing, distributing and servicing a product/service. Actual production costs	Cost of each activity in the value chain to satisfy customer	Integrated performance measurement	Cost reporting for each activity in the value chain to meet customer satisfaction
10	Benchmarking	Products, functions, and operations are benchmarked. The actual results of the company's products, functions, and operations Relevant data on partner benchmarking: process, implementation and performance measures.	Compare and analyze your results with your partner's, find out where to improve results.	Kaizen cost	Report on comparison and analysis between your results and your partners', draw out points that need to be implemented to improve results.
11	Kaizen costing	Selected products, functions, and activities for comparison Actual cost of previous period Actual costs for this period	Periodic cost reduction.	Lean cost, Integrated performance measurement	Report on periodic cost reduction.
12	Lean accounting	Cost of each activity in the value chain Periodic cost reduction.	Value-creating and non-value-creating costs in the value chain contribute to customer satisfaction.		Report periodically on the movement of value-creating costs and non-value-creating costs.
13	Customer profit analysis	Customer-oriented activities.	Operating profit according to	Integrated performance measurement	Report analyzing customer

No.	Name	Input	Output	Provide for other techniques	Provide for SMA reports
			customer type.		portfolio
14, 15	Customer lifetime profitability, value customers as assets	Customer-based activities	Operating profit stream according to customers	Integrated performance measurement	Report analyzing operating profit stream by customer
		The flow of operating expenses is estimated into the future			
		The flow of sales is estimated into the future			
16	Attribute costing	Product attributes	The cost of product attributes that attract customers	Quality cost, Integrated performance measurement	Report on the cost of product and service attributes that create value
17	Quality costing	Attributes of products, services, and customer needs	Quality maintenance costs (prevention costs, inspection costs, failure costs).	Integrated performance measurement	Customer-oriented quality cost reporting.
		Activities and relationships of the entire production and business process activities with costs, by customer and supplier			
		Customer satisfaction			
18	Brand value budgeting	The cost of branding activities	Brand value	Integrated performance measurement	Brand Value Report
		Revenue ratio for copyright transfer			
19	Integrated performance measurement	Strategy, vision, mission	Performance in four dimensions: financial, internal processes, learning and development, customers		Achievements of aspects, strategic maps and KPIs
		The goals of the four perspectives: financial, internal,	Strategy Map and KPI		

No.	Name	Input	Output	Provide for other techniques	Provide for SMA reports
		learning and development, customer			
		Activities and operating expenses			

Appendix 2.

Expert interview questions.

The tools used for synthesis are MS Word, Excel, SPSS. Interview questions revolve around the following issues:

- What is the level of implementation of SMA techniques in companies today?
- What is the level of implementation of SMA reports in companies today?
- What is the level of implementation of AIS in companies?
- What is the current status of information collection for SMA reports in companies today?
- What types of SMA reports are needed today?
- What is the appropriate information for SMA reports?
- What is the information relationship between SMA techniques?