



DIGITAL-BASED MANAGEMENT ACCOUNTING MODEL TO INCREASE THE EFFECTIVENESS OF MSMEs IN KUPANG CITY

MODEL AKUNTANSI MANAJEMEN BERBASIS DIGITAL UNTUK MENINGKATKAN EFEKTIVITAS UMKM DI KOTA KUPANG

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Abstract— The purpose of this study is to increase the effectiveness of MSMEs in Kupang City by designing a digital-based management accounting model, designing a basic accounting model to help Pondok Bambu Business manage various transactions, forms and records to create financial reports that provide accurate results and detailed financial information.

The research method is the design of a digital-based management accounting model using the development of the Define, Design, Development, and Disseminate (4D) model. This research will be carried out at Pondok Bambu SMEs for 6 months, will be carried out in the Define, Design, and Development stages, and the last stage is Disseminate, which will first test the effectiveness of the design of a digital-based management accounting model. This study uses a qualitative research method with a case study approach. Data collection techniques were carried out by participant observation, interviews, and documentation. The results of the investigation show that the Pondok Bambu Business does not yet have a financial recording and reporting system based on management accounting principles. In this study, financial records and reporting advice are provided by designing flowcharts that include organizational structure, list of accounts, accounting policies, complementary documents, sales, purchases, and preparation of financial statements.

Keywords— *UMKM, Management Accounting Model, Digital, 4D*

I. INTRODUCTION

Along with the development of the era of the industrial revolution 4.0 era and during the Covid-19 pandemic, advances in the field of information technology are increasingly dominating in all fields, thus encouraging people to continue to innovate and always be sensitive to changes in the field of technology. The development of digital-based technology that is increasingly widespread is characterized by the application

of the realm of technology in the scientific field, one of which is in the field of management accounting. Management accounting information system is a tool for processing data in a company to obtain information for company management and other interested parties. The use of this accounting information system is intended to facilitate an enterprise in obtaining information, making decisions, and controlling the company's activities.

Micro, Small and Medium Enterprises (MSMEs) are one of the most popular business practices among the public. MSMEs are business activities or businesses run by individuals, households, and small business entities. Many business activities today are shifting to digital platforms, including with MSMEs [1]. There is an urgent need for access and increased access to MSME financial services to combat this competition. Therefore, the calculation of the cost of goods produced is one of the factors that cannot be abandoned, if the owner is not right in determining the cost of goods produced, the selling price will be very high so that the possibility of ordering will be reduced. As a result, sales volume will decrease so that the company's goals are not achieved.

Based on data from the Ministry of Cooperatives and SMEs, the number of MSMEs currently reaches 64.2 million with a contribution to GDP of 61.07% or . The total number of MSMEs reaches 99.9% of the total business units in Indonesia. Other BPS data also showed that in the third quarter of 2020 all components of expenditure.

One of the business fields is in the form of a culinary business which is considered very promising because food products are staple foods that are always sought after and needed by the community. The impact of technology on the cooler business in Indonesia, the digital system [2] has integrated local food and new cuisine. Therefore, the *online* system has attracted customers from all walks of life to taste the mixed culinary menu. Technology helps culinary

businesses to handle orders, packages, and deliveries. Food technology plays an important role in reducing manual work in handling the preparation, processing, serving and serving of food.

II. THEORY REVIEW

A. Overview of MSMEs

In Indonesia, the law governing MSMEs is Law No. 20/2008 [3], in the Law, Small and Medium Enterprises (MSMEs) are explained as: "small companies owned and managed by a person or owned by a small group of people with a certain amount of wealth and income." The following are the criteria for wealth and income in the Act. Criteria for MSMEs and Large Enterprises Based on Assets and Turnover, presented in Table 1, below.

Table 1. Criteria for MSMEs and Large Businesses Based on Assets and Turnover

Business Size	Criteria	
	Assets (excluding land and buildings and places of business)	Turnover (in 1 year)
Micro	Maximum IDR 50 million	Maximum IDR 300 million
Small Business	More than IDR 50 million-IDR 500 million	More than IDR 300 million-IDR 2.5 billion
Medium Enterprises	More than IDR 50 million- IDR 10 billion	More than IDR 2.5 billion - IDR 50 billion
Great Efforts	More than IDR 10 billion	More than IDR 50 billion

Based on Table 1, MSME activities are one of the business fields that can develop and be consistent in the national economy. MSMEs are a good forum for job creation planned by both the government, the private sector and individual entrepreneurs[4]. The process to develop a new business occurs in the entrepreneurial process (*entrepreneur process*), which involves more than just solving problems in a management position. An entrepreneur must find, evaluate, and develop an opportunity by overcoming the forces that stand in the way of creating a new one. This process has four different stages: 1) identification and evaluation of opportunities, 2) development of a business plan, 3) determination of the resources needed, and 4) management of the resulting company [5].

Therefore, to be able to find out the effectiveness of the *entrepreneur process* in this study, the MSMEs used as the subject of the study were the Pondok Bambu Business. Pondok Bambu is located at Jl. Adi Sucipto Penfui No.44, RT.06, Penfui, Maulafa, Kupang City, Nusa Tenggara Your team. The products sold are in the form of a mixed culinary menu. The location of Pondok Bambu is quite strategically located right on the side of the road adjacent to El Tari Kupang International Airport.

B. Maintaining the Integrity of the Specifications

Financial management is one of the problems that is often overlooked by MSME business people, especially related to the application of the rules of financial management and correct accounting. This problem usually arises because the knowledge and information of MSME actors regarding accounting is very limited, the educational background of MSME actors also affects the knowledge of business actors [6].

Accounting information plays a role in improving the performance of SMEs. This can be seen in the increase in sales, decrease in funding, and the addition of assets to MSMEs that run a full accounting cycle and use accounting information for decision making [7]. In relation to accounting information, researchers categorize accounting activities carried out in the form of MSME accounting records, storing accounting documents, and preparing financial reports [8].

The experience of using high information will improve the application of management accounting, especially if the experience provides meaningful learning and benefits as msME actors want[9]

4. Designing a digital-based management accounting model

Developing digital-based MSMEs is an alternative to save the MSME sector during the Covid pandemic, but so far the government and the Ministry of Cooperatives and SMEs are trying to encourage digital transformation. Thus, the Covid-19 pandemic has fostered a digital entrepreneurial ecosystem. In this context, digital entrepreneurship is a form of business that utilizes the sophistication of digital technology, both in the process and marketing of products and services. In other words, all types of businesses that use websites or applications to sell their products online are included in the realm of digital entrepreneurship. The use of e-commerce applications and the use of social media in digital marketing covers the realm of digital entrepreneurship. Therefore, digital entrepreneurship in the future can become one of the sectors that make many positive contributions to strengthening the Indonesian economy. This is tracked by the strengthening of the role of information technology in the business world [10].

The design of a digital-based management accounting model occurs when there are accounting practices. Accounting practices in a financial statement are characterized by the availability of financial statements that are systematically prepared and supported by adequate evidence. To produce

financial statements, it is related to the availability of an accounting information system. An accounting information system is an integrated array of people, activities, data, networks and technologies that serve to support and improve the daily operations of a business, as well as provide information needs for problem solving and decision making by management. There are two types of information systems, namely *single user* and *multi user*[11] . Therefore, the differences in the creation of financial statements of computerized (digital) systems and manual systems are presented in Table 2, the following.

Table 2. Differences between Computerized (digital) System Financial Report Making and Manual System

Computerized System (digital)	Manual System
1. It starts with the initial residual value in the account contained in the general ledger.	1. Same
2. Analyze and classify business transactions according to their type.	2. Conducting analysis and journaling of transactions at the time of occurrence.
3. Automatically, the computer will transfer the book of transactions per group or at the time of occurrence (<i>on-line</i>).	3. Transfer journals to an account on the general ledger.
4. After the book-entry is carried out, there will automatically be an unsuitable residual value for each account.	4. In each accounting period, the calculation of the remaining value that has not been adjusted for each account is carried out.
5. If needed, the remaining balance sheet can be printed as a report.	5. Insert the remaining balance into the lane balance sheet, and complete the lane balance.
6. Enter and move book the adjustment journal paragraph. Print financial statements. After creating a <i>back up</i> for the accounting data of this period, do the closing	6. Compile financial reports, do journals adjustments, do journals. Arrange an adjusted remaining balance sheet. The balance sheet of sisini will be the basis in stage 1 for the next period.

posted automatically. The initial remaining value for the next period will automatically appear as a result of the closing process.	
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Based on the differences in Table 2, it can be identified that in the accounting information system and the presentation of financial statements a company consists of 3 main components, the three components of the function system are *inputs*, processes, so as to produce *outputs* in the form of financial statements as information needed in making managerial decisions. This feature also shows that the system as a process cannot work alone, it requires input, process and output. Plus SWOT Analysis and SWOT Matrix. SWOT analysis is used from the start to improve internal and external business factors. This research is a production-focused business strategy that considers aspects of strengths, strengths, threats, and weaknesses [12].

III. METHODS

Research Location and Time

Pondok Bambu Pondok Bambu Business Research Location is located at Jl. Adi Sucipto Penfui No.44, RT.06, Penfui, Maulafa, Kupang City, Nusa Tenggara Your team. The research will be conducted for 6 months from April-September 2022, while the preparation of the final report will be carried out in October 2022.

Types of Research

This type of research is *research and development* using a 4D device development model (*Define, Design, Develop, and Disseminate*) [13]. The research resulted in an analysis of the design of a digital-based management accounting model.

Research Implementation Procedure

The selection uses a 4D device development model because the development steps are very clear, systematic, and purposeful. So as to get a valid, reliable, objective, and practical project assessment. The explanation of the stages is as follows.

1) *Defining* Stage (Define)

The activities in this stage are initial-final analysis, *entrepreneurial analysis (owners / managers and employees)*, financial management analysis, and business objective specifications. a). Initial – Final Analysis. At this stage, researchers seek information about *entrepreneurial* characteristics including cognitive development, academic background, social and economic life background. b). Material

Analysis The analysis of this material is the basis for the preparation of business objectives. This analysis is useful in determining the parts that will be studied in the business. c). Task Analysis. The analysis of this task is compiled on the basis of indicators of the achievement of efforts. d). Business Objectives Specification. The activity carried out by the researcher at this stage is to describe the indicators of business achievement with the results of material analysis and analysis of tasks carried out previously.

2) Design Stage

The purpose of this stage is to produce a digital-based management accounting model device design. The results at this stage of design are called preliminary drafts (draft I). Activities at this stage are: a). Media Selection. At this stage, the researcher determines the right media and in accordance with the theme with the digital-based management accounting model. Selection of media with business objectives, entrepreneurial characteristics, time, media function, and entrepreneurial ability to use media. b). Format Selection. At this stage, the researcher chooses a format for designing the content, selecting business strategies, and sources of financial management in accordance with the principles, characteristics, and steps that are in accordance with the design of the model used. . c). Preliminary Design. The initial design of the digital-based management accounting model design in this study included the initial design of a digital-based management accounting model, a test instrument for the resulting effectiveness results called Draft I.

3) Development Phase (Develop)

The purpose of the development stage is to produce a final draft of a good digital-based management accounting model design. The activities at this stage are :a). Expert validation. The result of the initial draft is that draft I is validated by the validator, and the revision is used as the basis for improving the model design to obtain draft II. . b). Readability Test. The readability test was carried out to several selected entrepreneurs and employees to see if the design of the digital-based management accounting model could be read clearly and easily understood.

4) Disseminate Stage

The purpose of this stage is to conduct a validation test on the design of a digital-based management accounting model that has been tested and revised, then disseminated to the field. The 4D Development Design is presented in Figure 2.

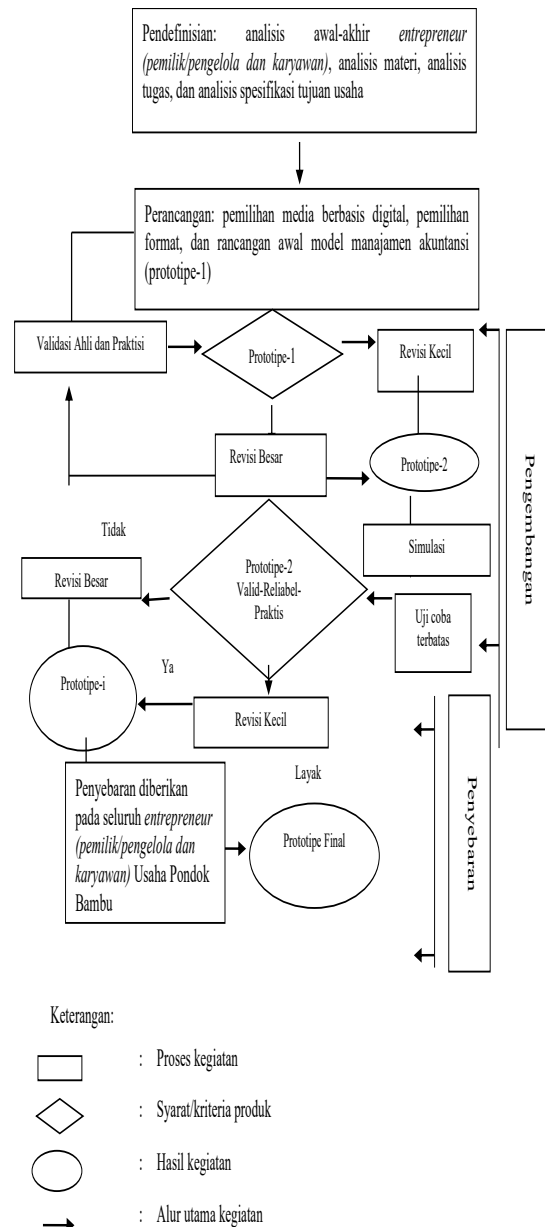


Figure 2. Design Development of 4D models; *Define, Design, Development and Disseminate*

Research Instruments

The research instrument was developed to obtain information about all components of development quality which include validity, reliability, objectivity, and practicality. The instruments developed include: 1) feasibility assessment

sheets for business strategy implementation; 2) business implementation observation sheet; and 3) validation sheet.

Data Collection Techniques

The data collection techniques used in this study were carried out by participant observation, interviews, and documentation, including: 1) non-test techniques, consisting of: (a) direct observation and assessment of the design of a digital-based management accountability model. by validator; (b) direct observation and assessment of the implementation of the instrument given to the observer, and (c) giving questionnaire responses from employers (owners/managers and employees) to collect design feasibility data and 2) testing techniques, namely giving a test item description to entrepreneurs (owners/employees). managers and employees) to find out the understanding of the business activities that have been carried out [14].

Data Analysis Techniques

Data analysis techniques include: 1) data validity analysis; 2) reliability of data analysis (reliability); 3) data analysis of the practicality of designing a digital-based management accounting model;

IV. RESEARCH RESULTS

Management system

Digital accounting is the new normal. Entering the era of digitalization which is often referred to as the industrial revolution 4.0, the phenomenon of collaboration between cyber technology and automation technology forces us to adapt to technology. Responding to the negative impact of the industrial revolution 4.0, a new idea emerged, namely society 5.0, this concept focuses on humans (human-centric) based on technology. One of the professional fields that can take advantage of this technology is the accounting profession. Computer-based and digital information systems play an important role in developments in the business world, as well as in the world of accounting. The specific purpose of this study is to increase the effectiveness of MSMEs in Kupang City by analyzing the design of a digital-based management accounting model. The use of computers has a significant effect on the use of financial statements at Pondok Bambu. Using the Moka Pos device, it has an ease of use that affects the use of its managers. The owner can know all transactions starting from the hour, day, week, month and year with reports at any time.

Moka really helps the manager in developing Pondok Bambu Restaurant because he can monitor it at once every day. Its simple operating system is also very practical making it safe to learn in new stores. The food and beverage business or what is commonly referred to as the culinary business is indeed profitable. In addition to having a relatively small risk and capital compared to other businesses, eating is the main need of every human being. Some of them such as coffee shops, fast food restaurants, or food stalls. Fast food restaurants are

restaurants that provide fast food as well known as McDonalds, KFC, and various other restaurants. Therefore, a food business can be started for novice entrepreneurs in Indonesia.

Pondok Bambu Resto is one of the fast food restaurants in the city of Kupang, precisely in the village of Penfui, which is never empty of visitors, especially those around an area of 10 km². The characteristics of the queuing system, queuing estimation applied at Pondok Bambu Resto, formulate recommendations for improving the queuing system to reduce queues, and minimize costs [15]. Data analysis was performed to compare manual calculations and simulation methods using rena 14.0. The characteristics of the current queue in restaurants are random and unlimited arrival patterns, FIFO (first in first out) queue discipline, and the design of a single-phase multi-channel queuing system. The recommended queuing model that can be applied is to add 1 cashier to 2 cashiers. Sales are made offline and online.

Human Resources.

Pondok Bambu Restaurant provides its employees with a work culture that all employees of Pondok Bambu Restaurant must adhere to. Every employee is expected to be in charge. Each employee is appreciated for their work, and given constructive feedback so that employees can continue to learn to develop their respective potentials. Having a quality menu prioritized at affordable prices Hospitality Culture "Attitude + Behavior = Customer Experience" is a simple formula that employees use and apply every day. Pondok Bambu Restaurant was built with the principles of inclusiveness and tolerance as well as mutual respect.

The advantages of fast food restaurants are that they are practical, have a comfortable place, taste relatively good and the portions served are also appropriate so that they do not make the stomach feel full. Which can reduce the impact of the entry of new competitors to enter the same field with the same restaurant as other fast food industries [16]. SWOT ANALYSIS Strengths. First, this restaurant has a delivery system. The delivery system helps consumers to get their orders easily and practically, by downloading the Grab Food application (playstore/apstore) or consumers can order the desired food then it will be delivered according to the consumer's address. During the pandemic, Indonesia has implemented contactless take away, contactless drive thru, and contactless delivery services. In Grab Food's contactless service, restaurants require food deliveries to be delivered with no physical contact at all between consumers and the delivery person. This system gives consumers the opportunity to pick up their own orders directly in the Grab Food .

SWOT Analysis Recapitulation

4P	Strength (S)	Debilitation (W)	Chance (O)	Threat (T)
1. Business Location	a. It is located near several agencies/offices.	a. Lack of parking space.	a. Located near several agencies / offices.	Many similar ventures.
(Place)	b. Convenience of location.	b. The place to eat is hot during the day.	b. Located on the outskirts of a bustling street	b. Many choices of food businesses around.
	c. Be in a two-way lane.			c. Hygiene issues.
2. Menu	a. It has a varied menu (product).	a. Cannot be enjoyed by everyone.	a. Loved by foodies.	a. Raw materials are difficult to find
(Product)	b. It has a distinctive taste.	b. Raw materials are not durable.	b. Prepare n birthday party packages and catering.	
	c. Food sold is familiar to consumers.			
	d. There are always new innovations			
3. Price Offered (Price)	a. Priced	-	-	-
4. Promotions (Promotion)	a. Promotion with various media.	a. Has not done any promotion through television media.	a. Free promotion.	-

Figure 1. Pondok Bambu restaurant SWOT Analysis Recapitulation

Finance

Sales in 2022 from January to July are presented in figure 1

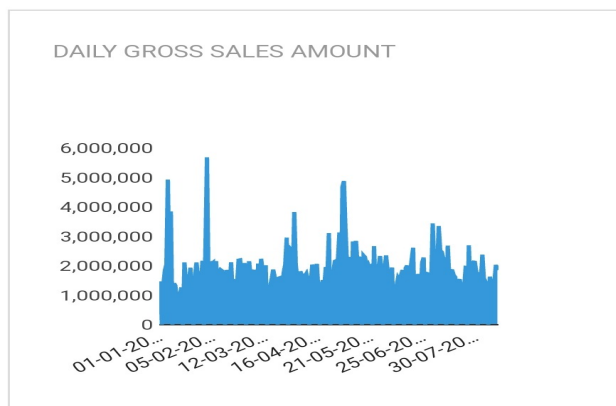


Figure 1. Sale transaction of Pondok Bambu Restaurant

Sales of Pondok Bambu continue to increase from month to month. The average monthly turnover reaches Rp. 37,000,000, - not including the costs and salaries of employees. When viewed from the word menu gori, the food is very large in income, it can be seen in Figure 2.

CATEGORY BY VOLUME

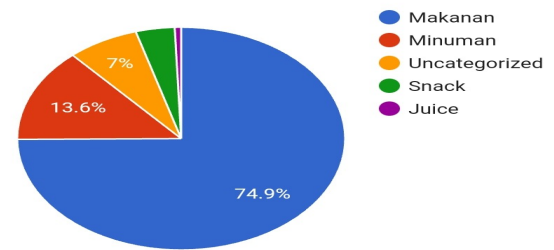


Figure 2. Pondok Bambu restaurant menu transaction January – July 2022

The highest sales of food menus in January – July 2022 were food reaching 74.9%, followed by drinks and the lowest was juice. Total 6 employees divided into two sets. Education 3 undergraduate and 3 high school graduates.

V. CONCLUSIONS

Based on the survey results and the description of the swot analysis of the pondok bambu restaurant business, the following conclusions can be drawn:

1) strengths based on the swot analysis conducted, pondok bambu restaurant has strength in terms of strategic business location (location), which is in a two-way lane with offices, a convenient location for customers or potential customers. Talking about menus (products), there are always new innovations, with diverse menus, distinctive flavors, and food products sold that are familiar to customers and potential customers. In terms of price (price), the price offered is very affordable. In terms of promotion, it is carried out using various media so that it can attract many customers or potential customers.

2) weaknesses based on the swot analysis conducted, pondok bambu restaurant has weaknesses in terms of location (location), minimal parking space and hot places to eat during the day. Regarding the menu (product), the menu is seafood, and not everyone who is not good at seafood or who is allergic to seafood can eat it. The ingredients are not easily damaged because the restaurant serves food using fresh ingredients for the convenience of its customers or potential customers to enjoy the available food. Regarding promotion, this restaurant is not advertised through tv media.

3) opportunities based on the swot analysis conducted, pondok bambu restaurant has an opportunity (opportunity) in terms of a strategic business location located near offices and on busy roads to attract customers or potential customers, has various branches for your convenience. Restaurant with branches all over the world. The menu (item) is popular with seafood lovers, features seafood on the menu, and offers

birthday party and catering packages. In terms of promotion, being around the office so you can do word of mouth for free.

4) threats based on the swot analysis conducted, pondok bambu restaurant poses a threat in terms of business location (location), the number of similar businesses, the many choices of food businesses around the restaurant, and cleanliness problems in the restaurant. By the roadside, every customer or prospective customer must first check the guaranteed cleanliness to return to this restaurant. For menus (products), raw materials are difficult to find in the open market, because they require high-quality raw materials that are in accordance with the restaurant's desire to become the best member of its customers and potential customers.

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