DATA IN SUMMARY | ACCOUNTING, MANAGEMENT, BUSINESS, ECONOMICS

Implementation of Digitalization of Bookkeeping Based on Accounting Computerization: Case Study From Village-Owned Enterprise (BUMDES) Ngargoretno, Salaman, Magelang, Indonesia

Muhammad Nuur Farid Thoha[1], Mia Ismiati[2]

[1,2] Department of Accounting, Faculty of Economic and Business, Universitas Budi Luhur, Jakarta, Indonesia.
Email: mn.faridthoha@budiluhur,ac,id[1], 2132500030@student.budiluhur.ac.id[2]

ABSTRACT
This study examined the implementation of Microsoft Excel-based bookkeeping digitalization in the Ngargoretno Village-Owned Enterprise (BUMDes) for the 2023 period. The sample used in this study was the Ngargoretno BUMDes, which oversees seven small and medium enterprises (SMEs): Kopi Merah, Kopi Liar, Kopi Arabica, Gula Semut, Teh Sangit, Jahe Instan, and Kunyit Instan. This research employed a qualitative descriptive approach with a case study focus. The findings indicate that the digitalization of bookkeeping has positively impacted the quality of financial recordkeeping within Ngargoretno BUMDes. The new system has made the bookkeeping process more informative and has significantly helped the BUMDes management overcome the challenges previously faced.

Keywords: BUMDes, Bookkeeping, Bookkeeping Digitalization.

I.   Introduction

The success of village development plays a significant role in national development, as it reflects equitable progress down to the most minor administrative units of the country (Salihin, 2021). Village development efforts are crucial for achieving national development goals because they help ensure the fair distribution of development outcomes that reach all segments of society, particularly those in rural areas (Salihin, 2021). Given Indonesia's large number of villages, the government cannot continuously supervise and regulate all economic activities in rural areas. As a result, the government has granted villages the authority to manage their affairs, as stipulated in Law Number 6 of 2014 concerning Villages (Pradini, 2020). This law encourages villages to establish village-owned enterprises (BUMDes) to fulfill community needs and fundamental necessities and to utilize untapped village resources while also developing human resources capable of managing these enterprises as assets to support the local economy. The establishment of BUMDes serves as a platform to foster community creativity and optimize village resources through various business activities. Ultimately, this can increase the village's original income and support economic and developmental growth at the village level (Arindhawati & Utami, 2020).

Based on data from the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration (bumdes.kemendesa.go.id), as of March 2023, only 12,945 Village-Owned Enterprises (BUMDes) have officially obtained legal status. Meanwhile, approximately 35,000 BUMDes are still in the process of registration. Central Java alone has 7,534 BUMDes, with 346 located in Magelang Regency. Based on this data, the author will discuss a Village-Owned Enterprise in Central Java, specifically in Ngargoretno Village, Magelang Regency.

Table 1. Allocation of BUMDES in Central Java Province, Indonesia

Regency	Number
Banjarnegara	262
Banyumas	300
Batang	218
Blora	267
Boyolali	219
Brebes	292
Cilacap	269
Demak	211
Grobogan	273
Jepara	184
Karanganyar	160
Kebumen	449
Kendal	254
Klaten	391
Kudus	111
Magelang	355
Pati	401
Pekalongan	247
Pemalang	211
Purbalingga	222
Purworejo	465
Rembang	253
Semarang	202
Sragen	196
Sukoharjo	145
Tegal	265
Temanggung	258
Wonogiri	251
Wonosobo	203
Total	7534

Source: www.bumdes.kemendesa.go.id

Ngargoretno Village is rich in natural resources, including coffee plantations, tea gardens, beekeeping, and Etawa goat farming. The village's local products include wild coffee, red coffee, wild honey, Etawa goat milk, sangit tea, ant sugar, and ready-to-brew herbal drinks. To manage these abundant resources and economic activities effectively, a Village-Owned Enterprise (BUMDes) is essential. However, BUMDes Ngargoretno continues to face challenges in bookkeeping. These challenges stem from several factors, such as a limited understanding of accounting principles, a shortage of skilled human resources, and the lack of bookkeeping training for BUMDes administrators. These issues became particularly evident during the implementation of the Merdeka Belajar Kampus Merdeka – Membangun Desa program.

II.   Literature Review and Hypothesis Development

2.1.   Stewardship Theory

Stewardship Theory is a branch of accounting theory that describes a condition in which management is primarily motivated to achieve shared goals rather than pursue personal interests (Efendi et al., 2022). Within this framework, managers act as stewards—individuals entrusted with managing an organization's resources for the collective benefit. In the case of BUMDes Ngargoretno, the administrators serve as stewards responsible for managing village resources on behalf of the Ngargoretno Village community, who act as the principals or resource owners. The relationship between the stewards (BUMDes administrators) and the principals (village community) is built on mutual trust and a shared commitment to the organization's goals (Nuur et al., 2024).

2.2.   Bookkeeping

Bookkeeping involves the process of recording, managing, and reporting financial data of an entity, be it a company, organization, or individual. The systematic documentation of all economic activities related to accounting processes is the foundation for financial reporting and accountability to relevant stakeholders (Wardiningsih, Wahyuningsih, & Sugianto, 2020). Bookkeeping is crucial in monitoring the progress and growth of any entity engaged in economic activities. An entity's continuous development and expansion reflect its success in achieving sustainable operations (Azman et al., 2021).

2.3.   Village-Owned Enterprises (BUMDes)

Village-Owned Enterprises (BUMDes) are business entities established and managed by villages to enhance the local economy by utilizing each village's unique potential and resources (Sururama & Masdar, 2020). Since every village possesses distinct characteristics and resources, the local community is best positioned to understand and manage them effectively. A one-size-fits-all approach by the government is not suitable for addressing the diverse needs of each village. Therefore, BUMDes were created to empower villages through self-managed economic initiatives. The active participation of all community members in managing and developing BUMDes is highly encouraged. The continuous growth and development of BUMDes serve as indicators of improving community welfare.

2.4.   Micro, Small, and Medium Enterprises (MSMEs)

Micro, Small, and Medium Enterprises (MSMEs) are business activities undertaken by individuals or business entities that significantly enhance communities' economic well-being (Aliyah, 2022). MSMEs contribute to economic development by utilizing various potentials across agriculture, fisheries, manufacturing, services, trade, banking, and more. These enterprises generate employment opportunities, help reduce poverty, and promote equitable economic growth.

2.5.   Profit

Profit is a crucial piece of information for both internal and external organizational meetings. It serves as a tool to evaluate management performance and as a form of accountability for the assets entrusted to them (Cerniati & Hassan, 2020). Ultimately, every organization shares a common goal: to achieve profitability.

2.6. Digitalization

Digitalization originates from the word digital, which, according to the Indonesian Dictionary (KBBI), refers to something related to numbers used in calculations and numbering systems (Sinarwati et al., 2023). Digitalization involves transforming information from analog to digital format, making it easier to use, manage, store, and distribute. It replaces manual, labor-intensive operations with more automated and advanced systems managed through computers (Rika et al., 2023). As BUMDes is a profit-oriented entrepreneurial institution, implementing digitalization is essential to streamline the bookkeeping process.

2.7. Microsoft Excel

Microsoft Excel is among the most widely used spreadsheet applications in academic and professional settings. It offers a range of features that support data processing, the creation of charts and tables, and statistical analysis (Firdaus, 2024). The use of Excel simplifies tasks related to data management and statistical computations.

III. Research Method

This study employs a case study research method with a qualitative descriptive approach. The case study method collects data from natural settings (not artificially created), involving activities such as distributing questionnaires, conducting structured interviews, and other data collection techniques. Descriptive research analyzes various societal issues, prevailing norms, specific situations, and the relationships between activities, attitudes, perspectives, ongoing processes, and their effects.

3.1. Time and Place of Research

This research was conducted in 2023 at the Village-Owned Enterprise (BUMDes) Ngargoretno, in Salaman District, Magelang Regency, Central Java.

3.2. Data Collection Techniques

This study employs secondary data collection techniques from field research and literature reviews.

3.3. Data Analysis Techiques

The data analysis techniques used in this study are as follows:

1. Field Research:
   This technique involves collecting relevant data and information related to the topic of discussion, specifically the bookkeeping of incoming and outgoing goods at BUMDes Ngargoretno. The data is obtained through interviews with BUMDes representatives, including discussions about the challenges faced in the bookkeeping process and the type of assistance the researcher can offer.
2. Library Research:
   This technique involves gathering data and information from various reading materials, both online and offline, including scientific journals, books, and previous theses that are relevant to the research topic.

IV.   Results and Discussion

4.1.   The Process of Planning Bookkeeping Creation

Figure 1. Manual Bookkeeping of BUMDes Ngargoretno
Source: UMKM Division of BUMDes Ngargoretno

Figure 1 presents the bookkeeping form used by BUMDes Ngargoretno before it was modified and digitized using Microsoft Excel. The figure shows that the bookkeeping system was still disorganized, with conflicting and unclear information placement. For instance, the column intended to record the date of incoming goods also includes item names, and similarly, the column for the date of outgoing goods is mixed with the names of the items. Furthermore, there is no designated column to input the unit price of goods. The form also lacks a section to document the distribution of profits generated from BUMDes sales revenue, such as the profit share allocated to each UMKM and the portion received by BUMDes. The BUMDes share is further divided into two parts: one as profit and the other as working capital for BUMDes development.

Figure 2. Bookkeeping Design

4.2. Creation of Incoming and Outgoing Goods Bookkeeping For

Pembukuan Persediaan

Bulan : Agustus

Tgl	Nama Barang	Barang Masuk			Barang Keluar		
		Jumlah	Harga	Total	Jumlah	Harga	Total
1	Kopi Merah	3 kg	Rp 120,000	Rp 360,000			
	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
4	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
	Kopi Arabica				1 kg	Rp 250,000	Rp 250,000
7	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
8	Kopi Merah	3 kg	Rp 120,000	Rp 360,000			
10	Kopi Arabica				1 kg	Rp 250,000	Rp 250,000
	Kopi Liar				1 kg	Rp 180,000	Rp 180,000
12	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
14	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
	Kopi Liar				1 kg	Rp 180,000	Rp 180,000
18	Kopi Liar				1 kg	Rp 180,000	Rp 180,000
	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
19	Kopi Arabica				1 kg	Rp 250,000	Rp 250,000
20	Kopi Arabica				1 kg	Rp 250,000	Rp 250,000
22	Gula Semut				1 kg	Rp 50,000	Rp 50,000
23	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
26	Kopi Merah	3 kg	Rp 120,000	Rp 360,000			
	Kopi Arabica	1 kg	Rp 200,000	Rp 200,000			
	Kopi Liar				1 kg	Rp 180,000	Rp 180,000
27	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
29	Kopi Merah				1 kg	Rp 180,000	Rp 180,000
	Jahe				1 pcs	Rp 10,000	Rp 10,000
				Rp 1,280,000			Rp 3,400,000

Figure 3. Incoming and Outgoing Goods Bookkeeping Form

The creation of the incoming and outgoing goods bookkeeping form was based on the previous version; however, the new form features a more systematic recording method based on chronological dates, ensuring that bookkeeping is carried out sequentially. If there are no incoming goods on a particular date, the corresponding column is left blank, and the same applies to outgoing goods. This updated form includes dedicated columns for item names, with separate sections for incoming and outgoing goods. Each section contains additional columns for quantity, unit price, and total price (calculated by multiplying quantity by unit price). This format makes tracking the total number of goods received and dispatched easier, enabling readers to understand how the figures were calculated.

4.3. Creation of Stored Goods Bookkeeping Form

Rekap Sisa Barang Juli				
Kopi Merah	4 kg	Rp 120,000	Rp 480,000	
Kopi Arabica				
Kopi Liar				
Gula Semut	7 kg	Rp 45,000	Rp 315,000	
Jahe	1 kg	Rp 20,000	Rp 20,000	
Kunyit	1,4 kg	Rp 16,000	Rp 22,400	
			Rp 795,000	
Rekap Barang Masuk				
Kopi Merah	9 kg	Rp 120,000	Rp 1,080,000	
Kopi Arabica	1 kg	Rp 200,000	Rp 200,000	
Kopi Liar				
Gula Semut				
Jahe				
Kunyit				
			Rp 1,280,000	
Rekap Barang Keluar				
Kopi Merah	9 kg	Rp 180,000	Rp 1,620,000	
Kopi Arabica	4 kg	Rp 250,000	Rp 1,000,000	
Kopi Liar	4 kg	Rp 180,000	Rp 720,000	
Gula Semut	1 kg	Rp 50,000	Rp 50,000	
Teh Sangit				
Jahe	200 g	Rp 10,000	Rp 10,000	
Kunyit				
			Rp 3,400,000	
Rekap Sisa Barang Agustus				
Kopi Merah	4 kg	Rp 120,000	Rp 480,000	
Kopi Arabica				
Kopi Liar				
Gula Semut	7 kg	Rp 45,000	Rp 315,000	
Jahe	1 kg	Rp 20,000	Rp 20,000	
Kunyit	1,4 kg	Rp 16,000	Rp 22,400	
			Rp 795,000	

Figure 4. Stored Goods Bookkeeping Form

This form allows for the entry of information related to the recap of incoming goods from the previous month (end-of-month inventory), which serves as the initial stock for the current month. Additionally, it includes a recap of goods received during the current month from each UMKM that has deposited items, clearly showing the number of items added to the warehouse inventory during that period.

Similarly, a corresponding form for outgoing goods is prepared, containing the same type of information. However, this form is filled with data related to items that have been dispatched. After processing the bookkeeping data, a final inventory recap for the current month is generated, which will serve as the opening inventory for the following month.

4.4.   Creation of Profit Distribution Bookkeeping Form for UMKM and BUMDes

Table 2. Profit Distribution Bookkeeping Form for UMKM and BUMDes

Profit Distribution Bookkeeping: AUGUST					
	Unit	Price	Per Product	Total	
Total profit				Rp	3,400,000
Profit from Red Coffee	9 kg	Rp	120,000	Rp	1,080,000
Profit from Wild Coffee	4 kg	Rp	120,000	Rp	480,000
Profit from Arabica Coffee	4 kg	Rp	200,000	Rp	800,000
Profit from Ant Sugar	1 kg	Rp	45,000	Rp	45,000
Profit from Sangit Tea					
Profit from Instant Ginger	1 pcs	Rp	20,000	Rp	20,000
Profit from Instant Turmeric					
Remaining profit				Rp	975,000
Bumdes income				Rp	292,500

At the end of each month, BUMDes manages the profits earned during that period. This process involves distributing the total profits to each UMKM that has supplied goods to BUMDes and allocating a portion of the profits to BUMDes itself. Each UMKM receives a share of the profit based on the quantity of goods sold, while BUMDes generates profit by applying a markup to the selling price of each product. From the profits generated through these price markups, 30% is allocated as profit for BUMDes, while the remaining 70% is reinvested as working capital for BUMDes development.

V.   Conclusion

Based on the discussion above, the following conclusions can be drawn:
a. Digitalization of BUMDes Ngargoretno's Bookkeeping
    The use of Microsoft Excel for bookkeeping has had a positive impact, making financial records easier to understand and more comprehensive. It enhances the clarity and accessibility of financial information.
b. Incoming and Outgoing Goods Form
    This form effectively illustrates the monthly flow of goods. Analysis can identify periods with the highest and lowest volumes of incoming and outgoing goods for MSMEs (UMKM), serving as a valuable indicator for future inventory management decisions.
c. Inventory Management Form
    The inventory form helps BUMDes organize and monitor stock levels in the warehouse. In cases of overstocking during a particular month, BUMDes can reduce incoming supplies to prevent overcrowding and preserve product quality.
d. Profit Distribution Form for UMKM and BUMDes

This form simplifies the calculation of profit sharing between UMKM and BUMDes. It also facilitates analysis to determine which UMKM may require additional guidance or support, contributing to more equitable and strategic business development.

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