

## MSMEs Business Empowerment Through Assistance in Analysing Cost of Goods Sold in Lengkong Karya, North Serpong District, South Tangerang

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### ABSTRACT

The COVID-19 pandemic in 2020 significantly impacted the performance of Micro, Small, and Medium Enterprises (MSMEs) in South Tangerang City, Banten, Indonesia. Despite a growing human population that suggests a potential boost to the local economy, MSMEs in Lengkong Karya Village, North Serpong District, are not fully capitalizing on these opportunities. According to the coordinator of economic development in Lengkong Karya Village, MSMEs in the area are grappling with capital issues, primarily due to their inability to accurately identify costs, particularly the Cost of Goods Sold (COGS). This challenge hinders their financial management, making it difficult to evaluate their performance. In response, the Community Service team aims to implement an assistance program focused on analyzing COGS for local MSMEs, with the purpose of enhancing their economic income and overall business performance. Utilizing a training and assistance method, the program will provide MSME owners with essential knowledge, skills, and practical guidance in financial management and cost analysis. This program results in an increase in understanding, skills, and experience in analyzing the Cost of Goods Sold among the MSMEs being operated. Ultimately, this initiative seeks to contribute to an increase in family economic income and foster sustainable growth within the local economy, allowing MSMEs to better leverage the opportunities available to them.

**Keywords:** Assistance, Cost of Goods Sold, MSMEs, Community Service.

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## INTRODUCTION

South Tangerang City, especially the North Serpong District, was one of the areas affected by COVID-19 in 2020. According to data from the Central Statistics Agency ([www.bps.go.id](http://www.bps.go.id)), the economic growth in Indonesia contracted by 2.07 percent from 2019 to the fourth quarter of 2020. Economic contraction is a condition of a deep economic cycle decline, such that the GDP Figure is in the negative range. This was the result of the pandemic, which caused a crisis that affected various sectors in almost all countries in the world. One of the sectors affected by COVID-19 is employment. This is indicated by the large number of employees laid off from the agencies where they worked. The large number of employees who were laid off has caused an increase in the poverty rate in South Tangerang City, according to the BPS data for South Tangerang City, as shown in Figure 1.



**Figure 1. The Increase in Poor Population in South Tangerang City**

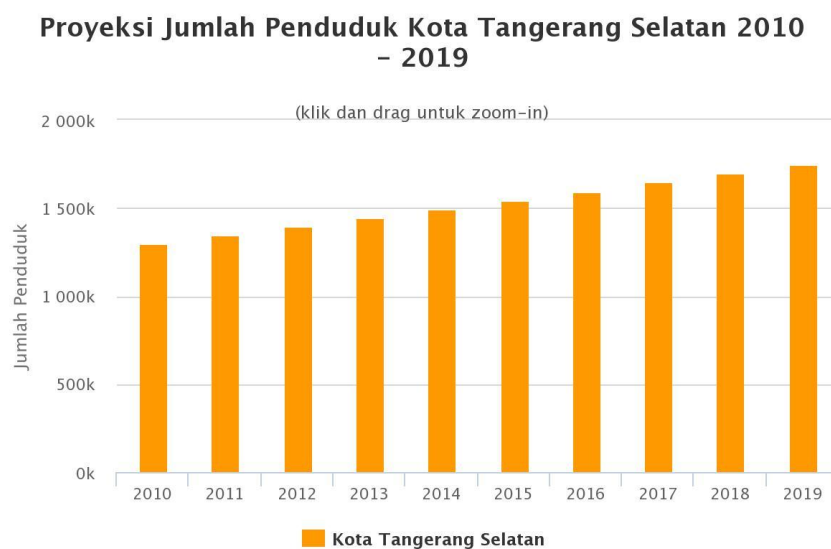
Source: Badan Pusat Statistik Kota Tangerang Selatan (2023)

Based on the graph in Figure 1, it can be seen that in 2013, there was a drastic spike in numbers, which tended to be stable until 2019. Due to the COVID-19 Pandemic, it can be seen that the poor population experienced a much more drastic increase in 2020, reaching a Figure above 2.25%. This indicates a decline in economic conditions among the people of South Tangerang City. The decline in economic conditions was felt by all levels of society who earned income from various sectors, including business. In this case, entrepreneurs also felt the impact, namely a decrease in income from the sale of goods/services, because people tend to be more careful in carrying out shopping activities and limiting travel activities during the pandemic. Consequently, there was a decline in welfare on a broad scale, which could be felt by both workers and entrepreneurs.

On the other hand, the development of Industry 4.0, and the rapid flow of globalization, require individuals to do creative things and always be innovative in capturing business opportunities in economic competition even on a small scale,

especially with the global pandemic that continues to suppress the economic situation, so that people must continue to hone their mindset that always wants to innovate creatively to improve family welfare. Therefore, in difficult times, the economic situation on a small scale plays an important role in maintaining the sustainability of welfare at the family level. If the family's economic situation cannot support the fulfillment of family needs, creative innovation efforts are needed to improve family welfare to meet daily needs.

MSMEs must be appreciated because they can support the government in providing jobs more evenly. Moreover, its population is increasing every year. This has an impact on competition in finding work, which is becoming increasingly difficult. The increase in population, especially in South Tangerang, is shown in Figure 2.



**Figure 2. Population Increase in South Tangerang City**

Source: Badan Pusat Statistik Kota Tangerang Selatan (2023)

Based on the graph above, it can be seen that there was a consistent increase in the population from 2010 to 2019. This indicates that population projections from year to year are increasing. With the increasing population, the potential of the community can also be ensured to increase and provide benefits to the economy, as long as the community is given adequate training and assistance. Starting from here, the Community Service team carried out a program in the form of training and assistance for the MSMEs in Lengkong Karya Village, who own household businesses. Training and assistance to pioneer this business can encourage accelerated economic improvement by increasing the number of MSMEs in South Tangerang in various sectors. Below are the data on MSMEs in South Tangerang City based on the scale and type of business in 2022.

**Table 1.** MSMEs at Tangerang Selatan City in 2022

Industry	Micro	Small	Medium	Total
Automotive	3783	107	16	3906
Accommodation	9643	126	2	9771
Expedition	101	57	2	160
Electronic	1219	47	4	1270
Pharmacy	538	37	4	57
Furniture	1088	32	18	1138
Counter HP	2900	57	1	2958
Creative	337	19	0	356
Culinary	54860	460	43	55363
Education	1458	87	7	1552
Nursery/ Care and Health	2955	102	6	3063
Fisheries	739	17	0	756
Agriculture	121	2	4	127
Vegetables & Fruits	4165	33	2	4200
Transportation	3166	103	2	3271
Fashion	20	1	0	21
Fashion & Convection	2898	22	14	2934
Convection	956	15	3	974
Grocery store	36537	1067	47	37651
Accessories	2	0	0	2
Craft	552	6	1	559
Other Services	14028	2823	140	16991

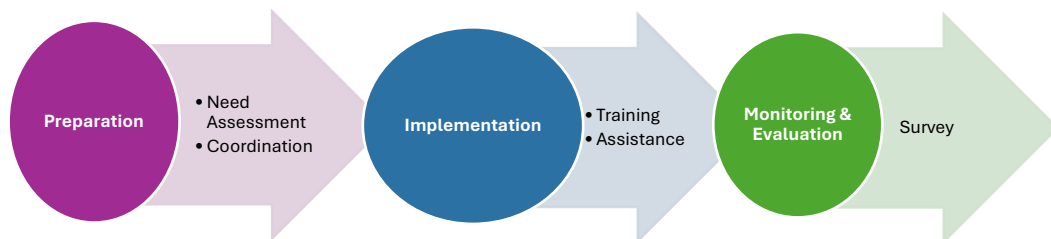
Source: Dinas Koperasi Usaha Kecil dan Menengah (2023)

Currently, the largest number of industries in the South Tangerang City MSMEs are dominated by culinary businesses, grocery stores, and other types of businesses. This shows that the two greatest potentials for businesses identifiable in South Tangerang City are culinary and groceries. To encourage the growth of these businesses, business performance should be improved. Business performance can be improved if measurable indicators are present. To measure such indicators, MSMEs should identify profits gained by maximizing sales and minimizing costs. To meet these requirements, MSMEs must identify their costs. For businesses that sell products, the most important cost is COGS. For this reason, the Community Service team in 2024 will conduct assistance, which is carried out in stages to equip the MSMEs actors at Lengkong Karya Village to analyze the cost of their business. Through the assistance of MSMEs, the Community Service team hopes that the knowledge and skills obtained can be disseminated to the entire community in North Serpong, so that MSMEs can better manage their finances and their performance can be more measurable.

In general, MSMEs actors perform their duties and functions to empower communities and families. The MSMEs actors in the North Serpong District are female, most of whom are housewives, with an average age of 40 years. Most MSMEs actors have a strong willingness to help the household economy. However, most of them feel that they do not have sufficient knowledge and skills to manage their costs and make their businesses sustainable. Therefore, they are often unable to provide marketed raw materials. In this case, the Community Service team needs to encourage MSMEs actors by providing knowledge and skills to make their businesses sustainable by improving capacities in analyzing MSMEs finances from the initial step, namely analyzing the cost of old goods (COGS). Knowledge and skill in analyzing COGS are very important for MSMEs. By providing a COGS analysis, MSMEs can determine the selling price of products, which can make their business profit. By gaining a profitable business, MSMEs can maintain their sustainability (Ayu Trisnawati & Maulana, 2024; Firmandani et al., 2024; Fitri et al., 2024; Ilmiyono, 2023; Maulany et al., 2024; Putri et al., 2021; Sugiana et al., 2023).

## METHOD

Before the Community Service activity was implemented, the Community Service team conducted a preparation in the third week of February 2024, before the first stage of training and assistance began. This preparation includes Training Need Assessment and coordination between the Community Service team and the MSMEs. *Community Education* : used for activities such as a) training such as *in-house training* ; b) counseling aimed at increasing understanding and awareness, and so on.



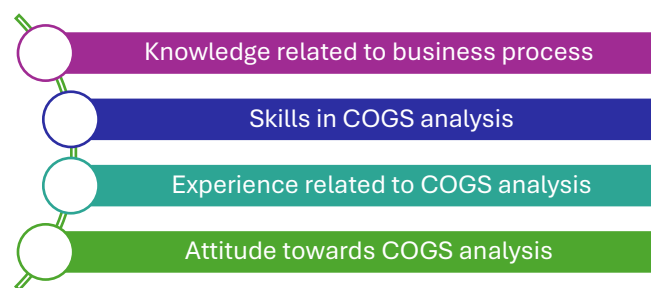
**Figure 3. The stages of Community Service program**

Source: Researchers (2024)

The coordination is carried out face-to-face, as well as a training needs assessment, in which data are collected using interviews and observation methods. The interview was conducted to obtain information about demography, educational background, the length of time in running business, four components, as shown in Figure 4, and the problems aroused in the determination and analysis of COGS. Interviews were also conducted related to the type of program MSMEs needed to solve the problems. The data and information obtained from the interviews were validated using triangulation techniques by confirming with assistants or employees who work to help MSME owners run their businesses to ensure that the information provided is valid. In addition to interviews, observations were also conducted by reviewing the location of training and

assistance in Lengkong Karya Village, North Serpong, to see first the condition of MSMEs that would be participants in the Community Service program.

Based on the training needs assessment conducted, the most common problem faced by MSMEs actors in analyzing COGS is identifying components that need to be considered in determining costs. The method needed to overcome the problems faced by MSMEs actors in Lengkong Karya Village based on the training needs assessment is a training and assistance method that is considered effective for improving capacity (Putri et al., 2021; Riyani et al., 2023; Tantri et al., 2022). Training and assistance were carried out intensively by conducting a blended method: synchronous and asynchronous methods. The synchronous method is used to deliver face-to-face training by visiting a location. Meanwhile, the asynchronous method was used to carry out intensive communication during the entire program via WhatsApp. Training and assistance are expected to solve the problems faced by MSMEs actors in analyzing the cost of goods sold (COGS), despite the challenge that most MSMEs actors are not familiar with accounting terms commonly used in analyzing COGS. To cope with this challenge, the Community Service team regularly used words common to MSMEs actors.



**Figure 4. Information obtained from MSMEs actors**

Source: Researchers (2024)

The next stage in the Community Service program is the implementation of training and assistance in analyzing the COGS. This training and assistance activity aims to provide knowledge and skills to the MSMEs actors regarding how to analyze the COGS. Training and assistance is provided by delivering materials on: 1) the importance of identifying COGS, 2) what needs to be considered in determining COGS, 3) how to calculate COGS, and 4) how to analyze COGS in determining the product selling price. The training was implemented on October 14, 2024, and assistance in analyzing COGS was conducted for two weeks after the training. The assistance program is carried out through intensive communication to evaluate the extent to which the MSMEs actors can implement the analysis of COGS learned through the training program. The training and assistance program is intended so that participants (MSMEs) can experience increased capacity that is not only limited to knowledge but also skills, experience, and attitudes.

Meanwhile, monitoring and evaluation activities were carried out to ensure that knowledge, skills, experience, and attitudes related to COGS analysis were in accordance with the objectives of the entire program. Monitoring and evaluation are carried out by the Community Service team offline by visiting the location directly. At

the end of the program, the Community Service team conducted a survey to determine whether training and assistance had an effective impact on participants. Before participating in this training and assistance, MSME actors do not have sufficient understanding and skills regarding COGS analysis, so it is expected that after participating in the program as a whole, MSME actors can apply COGS analysis. With the right COGS analysis, MSME actors will be able to determine the right selling price for products to reduce potential losses and maximize profits.

## RESULTS AND DISCUSSION

Participants who attended the training and assistance stage were dominated by MSME actors who were women (90%) and men (10%), with an average age of 40 years. Most MSME actors who were training and assistance participants already had businesses such as sachet coffee businesses at home, mukena (prayer set) reseller businesses, grocery stalls, and fried food businesses. As many as 5% of participants had run their businesses for more than 10 years, 55% had run their businesses for 6-10 years, and 40% had run their businesses for 1-5 years. Thirty-six participants attended the training and assistance stage was 36 people. A total of 36 UMKM actors received training that was carried out for one day, and then continued with intensive assistance for two weeks after the training day.

Based on the results of the Training Need Assessment conducted by the community service team, 80% of participants did not fully understand the determination of COGS, while 75% realized that they did not have the skills to identify and analyze COGS. Of all participants, 60% admitted that they had never had experience analyzing COGS, even though some of them had skills and understanding. However, all participants had positive attitudes and supported increasing capacity in the COGS analysis. Based on the results of the need assessment, it was also found that MSME actors in Lengkong Karya, North Serpong, have the same problem, namely the lack of knowledge, skills, and experience of MSME actors in analyzing COGS. Training and assistance were provided in the COGS analysis to accommodate these needs.



**Figure 5. The documentation of Training Need Assessment**

Source: Researchers (2024)

Training and assistance at this stage aim to help participants manage their businesses more efficiently. The Community Service team provides materials in the form of an explanation of the concept of COGS, how to accurately identify and calculate COGS, and how to determine the correct decision based on the information obtained from the COGS calculation. Additionally, participants are trained to analyze production costs, consider other factors that affect product cost, and ensure optimal profit margins to make a projection of the selling price. The Community Service team also provides calculation simulations with various examples of industries. At the end of this stage, participants were given a worksheet specifically designed to make it easier for them to understand and analyze COGS for products according to the business they run. The worksheet contains a guide to the steps for analyzing the COGS, including raw material components, labor costs, and other operational costs (overhead). Participants were asked to fill out a worksheet based on real data from their business so that the calculation results could be directly implemented in the management of their business. The assistance was also carried out by evaluating the results of the worksheet through group discussions and online communication. The results of this stage show that participants were able to analyze COGS and use the information to make decisions for setting the right selling price for products to support the sustainability of their home businesses.

Worksheets are provided to training and assistance participants to conduct COGS analysis in two forms: the first is intended for businesses whose products are produced by themselves, while the second is intended for businesses whose products are in the form of merchandise supplied by other businesses. For the first form, the community service team provided an example of filling out a worksheet for a brownie cake business, whereas for the second form, the community service team provided an example of a silk mukena/prayer set reseller business.



**Figure 6. The documentation of Training and Assistance Program**

Source: Researchers (2024)

In each worksheet, for both the brownie business and the silk mukuena, there are 4 (four) sheets, namely COGS Calculation, Product Data, Raw Materials, and Overhead Costs. The COGS Calculation Sheet contains data that must be filled in to identify the costs involved in the production process based on the results of providing training materials for cost identification. This sheet is the final recap of the identification of product data, raw materials, and overhead costs.

[illegible]

**Figure 7. Worksheet of COGS analysis for brownies product**

Source: Researchers (2024)

The second sheet on the worksheet used for brownie products is Product Data. Product data contain information about the products sold in the business being run. In this case, MSME participants record all the product variants produced so that each cost that occurs in the production process can be identified. Furthermore, the raw material sheet contains a list of all Raw Materials used in the production process, while the overhead cost sheet identifies costs that support the production process being carried

out. For the example of the COGS analysis of retail business products, whose products are not produced in-house, the type of sheet used is relatively the same, but there are differences in the steps of identifying raw materials and overhead costs.

Nama Usaha : Soliha Wear		Jenis Usaha : Bisnis online	
1 Nama Produk : Mulena katun silk		1 Pcs	
Untuk Per :			
I Harga Pokok Produk			
1. Biaya Bahan Baku/modal		Rp75.000	
2. Biaya Tenaga Kerja		Rp5.000	
3. Biaya Overhead		Rp10.750	
Total Harga Pokok Produk		Rp90.750	
II Biaya Operasional			
1. Sewa Tempat		Rp2.000.000	
2. Gaji Karyawan		Rp1.500.000	
3. Listrik		Rp200.000	
4. Air			
5. Telepon		Rp60.000	
6. Pemasaran/promosi			
7. Transport			
8. Perbekalan ( ATK)			
9. Penyusutan			
10.			
11.			
12.			
13.			
14.			
15.			
Total Biaya Operasional		Rp3.760.000	
Total Harga Pokok Penjualan		Rp128.350	
III JUMLAH PRODUK UNIT DIHASILKAN		100	
IV LABA DIHARAPKAN (PER BULAN)		20%	
V TOTAL HARGA JUAL		Rp154.020	
VI HARGA JUAL PER SATUAN UNIT			

DATA PRODUK				
No	Produk	Jumlah	Satuan	
1	Mulena travel	1	pcs	
2	Mulena katun silk	1	pcs	
3				
4				
5				
6				

Perhitungan Bahan Baku				
No	Nama Bahan Baku	Satuan Beli Bahan Baku	Jumlah yang Dipakai	Harga Satuan
		Harga	Nilai	Satuan
1	Mulena	Rp3.750.000	50	Rp75.000

Perhitungan Biaya Overhead				
No	Nama Barang/Jenis Biaya	Satuan Beli Barang	Jumlah yang Dipakai	Harga Satuan
		Harga	Nilai	Satuan
1	B. utilitas		3%	75000
2	B. Gastos Ongkir		4%	75000
3	B. iklan			2000
4	B. Packaging			2000
				10750

Figure 8. Worksheet of COGS analysis for silk prayer set

Source: Researchers (2024)

After the implementation of the training and assistance program, the community service team monitored and evaluated the participants, namely MSME actors. Monitoring and evaluation were carried out two weeks after the assistance was completed, using interviews with training and assistance participants. MSME actors, who initially 80% did not understand how to conduct COGS analysis, now understand COGS analysis. All participants also stated that they had the skills to conduct COGS analysis. For experience and attitude, the community service team conducted measurements during the monitoring and evaluation stages. The more MSME actors understand, possess skills, and have experience, the more they will have a positive attitude, because they perceived ease and usefulness (Ajzen, 2001). The results of this measurement showed that all participants stated that they had experience in analyzing COGS because they implemented COGS analysis using the format provided during training and assistance. In addition, all the participants stated that this program was useful and provided knowledge that could be applied.

## CONCLUSION

In conclusion, the assessment of community empowerment activities revealed varying degrees of target achievement based on the unique problems, needs, and challenges faced within the respective communities. It is evident that the methods employed in these initiatives align closely with community requirements, leading to significant impacts and benefits such as enhanced local participation and improved socio-economic conditions. The training and assistance program aimed at MSME actors, predominantly women, focused on enhancing their skills by analyzing the cost of goods sold (COGS).

Prior to the program, most participants had limited understanding of and experience with COGS analysis, despite having been in business for various durations. The program successfully addressed these gaps by providing comprehensive training on identifying and calculating COGS using worksheets tailored to different types of

businesses, including self-produced and resold products. Through simulations and hands-on exercises, the participants were able to apply what they learned directly to their businesses. Post-program evaluations showed significant improvements: all participants reported understanding and ability to perform COGS analysis, leading to better decision making in setting product prices. The program proved beneficial by equipping participants with practical skills to enhance the efficiency and sustainability of their businesses.

The success of these efforts can be attributed to a collaborative approach that acknowledges and addresses specific local issues. However, ongoing challenges highlight the need for continuous evaluation and adaptation of strategies to ensure sustainable outcomes. For further community empowerment, strengthening partnerships with local stakeholders, increasing resource allocation, and fostering continuous education and capacity-building initiatives are recommended. This holistic approach contributes to more effective empowerment activities, ultimately leading to more resilient communities. Additionally, it is imperative that appropriate acknowledgments of support and any potential conflicts of interest be transparently declared to maintain the integrity of research and empowerment activities.

#### **Funding Statement**

We would like to express our deepest gratitude to Universitas Terbuka for the grants provided to this community service program and to all individuals and organizations that contributed to the success of our community empowerment activities. Special thanks to our dedicated team members, who supported the training and assistance phases.

#### **Ethical Compliance**

All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

#### **Data Access Statement**

A Data Access Statement is a section in a scientific publication or research report that explains how the data used or generated in a study can be accessed by readers or other researchers. This statement aims to promote transparency, support research reproducibility, and comply with open-access policies, where applicable.

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2. **Access Instructions:** Provides information on how to access the data, such as direct links, digital object identifiers (DOI), or contact details.
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3. No Data Available:
  - "No datasets were generated or analyzed during the current study."
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- Reproducibility: Enables other researchers to replicate or verify the findings.
- Collaboration: Encourages further collaboration by sharing data.
- Compliance: Adheres to the policies of funding agencies or journals that require open access to data.

### Conflict of Interest declaration

The authors declare that they have no affiliations with or involvement in any organization or entity with any financial interest in the subject matter or materials discussed in this manuscript.

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