

Determining Production Cost Using The Job Order Costing Method at A Wood Furniture MSME

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Abstract

This study aims to analyze the determination of production costs using the Job Order Costing method at Pak Soleh's wooden furniture MSME in Lubuk Soting Village. The study is motivated by the fact that the existing production cost calculation system remains simple and does not yet account for all elements of production cost, particularly factory overhead cost, a condition that potentially leads to inaccurate selling price determination and affects business profitability. This study employed a qualitative descriptive approach, with data obtained through observation, interviews, and documentation, analyzed using the interactive analysis model of data reduction, data display, and conclusion drawing, followed by production cost calculation using the Job Order Costing method. The results show that the production cost according to the Job Order Costing method is Rp331,667 for a table, Rp241,667 for a chair, and Rp1,461,667 for a two-door wardrobe, while the production cost calculated by the MSME itself was Rp260,000, Rp160,000, and Rp1,500,000, respectively. Discrepancies of Rp71,667 for the table, Rp81,667 for the chair, and Rp38,333 for the two-door wardrobe indicate that the MSME's own calculation has not fully allocated factory overhead cost, so its production cost figures do not yet reflect actual production cost. It is concluded that the Job Order Costing method produces a more accurate production cost calculation because it systematically accounts for all production cost components, and is therefore suitable for implementation at Pak Soleh's wooden furniture MSME as a basis for determining selling price, controlling production cost, and improving business profit.

Introduction

Micro, Small, and Medium Enterprises (MSMEs) are productive business units owned by individuals or business entities that meet specific criteria under applicable statutory provisions. MSMEs hold a strategic role in the economy, given their capacity to absorb labor, increase community income, and support regional economic growth; in practice, however, MSMEs are required to manage their businesses effectively, including in the aspect of production cost management (Yolanda, 2024).

Accounting is an information system that provides financial reports to interested parties regarding a business's economic activities and condition (M. Rizal Satria, 2021). Within accounting, cost accounting specifically concerns the recording, classification, summarization, and presentation of costs relating to the manufacture and sale of products or services, along with their interpretation, with its primary objectives being the determination of production cost, cost control, and support for specific decision-making.

Pak Soleh's Wood Furniture/Furnishing MSME, located in Lubuk Soting Village, is a micro-enterprise engaged in producing various types of wood-based furniture according to customer orders. Products produced include wardrobes, tables, chairs, doors, door frames, shelves, beds, and various other furniture items made according to the size, design, and specifications desired by the consumer. The production system applied is job-order-based, meaning each product possesses different characteristics in terms of raw material use, processing time, number of workers involved, and level of manufacturing difficulty. This condition means the cost incurred for each

order is not the same, requiring a production cost calculation system capable of accurately reflecting the cost of each job undertaken.

Based on preliminary observation at Pak Soleh's furniture MSME, selling price determination is still conducted simply, relying on the owner's experience and estimates of raw material cost and labor wages. In practice, not all production cost components are calculated in detail, particularly overhead costs such as electricity use during production, machine and equipment depreciation, equipment maintenance cost, indirect materials, and other operational costs that actually form part of the production cost. This condition means the business owner does not yet have complete production cost information, so the selling price set potentially does not reflect the actual production cost.

The issue of production cost determination becomes increasingly important given that each order received has different specifications; a wardrobe order using teak wood, for instance, requires considerably higher raw material cost than one using meranti wood, while products with special carvings or designs require longer processing time than those with simpler designs. If such cost differences are not calculated accurately, the risk of error in setting the selling price arises: a selling price set too low can reduce business profit, while one set too high can diminish product competitiveness amid increasingly intense competition in the furniture business.

Preliminary data on the MSME's own production cost calculations show that the table has a production cost of Rp260,000, the chair Rp160,000, and the two-door wardrobe Rp1,500,000, a fairly significant difference influenced by the amount of raw material used, the complexity of the manufacturing process, labor requirements, and the completion time of each order. One method considered suitable for calculating production cost in businesses that produce goods based on customer orders is the Job Order Costing method, a system of collecting production cost based on each order received, so that all cost incurred can be specifically identified for each job; through this method, raw material cost, direct labor cost, and overhead cost are charged according to the order currently being worked on, and this method is capable of producing more detailed cost information than a simple production cost calculation approach (Andrea et al., 2025; Pradani et al., 2025).

Job Order Costing is particularly relevant for the furniture business because each product possesses different characteristics; not every order requires the same amount of raw material, the same processing time, or the same labor use, and within a single month a furniture business may receive various types of orders with differing levels of difficulty. If all such costs were averaged uniformly, the resulting production cost calculation would become less accurate; accordingly, Job Order Costing offers a solution for obtaining more precise production cost information, benefiting the business not only in determining selling price but also in controlling production cost, since the owner can identify in detail the cost used for each order and thereby more easily evaluate raw material use, labor productivity, and production process efficiency (Dewi, Tripaupi, & Zukhri, 2017; Diana, Setyowati, & Zulkarnain, 2023).

Based on this background, the researcher is interested in conducting this study entitled "Analysis of Production Cost Determination Using the Job Order Costing Method at Pak Soleh's Wooden Furniture MSME in Lubuk Soting Village," aiming to provide a deeper understanding of production cost determination practices, cost-recording practices, the constraints business owners face, and the suitability of applying the Job Order Costing method under real MSME conditions.

Literature Review and Hypotheses Development

Production cost refers to the entirety of costs incurred to process raw materials into finished goods, forming the cost basis attached to the products a business generates. Production cost is generally classified according to its elements into direct raw material cost, direct labor cost, and factory overhead cost; direct raw material cost refers to expenditure to obtain the primary materials used in the production process and directly traceable to the resulting product, such as wood planks and nails in a wood furniture business, while direct labor cost refers to wages paid to workers directly involved in the process of converting raw materials into finished goods, such as the wages of a carpenter working on a table, chair, or wardrobe. Factory overhead cost, meanwhile, comprises production cost other than direct raw material and direct labor cost, cost that cannot be

traced directly to a specific product, such as electricity cost, equipment maintenance cost, equipment depreciation cost, and indirect materials such as wood glue and sandpaper.

Production cost can also be classified based on its relationship to the product into direct cost, which can be identified directly with the resulting product, such as wood and carpenter wages, and indirect cost, which cannot be traced directly to a specific product and must therefore be allocated, such as electricity and machine-maintenance cost; based on cost behavior, production cost can further be classified into fixed cost, whose amount remains relatively constant regardless of production volume changes within a given period, such as equipment depreciation and business-premises rent, and variable cost, whose amount changes in line with production volume changes, such as raw material cost and labor wages based on order quantity.

The Job Order Costing method is a production cost determination method used when a company produces goods based on customer orders, with each product possessing different specifications, cost collected for each individual order, and production cost calculated once the order is completed; this method is well-suited to businesses producing non-mass products made to consumer request, such as furniture businesses, printing services, workshops, garment-making, and craft industries, in which the products generated vary in design, size, material type, and level of manufacturing difficulty for each order (Andrea et al., 2025; Masnoni, Sutandi, & Krinsal, 2024). Within Job Order Costing, production cost is classified into three primary elements: direct raw material cost, direct labor cost, and factory overhead cost, with factory overhead cost, being untraceable directly to a single specific order, requiring allocation using an appropriate application base (Dewi, Tripaupi, & Zukhri, 2017). Cost recording under this method is conducted using a job cost sheet, a document that records all cost incurred during the production process of an order, from raw material use and labor through to overhead cost allocation, enabling the business owner to identify the total production cost of each order in detail (Wahyuning & Khayati, 2020; Diana, Setyowati, & Zulkarnain, 2023).

The calculation of depreciation cost for production equipment and machinery is commonly performed using the straight-line method, considered the most frequently applied approach owing to its simplicity and its suitability for assets with a relatively constant usage pattern each year, calculated by dividing the difference between acquisition cost and residual value by the asset's useful life (Jayana Salesti, 2015; Srikalimah & Malikah, 2022). Direct labor cost, meanwhile, can be calculated as the wage rate per hour multiplied by the number of direct labor hours, or as the wage rate per unit multiplied by the number of units produced, referring to wages paid to employees directly involved in the production process (Pattimahu & Tangke, 2025).

In the Job Order Costing method, the total production cost of an order is obtained by summing direct raw material cost, direct labor cost, and factory overhead cost charged to that order, with the production cost per unit determined by dividing the total production cost of the order by the number of units produced within it, a calculation method commonly applied by businesses operating an order-based production system, such that each order's production cost is calculated separately (Nangin, Nangoi, & Tirayoh, 2018; Salsabila & Sucahyati, 2026). Determining a business's profit, in turn, is fundamentally a matter of calculating the difference between sales revenue and the total cost incurred by the business, particularly production cost and operating cost (Massese, Tandungan, Donni, Julyarman, & Ardhana, 2025).

Research Methods

The object of this study is the analysis of production cost determination using the Job Order Costing method at Pak Soleh's Wood Furniture/Furnishing MSME, located in Lubuk Soting Village, East Tambusai District, Rokan Hulu Regency, Riau Province, a business engaged in producing various furniture and wood furnishing products based on customer orders (job orders), such as tables, chairs, wardrobes, doors, door frames, and shelves, with each order possessing different specifications in terms of size, material type, design, and production quantity. This study is grounded in and positioned relative to prior research addressing similar production cost determination issues, following the practice of drawing on relevant preceding studies to situate a

study's contribution and to uphold academic integrity in presenting original work (Mahanum, 2021).

This study employed a qualitative research method with a descriptive approach, aiming to understand the phenomenon under study in depth through the collection of data in the form of words, information, documents, and activities relating to the research object, describing systematically how the production cost determination process is applied by the MSME, without aiming to test a hypothesis, but instead describing the actual condition of production cost calculation encompassing raw material cost, direct labor cost, and factory overhead cost, subsequently analyzed using the Job Order Costing method (Sugiyono, 2022).

The data used in this study consist of primary data, obtained directly from the first source through observation and interviews with the owner of Pak Soleh's furniture MSME, covering the production process, the cost-recording system, production cost determination, raw material types used, labor wages, operational production cost, and selling price determination, and secondary data, obtained from various supporting documents, including production cost records, raw material purchase receipts, labor wage lists, utility payment proof, customer order documents, and relevant books, scientific journals, theses, and literature relating to cost accounting and the Job Order Costing method.

Data collection was conducted through a semi-structured interview, with the researcher preparing a question guide while allowing the informant, the MSME owner, to explain information more broadly, covering the business's history, product types, production process, order-receiving system, raw material cost calculation, labor wage determination, factory overhead expenditure, selling price determination method, and constraints faced in calculating production cost; and through direct observation of production activity at the MSME, encompassing wood-cutting, product assembly, sanding and finishing processes, raw material use, labor use, machine and equipment use, and supporting material use, supplemented by documentation in the form of production activity photographs, cost documents, raw material purchase receipts, and other relevant documents.

Data analysis was conducted throughout the data collection process using the interactive analysis model of Miles, Huberman, and Saldana, comprising data reduction, data display, and conclusion drawing, followed by production cost analysis using the Job Order Costing method. To obtain valid and reliable data, this study applied source triangulation, comparing information obtained from the business owner, bookkeeping documents, purchase receipts, and production cost records, and technique triangulation, comparing the results of interviews, observation, and documentation; data were considered to possess a good level of validity when information obtained through these three techniques showed consistent results. Direct labor cost was calculated as the wage rate per hour multiplied by the number of direct labor hours, or the wage rate per unit multiplied by the number of units produced, while total production cost under the Job Order Costing method was obtained by summing direct raw material cost, direct labor cost, and factory overhead cost charged to each order.

Results and Discussion

Pak Soleh's Wood Furniture/Furnishing MSME has operated for 15 years and continues to operate today, producing various furniture products such as tables, chairs, two-door wardrobes, door frames, doors, and shelves according to customer orders (job order). The business receives an average of approximately 20 sets of orders per month. The primary raw materials used are Kulim and Meranti wood, supplemented by planks, panels, wood glue, nails, sandpaper, and varnish as supporting materials. Selling price determination has thus far been conducted by calculating overall production capital and adding an expected profit margin; however, production cost recording remains simple and has not yet applied a production cost calculation method consistent with cost accounting principles, particularly the Job Order Costing method.

Direct Raw Material Cost

Based on interview results, the primary raw materials used are Kulim and Meranti wood, priced at Rp2,700,000 per cubic meter, supplemented by 4-meter planks priced at Rp70,000 per sheet and panels priced at Rp150,000 per sheet. Raw material requirements differ across products: a table requires 2 pieces of 5×5 wood and 1 plank sheet, a chair requires 1 piece of 5×5 wood and 1 plank sheet, and a two-door wardrobe requires 6 pieces of 5×5 wood and 10 plank sheets. Based on these requirements, the direct raw material cost obtained is Rp90,000 for a table, Rp50,000 for a chair, and Rp850,000 for a two-door wardrobe, with the wardrobe requiring substantially more raw material and therefore carrying a considerably higher raw material cost than the table and chair.

Direct Labor Cost

The MSME applies a piece-rate wage system based on the type of work performed. The wage for table manufacturing is Rp100,000 per unit and for finishing is Rp30,000 per unit, resulting in a total direct labor cost of Rp130,000 for one table unit. Labor cost for chairs is estimated at Rp80,000 per unit, while labor cost for a two-door wardrobe is estimated at Rp500,000 per unit, reflecting the substantially greater time and difficulty involved in wardrobe manufacturing compared to table and chair production.

Factory Overhead Cost

Factory overhead cost comprises monthly cost, consisting of electricity (Rp400,000), water (Rp100,000), indirect materials (Rp1,000,000), equipment maintenance (Rp300,000), and cleaning materials (Rp200,000), totaling Rp2,000,000 per month, and annual cost, consisting of machine repair (Rp1,000,000), equipment depreciation (Rp600,000), circular saw depreciation (Rp400,000), planing machine depreciation (Rp600,000), and building maintenance (Rp200,000), totaling Rp2,800,000 per year, equivalent to Rp233,333 per month. The combined monthly factory overhead cost is therefore Rp2,233,333, which, divided across the average 20 orders received per month, yields a factory overhead cost of Rp111,667 per order, applied uniformly across all three products in this study's Job Order Costing calculation.

Table 1. Production Cost Calculation Using the Job Order Costing Method (in Rp)

Cost Component	Table	Chair	Two-Door Wardrobe
Direct Raw Material Cost	90,000	50,000	850,000
Direct Labor Cost	130,000	80,000	500,000
Factory Overhead Cost	111,667	111,667	111,667
Total Production Cost	331,667	241,667	1,461,667

Source: Researcher-Processed Interview Data, 2026

Table 2. Comparison of Production Cost: MSME Calculation vs. Job Order Costing (in Rp)

Product	MSME Calculation	Job Order Costing	Difference
Table	260,000	331,667	-71,667
Chair	160,000	241,667	-81,667
Two-Door Wardrobe	1,500,000	1,461,667	38,333

Source: Researcher-Processed Data, 2026

Based on Table 2, the production cost according to the MSME's own calculation for the table is Rp260,000, while the Job Order Costing calculation yields Rp331,667, a difference of Rp71,667; for the chair, the MSME's calculation is Rp160,000 against Rp241,667 under Job Order Costing, a difference of Rp81,667. In both cases, the MSME's own calculation is lower than the Job Order Costing result, indicating that the business has not fully accounted for factory overhead cost, such as electricity, water, equipment depreciation, machine maintenance, and other indirect costs, in its production cost calculation. For the two-door wardrobe, the pattern reverses: the MSME's own calculation of Rp1,500,000 exceeds the Job Order Costing result of Rp1,461,667 by Rp38,333, indicating that for this particular product the business had set a production cost estimate

somewhat higher than the cost actually obtained through systematic Job Order Costing calculation, leaving a larger profit margin for this product than for the table and chair.

Comparing the resulting production costs against the MSME's current selling prices, the table, sold at Rp300,000, falls Rp31,667 short of its Rp331,667 Job Order Costing production cost, while the chair, sold at Rp200,000, falls Rp41,667 short of its Rp241,667 Job Order Costing production cost, indicating that the current selling prices for these two products have not been able to fully cover their actual production cost once factory overhead is properly allocated. The two-door wardrobe, by contrast, sold at Rp2,500,000 against a Job Order Costing production cost of Rp1,461,667, yields a gross profit of Rp1,038,333, indicating that its current selling price comfortably covers production cost and continues to provide the business with a healthy profit margin.

Overall, the results show that applying the Job Order Costing method produces a more accurate production cost calculation, as it systematically accounts for all production cost elements: direct raw material cost, direct labor cost, and factory overhead cost. This finding is consistent with prior research finding that the Job Order Costing method produces more accurate production cost calculations than the simplified methods commonly applied by furniture businesses, and can serve as a basis for more appropriately determining selling price, controlling production cost, and improving business profitability (Andrea et al., 2025; Masnoni, Sutandi, & Krinsal, 2024). This finding is further consistent with the view that consistent application of a job cost sheet across each order enables the business owner to identify total production cost in detail and thereby make more informed pricing decisions (Wahyuning & Khayati, 2020).

Implication and Conclusion

Based on the results of the analysis and discussion, it can be concluded that Pak Soleh's Wood Furniture MSME has calculated its production cost simply, focusing primarily on raw material and direct labor cost, without fully allocating factory overhead cost to each product produced. Calculation using the Job Order Costing method shows a production cost of Rp331,667 for the table, Rp241,667 for the chair, and Rp1,461,667 for the two-door wardrobe, obtained by systematically summing direct raw material cost, direct labor cost, and factory overhead cost. Differences exist between the MSME's own production cost figures and those calculated under Job Order Costing: for the table and chair, the Job Order Costing production cost is higher than the MSME's calculation, while for the two-door wardrobe, it is slightly lower, indicating that the Job Order Costing method is capable of producing a more accurate production cost calculation and can serve as a basis for selling price determination that helps ensure the business achieves optimal profit.

These findings imply that Pak Soleh's Wood Furniture MSME is encouraged to adopt the Job Order Costing method in calculating production cost, so that all production cost, including factory overhead cost, is fully accounted for and selling price determination becomes more accurate; the business is further encouraged to maintain more structured, order-separated production cost records to facilitate cost control, business evaluation, and profit calculation. Future researchers are recommended to develop this study further by comparing the Job Order Costing method with other production cost determination methods, or by incorporating additional analysis of selling price determination and MSME profitability levels, in order to obtain more comprehensive findings.

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