Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6, 6064-6082
2024
Publisher: Learning Gate
DOI: 10.55214/25768484.v8i6.3322

Cost accounting in Cambodia's garment industry: A case study

Edman Flores[1*], Siphat Lim[2], Juliet Uy[3]
[1,2,3]CamEd Business School, Phnom Penh, Cambodia; edman@cam-ed.com (E.F.).

Abstract: This study examines the cost accounting practices of garment manufacturers in Cambodia, with a particular focus on a leading company in the industry. By conducting in-depth interviews and analyzing secondary data, such as cost breakdown reports and job costing sheets, the research provides valuable insights into how cost accounting influences production efficiency and sustainability. The findings indicate that the company utilizes a detailed job order costing system integrated with FOB costing principles, meticulously tracking direct material, direct labor, production overhead, and non-production costs. This comprehensive approach facilitates accurate cost determination and informed pricing decisions, thereby ensuring profitability. This study is the first to offer an in-depth examination of cost accounting practices in the Cambodian garment industry, providing a unique, contextualized understanding of the challenges and strategies of a leading garment manufacturer in the country. However, the research is limited to a single case company, which may not fully represent the broader industry. Future research should consider comparative studies across multiple manufacturers to provide a more comprehensive understanding of industry practices.
Keywords: *Cambodia, Cost accounting, FOB costing, Garment manufacturing, Job order costing.*

1. Introduction

The garment industry is a cornerstone of Cambodia's economy, playing a vital role in its industrial development and employment landscape. Since the early 1990s, Cambodia has experienced rapid economic growth, largely driven by the expansion of the garment sector. This industry has been instrumental in leading the development of the manufacturing sector, supported by government policies that emphasize labor-intensive manufacturing [1]. The importance of the garment industry is further underscored by its significant impact on employment. Trade reforms, such as the European Union's changes in rules of origin for duty-free market access, have led to positive export shocks for the garment industry, resulting in substantial employment growth, particularly for female workers in formal establishments [2].

In this dynamic environment, cost accounting emerges as a crucial tool for garment manufacturers, enabling them to understand profitability and make informed decisions. By providing detailed insights into the various cost components involved in garment production, cost accounting allows manufacturers to accurately determine the cost of each garment style and assess the profitability of their operations. One significant aspect of cost accounting is its ability to offer a sustainable cost analysis solution that can provide actual costs of finished goods. This capability enables manufacturers to identify whether they have gained profit from a particular style. For instance, a proposed cost analysis model can be integrated into existing enterprise resource planning systems to capture production information and compare the expenditure incurred in making each style with the order price, thus arriving at the actual profit made from each style [3]. Moreover, understanding the elements of garment costing and the factors influencing garment prices is essential for manufacturers. By controlling inventory, accurate forecasting, and minimizing markdowns, companies can reduce costs and enhance profitability. A clear understanding of cost components and their distribution at each stage of the garment supply chain is necessary for making informed decisions that drive profitability.

* Correspondence: edman@cam-ed.com

Cost accounting in garment factories goes beyond financial record-keeping; it serves as a strategic tool for decision-making and operational efficiency. The primary objectives include cost control, profitability analysis, performance evaluation, budgeting and planning, compliance, and reporting. Costing methods such as job order costing, process costing, activity-based costing (ABC), standard costing, absorption costing, marginal costing, and throughput costing play a pivotal role in the financial management of manufacturing companies, offering insights into profitability, pricing strategies, and operational efficiency.

This study delves into the fundamental cost accounting practices adopted by garment manufacturers in Cambodia, examining their impact on efficiency and sustainability, and exploring the broader implications for the garment industry. Employing a case study approach, this research focuses on a leading garment manufacturing company in Cambodia. This in-depth examination of cost accounting practices within a specific industry setting aims to contribute to the existing literature on cost management in the global apparel supply chain. The findings provide valuable insights for garment manufacturers in Cambodia and other developing countries facing similar challenges, and inform policy decisions to support the long-term growth and sustainability of the industry. For confidentiality purposes, pseudonyms have been used to protect the identities of the case company and other entities involved in this case study.

2. Theoretical Background

The garment industry employs diverse cost accounting practices to manage and reduce costs effectively. One such method is job order costing, which assigns costs to specific production batches or jobs. This cost accounting system is particularly useful for companies that produce customized products or services, as it allows for precise tracking of costs associated with individual jobs [4], [5]. By providing a detailed breakdown of costs, including direct materials, direct labor, and allocated overhead, job order costing enables businesses to set accurate prices and understand the profitability of each job [6], [7]. This detailed cost information aids in better budgeting, financial planning, and decision-making, such as whether to accept or reject a particular order based on its expected profitability [5], [8].

However, implementing and maintaining a job order costing system can be complex and resource-intensive. It requires meticulous record-keeping and frequent updates to ensure accuracy, which can be time-consuming and costly, especially for smaller businesses [7], [9]. Allocating overhead costs accurately can also be challenging, as misallocation can distort the true cost and profitability of jobs [7], [8]. Despite these limitations, job order costing remains a valuable tool for the garment industry, providing a detailed understanding of costs and profitability at the individual job or batch level. This precision is crucial for pricing, cost control, and financial reporting, enabling businesses to maintain transparency and trust with stakeholders [5], [9]. However, companies must carefully weigh the benefits and challenges of implementing and maintaining a job order costing system to ensure it aligns with their specific production environment and strategic objectives.

Process costing is a cost accounting method used to assign production costs to units of output in industries where the production process is continuous and the products are indistinguishable from each other. This method simplifies the allocation of costs to products by averaging the total costs over all units produced, which is particularly beneficial in industries where production is continuous and units are homogeneous, such as the agro-industrial sector [10]. By breaking down the production process into distinct stages, process costing allows for better monitoring and control of costs at each stage. This can help in identifying inefficiencies and implementing corrective measures promptly. The study on agro-industrial processing organizations highlights how process-cost analysis can improve the analytical suitability of labor productivity assessments, thereby enhancing cost control [10]. Additionally, process costing provides detailed insights into the cost structure of production, which can be invaluable for financial planning and analysis, enabling businesses to predict costs more accurately and make informed decisions regarding pricing and budgeting [11].

One of the significant drawbacks of process costing is the potential for inaccuracies in cost allocation, especially in smaller businesses with limited resources. The case study on Shuttlecocks

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

micro-businesses reveals that inaccuracies in loading costs can lead to errors in determining the cost of goods sold, impacting the quality of earnings and long-term profitability [11]. Implementing process costing can also be complex and resource-intensive, particularly for businesses that do not have well-defined production stages or where production processes are not entirely homogeneous [11]. Furthermore, process costing may lead to disparities in the distribution of value added, particularly in terms of labor productivity and wages. The study on agro-industrial processing organizations found significant disparities in the distribution of value added, with an unreasonable level of wages and inconsistencies in the dynamic ratio of labor productivity and its payment [10].

ABC and its derivative, Time-Driven ABC (TDABC), are methodologies used to allocate costs more accurately to products and services. ABC provides a more refined cost calculation by focusing on the costs inherent in the activities required to produce, distribute, or support products. This leads to more accurate product costing, which can enhance decision-making and profitability [12], [13], [14].

ABC increases the transparency of costs, which aids in planning, controlling, and decision-making processes. This transparency helps in identifying non-value-added activities and improving overall efficiency [12], [15]. ABC extends cost management to the entire value chain, promoting better management of activities, processes, and activity chains. This holistic approach helps in eliminating non-value-added activities and improving the quality and efficiency of operations [15]. ABC is particularly beneficial in environments with high product complexity and diversification, as it provides detailed insights into the cost structure, which traditional costing methods may overlook [16], [17].

However, implementing ABC can be complex and expensive. It requires significant data collection and analysis, which can be resource-intensive. This complexity can be a barrier for some organizations, particularly smaller ones [14], [16], [17]. ABC systems also require regular updates and maintenance to remain accurate and relevant, which can be burdensome and lead to additional costs [12], [17]. Moreover, ABC can sometimes lead to overestimation of costs if not implemented correctly, due to the oversimplification of activities or incorrect determination of cost drivers [17].

To address the complexities of traditional ABC, TDABC has emerged as a simplified approach. TDABC uses time equations and capacity cost rates to measure unused capacity, making it more straightforward and less expensive to implement compared to traditional ABC [17], [18], [19]. TDABC provides a more accurate assessment of costs by focusing on the actual time and resources used, and it has been shown to generate lower and more precise cost estimates, particularly in healthcare and manufacturing settings [18], [19]. TDABC helps in identifying variations in costs and offers opportunities for increasing operational efficiency and waste reduction [18].

Even though TDABC is simpler than traditional ABC, it still requires an initial setup that involves defining time equations and capacity cost rates, which can be challenging and time-consuming [16], [17]. TDABC also relies heavily on accurate time data, which can be difficult to obtain and maintain, and inaccurate or incomplete data can lead to incorrect cost assessments [16], [17]. Additionally, TDABC may not be as flexible in adapting to changes in processes or activities compared to traditional ABC, which can limit its applicability in dynamic environments [16], [17].

Standard costing is a traditional management accounting tool used to control production costs by establishing cost standards and comparing them to actual costs. This method facilitates planning and controlling costs by setting predetermined cost standards, which can be used as benchmarks for evaluating actual performance. By comparing actual costs with standard costs, organizations can measure performance and take corrective actions if necessary, helping to maintain financial discipline within the organization [20], [21], [22]. Standard costing also allows for cost prediction for future periods, aiding in budget preparation and financial planning [21]. Furthermore, it provides operational information on current product profitability, which is crucial for management decision-making [21].

The use of standard costing can lead to increased efficiency and productivity by motivating employees to meet cost standards and by identifying areas where cost savings can be achieved [22], [23]. It helps in optimizing resource usage and reducing wastage, thereby improving overall operational efficiency [24]. The method also simplifies the costing process by providing a clear and straightforward approach to cost accounting, making it easier for managers and accountants to implement and use [20].

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

However, standard costing is not without its limitations. One of the main criticisms is its rigidity, as the predetermined standards may not always reflect the current market conditions or changes in production processes, leading to inaccurate cost assessments [23], [25]. It may not be suitable for industries with rapidly changing technologies or those that require frequent updates to cost standards [21]. Implementing and maintaining a standard costing system can also be complex and resource-intensive, especially in large organizations with diverse product lines and production processes [20], [26]. If the cost standards are not set accurately, the comparison between actual and standard costs can provide misleading information, leading to incorrect management decisions [24], [25]. Additionally, an overemphasis on cost control may lead to a reduction in product quality or employee morale if cost-cutting measures are too stringent [23]. Standard costing may also not be applicable to all types of industries, such as service industries or environments where production processes are highly variable [21], [25].

Absorption costing, also known as full costing, is a method where all manufacturing costs, both fixed and variable, are allocated to the product. This approach provides a more comprehensive view of product costs, which can be beneficial for pricing decisions and financial reporting. Absorption costing is required by Generally Accepted Accounting Principles and International Financial Reporting Standards for external reporting, ensuring compliance and consistency in financial statements. By including fixed manufacturing overhead in inventory costs, absorption costing can result in higher inventory values on the balance sheet, which may be advantageous for companies looking to improve their financial ratios. It allows for a more accurate analysis of profitability by ensuring that all costs of production are considered when calculating the cost of goods sold [27].

However, absorption costing can sometimes provide misleading information for internal decision-making. For instance, it may indicate higher profitability due to higher inventory levels, which might not reflect the actual financial health of the company. The method can also be more complex and time-consuming to implement compared to variable costing, as it requires the allocation of fixed manufacturing overhead to products. This can induce managers to produce more than necessary to allocate more fixed costs to inventory, leading to overproduction and increased holding costs. For internal decision-making, variable costing might be more useful as it provides clearer insights into the impact of fixed and variable costs on profitability [27].

Marginal costing, also known as variable costing, is a cost accounting method that differentiates between fixed and variable costs. This technique is widely used to analyze the relationship between cost, volume, and profit, providing valuable insights for decision-making in business operations. Marginal costing simplifies the process of cost control by focusing on variable costs, which are directly related to production levels. This allows businesses to easily identify and manage costs that fluctuate with production volume [28]. By distinguishing between fixed and variable costs, marginal costing aids in making informed decisions regarding pricing, production levels, and product mix.

One of the main criticisms of marginal costing is that it ignores fixed costs in the short term. This can lead to underestimating the total cost of production and may result in pricing decisions that do not cover all costs in the long run. Since marginal costing focuses primarily on variable costs, it may not be suitable for long-term strategic decisions that require a comprehensive understanding of both fixed and variable costs. In industries with high fixed costs, marginal costing can provide misleading information about profitability. Additionally, accurately separating fixed and variable costs can be complex and time-consuming, which can reduce the effectiveness of marginal costing as a decision-making tool [28].

Throughput costing is a cost accounting method that is particularly effective in measuring organizational performance in smart factory environments. By focusing on cost indicators and supporting performance efficiency and effectiveness, throughput costing provides valuable information for internal benchmarking and helps organizations assess and improve cost efficiency over time [29], [30]. The method is adaptable to various production environments, including those with high demand variation and offshored supply chains, where traditional accounting methods may fall short [31]. Throughput accounting is especially useful in modern manufacturing environments, such as Industry 4.0, where it can enhance flexibility and productivity through the use of advanced technologies like autonomous mobile robots [32].

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

One of the limitations of throughput costing is that it primarily focuses on short-term financial performance, which may not always align with an organization's long-term strategic goals [33]. The method is mainly applicable in environments where the Theory of Constraints is relevant, which may limit its usefulness in other contexts [34]. Throughput costing may not provide a comprehensive view of all cost factors, particularly in complex production systems with multiple constraints. The effectiveness of throughput costing also relies heavily on accurate and timely data, and inaccurate data can lead to incorrect conclusions and poor decision-making [30]. Implementing throughput costing can be resource-intensive, as it requires continuous monitoring and updating of data. If not properly implemented, it may lead to mismanagement of resources, particularly in areas not directly related to throughput, such as administrative and support functions [35]. Moreover, there is a risk of overemphasizing throughput at the expense of other important performance metrics, such as quality and customer satisfaction.

Product costing in garment manufacturing is a critical aspect that determines the competitiveness and profitability of garment products in the global market. Garment manufacturers in Cambodia are using either Cost of Manufacturing (CM) or Free on Board (FOB) costing. CM costing focuses on the internal costs associated with producing a single garment unit. It acts as the manufacturer's internal compass, guiding decisions and revealing areas for optimization. Labor costs, overheads, and other production-related expenses are crucial components of the cost of manufacturing. Effective management of manufacturing costs can result in significant savings and improved pricing strategies [36], [37].

On the other hand, FOB costing takes us beyond the factory walls, encompassing the total cost of delivering a garment to a designated port, typically the buyer's port. The fabric cost, which includes the cost of raw materials required to produce the garment, constitutes a significant portion of the total FOB cost, particularly influencing the overall pricing of garments like denim pants [36], [37]. Trims and accessories such as buttons, zippers, labels, and tags play essential roles in enhancing the functionality and aesthetics of the garment, with their costs meticulously calculated to ensure accurate pricing [36], [38]. Additionally, processes like washing and testing, essential for garments like denim pants, add to the FOB cost, ensuring quality and durability to meet market demands. The precision in calculating the costs associated with these processes maintains the delicate balance between quality and costs [36]. Furthermore, commercial costs, including marketing expenses, logistics costs, and profit margins, are factored into the FOB cost to help manufacturers and exporters achieve their financial objectives [36], [38].

The existing literature does not comprehensively examine the specific cost accounting practices adopted by garment manufacturers in Cambodia, their impact on operational efficiency and profitability, and the development of contextual recommendations to address the industry's unique challenges. This study aims to fill this gap by conducting an in-depth case study analysis of a prominent garment manufacturing company in Cambodia, focusing on the application of various costing methods and their implications for the industry's long-term sustainability and growth.

3. Methodology

3.1. Research Design

This study employs a case study approach to analyze the cost accounting methods used in Cambodia's garment sector. The selected company for this case study is HIJ (Cambodia) Garment Manufacturing Co., Ltd., a pseudonym to protect its actual identity. Hereafter, the company will be referred to as HIJ Cambodia.

The decision to utilize the case study method is justified for several reasons. First, the garment industry in Cambodia is a complex and dynamic sector, with each factory facing unique challenges and opportunities in cost management. A case study approach allows for an in-depth examination of the cost accounting practices within a specific organizational context, providing a comprehensive understanding of the factors influencing these practices. Second, the garment industry is highly competitive, and companies are often reluctant to share sensitive cost information publicly. A case study, with the cooperation of a participating factory, enables access to proprietary data and insights that would otherwise be difficult to obtain. Third, the case study method is well-suited for investigating

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

contemporary phenomena [39], such as the cost accounting practices in the Cambodian garment industry, where the boundaries between the phenomenon and the context are not clearly defined. This approach allows for a nuanced and detailed examination of the practices and challenges faced by garment manufacturers, offering valuable insights for both industry practitioners and policymakers.

3.2. Data Collection and Analysis

The data collection for this case study employs a comprehensive approach, utilizing both primary and secondary sources to ensure a thorough understanding of the cost accounting practices at HIJ Cambodia. Primary data is gathered through in-depth interviews with key personnel, including the general manager, production manager, merchandising manager, and other relevant staff members. These interviews are designed to gain detailed insights into various aspects of the factory's operations. The discussions cover the factory's background, the types of products manufactured, the costing methods employed, and the production processes in place. A significant focus is placed on evaluating the components of product costs, which includes analyzing direct material costs, assessing direct labor costs, and calculating production overhead costs. These interviews provide valuable firsthand information that is crucial for understanding the intricacies of the company's cost accounting practices.

Secondary data provided by the company includes several key documents that offer a detailed breakdown of costs. These documents include a direct material cost breakdown report, a direct labor cost breakdown report, and a template for job costing sheets. These reports are essential for understanding the specific cost components involved in the manufacturing process. However, to maintain confidentiality, all numerical values in these reports have been altered from their original values. Despite these alterations, the configuration and elements of the costs used in manufacturing the company's products remain true to their authentic form, as illustrated in Figure 1. This approach ensures that the study can provide accurate and relevant insights while protecting sensitive company information.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

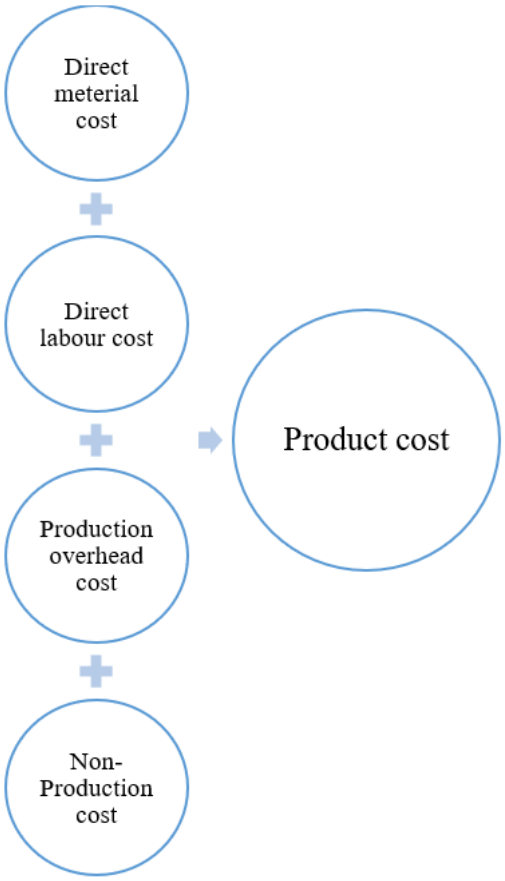


Figure 1.
Measurement of product cost.

We meticulously analyzed the data collected from both primary and secondary sources to calculate various cost components, including direct material cost, direct labor cost, production overhead cost, non-production cost, and the selling price per piece of shirt. The results of our comprehensive analysis are presented through a variety of visual and analytical tools such as diagrams, figures, tables, and equations, ensuring clarity and precision in the presentation of findings.

4. Results

4.1. About HIJ Cambodia

HIJ Cambodia is a prominent entity within the OBF International Group (a pseudonym to protect the entity's identity), headquartered in Hong Kong, China. Among the ten garment factories under the OBF International Group, HIJ Cambodia has distinguished itself as the leading exporter of garment products to the global market. This achievement reflects the company's strategic initiatives and commitment to excellence, positioning it at the forefront of the industry within the group.

The organizational structure of HIJ Cambodia, as depicted in Figure 2, is comprehensive and well-defined. It comprises seven key departments: finance, shipping, human resources, production, quality control (QC)/quality management system (QMS), in-house laboratory, and compliance. Each department plays a crucial role in ensuring the smooth and efficient operation of the factory.

The finance department manages the company's financial transactions, budgeting, and financial reporting, ensuring all financial activities are accurately documented and compliant with regulatory requirements.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

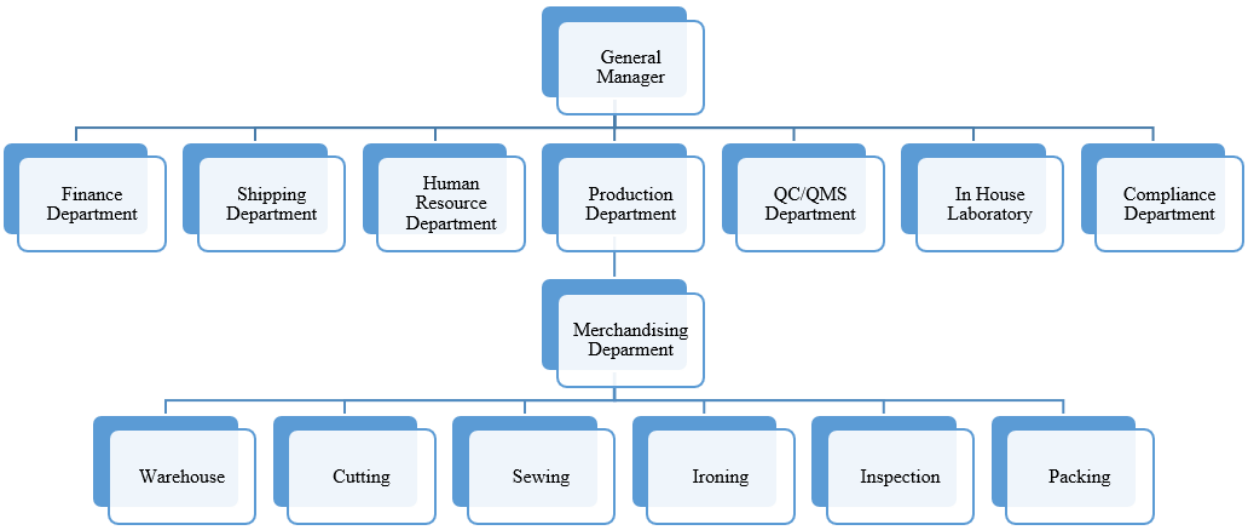


Figure 2.
Organizational structure of HIJ Cambodia.

The shipping department handles the logistics of exporting finished products to international markets, ensuring timely and efficient delivery to customers worldwide.

The human resources department manages employee relations, recruitment, training, and development, ensuring the company attracts and retains skilled workers essential for maintaining high production standards.

The production department is the heart of the manufacturing process. It includes a merchandising sub-department, which is further divided into six sections: warehouse, cutting, sewing, ironing, inspection, and packing. The warehouse section manages the storage and inventory of raw materials and finished products. The cutting section is responsible for cutting fabric into pieces according to design specifications. The sewing section assembles the cut pieces into finished garments. The ironing section ensures that the garments are pressed and free of wrinkles. The inspection section conducts quality checks to ensure the garments meet the required standards. Finally, the packing section prepares the finished products for shipment.

The QC/QMS department ensures all products meet the company's quality standards and comply with international regulations. This department conducts regular inspections and audits to maintain high-quality production.

The in-house laboratory conducts various tests on raw materials and finished products to ensure they meet the required specifications and standards, including testing for fabric strength, colorfastness, and other quality parameters.

The compliance department ensures the company adheres to all legal and regulatory requirements, including labor laws, environmental regulations, and industry standards. This department plays a vital role in maintaining the company's reputation and ensuring ethical business practices.

The company effectively oversees factory operations through well-defined job descriptions and clear delineation of responsibilities within the organizational structure. The factory has an independent finance department responsible for documenting and evaluating factory transactions, submitting profit tax declarations to the General Department of Taxation, consolidating all factory transactions, furnishing production shipping details to the head office in Hong Kong, and arranging payments for business associates and the payroll department.

Figure 3 illustrates the flow of inputs and outputs between HIJ Cambodia and OBF International Group. Based in Hong Kong, China, OBF International Group supplies raw materials to HIJ Cambodia. In return, OBF International Group receives finished goods from HIJ Cambodia. Located in Phnom Penh, Cambodia, HIJ Cambodia receives raw materials from OBF International Group and delivers finished goods back to them. This cyclical exchange highlights the interdependence between the two

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

companies, with OBF International Group providing the necessary raw materials for production and HIJ Cambodia completing the manufacturing process to produce finished goods. This model ensures a continuous flow of materials and products, facilitating efficient supply chain management.

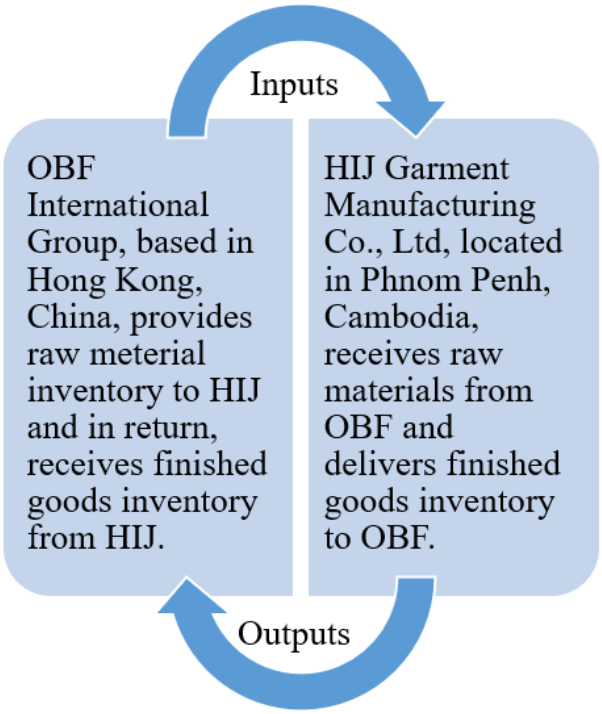


Figure 3.
The flow of inputs and outputs.

4.2. Product Costing Method Used by HIJ Cambodia

The company utilizes job order costing, where the costs associated with the production of products are gathered and recorded on a job costing sheet. This method allows for accurate tracking of costs related to specific jobs or projects, aligning well with their customer-driven production model. Job order costing operates on the fundamental principle that production commences only upon receipt of a purchase order from the customer. In this case, a purchase order from OBF International Group based in Hong Kong, China would trigger production. The job costing sheet would then track all production costs, including direct materials, direct labor, and allocated overhead costs.

At the same time, the company employs FOB costing principles. FOB costing ensures that all costs associated with delivering the product to the customer (OBF International Group) are included in the final price. This comprehensive approach to costing provides a clear understanding of the total expenses involved in fulfilling the customer's order, from the initial production costs to the final delivery.

By integrating job order costing and FOB costing, the company can maintain a precise record of the expenses incurred for each specific job, while also ensuring that the final price charged to the customer accurately reflects the complete cost of delivering the product. This synergistic approach allows the company to operate effectively in a customer-driven production environment while maintaining financial discipline and profitability.

4.3. Production Process and Product Cost Determination

The calculation of the cost per unit of product at HIJ Cambodia involves a meticulous four-step process, as illustrated in Figure 4. This process is designed to ensure accuracy and comprehensiveness and is crucial for maintaining effective cost management and pricing strategies.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

The first step involves the initial measurement of direct material costs. This task is handled by the merchandising department, which is responsible for identifying and quantifying all the raw materials required for production. These materials include fabric, thread, logos, price tickets, hangers, side sizers, care labels, elastic, poly bags, and cartons. The merchandising team ensures that each material is accurately accounted for and priced, forming the foundation of the cost calculation process.

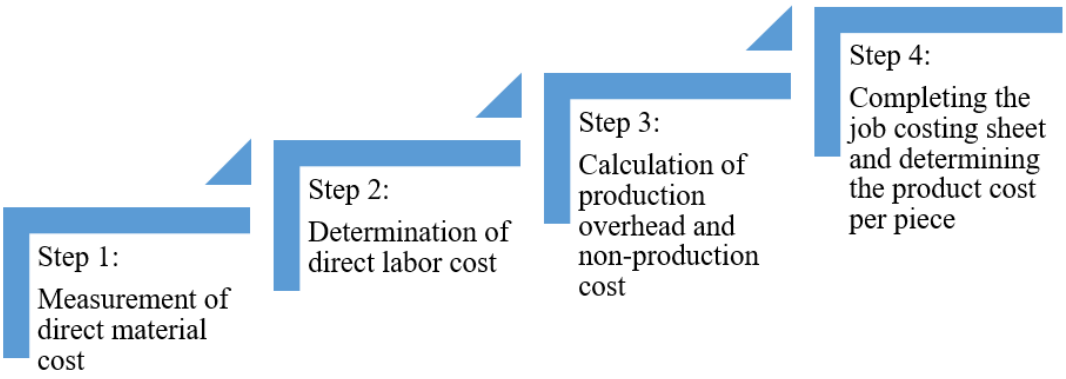


Figure 4.
Product cost determination process.

The second step is the determination of direct labor costs. This responsibility falls to the industrial engineering team, which establishes the production process and determines the labor requirements for each product. The team assesses the time and effort needed for various production activities, such as raw material inspection, fabric relaxation, spreading, cutting, sewing, overlocking, trimming, pressing, and packing.

The third step involves calculating production overhead and non-production costs. Production overheads are indirect costs incurred within the factory that cannot be directly traced to a specific product but are essential for the overall production process. The company's production overhead costs are calculated as a percentage of the prime cost, which is the sum of direct material and direct labor costs. Non-production costs, which are not directly related to the manufacturing process but are necessary for overall business operations, include bank fees, domestic export shipping, and domestic import shipping. Like production overhead costs, the company's non-production costs are also calculated as a percentage of the prime cost. Specifically, production overhead costs are calculated as 25% of the prime cost, while non-production costs are calculated as 20% of the prime cost.

The final step in the process is completing the job costing sheet. This comprehensive document consolidates all the cost components identified in the previous steps, providing a detailed breakdown of the total cost per unit of product. The job costing sheet includes direct material costs, direct labor costs, production overhead costs, and non-production costs. By compiling this information, the company can accurately determine the total cost of producing each unit, which is essential for setting the selling price and ensuring profitability.

4.4. Determination of Direct Material and Direct Labor Costs

Table 1 provides a comprehensive breakdown of the ten essential materials required for the production of a shirt. These materials include fabric, thread, logo, price ticket, hanger, side sizer, care label, elastic, poly bag, and carton. The total material cost per unit amounts to $2.516, with the carton being the least expensive at $0.09 per piece.

The first nine materials, which collectively account for 96.42% of the total material cost per unit, are sourced from the OBF International Group, a supplier based in Hong Kong, China. This indicates a heavy reliance on international suppliers for the majority of the raw materials. The breakdown of these costs is as follows: fabric, the most significant component, costs $1.980 per unit and forms the bulk of

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

the material cost; the remaining materials—thread, logo, price ticket, hanger, side sizer, care label, elastic, and poly bag—collectively cost $0.536 per unit.

In contrast, the carton, which represents only 3.58% of the total material cost per unit, is procured locally from JKF Co., Ltd. (a pseudonym to protect the entity's identity) in Cambodia. This local sourcing strategy for the carton helps reduce dependency on international suppliers for at least one component, potentially lowering lead times and transportation costs.

Table 2 provides a detailed breakdown of the twenty-five activities or sections associated with direct labor costs in the production of a shirt. These activities encompass various stages of the manufacturing process, each contributing to the overall labor cost. The total direct labor cost per piece is $1.272.

The first activity is raw material inspection, where materials are checked for quality and compliance with specifications. This is followed by fabric relaxation/spreading/cutting, a crucial step to ensure the fabric is properly prepared and cut into pieces for assembly. The next stage involves cut piece inspection/conveyer, where the cut pieces are inspected and conveyed to the next section.

Subsequent activities include sewing the washing label and sewing the bowknot, which are essential for branding and design. The overlocking of the bowknot and attaching the bowknot to the shoulder are detailed tasks that add to the garment's aesthetic appeal. Covering the bowknot raw edge ensures a clean finish, while overlocking the right raglan sleeve and piping the neck are critical for garment construction.

The process continues with overlocking the left raglan sleeve, feel seam, and covering the raw edge, which are steps to ensure the garment's durability and quality. Covering the bottom hem and performing X4 overlock on the collar and bowknot are additional steps to secure the garment's structure. Round neck puckering and front fell seam puckering are specialized techniques to enhance the garment's fit and appearance.

Further activities include sewing the round neck, trimming, and pressing, which are vital for the garment's final look and feel. Re-inspection ensures that all previous steps have been correctly executed. The final stages involve tagging, folding, packing, and loading, which prepare the garment for distribution.

4.5. Job Costing Sheet

The cost per unit of product is determined by taking into account both production and non-production costs, ensuring a comprehensive understanding of the total costs involved in manufacturing and delivering the product.

Production costs are calculated by summing the prime cost and the production overhead cost. The prime cost is the aggregate of direct material and direct labor costs, which are detailed in Table 1 and Table 2, respectively. Direct material costs include expenses for raw materials such as fabric, thread, and other components essential for garment production. Direct labor costs encompass wages paid to workers directly involved in the manufacturing process.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

Table 1.
Direct material cost.

Shipment:					FOB:		PO quantity:	
No.	**Material**	**Unit price**	**Quantity**	**Cost incurred**		**Supplier name**	**Country CO**	**Invoice No.**
1	Fabric (in kg)	7.92	0.35		$1.980	OBF International	Hong Kong, China	OBE20X0-001
2	Thread cones	0.85	0.2		$0.169	OBF International	Hong Kong, China	OBE20X0-002
3	Transfer logo print (in dz)	0.20	1		$0.017	OBF International	Hong Kong, China	OBE20X0-003
4	Price tickets (in dz)	0.20	2		$0.033	OBF International	Hong Kong, China	OBE20X0-004
5	Hangers (in dz)	1.06	1		$0.088	OBF International	Hong Kong, China	OBE20X0-005
6	Side sizers (in pc)	0.01	1		$0.011	OBF International	Hong Kong, China	OBE20X0-006
7	Care labels (in dz)	0.20	1		$0.017	OBF International	Hong Kong, China	OBE20X0-007
8	Elastic (in kg)	6.60			$0.001	OBF International	Hong Kong, China	OBE20X0-008
9	Poly bags (in kg)	1.98			$0.110	OBF International	Hong Kong, China	OBE20X0-009
10	Cartons (in pc)	0.92		$0.09		JKF Co., Ltd	Cambodia	JFK20X0-001
			Total	$0.09	$2.426			

Source: HIJ Cambodia.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

Table 2.
Direct labor cost.

Section	Description	Cost/Pcs	Style No.
1	Raw material inspection	$0.025	
2	Fabric relaxation/Spreading/Cutting	$0.036	Buyer:
3	Cut piece inspection/Conveyer	$0.024	
4	Sew washing label	$0.060	Quantity:
5	Sew bowknot	$0.072	
6	Overlocking bowknot	$0.096	Line:
7	Attach bowknot to shoulder	$0.030	
8	Covering bowknot raw edge	$0.016	PO No.:
9	Overlocking right raglan sleeve	$0.042	
10	Piping neck	$0.096	
11	Overlocking left raglan sleeve	$0.088	
12	Feel seam	$0.042	
13	Covering raw edge	$0.030	Sketch 
14	Covering bottom hem	$0.030	
15	X4 overlock collar and bowknot	$0.042	
16	Round neck puckering	$0.028	
17	Front fell seam puckering	$0.036	
18	Sewing round neck	$0.048	
19	Trimming	$0.060	
20	Pressing	$0.060	
21	Re-inspection	$0.060	
22	Tagging	$0.036	
23	Folding	$0.036	
24	Packing	$0.084	Estimated quantity per day
25	Loading	$0.096	
			Section head
			Date
			Manager
	Total	$1.272	Date

Source: HIJ Cambodia.

The production overhead cost includes all indirect costs incurred within the factory. These are costs that cannot be directly traced to a specific product but are necessary for the overall production process. Examples of production overhead costs include supervision, which covers the salaries and wages of supervisors overseeing the production process; maintenance, which involves costs associated with maintaining machinery and equipment; depreciation, which is the allocation of the cost of factory equipment and buildings over their useful lives; insurance, which includes premiums paid for insuring factory assets; and utilities, which cover expenses for electricity, water, and other utilities used in the production process. These overhead costs are essential for maintaining the production environment and ensuring smooth operations.

Non-production costs, also referred to as other costs, include expenses that are not directly related to the manufacturing process but are necessary for the overall business operations. These costs include bank fees, which are charges incurred for financial transactions and services provided by banks; domestic export shipping, which covers costs associated with shipping products from the factory to domestic customers or ports for international shipping; and domestic import shipping, which involves expenses for importing raw materials or components from domestic suppliers to the factory.

The product cost structure and the detailed breakdown of the company's product costs are illustrated in Figure 5 and Table 3, respectively. This comprehensive cost analysis helps the company

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

price their products accurately, manage expenses effectively, and make informed financial decisions to enhance profitability and sustainability.

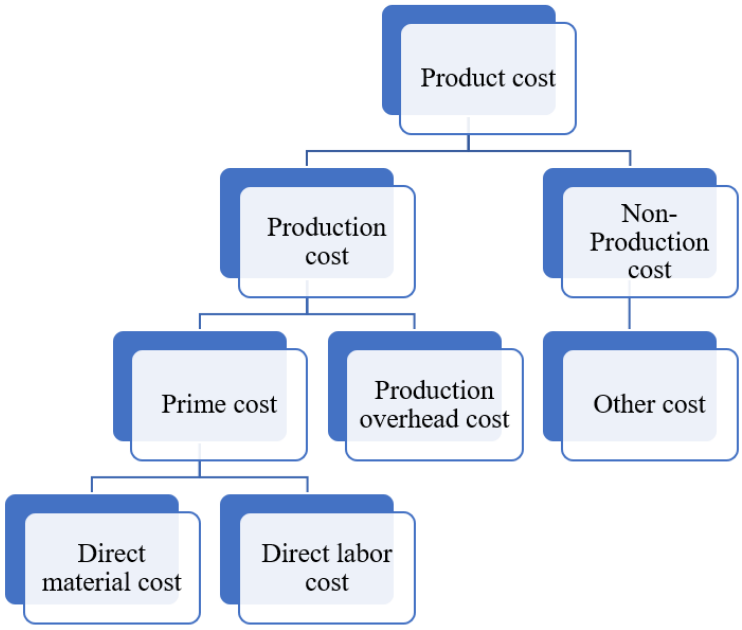


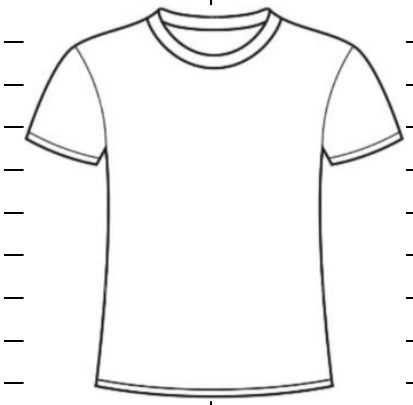
Figure 5.
Product cost structure.

The price for each shirt is determined by considering various cost components that contribute to the total cost of producing and delivering the shirt. These components include direct material costs, direct labor costs, production overhead costs, and non-production or other costs. The direct material cost constitutes 41.63% of the selling price, while the direct labor cost accounts for 21.05%. The production overhead cost is 15.67%, and the non-production or other costs make up 12.54% of the selling price.

The company employs the margin method to determine the selling price per shirt, assuming that the selling price is 100%. This method allows the company to clearly define and maintain its profit margins. In this case, the company has set a profit margin of approximately 9.10% of the selling price per unit. This profit margin ensures that the company achieves a reasonable return on each shirt sold.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

Table 3.
Job costing sheet.

Shipment:		**Merchandiser:**		**FOB:**			**PO Quantity:**	
Buyer	**Style**	**Items**	**Quantity**	**Cost Incurred in China**	**Cost Incurred in Cambodia**	**Total**	**Percentage**	**Remarks**
		Fabric	0.35KG	$1.980		$2.516	41.63%	Direct material cost
		Raw material		$0.446	$0.090			
		CM			$1.272	$1.272	21.05%	Direct labor cost
		Supervision			$0.947	$0.947	15.67%	Production overhead cost
		Maintenance						
		Depreciation						
		Insurance						
		Utility						
		Bank charge			$0.758	$0.758	12.54%	Non-production cost or other cost
		Inland export transport						
`		Import inland transport						
		Total Cost			$3.066	$5.492	90.90%	Total cost
		Profit			$0.550	$0.550	9.10%	Profit
		LDC Qualifying Content		$2.426	$3.616	$6.042	100%	Selling price
				40.14%	59.86%	100%		

Source: HIJ Cambodia.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

5. Discussion

Our findings from the case study of HIJ Cambodia demonstrate the company's comprehensive approach to cost accounting and product costing. The organizational structure, with its well-defined departments, reflects a strategic focus on operational efficiency and effective cost management. The integration of job order costing and FOB costing principles is particularly well-suited to HIJ Cambodia's customer-driven production model, allowing for precise tracking of costs and expenses related to specific jobs or projects.

The detailed breakdown of direct material and direct labor costs highlights the company's emphasis on meticulous cost analysis. The heavy reliance on international suppliers for the majority of raw materials, with the exception of the locally sourced carton, suggests a strategic approach to balancing global and local sourcing to optimize costs and reduce dependencies. The allocation of production overhead and non-production costs based on the prime cost further demonstrates the company's comprehensive understanding of the total costs and expenses involved in manufacturing and delivering the products.

Our findings are supported by the related literature, which discusses the widespread use of job order costing in the garment industry, particularly for companies that produce customized products or services [4], [5]. The job order costing system employed by HIJ Cambodia enables the company to set accurate prices and understand the profitability of each job, aligning with the literature's emphasis on the benefits of this cost accounting method [6], [7].

However, the literature also highlights the potential challenges of implementing and maintaining a job order costing system, such as the complexity of record-keeping and the accurate allocation of overhead costs [7], [9]. This underscores the need for HIJ Cambodia to continuously review and refine its cost accounting practices to ensure their effectiveness and adaptability in the face of changing market conditions and production requirements.

The literature on process costing provides a useful comparative perspective, as it emphasizes the benefits of cost allocation based on production stages, particularly in industries with continuous and homogeneous production processes [10], [11]. While the garment industry may not be as well-suited to process costing due to the customized nature of its products, the insights from the literature on the importance of cost monitoring and control at each stage of production can inform HIJ Cambodia's continuous improvement efforts.

The discussion of ABC and TDABC in the literature offers further insights into the cost accounting methods that could potentially enhance HIJ Cambodia's financial management. While the complexity and resource-intensive nature of traditional ABC may be a challenge for the company, the simplified approach of TDABC could provide opportunities for more accurate cost assessments and improved decision-making [17], [18], [19].

The garment industry-specific literature on product costing further reinforces the importance of the comprehensive approach employed by HIJ Cambodia. The distinction between CM and FOB costing, as discussed in the literature, aligns with the company's synergistic use of job order costing and FOB costing principles [36], [37]. This holistic perspective on product costing enables HIJ Cambodia to maintain a competitive edge in the global garment market by ensuring accurate pricing and profitability.

6. Conclusion

The case study of HIJ Cambodia offers valuable insights into the comprehensive cost accounting and product costing strategies employed by a leading garment manufacturer in the Cambodian market. The company's well-defined organizational structure, featuring specialized departments, underscores its strategic focus on operational efficiency and effective cost management.

HIJ Cambodia integrates job order costing and FOB costing principles to align with its customer-driven production model, enabling precise tracking of costs and expenses related to specific jobs or projects. The meticulous analysis of direct material and direct labor costs, coupled with the allocation of production overhead and non-production costs, ensures a thorough understanding of the total costs and expenses involved in manufacturing and delivering the company's products.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

The findings from this case study are supported by related literature, which highlights the benefits of job order costing in the garment industry, particularly for companies producing customized products. However, the literature also warns of the potential challenges in implementing and maintaining such a system, emphasizing the need for continuous review and refinement of cost accounting practices to ensure adaptability.

While the garment industry may not be ideally suited to process costing due to the customized nature of its products, insights from the literature on cost monitoring and control at each production stage can inform HIJ Cambodia's continuous improvement efforts. Discussions on more advanced cost accounting methods, such as ABC and TDABC, suggest potential opportunities for enhancing the company's financial management and decision-making.

Industry-specific literature on product costing further reinforces the importance of the comprehensive approach employed by HIJ Cambodia. The synergistic use of job order costing and FOB costing principles enables the company to maintain a competitive edge in the global garment market by ensuring accurate pricing and profitability.

While this study provides valuable insights, it is important to acknowledge its limitations. The research focuses on a single case, HIJ Cambodia, which may not fully represent the broader garment manufacturing industry. Additionally, the analysis is based on information and data provided by the company and its key personnel. Access to additional financial and operational data could have further enriched the findings.

Future research could benefit from comparative studies of cost accounting practices across multiple garment manufacturing companies, both within the OBF International Group and the wider industry. Such studies could help identify best practices and areas for improvement. Furthermore, an in-depth analysis of factors influencing profitability and competitiveness—such as market dynamics, supplier relationships, and labor productivity—could offer a more comprehensive understanding of the industry's challenges and opportunities.

Acknowledgements:
We sincerely appreciate the financial support from CamEd Business School, which made it possible for us to proceed with submitting our paper for publication.

References

[1] J. S. Mah, "Industrial-led economic development of Cambodia," *Journal of Southeast Asian Economies*, vol. 39, no. 2, pp. 198-210, 2022.

[2] K. Tanaka and T. M. Greaney, "Trade and employment in the formal and informal sectors: a natural experiment from Cambodia," *Journal of Asian Economics*, vol. 90, p. 101676, 2024.

[3] V. Rajendran, S. Prabhu, and M. Rachel, "Cost Analysis of a Knitted Garment," *Journal for Studies in Management and Planning*, vol. 4, pp. 36-42, 2018.

[4] W. Nugroho, A. Fatimah, and A. Javas, "Job-Order Costing dan Penerapannya pada Pekerjaan Interior Hunian Vertikal," *Jurnal Prokons*, vol. 15, no. 2, pp. 67-78, 2021.

[5] T. R. Widya, "Perhitungan Harga Pokok Produksi dengan Metode Harga Pokok Pesanan (Job Order Costing) pada Hana Digital Printing Malang," *AL-MANHAJ: Jurnal Hukum dan Pranata Sosial Islam*, vol. 5, no. 1, pp. 479-488, 2023.

[6] E. S. Handayani, W. Winarni, S. Akiah, and L. H. Suriyanti, "Analisis Perhitungan Biaya Produksi Berdasarkan Pesanan (Job Order Costing) Pada Rafi Jaya Mebel (Rjm) Suak Temenggung," *Research in Accounting Journal (RAJ)*, vol. 1, no. 1, pp. 187-195, 2020.

[7] K. N. Diana and L. Setyowati, "Teknik Job Order Costing dalam Perhitungan Harga Pokok Produksi pada UD. Nirwana," *ECOMA: Journal of Economics and Management*, vol. 1, no. 2, pp. 78-85, 2023.

[8] F. A. Putri and E. Desi, "Cost of production price analysis using job order costing method in CV. Alam Lestari Jaya," *IJISTECH (International Journal of Information System and Technology)*, vol. 4, no. 1, pp. 349-353, 2020.

[9] S. Suendri, T. Triase, and S. Afzalena, "Implementasi Metode Job Order Costing Pada Sistem Informasi Produksi Berbasis Web," *JS (Jurnal Sekolah)*, vol. 4, no. 2, pp. 97-106, 2020.

[10] O. Pirogova, R. Nuzhdin, N. Kondrashova, and O. Lukina, "Process-cost analysis of productivity and wages in agro-industrial processing organizations," in *E3S Web of Conferences*, vol. 217, p. 09002, 2020.
[11] F. F. Rohma and P. E. A. N. Wahyu, "The analysis of process costing method: a case study in ultra micro business," *Wacana Equiliberium (Jurnal Pemikiran Penelitian Ekonomi)*, vol. 10, no. 02, pp. 64-75, 2022.
[12] M. F. Alsayegh, "Activity based costing around the world: Adoption, implementation, outcomes and criticism," *Journal of Accounting and Finance in Emerging Economies*, vol. 6, no. 1, pp. 251-262, 2020.
[13] D. David, D. Pordea, and L. Păiuşan, "A study concerning the application of the activity-based costing method for entities operating in the building sector," *CECCAR Business Review*, vol. 1, no. 6, pp. 30-37, 2020.
[14] M. M. Saeed, A. Widyaningsih, and A. S. Khaled, "Activity-based costing (ABC) in the manufacturing industry: A literature review," *Journal of Development Economics*, vol. 8, no. 2, 2023.
[15] R. Zhang and J. L. Li, "The application of activity-based costing in the cost calculation of thermal-power enterprise," *Thermal Science*, vol. 25, no. 2 Part A, pp. 933-939, 2021.
[16] T. I. R. Hakim, "Activity-Based Costing and Its Derivatives and Significance in the Cutting-Edge Environment," *TIJAB (The International Journal of Applied Business)*, vol. 2, no. 2, pp. 107-122, 2018.
[17] N. F. Zamrud and M. Y. Abu, "Comparative study: activity based costing and time driven activity based costing in electronic industry," *Journal of Modern Manufacturing Systems and Technology*, vol. 4, no. 1, pp. 68-81, 2020.
[18] P. Jayakumar, B. Triana, and K. J. Bozic, "Editorial commentary: the value of time-driven, activity-based costing in health care delivery," *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, vol. 37, no. 5, pp. 1628-1631, 2021.
[19] D. Koolmees, D. N. Bernstein, and E. C. Makhni, "Time-driven activity-based costing provides a lower and more accurate assessment of costs in the field of orthopaedic surgery compared with traditional accounting methods," *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, vol. 37, no. 5, pp. 1620-1627, 2021.
[20] D. Tamulevičienė, J. Mackevičius, and L. Gaižauskas, "Methodology of applying standard costing and normative methods in manufacturing enterprises," *Buhalterinės apskaitos teorija ir praktika*, vol. 21, pp. 4-4, 2020.
[21] T. Rosit and O. Suzanska, "Production technology as a determining factor of a cost accounting method chosen," *Pryazovskyi Economic Herald*, 2021. [Online]. Available: https://doi.org/10.32840/2522-4263/2021-5-27.
[22] T. C. Hung and J. K. Shanmugam, "The Relevance of Standard Costing and Variance Analysis in Global Industries Today," *East Asian Journal of Multidisciplinary Research*, vol. 2, no. 2, pp. 525-542, 2023.
[23] K. Sil, "Scientific Application of Standard Costing Practices in Manufacturing Industries-A Case Study," *ComFIn Research*, vol. 1, pp. 27-33, 2021.
[24] E. Oyedele, L. Mustapha, and S. Agbi, "The Impact of Standard Costing on the Profitability of Listed Consumer Goods Firms in Nigeria," *EPRA International Journal of Economics, Business and Management Studies*, 2023. [Online]. Available: https://doi.org/10.36713/epra13254.
[25] O. I. Ogungbade, I. M. Adebiyi, and P. Odumodu, "Standard Costing and Performance of Manufacturing Firms in Nigeria," *The International Journal of Business and Management*, vol. 8, no. 10, 2020.
[26] S. McKinstry, K. Kininmonth, and K. Mathieson, "The introduction and operation of standard costing at J&P Coats Ltd., 1925–1961: an institutional interpretation," *Accounting History Review*, vol. 29, no. 3, pp. 369-389, 2019.
[27] Á. Nhaca, "The Advantages as an Instrument of Management of the Variable Cost Method in Comparison With the Observation Method," SSRN, 2019. [Online]. Available: https://ssrn.com/abstract=3789840.
[28] N. K. Gupta, "A Study on Marginal Costing in Tata Steel Ltd.," *International Journal For Multidisciplinary Research*, 2023. [Online]. Available: https://doi.org/10.36948/ijfmr.2023.v05i01.1662.
[29] K. I. Kim, "Application of Throughput Costing in Smart Factory Manufacturing Environment," *Journal of Convergence for Information Technology*, vol. 11, no. 8, pp. 8-13, 2021.
[30] F. S. Piran, D. P. Lacerda, A. S. Camanho, and M. C. Silva, "Internal benchmarking to assess the cost efficiency of a broiler production system combining data envelopment analysis and throughput accounting," *International Journal of Production Economics*, vol. 238, p. 108173, 2021.
[31] G. da Silva Stefano, T. dos Santos Antunes, D. P. Lacerda, M. I. W. M. Morandi, and F. S. Piran, "The impacts of inventory in transfer pricing and net income: Differences between traditional accounting and throughput accounting," *The British Accounting Review*, vol. 54, no. 2, p. 101001, 2022.
[32] G. Fragapane, D. Ivanov, M. Peron, F. Sgarbossa, and J. O. Strandhagen, "Increasing flexibility and productivity in Industry 4.0 production networks with autonomous mobile robots and smart intralogistics," *Annals of Operations Research*, vol. 308, no. 1, pp. 125-143, 2022.
[33] M. F. Khalaf, "Integrating throughput accounting and activity based costing in industrial companies," *Journal of Southwest Jiaotong University*, vol. 54, no. 6, 2019.
[34] H. K. Kadhim, K. J. Najm, and H. N. Kadhim, "Using Throughput Accounting for Cost Management and Performance Assessment: Constraint Theory Approach," *TEM Journal*, vol. 9, no. 2, 2020.
[35] S. H. Mijbil, A. M. Hamzah, and K. M. Allawi, "Measuring cost by using throughput accounting to rationalize administrative decisions," *International Journal of Economics and Business Administration*, vol. 8, no. 3, pp. 569-578, 2020.
[36] T. M. Mohibullah, U. M. Takebira, M. Rahman, M. S. Alam, A. S. Sarker, and S. Q. Mahir, "Costing Principles of a Denim Pant," *Journal of Textile Science and Technology*, vol. 5, no. 2, pp. 48-60, 2019.
[37] F. Hosen, M. Hossain, S. Hassan, M. Hassan, A. A., and K. Bisal, "Assessment and Evaluation of the Production Merchandising of a Denim Pant," *Australian Journal of Engineering and Innovative Technology*, 2020. [Online]. Available: https://doi.org/10.34104/ajeit.020.0910100.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322

[38] T. M. Mohibullah, U. M. Takebira, S. Islam, M. A. R. Robin, M. R. Shipto, R. Ahmed, M. F. Rabby, and L. Zaman, "Costing Break Down of Fully Fashioned Knitwear," *Journal of Textile Science and Technology*, vol. 6, no. 4, pp. 153-167, 2020.
[39] Flyvbjerg, "Case study," *The Sage Handbook of Qualitative Research*, 4th ed., pp. 301-316, 2011.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 6: 6064-6082, 2024
DOI: 10.55214/25768484.v8i6.3322