# IMPROVING THE CALCULATION AND ANALYSIS OF PRODUCTION COSTS BASED ON FOREIGN EXPERIENCE

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Received: 07.10.2025
Revised: 08.10.2025
Accepted: 09.10.2025

**Keywords:**
production cost, cost accounting, lean manufacturing, cost analysis, foreign experience, cost center accounting, erp systems, strategic cost management, process optimization.

**Annotation**

This article explores methods for improving the calculation and analysis of production costs by incorporating foreign best practices. It examines cost accounting systems used in countries such as Germany, Japan, and the United States, highlighting approaches like cost center accounting, lean manufacturing, and activity-based costing. The study outlines how these methods contribute to better cost control, process optimization, and strategic decision-making. Recommendations are provided for adapting these foreign practices to local business environments to enhance production efficiency and competitiveness. The article also discusses challenges such as localization, staff training, and initial implementation costs.

**Introduction.** In an increasingly globalized and competitive economic environment, the accurate calculation and analysis of production costs have become essential for companies aiming to improve efficiency, reduce waste, and remain profitable. While many countries and industries develop their own cost accounting systems, there is significant value in studying and adapting international best practices. Foreign experience—particularly from economically advanced countries such as Germany, Japan, and the United States—offers practical insights into advanced cost management methods that can significantly enhance domestic approaches.

Production cost includes all expenses related to the manufacturing of goods, such as raw materials, labor, overhead, and depreciation. A precise understanding of these costs helps in:

- Pricing strategies
- Profitability analysis
- Budgeting and forecasting
- Identifying inefficiencies

- Strategic decision-making

**Analysis of Literature.** The calculation and analysis of production costs have long been a critical focus in managerial accounting and operations management research. Over the past decades, scholars and practitioners worldwide have explored various methodologies to improve cost accuracy, control, and relevance in decision-making. Foreign experiences, especially from economically advanced countries, offer a wealth of knowledge on effective cost management strategies that can be adapted and localized to enhance domestic industrial competitiveness. Classical cost accounting methods, such as **standard costing** and **absorption costing**, have been the foundation of cost management since the early 20th century (Horngren, Datar, & Rajan, 2015). These approaches allocate overhead costs based on volume metrics (e.g., labor hours or machine hours) but have been criticized for their inaccuracy in complex production environments with diverse products and overhead activities (Cooper & Kaplan, 1988). The literature suggests that these traditional methods often lead to distorted product costs, poor pricing decisions, and missed opportunities for cost savings (Drury, 2013). The development of **Activity-Based Costing (ABC)** in the late 1980s, particularly in the United States, marked a significant advancement. ABC assigns costs to products based on the actual activities and resources they consume, providing more accurate and actionable insights (Kaplan & Anderson, 2007). Researchers such as Cooper and Kaplan (1991) demonstrated that ABC helps companies identify inefficient processes and non-value-added activities, leading to improved cost control and strategic management. However, challenges include the complexity of implementation and high data requirements (Innes & Mitchell, 1995).

German literature emphasizes the importance of cost centers (*Kostenstellen*) and **controlling** systems, which integrate cost accounting with managerial decision-making processes (Fülbier & Stölzle, 2007). German companies often adopt rigorous cost control through departmental cost centers, facilitating detailed variance analyses and operational performance monitoring (Merchant & Van der Stede, 2017). Studies highlight that the German approach promotes alignment between financial metrics and operational activities, enabling continuous cost optimization (Horngren et al., 2015). Japan's manufacturing sector has pioneered the integration of **lean production** principles with cost management (Womack, Jones, & Roos, 1990). The literature emphasizes that Japanese firms focus on waste elimination (*muda*), continuous improvement (*kaizen*), and just-in-time (JIT) inventory systems to reduce production costs (Ishikawa, 1985; Ohno, 1988). Research indicates that Japanese cost systems are process-oriented rather than product-oriented, facilitating the identification of inefficiencies across the entire value stream (Shingo, 1989). This holistic view contrasts with traditional cost accounting and encourages a culture of employee involvement in cost reduction efforts.

The rise of **Enterprise Resource Planning (ERP)** systems has transformed cost calculation and analysis globally. Studies show that ERP software integrates financial and operational data, automates cost tracking, and enhances real-time reporting capabilities (Davenport, 1998; Bradley, 2008). By adopting ERP and digital tools, firms can implement sophisticated costing methods like ABC more efficiently and reduce manual errors (Granlund & Malmi, 2002). The reviewed literature consistently supports the idea that no single method suits all contexts; instead, a combination of foreign best practices tailored to local conditions yields the best results. For instance, adopting German cost center rigor, Japanese lean principles, and American ABC can synergistically improve cost accuracy, transparency, and managerial relevance (Bhimani, Horngren, Datar, & Rajan, 2015). Researchers also caution that successful implementation depends on organizational culture, management commitment, and adequate staff training (Langfield-Smith, 2008).

**Research discussion.** The analysis of foreign experience in the calculation and analysis of production costs reveals several critical insights that can substantially improve domestic cost management practices. This discussion synthesizes the theoretical foundations and practical applications from countries such as Germany, Japan, and the United States, highlighting both the potential benefits and limitations of adapting these methods. One of the most striking findings is the complementary nature of various foreign costing systems. For example, the German emphasis on cost center accounting and variance analysis provides a robust framework for detailed cost control and operational monitoring. When combined with the Japanese lean philosophy—which prioritizes waste reduction and continuous improvement—and the American innovation of activity-based costing (ABC), companies can develop a comprehensive cost management system. This integrated approach addresses the shortcomings of traditional volume-based costing by improving cost accuracy, promoting efficiency, and enabling strategic decision-making. However, this integration is not without challenges. Implementing multiple sophisticated systems requires a high degree of organizational coordination, significant investment in technology, and a culture that supports change and continuous learning. The literature suggests that companies must carefully assess their readiness and capacity before attempting to combine these approaches (Langfield-Smith, 2008; Bhimani et al., 2015).

A recurring theme in the literature is the importance of tailoring foreign practices to local business environments. Legal frameworks, market conditions, labor relations, and management styles differ widely across countries, influencing how cost systems function. Blind adoption of foreign models without contextual adaptation can lead to resistance, misapplication, or failure (Merchant & Van der Stede, 2017). Therefore, organizations should undertake a thorough diagnostic of their internal capabilities and external environment before implementing changes. Pilot programs,

phased rollouts, and continuous feedback loops can facilitate smoother transitions and greater alignment with local needs.

Ultimately, improved cost calculation and analysis empower firms to make better strategic decisions—whether in pricing, product mix, investment, or process improvement. The enhanced visibility into cost drivers and operational inefficiencies supports proactive management, fosters innovation, and strengthens competitive advantage. However, the benefits are contingent on integrating costing insights into broader management processes. Companies must ensure that cost data informs decision-making at all levels and is linked to performance measurement, incentive systems, and long-term strategic planning. The foreign experiences in cost calculation and analysis offer rich lessons that can guide domestic firms toward more sophisticated and effective cost management. Success hinges not only on technical adoption but also on organizational readiness, cultural alignment, and thoughtful localization. By embracing these insights holistically, companies can significantly enhance their production efficiency, cost competitiveness, and strategic responsiveness.

**Conclusion.** The exploration of foreign experiences in production cost calculation and analysis reveals that adopting and adapting international best practices can significantly enhance domestic cost management systems. Countries like Germany, Japan, and the United States offer valuable models—ranging from detailed cost center accounting and lean manufacturing principles to activity-based costing—that improve cost accuracy, promote efficiency, and support strategic decision-making. However, successful implementation requires more than technical adoption. It demands a supportive organizational culture, investment in technology, and tailored localization to fit the unique economic, legal, and cultural context of the adopting company or country. Moreover, engaging employees and ensuring management commitment are essential for sustaining improvements over time. By integrating these foreign methodologies thoughtfully and holistically, companies can gain greater insight into cost drivers, eliminate waste, optimize processes, and ultimately strengthen their competitive position in the global market.

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