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# COST–BENEFIT ANALYSIS OF OUTSOURCING FREIGHT FORWARDING AT SENUVA FREIGHT, CHENNAI

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## ABSTRACT

This study examines the financial and operational impact of outsourcing freight forwarding services at Senuva Freight Management Private Limited, Chennai. Freight forwarding plays a key role in logistics by improving delivery timelines, documentation accuracy, and overall supply chain efficiency. The research is based on primary data collected from 99 respondents and analysed using percentage analysis, weighted average, and Henry Garrett Ranking method. The findings reveal that outsourcing helps reduce overhead costs, enhances supply chain coordination, and allows companies to focus on their core competencies. However, the reduction in internal staff workload remains moderate. Overall, outsourcing proves to be a strategic tool for improving cost efficiency and supply chain performance, with documentation accuracy emerging as the most valued outsourcing outcome.

**Keywords:** Freight Forwarding, Outsourcing, Cost-Benefit Analysis, Supply Chain, Logistics, Garrett Ranking, Weighted Average

## 1. INTRODUCTION

In today's business environment, organizations are constantly finding ways to enhance operational efficiency and reduce costs. Many companies find it difficult to make strategic decisions in international trade and logistics, particularly around whether to manage freight forwarding in-house or to outsource to a specialist provider. This dilemma is especially critical for growing organizations where logistics complexity increases with business scale.

Freight forwarding—the organization of shipments across countries—is a complex task requiring expertise in customs regulation, transportation modes, documentation, and risk management. Outsourcing freight forwarding carries several advantages: reduced overhead costs, scalability, and access to expert knowledge. However, it also comes with risks such as reduced operational control and dependency on third-party providers.

India's freight forwarding industry is a critical segment of the country's logistics ecosystem. Leading players include DHL Express (India) Pvt. Ltd., DTDC Express Limited, GATI Ltd., Allcargo Logistics Ltd., and FedEx. The four primary types of freight forwarding—ocean/sea, air, road, and rail—each offer distinct cost, speed, and volume trade-offs. This study evaluates the financial and operational implications of outsourcing at Senuva Freight Management Private Limited, Chennai, founded in 2023, to help businesses make data-driven decisions aligned with their strategic goals.

## 2. REVIEW OF LITERATURE

Anaadiar and colleagues (2020, Chennai) examined service quality attributes of freight forwarders, highlighting that timely, error-free delivery, competitive pricing, and personalized service solutions are crucial for customer trust and loyalty. Tatanexarc Logistics Blog (2024–25) reviewed India's evolving freight forwarding landscape with emphasis on digitalization, e-commerce integration, AI, and IoT adoption, noting the growing importance of sustainability practices for long-term competitiveness.

Science Direct (2024) analysed sustainable logistics with a focus on freight emissions forecasting, emphasizing that environmental concerns increasingly shape outsourcing strategies. FIATA-based reports (2022–25) highlighted reverse logistics, contract management, and green logistics as key factors in logistics service provider (LSP) selection. DB Analysis (2024) showed that government-led Multi-Modal Logistics Parks (MMLPs) are transforming India's logistics sector by reducing freight costs and improving supply chain visibility.

Doratiotto et al. (2022) found that international logistics outsourcing had strong positive effects on financial performance, customer service, and cost competitiveness, with over 90% user satisfaction in UAE and Brazil cases. Afum et al. (2021) noted significant operational performance improvements through outsourcing, but identified service quality inconsistency and communication challenges as key risks. Gambal et al. (2022) highlighted how ITO and BPO frameworks in freight forwarding can drive cost savings and supply chain innovation. Tan et al. (2024) proposed collaborative Shapley value models for profit-sharing across networked freight forwarders, promoting capacity utilization and sustainability.

# 3. RESEARCH METHODOLOGY

## 3.1 Research Design

This study employs a descriptive research design to systematically describe the cost, benefit, and operational outcomes of outsourcing freight forwarding. Descriptive research enables an accurate picture of current practices and evaluates the effectiveness of outsourcing without manipulating variables.

## 3.2 Sampling and Data Collection

A convenience sampling technique was adopted, as it allows quick and cost-effective data collection from readily accessible respondents (logistics firm professionals). Primary data was collected through structured questionnaires from 99 respondents. Secondary data was drawn from published reports, journals, and online sources. The study was conducted over a one-month period.

## 3.3 Statistical Tools

- Percentage Analysis – to understand response distribution across variables
- Weighted Average (Likert Scale) – to determine the relative impact of outsourcing across performance dimensions
- Henry Garrett Ranking – to identify and rank the most important factors influencing outsourcing decisions

# 4. DATA ANALYSIS AND INTERPRETATION

## 4.1 Cost Impact of Outsourcing

### 4.1.1 Overall Cost Savings

The majority of respondents (30.3%) reported a slight reduction in costs due to outsourcing, while 29.3% experienced a slight increase and 26.3% noted no change. Only 3% reported a significant reduction, indicating that outsourcing yields modest but positive cost savings for most organizations (Fig 1).

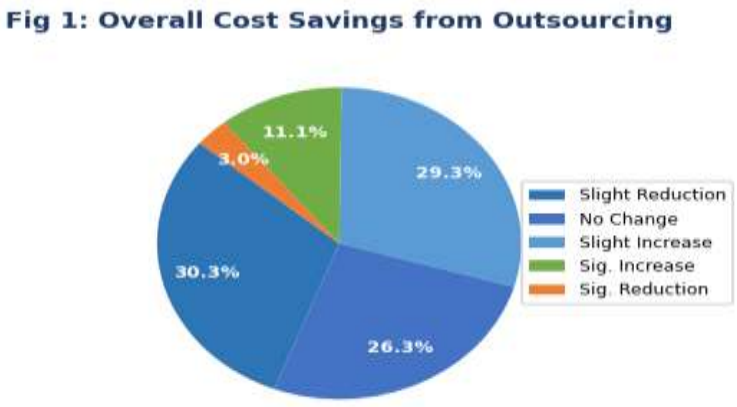


Fig 1: Overall Cost Savings — 30.3% report slight reduction; outsourcing yields modest savings

### 4.1.2 Cost Reduction Areas

Overhead costs were identified as the most reduced area (29.3%), followed by infrastructure costs (27.3%), technology/software costs (20.2%), and labour costs (18.2%). Only 5.1% reported no cost reduction in any category (Fig 2).

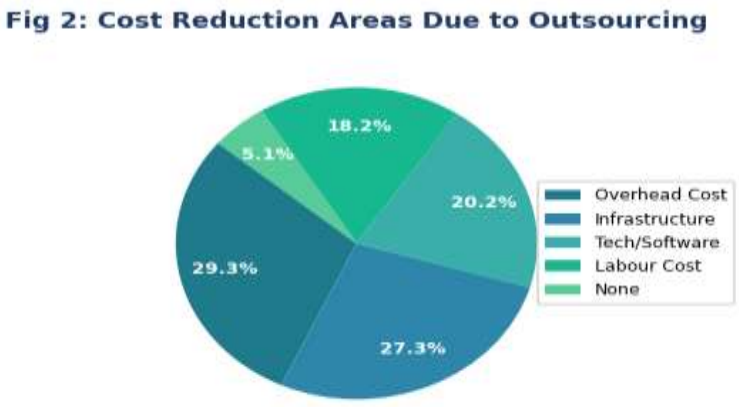


Fig 2: Cost Reduction Areas — Overhead cost (29.3%) is the most impacted category

### 4.1.3 Cost Predictability and Budgeting

On cost predictability, 32.3% agreed and 14.1% strongly agreed that outsourcing improved budgeting, giving a combined positive response of 46.4%. However, 29.3% disagreed, suggesting that cost predictability benefits are not universally experienced (Fig 3).

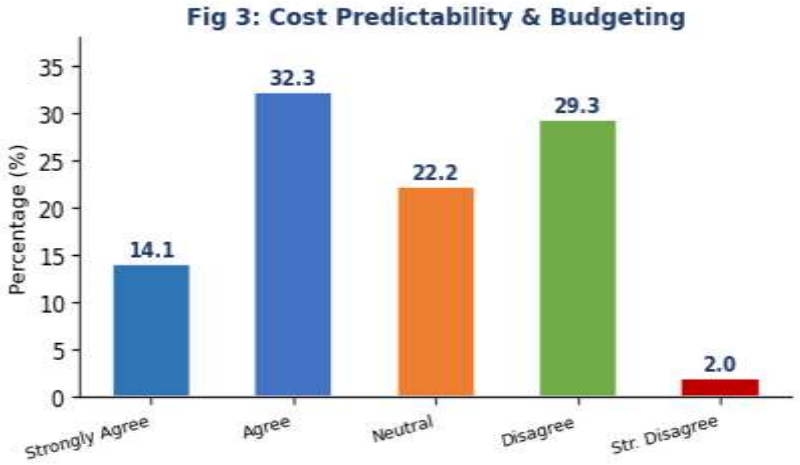


Fig 3: Cost Predictability & Budgeting — 46.4% agree outsourcing improves budgeting

### 4.1.4 Operational Cost Reduction Range

A plurality of respondents (30.3%) estimated operational cost reductions of 21–30% attributable to outsourcing, followed by 29.3% reporting 31–50% reductions. This confirms that outsourcing can yield meaningful operational savings when managed effectively (Fig 4).


Fig 4: Operational Cost Reduction — 30.3% estimate 21–30% cost savings

## 4.2 Operational and Service Impact

### 4.2.1 Delivery Time to Customers

On delivery time impact, 29.3% rated it as good and another 29.3% as average, while 28.3% rated it as bad. This split indicates that outsourcing's impact on delivery timelines is mixed and dependent on provider quality and logistics complexity (Fig 5).

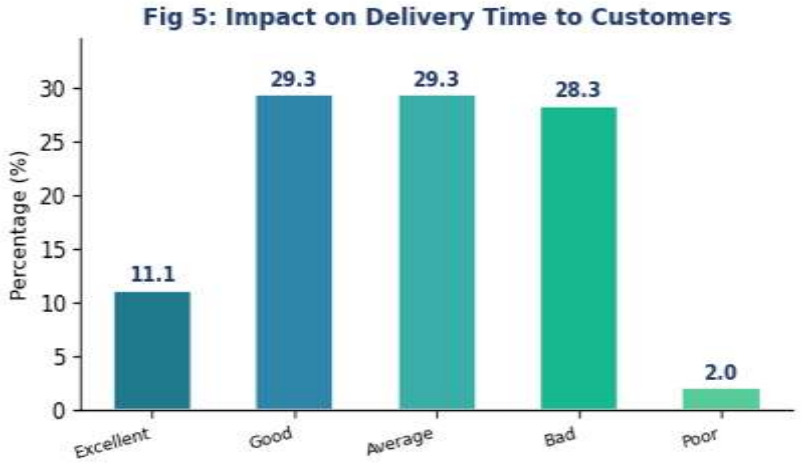


Fig 5: Impact on Delivery Time — Evenly split between Good (29.3%) and Average (29.3%)

### 4.2.2 Supply Chain Documentation Accuracy

Documentation accuracy was rated good by 38.4% and average by 30.3%, with 11.1% rating it excellent. This indicates a generally positive perception of outsourced documentation quality, which is aligned with the expectation that specialist providers offer superior documentation expertise (Fig 6).

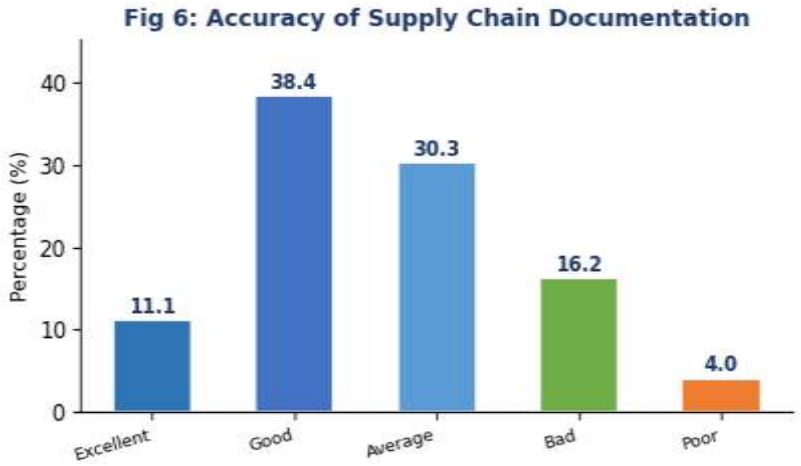


Fig 6: Documentation Accuracy — 38.4% rate it as Good; overall positive perception

### 4.2.3 Supply Chain Coordination

37.3% agreed and 11.1% strongly agreed that outsourcing improved supply chain coordination, giving a combined positive response of 48.4%. However, 17.2% disagreed and 6.1% strongly disagreed, indicating that coordination improvements depend heavily on the quality of the outsourcing partnership (Fig 7).

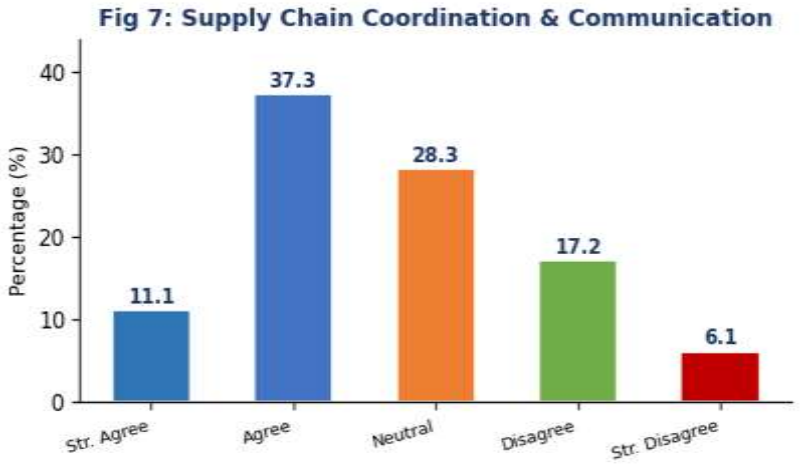


Fig 7: Supply Chain Coordination — 48.4% agree outsourcing improves coordination

### 4.2.4 Overall Supply Chain Assessment

33.3% of respondents assessed the overall supply chain as somewhat efficient post-outsourcing, while 24.2% each rated it as neutral and somewhat inefficient, and 15.2% as highly efficient. This moderate positive assessment underscores the need for continuous monitoring (Fig 8).


Fig 8: Overall Supply Chain Assessment — 33.3% rate it as somewhat efficient

## 4.3 Resource and Operational Impact

### 4.3.1 Core Competency Focus

37.4% agreed and 12.1% strongly agreed that outsourcing allowed their organizations to focus more on core competencies (combined 49.5%), while 22.2% disagreed and 8.1% strongly disagreed. This near-majority positive response reinforces outsourcing's strategic value (Fig 9).

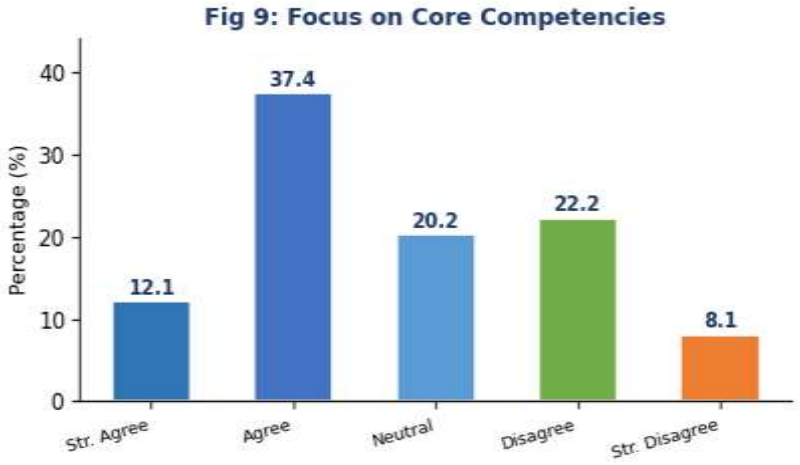


Fig 9: Focus on Core Competencies — 49.5% agree outsourcing enables strategic focus

### 4.3.2 Internal Staff Workload

35.4% of respondents reported that workload slightly decreased, and 12.1% that it greatly decreased, giving a combined 47.5% positive response. However, 27.3% reported a slight increase, indicating that outsourcing does not fully relieve internal employees of responsibilities (Fig 10).

**Fig 10: Impact on Internal Staff Workload**

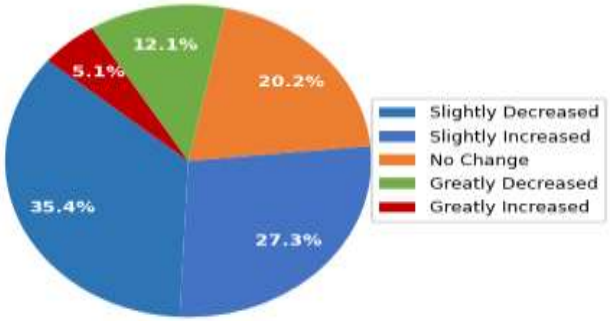


Fig 10: Internal Staff Workload — 47.5% report decrease; 27.3% report increase

### 4.3.3 Resource Reallocation

Technology resources were reallocated most frequently (32.3%), followed closely by time and managerial attention (31.3%), financial resources (17.2%), and human resources (13.1%). This reflects that outsourcing primarily frees up technology-related investments and management bandwidth (Fig 11).

**Fig 11: Reallocation of Internal Resources**

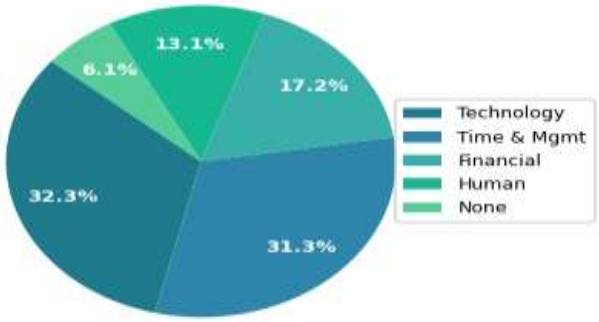


Fig 11: Resource Reallocation — Technology (32.3%) and Time & Management (31.3%) dominate

## 4.4 Summary of Percentage Analysis

| Parameter | Majority Response | Percentage |
|---|---|---|
| Overall Cost Savings | Slight Reduction | 30.3% |
| Most Reduced Cost Area | Overhead Cost | 29.3% |
| Cost Predictability | Agree (Improved) | 32.3% |
| Operational Cost Reduction | 21%–30% Reduction | 30.3% |
| Delivery Time Impact | Good / Average (tied) | 29.3% each |
| Documentation Accuracy | Good | 38.4% |
| Supply Chain Coordination | Agree (Improved) | 37.3% |
| Overall Supply Chain Efficiency | Somewhat Efficient | 33.3% |
| Core Competency Focus | Agree | 37.4% |
| Staff Workload | Slightly Decreased | 35.4% |
| Resource Reallocation | Technology Resources | 32.3% |

| | | |
|---|---|---|
| Internal Operations Efficiency | No Impact | 31.3% |

Table 1: Summary of Percentage Analysis Results (n=99)

## 4.5 Weighted Average Analysis – Outsourcing Impact on Logistics Performance

Weighted average analysis was applied to eight logistics performance dimensions rated on a 5-point scale (Always=5 to Never=1). Cost savings in operations emerged as the highest impact area (WA = 4.34), significantly ahead of all other dimensions. Focus on core business activities (WA = 3.83) and improvement in delivery time (WA = 3.81) followed, while reduction of internal staff workload recorded the lowest score (WA = 3.30), confirming that outsourcing does not substantially relieve employee burden.


Fig 12: Weighted Average Scores — Cost Savings (4.34) is the strongest impact area

| Logistics Performance Area | Weighted Average | Rank |
|---|---|---|
| Cost Savings in Operations | 4.34 | 1st |
| Focus on Core Business Activities | 3.83 | 2nd |
| Improvement in Delivery Time | 3.81 | 3rd |
| Improvement in Customer Satisfaction | 3.43 | 4th |
| Accuracy of Supply Chain Documentation | 3.42 | 5th |
| Efficiency of Internal Operations | 3.42 | 5th |
| Coordination and Communication in Supply Chain | 3.39 | 7th |
| Reduction of Workload for Internal Staff | 3.30 | 8th |

Table 2: Weighted Average – Impact of Outsourcing on Logistics Performance

## 4.6 Henry Garrett Ranking – Factors Influencing Outsourcing Decisions

The Henry Garrett Ranking method was applied to identify the most important factors influencing companies to outsource logistics. Using the formula Percent Position = 100(Rij – 0.5) / Nj, Garrett scores were computed for each of eight factors across 99 respondents. The Garrett values for ranks 1–8 were 80, 68, 60, 53, 47, 41, 32, and 20 respectively.

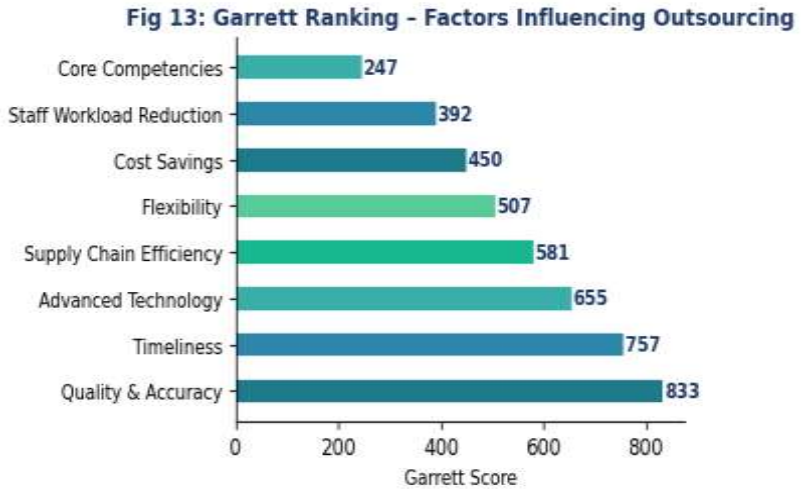


Fig 13: Garrett Ranking — Documentation Quality (833) is the top outsourcing driver

| Factor Influencing Outsourcing | Garrett Score | Final Rank |
|---|---|---|
| Quality & Accuracy of Documentation | 833 | 1st |
| Timeliness of Delivery | 757 | 2nd |
| Access to Advanced Technology / IT Support | 655 | 3rd |
| Efficiency in Supply Chain Management | 581 | 4th |
| Flexibility to Handle Demand Changes | 507 | 5th |
| Cost Savings Potential | 450 | 6th |
| Reduction of Internal Staff Workload | 392 | 7th |
| Ability to Focus on Core Competencies | 247 | 8th |

Table 3: Garrett Ranking – Factors Influencing Logistics Outsourcing Decisions

The findings reveal that documentation quality and delivery timeliness are the top priorities for outsourcing, followed by access to advanced technology. Cost savings, despite being the most measurable benefit, was ranked 6th, indicating that businesses value reliability and operational excellence over pure cost reduction when deciding to outsource.

# 5. FINDINGS

## 5.1 Percentage Analysis Findings

- 30.3% of respondents experienced a slight reduction in overall costs through outsourcing.
- Overhead costs (29.3%) were the most reduced area, followed by infrastructure costs (27.3%).
- 32.3% agreed that outsourcing improved cost predictability and budgeting.
- 30.3% estimated operational cost reductions of 21–30% attributable to outsourcing.
- Delivery time was rated good and average equally (29.3% each), indicating mixed results.
- Documentation accuracy was rated good by 38.4%, reflecting a key outsourcing benefit.
- 37.3% agreed that supply chain coordination improved; 33.3% rated overall efficiency as somewhat efficient.
- 37.4% agreed outsourcing enabled greater focus on core competencies.
- 35.4% reported a slight decrease in staff workload; 32.3% noted technology resource reallocation as the primary shift.
- 31.3% reported no impact on internal operations efficiency, suggesting limited transformation in day-to-day workflows.

## 5.2 Weighted Average Findings

- Cost savings in operations (WA = 4.34) is the strongest impact area of outsourcing.
- Focus on core business activities (WA = 3.83) and delivery time improvement (WA = 3.81) are secondary benefits.
- Reduction of internal staff workload (WA = 3.30) is the weakest impact area, confirming limited relief for employees.

### 5.3 Garrett Ranking Findings

- Quality and accuracy of documentation (Score: 833) is the top reason companies choose to outsource logistics.
- Timeliness of delivery (757) and access to advanced technology (655) are the 2nd and 3rd ranked factors.
- Cost savings potential was ranked only 6th (Score: 450), confirming that reliability outweighs cost in outsourcing decisions.
- Ability to focus on core competencies ranked last (247), suggesting companies prioritize operational outcomes over strategic redirection.

## 6. SUGGESTIONS

- Companies should negotiate robust service-level agreements (SLAs) with outsourcing partners, specifically targeting documentation accuracy and delivery timelines.
- Regular monitoring and audits should be conducted to ensure documentation reliability and compliance with customs regulations.
- Digital tools and advanced logistics technologies should be adopted to enhance real-time communication and supply chain visibility.
- Training sessions for both internal staff and outsourcing partners can improve coordination and reduce information gaps.
- Workload distribution between internal staff and outsourcing partners should be optimized to avoid over-dependency and employee frustration.
- Continuous feedback collection from stakeholders can help refine outsourcing strategies and identify service gaps.
- Management should balance cost reduction objectives with quality standards, as pure cost minimization may compromise service reliability.
- Firms should explore advanced technology platforms (AI, IoT, blockchain) offered by LSPs to maximize the value of outsourcing beyond cost savings.

## 7. CONCLUSION

This study on the cost–benefit analysis of outsourcing freight forwarding at Senuva Freight, Chennai, confirms that outsourcing is a strategically valuable but nuanced decision. The study's findings show that outsourcing yields meaningful reductions in overhead and operational costs, improves supply chain coordination, and enables organizations to focus on core business activities. However, the impact on internal staff workload is moderate, and delivery time improvements are inconsistent, underscoring the importance of careful provider selection.

The weighted average analysis establishes cost savings as the most impactful outsourcing outcome (WA = 4.34), while the Henry Garrett Ranking reveals a surprising insight: companies value documentation accuracy and delivery timeliness above cost savings when choosing to outsource. This signals a maturity in logistics decision-making—organizations are increasingly prioritizing reliability, accuracy, and technological capability over mere financial savings.

For Senuva Freight and similar logistics firms in Chennai, the strategic imperative is clear: leverage outsourcing to drive documentation excellence, embrace digital logistics platforms, and ensure robust SLA frameworks. By balancing cost efficiency with service quality and maintaining strong oversight of outsourced operations, companies can achieve long-term supply chain resilience and sustained competitive advantage in India's rapidly evolving logistics market.

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