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The Impact of the Statement of Work on the Relationship between the 3PL Customer and Service Provider in the Manufacturing Sector

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Abstract: *The success of outsourcing supply chain operations to Third-Party Logistics (3PL) providers depends heavily on the clarity and precision of the Statement of Work (SoW). Despite the widespread expectation that 3PL partnerships will deliver efficiency gains, cost reductions, and enhanced service performance, many manufacturing customers report unmet expectations and strained relationships with providers. This study examines the role of SOW quality in shaping customer-provider relationships, with a particular focus on how vague, incomplete, or overly rigid SOWs contribute to scope creep and dissatisfaction. Using a qualitative research design, structured interviews were conducted with both manufacturing customers and 3PL providers across the Aerospace, Automotive, Defense, and Industrial Equipment sectors. The findings reveal that scope creep often begins subtly, with small, informal requests evolving into ongoing service obligations. Inadequately defined requirements, such as compliance tracking, kitting processes, or inventory handling rules, created significant misalignment between what customers expected and what providers had agreed to deliver. These discrepancies resulted in frustration, operational inefficiencies, and financial strain, particularly when customers resisted contract adjustments to reflect expanded requirements. The study concludes that static SOWs are insufficient in the context of modern manufacturing supply chains, where complexity and variability are inherent. To sustain effective partnerships, both parties must adopt dynamic SOW management frameworks that incorporate clear mechanisms for scope adjustment, cost sharing, and process transparency. Such approaches not only mitigate the risks of scope creep but also strengthen trust, resilience, and long-term profitability in customer-3PL relationships.*

Keywords: Third-Party Logistics (3PL), Statement of Work (SOW), scope creep, manufacturing sector, supply chain management, customer-provider relationships

I. INTRODUCTION

1.1 Background

The outsourcing of logistics and supply chain activities has become a defining trend in modern manufacturing as firms increasingly seek to enhance competitiveness, streamline operations, and focus on their core competencies. Over the last three decades, Third-Party Logistics (3PL) providers have emerged as critical partners in achieving these goals, offering services that extend well beyond basic transportation and warehousing. Today, 3PLs provide a wide range of value-added services, including production kitting, packaging, assembly, inventory management, quality assurance, and compliance monitoring [3]. By assuming responsibility for these functions, 3PLs allow manufacturers to concentrate resources on design,

innovation, and market responsiveness rather than the complexities of logistics management.

The scale and significance of outsourcing to 3PLs is evidenced in global supply chain surveys. According to ref. [2], a majority of customers (69%) report that 3PL providers meet their operational needs, highlighting the sector's value in addressing diverse supply chain challenges. At the same time, however, customer satisfaction levels have stagnated in areas such as cost reduction and service adaptability, suggesting that the effectiveness of outsourcing is uneven across contexts [2]. These findings indicate that while 3PL adoption has become mainstream, challenges remain in ensuring that partnerships deliver consistent and measurable benefits.

One of the main drivers of 3PL adoption has been the increasing complexity of manufacturing supply chains, especially in industries that face strict regulatory requirements. For instance, pharmaceutical and biotechnology sectors demand rigorous traceability of materials, including lot numbers, batch codes, and expiration dates, to ensure compliance with safety and quality standards [5]. In the automotive sector, regulatory frameworks require the tracking of supplier lots and serial numbers, ensuring that defective parts can be identified and recalled efficiently [6]. Similarly, environmental regulations in the manufacturing sector have placed increasing responsibility on both manufacturers and their logistics partners to ensure compliance throughout the supply chain [4]. These examples underscore that logistics outsourcing is no longer confined to operational efficiency but also plays a strategic role in ensuring compliance, risk management, and product integrity.

In addition to compliance, value-added services such as kitting and light assembly highlight the expanded role of 3PLs in supporting production processes. Kitting, which involves the preparation of components for assembly, may appear straightforward but becomes highly complex when dealing with large Bills of Material (BOMs) or when specialized conveyances are required for heavy or sensitive parts [8]. Such complexity introduces challenges in process design, resource allocation, and error prevention, which must be clearly articulated in contractual agreements between the manufacturer and the 3PL. When requirements are not sufficiently detailed in the governing Statement of Work (SOW), both parties risk misalignment in expectations and performance outcomes.

The increasing reliance on 3PLs has therefore transformed logistics providers into strategic partners in manufacturing

supply chains. However, this shift also places new emphasis on the governance mechanisms that structure these partnerships. Central to this governance is the SOW, which defines the scope of services, performance metrics, pricing structures, and responsibilities of each party [7]. A well-crafted SOW can act as a foundation for efficiency, trust, and collaborative problem-solving, while a poorly designed one can quickly become a source of disputes, scope creep, and dissatisfaction. Given the rising complexity of manufacturing supply chains and the strategic role of 3PLs, the quality of the SOW has become an increasingly critical determinant of partnership success.

II. LITERATURE REVIEW

2.1 Value-Added Services and Complexity

The role of Third-Party Logistics (3PL) providers has expanded significantly over the past three decades. While early outsourcing arrangements focused primarily on basic services such as transportation, warehousing, and distribution, today's 3PLs increasingly perform value-added services (VAS) that extend their role beyond logistics execution into direct support of manufacturing processes. These services include production kitting, light assembly, packaging, sequencing, quality inspection, and compliance-related activities [3]. The shift reflects both competitive pressures in manufacturing and customer demand for integrated solutions that reduce the burden of non-core yet operationally essential activities.

Although value-added services increase the strategic relevance of 3PLs, they also introduce significant operational complexity. Unlike standard logistics tasks, which are relatively predictable and process-driven, value-added activities often involve customization, variability, and coordination with customer production schedules. For instance, kitting requires preparing sets of components for assembly, which may appear straightforward but becomes increasingly complex as the Bill of Materials (BOM) grows in size and diversity. Research shows that while a simple kit may involve two or three items, kits in aerospace, automotive, or defense industries can contain hundreds of components, often with special handling or sequencing requirements [8]. The complexity escalates when shortages occur, oversized components need special conveyances, or kits must be reconfigured in response to production changes.

The challenge extends further in industries subject to stringent regulatory requirements. In the pharmaceutical and biotechnology sectors, for example, value-added services often require detailed lot tracking, serialization, and expiration management to comply with safety and regulatory standards [5]. Failure to adhere to these requirements can result in costly recalls or regulatory penalties, placing additional pressure on 3PL providers. Similarly, in the automotive industry, compliance with traceability regulations requires the precise recording of supplier lot and serial numbers to ensure defective parts can be quickly identified and removed from circulation [6]. In these cases, value-added logistics services are no longer

merely supportive but integral to regulatory compliance and product quality assurance.

As 3PLs take on these complex responsibilities, the role of the Statement of Work (SOW) becomes critical. The SOW defines the scope, deliverables, and performance metrics of outsourced services, guiding how providers allocate resources and price their offerings [7]. However, the increasing complexity of value-added services makes it difficult for customers to fully capture their requirements in the initial SOW. For instance, questions such as how providers should respond to missing kit components, how quality inspection should be measured, or how to manage variability in production schedules often remain unaddressed. When such details are absent, customers may assume flexibility and adaptability are part of the agreement, while providers view these demands as scope extensions. The resulting misalignment contributes to scope creep and dissatisfaction.

Survey data support this tension. While a majority of 3PL customers recognize the importance of value-added services in meeting supply chain needs, fewer report satisfaction with the outcomes, particularly when cost savings or service adaptability are concerned [2]. The addition of value-added services creates greater interdependence between customer and provider, which increases the stakes of misalignment. Unlike basic warehousing or transportation, value-added services are embedded directly into production processes, meaning that failures or disputes have immediate consequences for manufacturing output.

The academic literature has acknowledged the complexity of value-added logistics services but has paid less attention to how these complexities are translated into contractual frameworks. For example, ref. [3] depicts the drivers and barriers of VAS development from a provider perspective, yet its work stops short of examining how contractual clarity shapes the success or failure of such services. Similarly, compliance-focused research has demonstrated the technical requirements of regulated industries [4], [5], [6], but does not consider how these requirements are codified or overlooked in the SOW. This omission is significant because the absence of explicit contractual detail not only increases operational risks but also undermines the relational trust necessary for long-term partnerships.

The rise of value-added services in 3PL operations has amplified both the strategic importance and operational complexity of outsourcing arrangements in the manufacturing sector. These services blur the line between logistics and production, placing new demands on providers and creating heightened interdependence with customers. While value-added services create opportunities for efficiency and integration, they also expose vulnerabilities when not fully articulated in contractual agreements. The inability of many SOWs to capture the intricacies of value-added services, ranging from BOM variability in kitting to compliance requirements in regulated industries, serves as a root cause of dissatisfaction and scope creep. This underscores the need to treat SOWs not as static documents but as living governance tools capable of adapting to

complexity and ensuring alignment between customer expectations and provider capabilities.

2.2 Scope Creep in 3PL Relationships

Scope creep, defined as the incremental expansion of tasks and responsibilities beyond the original contractual agreement, is one of the most frequently cited challenges in project management and outsourcing relationships [7]. Within the context of Third-Party Logistics (3PL) partnerships, scope creep represents a persistent and often hidden problem. It arises when customers gradually request additional services, often framed as temporary adjustments or small favors, that over time become routine expectations. While such requests may initially appear minor, their cumulative effect can impose significant operational and financial burdens on providers, ultimately straining customer-provider relationships.

The problem of scope creep is particularly acute in 3PL arrangements because of the close operational integration between providers and manufacturing customers. Unlike standalone service contracts, logistics outsourcing frequently embeds providers directly into production processes through value-added services such as kitting, assembly, or quality inspection [3]. These activities are highly variable and often subject to changing customer requirements. For example, in kitting operations, unforeseen issues such as missing parts, oversized subassemblies, or altered sequencing can require providers to adapt processes quickly. If such contingencies are not specified in the Statement of Work (SOW), customers may expect providers to absorb the adjustments as part of the service, while providers perceive them as scope extensions requiring renegotiation [8]. This mismatch between expectations and contractual definitions creates fertile ground for scope creep.

Scope creep also emerges in regulated manufacturing sectors, where compliance obligations frequently evolve in response to new regulations or customer-specific requirements. In pharmaceutical and biotechnology industries, for instance, providers may be asked to implement more stringent lot tracking, serialization, or audit documentation than was originally specified in the SOW [5]. In the automotive industry, regulatory and customer requirements for traceability may shift mid-contract, requiring providers to implement additional documentation processes across thousands of SKUs [6]. These unanticipated requirements are resource-intensive, often requiring new systems, staff, or processes. Yet when customers view these changes as “non-negotiable” compliance necessities, they resist cost adjustments, leaving providers to bear the financial strain.

Survey evidence underscores the persistence of this issue. Ref. [2] highlights that while most customers acknowledge 3PLs’ ability to address operational needs, satisfaction with adaptability and cost management has declined. This decline can be interpreted as a direct consequence of scope creep: providers attempt to accommodate evolving requirements without formal scope adjustments, eroding profitability, while customers perceive subsequent cost

increases as opportunistic. The resulting perception gap damages trust and undermines the collaborative potential of the relationship.

Scope creep also has important relational consequences. As ref. [1] observes, successful outsourcing depends not only on operational performance but also on trust, communication, and collaboration between partners. When providers consistently absorb additional tasks without formal recognition, they may begin to feel exploited. Conversely, when providers attempt to renegotiate contracts to account for these tasks, customers may view such actions as unfair or opportunistic. These dynamics create a cycle of resentment and mistrust that can destabilize even otherwise productive relationships. In this sense, scope creep is not simply a contractual or operational issue but a relational one, with implications for long-term partnership sustainability.

At the heart of the scope creep problem lies the failure of many SOWs to capture the dynamic realities of manufacturing logistics. Static, one-time contracts assume a level of predictability that does not exist in industries characterized by variable demand, complex Bills of Material, and evolving regulatory requirements. When SOWs are vague, they leave critical contingencies unaddressed, creating opportunities for misinterpretation. When they are overly rigid, they lack mechanisms for adaptation, forcing providers to choose between absorbing costs or risking relational conflict. In either case, the result is dissatisfaction on both sides: customers frustrated by perceived service shortfalls, and providers frustrated by unacknowledged or uncompensated scope expansions.

Scope creep represents a central challenge in 3PL relationships, rooted in the tension between operational variability and contractual rigidity. It arises when the SOW fails to adequately define service boundaries or anticipate contingencies, leaving providers vulnerable to incremental scope expansions. Beyond operational inefficiency, scope creep undermines trust, damages collaboration, and contributes to the erosion of long-term partnership viability. Addressing this challenge requires rethinking the SOW as a living governance document, equipped with mechanisms for scope adjustment, cost alignment, and transparent communication. Only by explicitly managing scope can customers and providers sustain resilient and mutually beneficial outsourcing relationships in complex manufacturing environments.

2.3 Customer–Provider Relationship Management

The effectiveness of outsourcing logistics to Third-Party Logistics (3PL) providers depends not only on operational efficiency and service delivery but also on the quality of the relationship between the customer and the provider. As Ref. [1] emphasizes, relational dimensions such as trust, communication, and collaboration are critical to sustaining successful partnerships. This is particularly important in manufacturing, where 3PLs are often embedded directly into production systems through services such as kitting, assembly, compliance tracking, and inventory management [3]. The complexity and interdependence of these arrangements mean that technical performance alone cannot

ensure success; instead, relational governance becomes central.

A recurring theme in logistics research is the tension between contracts and relationships. Formal contracts, such as the Statement of Work (SOW), provide clarity and accountability by defining service scope, responsibilities, and performance measures [7]. Relational mechanisms, on the other hand, rely on trust, flexibility, and goodwill to manage unexpected challenges. Effective 3PL partnerships typically require a balance of both: contracts provide a framework for accountability, while relationships provide the adaptability needed to navigate uncertainty. When this balance is disrupted, such as when the SOW is vague or incomplete, the partnership becomes vulnerable to conflict. The challenges of managing customer-provider relationships are heightened by scope creep, which places stress on both contractual and relational foundations. As discussed in Section 2.2, scope creep often begins with small, informal requests that escalate into routine obligations. From a relational perspective, providers may initially agree to these requests in order to build goodwill and demonstrate commitment. However, when customers begin to expect such accommodations as standard, providers may feel exploited, particularly if the additional work is resource-intensive. Customers, conversely, may perceive later attempts to renegotiate scope or costs as opportunistic. This mismatch in perceptions creates a trust deficit, damaging the relational fabric of the partnership [2]. The literature on compliance in manufacturing illustrates the relational pressures that arise from unanticipated requirements. In pharmaceuticals, for instance, 3PLs may be expected to introduce more sophisticated serialization or lot-tracking processes without corresponding contract revisions [5]. In the automotive industry, manufacturers may alter compliance protocols or production scheduling mid-contract, placing sudden burdens on providers [6]. These unilateral changes create a situation where customers expect providers to “figure it out,” while providers struggle to maintain service levels without formal acknowledgment of increased scope. The absence of mechanisms to renegotiate the SOW under such conditions exacerbates relational strain, as providers feel undervalued and customers perceive declining service quality.

Effective relationship management requires more than simply reacting to challenges; it requires building systems of collaborative governance. This includes transparent communication channels, joint problem-solving mechanisms, and shared processes for scope adjustment. Relational theory suggests that trust and adaptability are mutually reinforcing: when providers trust that customers will fairly recognize additional work, they are more willing to adapt; when customers trust that providers are not exploiting change for profit, they are more open to renegotiation. Conversely, when trust is absent, even minor scope changes can lead to conflict [1].

The academic literature, however, reveals a gap in explicitly connecting contractual clarity to relational outcomes. While studies highlight the importance of relational factors in outsourcing success, they often treat these as separate from

the contractual framework. Yet evidence from practice shows that poorly defined SOWs directly undermine relational quality by creating ambiguity and scope creep. Contracts and relationships are not independent but interdependent: vague contracts place undue strain on trust, while rigid contracts constrain adaptability. Thus, relationship management in 3PL contexts must be understood as a function of both contractual design and relational flexibility.

Ref. [2] reinforces this perspective, noting that change management remains one of the most significant challenges in 3PL partnerships. Effective change management is not only about operational adjustments but also about relational negotiation, how customers and providers agree to handle evolving requirements. Without structured processes for renegotiation, relational tensions escalate, jeopardizing long-term collaboration.

The management of customer-provider relationships in 3PL contexts is shaped by a delicate balance between formal contracts and informal trust mechanisms. Strong relationships cannot compensate indefinitely for poorly constructed SOWs, just as clear contracts cannot succeed without trust and collaboration. The interplay of these elements determines whether scope creep and operational variability lead to conflict or collaboration. For manufacturing sectors where complexity and compliance pressures are high, successful relationship management requires treating the SOW as a living document, supported by relational practices of transparency, fairness, and adaptability. Only through this integrated approach can 3PL partnerships remain resilient, sustainable, and mutually beneficial.

III.METHODOLOGY

3.1 Research Design

This study adopts a qualitative exploratory research design to investigate how the quality of the Statement of Work (SoW) affects customer-provider relationships in Third-Party Logistics (3PL) partnerships. Qualitative approaches are particularly appropriate for exploring complex relational phenomena, such as trust, scope creep, and contract interpretation, which cannot be fully captured through quantitative surveys alone [1]. By using interviews as the primary method of inquiry, the study provides rich, context-specific insights into how SOW clarity, or lack thereof, shapes both operational outcomes and relational dynamics.

3.2 Data Collection

Data were collected through structured interviews with stakeholders from both sides of the outsourcing relationship: 3PL service providers and manufacturing customers. The structured format ensured consistency across interviews while allowing participants to elaborate on their experiences. Questions were designed to capture perceptions of:

- a. The adequacy of SOWs in reflecting actual service requirements.

- b. Experiences of scope creep and its impact on operations.
- c. The relational consequences of contractual ambiguity, including trust, communication, and conflict.
- d. Mechanisms currently in place (or lacking) for renegotiating scope and managing change.

The interviews were conducted across four manufacturing sectors known for complex logistics requirements: Aerospace, Automotive, Defense, and Industrial Equipment. These industries were selected because they combine high product complexity, regulatory obligations, and dependence on value-added logistics services, making them especially vulnerable to the consequences of inadequate SoWs.

3.3 Sampling Strategy

A purposive sampling strategy was employed to ensure the inclusion of participants with direct experience in drafting, negotiating, or executing SOWs within 3PL arrangements. The sample consisted of:

- 3PL providers: operational managers, account directors, and compliance officers responsible for delivering logistics services and ensuring adherence to contractual obligations.
- Manufacturing customers: supply chain managers, procurement specialists, and production planners involved in outsourcing decisions and contract management.

3.4 Data Analysis

Interview transcripts were analyzed using thematic coding. Following Braun and Clarke's (2006) framework for thematic analysis, the process involved:

- Familiarization: repeated reading of transcripts to identify preliminary themes.
- Initial coding: assigning codes to text segments relating to SOW clarity, scope creep, and relational outcomes.
- Theme development: grouping codes into broader themes such as "contractual ambiguity," "hidden expectations," "trust erosion," and "adaptive mechanisms."
- Review and refinement: comparing themes across customer and provider groups to identify similarities and differences.
- Interpretation: relating findings to the research questions and the existing literature on outsourcing and 3PL governance.

The use of thematic analysis allowed for the identification of patterns across cases, while also preserving the nuance of individual experiences.

3.5 Validity and Reliability

Several steps were taken to enhance the credibility and reliability of the findings. First, structured interview questions ensured consistency across participants, reducing variability in responses attributable to the interviewer. Second, triangulation was achieved by including both customer and provider perspectives, allowing for the comparison of narratives across sides of the partnership.

Third, member checking was used: selected participants were allowed to review summaries of their interviews to confirm accuracy and interpretation. Finally, coding was conducted iteratively, with themes cross-validated by a second researcher to minimize bias.

3.6 Ethical Considerations

The study adhered to ethical research standards. All participants provided informed consent before participation, and confidentiality was maintained by anonymizing organizational and individual identifiers. Data was stored securely, with access restricted to the research team. Given the competitive and sensitive nature of outsourcing relationships, particular care was taken to ensure that findings were reported in aggregate form without disclosing proprietary details.

3.7 Limitations

This study has several limitations. First, the sample size, while sufficient for qualitative analysis, does not permit generalization to the entire manufacturing sector. The findings should therefore be interpreted as exploratory insights rather than statistically representative conclusions. Second, the reliance on self-reported data introduces the potential for bias, as participants may underreport challenges or emphasize certain narratives. Third, the focus on four industries, Aerospace, Automotive, Defense, and Industrial Equipment, means that results may not fully capture dynamics in other sectors, such as consumer goods or retail. Despite these limitations, the study provides valuable empirical evidence on the underexplored issue of SOW quality in 3PL relationships, laying the groundwork for future research using larger and more diverse samples. The chosen methodology, qualitative structured interviews analyzed through thematic coding, offers a robust approach for examining how SOW clarity shapes operational and relational outcomes in 3PL partnerships. By combining insights from both customers and providers across multiple industries, the study captures the dual perspectives necessary to understand the relational tensions caused by contractual ambiguity and scope creep. This methodology ensures alignment with the research questions and provides a strong foundation for the subsequent analysis of findings.

IV. RESULTS

The structured interviews provided rich insights into the experiences of both 3PL service providers and manufacturing customers. Thematic analysis identified four overarching themes: (a) Scope creep as a common experience, (b) Misalignment between SOWs and operational realities, (c) Customer-driven disruptions to established processes, and (d) Relational consequences of SOW ambiguity. Each theme is expanded below with supporting narratives.

4.1 Scope Creep as a Common Experience

A dominant theme across interviews was the prevalence of scope creep in 3PL partnerships. Providers consistently reported that scope creep emerged gradually, beginning with small, seemingly inconsequential customer requests.

For instance, a logistics manager from the automotive sector described how an initial agreement to reconfigure a few kits during a supply shortage gradually became a permanent responsibility:

“At first, we said yes because it was positioned as a one-off situation. But after a few months, these one-off requests became part of our daily routine. It required us to dedicate staff, change workflows, and even buy equipment we never budgeted for.”

Providers emphasized that they initially accommodated such requests to maintain goodwill and to be seen as flexible partners. However, once these practices became institutionalized, they created significant resource burdens without corresponding adjustments in cost structures.

From the customer perspective, these same adjustments were not viewed as scope creep but as essential elements of service quality. An aerospace manufacturer explained:

“We outsource to avoid disruptions. If parts are missing or shipments are delayed, we expect our logistics partner to handle it. To us, it’s not a scope change, it’s the job.”

This finding reveals a fundamental perception gap: what providers interpret as scope expansion, customers interpret as expected flexibility. The divergence illustrates how the absence of explicit guidance in the SOW creates space for misaligned assumptions.

In several cases, providers admitted that scope creep was tolerated for extended periods to avoid conflict, but over time, the cumulative effect became unsustainable. A defense-sector provider reflected:

“We didn’t push back for the first year. However, when we finally requested a formal adjustment, the customer accused us of nickel-and-diming. It damaged the relationship.”

The theme of scope creep demonstrates how ambiguity in the SOW directly translates into incremental operational burdens that destabilize customer-provider trust.

4.2 Misalignment Between SOWs and Operational Realities
Another recurring theme was the disconnect between contractual SOWs and actual operational requirements. Both customers and providers acknowledged that SOWs often fail to capture the complexity of real-world processes. From the provider's perspective, vague or incomplete SOWs left them unprepared for the true scope of service delivery. A defense logistics provider shared an example involving the management of over 300,000 SKUs:

“The SOW never specified that we would have to use multiple serialization systems for different countries. We discovered this only after operations began. It added massive complexity, requiring new IT systems and staff training. None of this was in our original cost models.”

This provider emphasized that such oversights were not minor but fundamentally altered their cost base.

Customers, by contrast, admitted that time constraints and competitive bidding pressures often led to SOWs that were high-level rather than detailed. A procurement officer from the industrial equipment sector explained:

“In the RFP process, we focus on being concise. Too much detail can discourage competitive bids. But we know that leaves gaps, and we expect the provider to fill them.”

This approach effectively shifts the burden of interpreting ambiguities onto providers. While customers viewed this as pragmatic, providers saw it as creating unrealistic expectations that undermined service delivery.

Several providers stressed that the RFP-driven SOW process encourages oversimplification, which contributes to dissatisfaction later in the partnership. One aerospace provider commented:

“We design our entire operating model based on what’s in the SOW. If it’s incomplete, our cost model is flawed from day one.”

This theme highlights that misalignment is not simply the result of poor drafting but of structural practices in outsourcing, where speed and cost competitiveness override operational realism.

4.3 Customer-Driven Disruptions to Established Processes

Several providers reported that even when SOWs were clear initially, customer-driven operational changes disrupted established workflows without corresponding adjustments to contracts.

A striking example came from an automotive logistics provider, who described how the SOW allocated two dock doors for staging materials. Six months into the partnership, the manufacturer reassigned one dock door to outbound shipping:

“We designed our entire system around having two doors. When they took one away, our staging process collapsed. We needed extra staff and equipment to compensate, but the customer refused to amend the SOW.”

Other disruptions included sudden changes to production schedules, elimination of kanban inventory buffers, and shifts in delivery frequency. Providers emphasized that such changes increased labor requirements and reduced efficiency, yet customers framed them as internal decisions unrelated to the outsourcing agreement.

An industrial equipment provider explained:

“When the customer changed their scheduling system, our workload tripled. They told us it was an internal adjustment and didn’t see why it should affect the contract. But it changed everything for us operationally.”

This theme demonstrates that even well-defined SOWs are undermined when customers unilaterally alter operating conditions, highlighting the need for adaptive contract mechanisms.

4.4 Relational Consequences of SoW Ambiguity

The final theme concerns the relational impact of ambiguous or rigid SOWs. Both customers and providers described how contractual misalignment translated into erosion of trust.

Providers expressed frustration when customers resisted acknowledging or compensating for the expanded scope. As one defense-sector provider put it:

“We want to be partners, but it feels like we’re constantly asked to do more for less. When we finally ask for a contract

change, we're accused of nickel-and-diming. It's exhausting."

Customers, meanwhile, described feeling exploited when providers requested scope adjustments, interpreting them as opportunistic. An aerospace procurement officer stated:

"They agreed to the SOW. When they come back asking for more money, it feels like they're trying to take advantage."

These conflicting narratives show how perception gaps damage trust. Providers view renegotiation as a necessity for sustainability, while customers see it as opportunism. Once established, these trust deficits often extended into other areas, making routine negotiations contentious.

Several providers concluded that the absence of adaptive SOW frameworks left them trapped in a cycle of resentment and mistrust. One industrial equipment provider explained:

"We start with goodwill, but by year two, the relationship feels adversarial. The SOW doesn't protect us, and the customer doesn't want to listen. Trust breaks down."

This theme highlights that ambiguous SOWs are not merely operational flaws but relational liabilities that erode long-term partnership sustainability.

V. DISCUSSION

The analysis of structured interviews demonstrates that the Statement of Work (SOW) plays a far more consequential role in 3PL partnerships than has been previously recognized in logistics literature. Far from being a procedural contract artifact, the SOW emerged as a determinant of scope clarity, operational efficiency, and relational trust. Poorly constructed or static SOWs were consistently identified as root causes of dissatisfaction, scope creep, and misalignment between customers and providers. In this section, the results are interpreted in light of existing literature and theoretical perspectives, with emphasis on scope creep, operational misalignment, compliance obligations, customer-driven disruptions, and relational dynamics.

5.1 Scope Creep and Contractual Weaknesses

This study confirms that scope creep is endemic in 3PL partnerships, but it extends existing knowledge by identifying contractual ambiguity in SOWs as its primary enabler. Ref. [7] framed scope creep broadly as a failure of planning and project control. However, our findings reveal that in logistics outsourcing, scope creep originates much earlier, during the contract drafting phase, when contingencies and service boundaries are left vague.

The data showed that scope creep often began with small requests, such as reconfiguring kits during supply shortages, that escalated into permanent responsibilities. Customers interpreted these adjustments as part of standard service, while providers saw them as unacknowledged expansions. This divergence in perception mirrors ref. [1] emphasis on the importance of aligning customer and provider expectations but extends it by demonstrating that such misalignment is often "baked in" at the contracting stage rather than emerging solely in execution.

Moreover, the study illustrates that scope creep has hidden costs for providers. By absorbing incremental tasks without scope adjustments, providers compromise profitability and strain internal resources. Over time, this creates resentment and damages trust, echoing ref. [2], who reported declining satisfaction with adaptability and cost efficiency in 3PL relationships. Ref. [8] highlighted the operational complexity of kitting processes; this study demonstrates how such complexity, when unarticulated in the SOW, directly fosters scope creep.

The implication is clear: scope creep is not merely a managerial oversight but a governance failure rooted in contractual design. Addressing it requires reconceptualizing the SOW as a preventative mechanism, one that explicitly anticipates operational variability and provides mechanisms for structured renegotiation.

5.2 Misalignment Between SOWs and Operational Realities

A second major finding is the disconnect between contractual SOWs and operational realities. Both customers and providers acknowledged that SOWs are often oversimplified during the RFP process, leading to cost models and operating plans that are fundamentally misaligned with actual service requirements.

Providers reported significant challenges when high-level SOWs failed to capture details such as multiple serialization systems or sequencing requirements across thousands of SKUs. This finding resonates with ref. [3], who emphasized the increasing complexity of value-added logistics services, but extends their analysis by showing that contractual simplification during procurement undermines operational feasibility.

Customers justified such simplification on pragmatic grounds: detailed SOWs, they argued, could deter competitive bids or slow down procurement. Yet this cost-driven approach creates structural misalignment from the outset. As one provider explained, "We design our entire model based on the SOW. If it is incomplete, our cost model is flawed from day one." This suggests that procurement practices incentivize under-specification, effectively transferring risk from customers to providers.

The consequences of this misalignment echo ref. [6], who demonstrated the challenges of continuous compliance in automotive supply chains. Whereas Santilli et al. focused on technical processes, this study highlights the contractual blind spot: regulatory and operational complexities are often excluded from SOWs, leaving providers to absorb unexpected burdens.

This finding points to a critical insight: misalignment is not accidental but structurally embedded in outsourcing practices. Remedying it requires reforming procurement approaches to prioritize contractual realism alongside cost competitiveness.

5.3 Theoretical Implications

This study makes three major contributions to theory:

- **Contractual Governance as a Relational Determinant:** Existing research has treated contracts and relationships as separate domains. This study

shows they are mutually reinforcing contractual clarity enables trust, while contractual ambiguity undermines it.

SOWs as Dynamic Governance Tools: Traditional views treat contracts as static agreements. This study reconceptualizes SOWs as living governance frameworks that must evolve alongside operational and regulatory variability.

- **Reframing Scope Creep:** Whereas project management literature views scope creep as a managerial failure, this study reframes it as a contractual design flaw. Scope creep arises not only from execution drift but from contractual under-specification at the outset.

5.4 Practical Implications

The findings also generate actionable insights for practitioners:

- **Invest in Detailed SOWs:** Customers should draft SOWs that explicitly define operational contingencies, compliance responsibilities, and value-added service complexities.
- **Adopt Dynamic SOW Frameworks:** SOWs should incorporate renegotiation clauses that allow scope, costs, and metrics to evolve without conflict.
- **Balance Cost and Realism in Procurement:** Procurement teams should avoid oversimplifying SOWs for competitive advantage, as this creates downstream misalignment.
- **Develop Relational Transparency Protocols:** Customers and providers should establish formal channels to flag and negotiate scope creep early.
- **Share Compliance Responsibility:** Compliance should be treated as a shared resource-intensive function, with cost-sharing models explicitly codified in contracts.

5.5 Limitations and Future Research

While the study provides valuable insights, it has several limitations. The qualitative design provides depth but limits generalizability. Future research could employ mixed methods, combining surveys with contract analysis, to test findings across broader populations. The focus on aerospace, automotive, defense, and industrial equipment leaves out consumer-facing industries such as retail or e-commerce, where service complexity and customer expectations differ. Finally, further research should explore technological innovations in contract management, such as digital SOW platforms or AI-assisted drafting, which may offer solutions to ambiguity and rigidity.

The findings demonstrate that dissatisfaction in 3PL partnerships stems not solely from provider performance but from the structural failure of SOWs to govern complexity. Ambiguity fosters scope creep, compliance conflicts, and customer-driven disruptions, while rigidity prevents adaptation. Together, these dynamics erode relational trust. The study thus reframes the SOW as a central governance mechanism, not a peripheral contract formality. By conceptualizing SOWs as living documents, the research advances both theory and practice, offering

pathways for designing adaptive, trust-enhancing frameworks capable of sustaining long-term 3PL partnerships.

VI. CONCLUSION

The objective of this study was to examine the role of the Statement of Work (SOW) in shaping customer-provider relationships in Third-Party Logistics (3PL) partnerships within the manufacturing sector. While much of the logistics literature has focused on efficiency, cost reduction, and performance outcomes, this study demonstrates that dissatisfaction in 3PL partnerships often originates in the contractual foundation of the relationship. Through structured interviews with providers and customers across aerospace, automotive, defense, and industrial equipment industries, the research revealed how poorly constructed or static SOWs contribute to scope creep, misalignment, compliance conflicts, and relational breakdown.

6.1 Key Findings

The findings underscore several interrelated challenges. First, scope creep was identified as a pervasive outcome of contractual ambiguity, with customers and providers holding divergent views on whether incremental tasks represented scope expansion or expected flexibility. Second, SOWs were found to be routinely misaligned with operational realities, particularly when drafted in the context of competitive bidding, where oversimplification is incentivized. Third, even well-defined SOWs were destabilized by customer-driven operational changes that were not reflected in contractual amendments, such as reallocating dock space or altering production schedules. Finally, these dynamics had profound relational consequences, eroding trust and creating perception gaps that transformed collaborative partnerships into adversarial relationships.

Collectively, these findings demonstrate that the SOW is not a peripheral technical document but a central governance mechanism that structures both operational processes and relational dynamics.

6.2 Theoretical Contributions

This study makes three important contributions to the literature.

- **Contractual Governance as a Relational Determinant:** The research demonstrates that contractual clarity directly shapes relational trust, challenging the separation of contracts and relationships in much of the logistics literature. Trust is not simply a product of goodwill but is structurally conditioned by the precision and adaptability of the SOW.
- **Reconceptualization of the SOW:** The findings advance the understanding of SOWs as living governance tools rather than static agreements. In dynamic manufacturing environments, SOWs must be designed with built-in adaptability to accommodate operational variability, compliance changes, and customer-driven disruptions.

- **Reframing Scope Creep:** Scope creep is reframed as a contractual design flaw rather than solely a managerial oversight. It emerges from under-specified or rigid SOWs, which leave room for incremental scope expansion and contested interpretations.

These contributions expand existing scholarship by positioning the SOW at the center of 3PL relationship governance, linking contractual design directly to partnership outcomes.

6.3 Practical Implications

For practitioners, the study highlights the need for greater rigor and adaptability in contract design. Customers must invest in drafting detailed SOWs that explicitly articulate compliance responsibilities, value-added service complexities, and operational contingencies. Procurement teams should resist the tendency to oversimplify SOWs for competitive advantage, as this creates downstream misalignment.

At the same time, SOWs should incorporate dynamic mechanisms that allow scope, costs, and performance metrics to be renegotiated without undermining trust. Relational transparency, such as formal protocols for identifying and addressing scope creep, should be prioritized to prevent disputes from escalating. Finally, compliance should be recognized as a shared responsibility, requiring explicit cost-sharing mechanisms and clear contractual language to avoid relational conflict.

By adopting these practices, both customers and providers can move beyond reactive conflict management toward proactive relationship governance that balances accountability with adaptability.

6.4 Concluding Remarks

The study demonstrates that the Statement of Work is both a technical and relational artifact. When poorly constructed, it creates scope creep, compliance disputes, and relational mistrust. When well designed, it enables alignment, adaptability, and trust. The central message is that the SOW must be treated not as a static contractual formality but as a living governance document, one that evolves alongside the dynamic realities of manufacturing supply chains.

By reframing the SOW in this way, the study contributes to both theory and practice, offering new pathways for strengthening the sustainability of 3PL partnerships. Ultimately, achieving the full potential of outsourcing

requires recognizing that contracts and relationships are inseparable, and that clarity, adaptability, and fairness in the SOW are foundational to mutual success.

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