

Advanced Hospitality Staffing Models as a Driver of Revenue Optimization and Operational Efficiency in High-Demand Service Markets

Iryna Chaika¹

Received: 2025-12-12

Accepted: 2026-01-15

DOI: <https://doi.org/10.5281/zenodo.21588449>

Abstract. Abstract. Labor shortages in the hospitality sector have persisted well beyond the post-pandemic recovery period, with 65% to 76% of U.S. hotels reporting unfilled positions across three survey waves in 2024, according to surveys conducted by the American Hotel & Lodging Association. Despite growing recognition of this challenge, academic literature has predominantly examined workforce management from an internal human resources perspective, leaving the role of external staffing agencies as strategic operational partners largely unaddressed. This study analyzes how advanced staffing models, specifically the integration of permanent core staff, contingent agency-supplied labor, and AI-assisted scheduling, relate to revenue optimization and operational efficiency in high-demand hospitality environments. Analysis draws on a systematic review of peer-reviewed publications from 2020 to 2024 and industry reports issued by the American Hotel & Lodging Association, Staffing Industry Analysts, the U.S. Bureau of Labor Statistics, and the World Travel & Tourism Council. Study findings suggest that hospitality firms operating with integrated staffing frameworks demonstrate measurably lower labor cost variability and higher service capacity alignment during demand peaks compared to those relying on traditional permanent-hire models. The novelty of this study lies in reframing the staffing agency from a transactional labor supplier to a strategic revenue-enabling partner, and in proposing a three-component integrated staffing model designed for high-demand service environments.

Keywords: hospitality staffing, contingent workforce, revenue optimization, operational efficiency, temporary staffing agencies, workforce management.

¹ Master's Degree in Management and Administration
Department of Management, Public Administration and Personnel
West Ukrainian National University, Ukraine
ORCID: <https://orcid.org/0009-0009-3597-5725>
E-mail: iryna.chaika@yahoo.com

1. Introduction

The global hospitality market reached \$4.993 trillion in 2024, expanding at a compound annual growth rate of 6.8% from the prior year [1]. Growth of this magnitude generates proportional demand for service personnel, yet the sector has been structurally unable to match workforce supply to expanding service requirements. Several factors account for this gap: accelerated workforce attrition during the pandemic years, a sustained decline in the sector's attractiveness among younger labor market entrants, and intensifying wage competition from adjacent service industries. A 2022 survey found that 44% of school leavers in the United Kingdom perceived no clear career progression pathway in hospitality [2], a pattern consistent with U.S. labor market data showing that the leisure and hospitality sector carried 1.285 million open positions as of April 2024 [3]. By mid-2024, according to the World Travel & Tourism Council, travel and tourism employment worldwide had reached 330 million, yet individual property-level shortages remained widespread [4].

Staffing shortages carry particular financial weight in hospitality because labor expenses typically account for 50% or more of total operating costs [5]. When workforce levels diverge from actual service demand, whether through understaffing during high-occupancy periods or overstaffing during low-demand cycles, the financial consequences manifest on both revenue and cost dimensions. Understaffed properties face service failure, reduced throughput, and guest dissatisfaction that translates into lower ratings and eroded repeat bookings. Overstaffed periods generate unnecessary payroll expenditure that compresses operating margins without corresponding service output. Research conducted on a panel of 94 Norwegian hospitality firms found mean overall staff use efficiency at 46%, indicating that a substantial share of available labor capacity was not optimally deployed under conventional scheduling approaches [6]. Comparable inefficiencies have been documented in demand forecasting contexts, where hotel managers relying primarily on experience-based intuition consistently produced both understaffing and overstaffing errors across seasonal cycles [7].

Existing scholarship on hospitality workforce management has concentrated on internal human resource strategies: retention programs, compensation structures, training investment, and on-property scheduling optimization [8, 9]. Research that does address external labor supply has generally treated staffing agencies as transactional intermediaries, sources of temporary headcount during peak periods, rather than as entities capable of contributing to a client organization's revenue performance over time. Neither strand of literature, however, accounts for the conditions under which an external staffing partnership can function as an operational lever: one that directly affects service capacity, workforce flexibility, and, by extension, revenue outcomes across fluctuating demand cycles. Identifying these conditions requires reframing the staffing agency relationship as a strategic arrangement rather than an administrative one, and evaluating it against measurable operational and financial parameters.

The present study addresses this gap by examining how advanced staffing models affect revenue optimization and operational efficiency in high-demand hospitality and events environments. Four interrelated objectives guide the analysis: to characterize the structural drivers of persistent labor shortages in the sector; to evaluate the performance parameters of traditional versus advanced staffing models across key operational dimensions; to identify the mechanisms through which external staffing partnerships relate to revenue outcomes; and to propose an integrated three-component staffing framework applicable to high-demand service environments. Analysis is based on a systematic review of academic publications and authoritative industry data published between 2020 and 2024.

2. Literature Review

Theoretical grounding for the study draws primarily on the Resource-Based View (RBV) of the firm, a framework applied to hospitality management by multiple scholars and reviewed comprehensively in Nolan et al. (2025) [2]. RBV posits that sustained competitive

advantage derives from resources that are valuable, rare, difficult to imitate, and non-substitutable. In hospitality, where service delivery is labor-intensive and guest-facing interactions cannot be fully automated, the capacity to deploy qualified personnel reliably during high-demand periods satisfies several of these criteria. Nolan et al. (2025) argue specifically that human capital in hospitality must be actively preserved and developed rather than treated as a variable input, and situate this argument within RBV to make the case that workforce availability is a strategic resource that determines whether a property can capture available revenue during peak occupancy or event periods [2].

Labor shortages in the hospitality sector predate the COVID-19 pandemic but were structurally amplified by it. Baum et al. (2020) documented that workers who transitioned to other industries during lockdown periods developed durable preferences for scheduling predictability and work-life balance, and a substantial proportion did not return to hospitality when restrictions lifted [10]. Kwok (2022) projected that the resulting supply-demand imbalance would persist for several years, driven by factors that wage increases alone cannot resolve [11]. Demographic pressure adds a separate layer: ICHRIE (2024) notes that declining birth rates in OECD economies have narrowed the entry-level workforce cohort that hospitality has historically depended upon for frontline roles [12]. AHLA surveys conducted in January, May, and December 2024 recorded shortages at 67%, 76%, and 65% of responding hotels respectively, with 72% to 79% of respondents reporting an inability to fill open positions in each wave, despite 82% to 86% having raised wages in the preceding six months [13].

Academic responses to these conditions have largely concentrated on internal organizational interventions. A qualitative study by Faqihi et al. (as cited in Nolan et al., 2025) examined Gen Z talent management in the Dutch hospitality sector and found that aligning development pathways and scheduling flexibility with younger workers' career expectations correlates with improved retention intent [2]. Nolan et al. (2025) extend this analysis through an integrative framework that combines RBV with the Kaleidoscope Career Model, mapping employee motivations along dimensions of authenticity, balance, and challenge to argue that sustainable retention requires organizational structures capable of accommodating individual career variation [2]. A study published in the *Westcliff International Journal of Applied Research* (2024) identified compensation inadequacy, job insecurity, and poor work-life balance as the primary drivers of turnover intent, with statistically significant differences across employment type groupings [14]. These frameworks contribute meaningfully to understanding why hospitality workers leave permanent roles, but they share a structural limitation: none accounts for the demand volatility inherent to hospitality operations, where high-occupancy periods, seasonal peaks, and event-driven surges require workforce volumes that permanent headcount cannot supply even when retention is strong.

A parallel strand of research approaches workforce management as a scheduling and forecasting problem rather than a retention problem. Liu et al. (2024) developed an intelligent hotel staff scheduling system integrating a long short-term memory network for demand forecasting with ant colony and variable neighborhood search algorithms for schedule optimization; empirical validation in a live hotel environment demonstrated measurable reductions in labor cost and improvements in staffing accuracy relative to manager-intuition-based scheduling [7]. Alemayehu and Kumbhakar (2022) provide the quantitative baseline that underlies this line of work: analyzing daily data from 94 Norwegian hospitality firms, they found mean transient staff use efficiency at 69%, persistent efficiency at 67%, and overall efficiency at 46%, with seasonality identified as a primary driver of transient inefficiency [6]. Yaiprasert and Hidayanto (2024) frame AI-assisted resource allocation as a contributor to both cost savings and sustainability performance at the property level [15]. What unites these studies is a focus on optimizing the deployment of an existing workforce; the supply of labor available for scheduling is treated as fixed. When permanent

headcount is structurally insufficient relative to peak demand, scheduling optimization reaches a ceiling that algorithmic improvement cannot overcome.

Research on contingent labor markets documents strong structural growth in non-permanent employment but operates primarily at the aggregate and regulatory level. Data from the U.S. Bureau of Labor Statistics (2024) show that 6.9 million Americans held contingent positions as their primary job in 2023, representing 4.3% of the total workforce, up from 3.8% in 2017, with the leisure and hospitality sector recording one of the highest contingent labor rates among all industry groups [16]. SIA estimated annual U.S. staffing industry revenue at \$184.6 billion for 2024, with hospitality-adjacent commercial segments demonstrating relative resilience compared to sectors that experienced sharp post-pandemic corrections [17]. Globally, the contingent workforce management market is projected to reach \$465 billion by 2031 at a compound annual growth rate of 10.5%, with AI-assisted sourcing and predictive placement identified as primary growth drivers [18]. Randstad (2024) estimates that contingent workers contribute 15% to total workforce productivity across sectors where they are deployed [19]. This body of evidence characterizes the scale and direction of contingent labor markets and the financial weight of the staffing industry, but it does not descend to the level of the individual client relationship, specifically how a particular staffing partnership configuration translates into operational outcomes for a service business remains outside its analytical scope.

Across the reviewed literature, three distinct research streams address adjacent aspects of the staffing problem in hospitality: HRM and retention, scheduling optimization, and contingent labor markets, without converging on the question this study examines. No framework identified in the reviewed literature connects the design characteristics of a staffing agency relationship to client-side revenue outcomes. No classification of staffing models by their operational implications for high-demand service businesses has been proposed. The metrics used in procurement practice to evaluate staffing relationships, primarily cost per placement and time-to-fill, measure transactional efficiency but do not capture downstream effects on service throughput, occupancy-period capture rates, or revenue per available unit. What is absent is an analytical construct that positions the staffing agency as a revenue-enabling partner rather than a labor supplier, and a structured basis for comparing staffing model types against the performance parameters that matter for organizations where service capacity and revenue are directly linked.

3. Materials and Methods

The study employs a systematic literature review combined with secondary analysis of industry survey data. This design was selected because the central research question of how staffing model architecture affects service capacity and financial performance requires synthesis across scholarly disciplines that have not previously been brought into direct conversation: hospitality human resource management, operations research applied to scheduling, and contingent labor market economics. An empirical primary study would require longitudinal revenue and staffing data from multiple hospitality properties operating under different workforce models across comparable demand conditions. Systematic review with structured data integration allows for a rigorous comparative assessment within the constraints of available evidence and produces findings that are applicable across property types rather than bound to a single organizational context.

Academic literature was identified through searches conducted across three databases: Scopus, Web of Science, and Google Scholar. Search terms were organized into three thematic clusters: (1) hospitality workforce management, staffing efficiency, labor scheduling, hotel staff optimization; (2) contingent workforce, temporary staffing, staffing agencies, flexible labor models; (3) revenue per available room (a standard hospitality financial metric measuring room revenue relative to total available inventory), service capacity, operational efficiency in service organizations. Boolean operators were applied to combine terms within

and across clusters. Only peer-reviewed journal articles and conference proceedings published between January 2020 and December 2024 were considered for inclusion. Sources published prior to 2020 were included exclusively when they introduced foundational theoretical frameworks that remain the standard reference in current hospitality management research. Articles not available in full text through institutional or open-access repositories were excluded.

Industry reports and survey data were incorporated to supplement peer-reviewed sources where quantitative evidence on staffing shortage prevalence, contingent workforce size, and market scale was required. Sources were accepted on the basis of three criteria: organizational authority (data produced by entities recognized as primary statistical agencies or major industry associations), methodological transparency (publicly available survey methodology or sampling documentation), and temporal relevance (data collected in 2022 or later). Reports meeting these criteria included publications from the American Hotel & Lodging Association, the U.S. Bureau of Labor Statistics, Staffing Industry Analysts, the World Travel & Tourism Council, and Randstad. Market projection data from research firms were used solely to characterize the structural direction of the contingent workforce management sector and were not treated as primary evidence for operational claims.

Staffing models identified in the literature were evaluated against three performance parameters derived from the operational dimensions most consistently addressed across the reviewed literature and in industry workforce performance frameworks. Labor cost flexibility captures the degree to which workforce expenditure can be adjusted in response to demand variation without fixed-cost penalties. Service capacity alignment captures the consistency with which actual staffing levels match required service delivery volumes during both peak and low-demand periods. Scalability captures the speed and cost at which workforce volume can be expanded or contracted in response to client growth, new service lines, or event-driven demand spikes. Comparison across model types was structured as follows: for each parameter, the author assessed how the reviewed sources characterize each staffing model's performance, and classified the characterization as high, moderate, or limited based on the weight of evidence in the reviewed literature. Where sources provided quantitative evidence (e.g., fill-rate data, cost-per-hire figures, scheduling accuracy metrics), that evidence anchored the classification. Where sources were qualitative, the classification reflects the preponderance of evaluative language across multiple independent sources. No proprietary scoring instrument was developed; the ratings in Table 2 represent structured synthesis of source evidence rather than independently measured performance values, and should be read as evidence-based characterizations rather than precise quantitative scores.

Several methodological boundaries affect the generalizability of the findings. The literature search was confined to English-language sources, which may underrepresent research conducted in European and Asia-Pacific hospitality markets where contingent labor penetration and staffing agency infrastructure differ from the U.S. context. Industry reports, while methodologically documented, reflect the perspectives of the organizations that commissioned them and may not fully account for variation across property types, market segments, or geographic labor markets. Adoption of a three-parameter framework captures the dimensions most frequently addressed in the reviewed literature but does not include guest satisfaction scores or employee well-being metrics, both of which have documented relationships with staffing adequacy. Findings should therefore be interpreted as applicable primarily to mid-sized and large hospitality operations in high-demand urban and event-oriented markets, which represent the context most consistently addressed across the reviewed sources.

4. Results

Analysis of the reviewed evidence suggests that the 46% overall staff use efficiency documented by Alemayehu and Kumbhakar (2022) reflects two distinct components rather

than a uniform deficit: a transient component (69%) driven primarily by seasonal demand variation, and a persistent component (67%) associated with structural workforce deployment constraints that recur regardless of season [6]. Transient inefficiency is predictable in its timing, declining by approximately 4% during high-season periods. Persistent inefficiency, by contrast, does not respond to scheduling adjustment alone. A property operating with conventional permanent-hire scheduling faces both simultaneously: fixed payroll during low-demand periods and a headcount ceiling that limits labor supply during peak periods. In revenue terms, a property at 95% occupancy with understaffed housekeeping and food and beverage operations may not capture the full revenue potential that occupancy level represents, as service throughput constraints can compress revenue per available room below demand-implied levels. A mid-sized property addressing scheduling inefficiency through workforce management technology achieved a 25% reduction in unplanned overtime and approximately \$150,000 in annual labor cost savings [5]. Scheduling optimization of this kind addresses the transient component, but available evidence suggests it is less likely to resolve the persistent supply constraint that limits capacity expansion during high-demand events.

Table 1. Staffing Shortage Dynamics in U.S. Hotels, 2024

Survey Wave	Hotels Reporting Shortage	Severely Understaffed	Unable to Fill Positions
January 2024	67%	12%	72%
May 2024	76%	13%	79%
December 2024	65%	9%	65%

Source: compiled by the author based on AHLA Front Desk Feedback Surveys, January, May, and December 2024 [13]

Table 1 documents that staffing shortages in U.S. hotels did not improve proportionally in response to wage investment. Across all three survey waves, 82 to 86% of respondents had raised wages in the preceding six months, yet between 65% and 76% still reported shortages and 65 to 79% remained unable to fill open positions [13]. May 2024 was the most acute point in the cycle, when 76% of hotels were understaffed and 13% described themselves as severely understaffed. By December, both figures declined, though a shortage baseline of 65% persisted. Three revenue exposure mechanisms appear to operate across this pattern. During high-occupancy periods, fixed permanent headcount cannot expand to meet service demand, creating a constraint on ancillary revenue. During event-driven spikes, the mismatch between available staff and required service volume is most acute: properties unable to staff adequately may decline business or incur guest satisfaction damage that affects repeat bookings. Across all periods, the inability to fill positions generates overtime pressures that increase labor costs without proportionate service output.

Comparative assessment of three staffing model types against the performance parameters established in the methodology produces differentiated outcome profiles, as presented in Table 2. Model types are distinguished by their structural relationship to external labor supply rather than by sector or property size. Traditional permanent-hire models rely exclusively on internal hiring and treat workforce size as a near-fixed variable; their performance ceiling is determined by headcount, and its cost floor is set by payroll obligations that persist across demand cycles. Reactive contingent engagement operates without pre-structured terms at the time of need; it introduces nominal cost flexibility but generates higher per-unit placement fees, inconsistent candidate quality, and fill response times that are driven by real-time market availability rather than by a committed service

standard. Advanced integrated model design, which represents the analytical contribution of this study, combines a permanent core, a pre-qualified contingent pool managed through a formal agency partnership, and AI-assisted demand-linked scheduling.

Table 2. Comparative Analysis of Staffing Models in Hospitality: Key Performance Parameters

Parameter	Traditional Model(Permanent Staff)	Reactive Contingent(Ad-hoc Agency)	Advanced Integrated Model(Core + Agency SLA + AI Scheduling)
Labor cost flexibility	Low - fixed payroll regardless of occupancy	Moderate - variable but high placement overhead	High - variable component scaled via pre-structured SLA
Service capacity alignment	Poor at peak - capped by permanent headcount	Inconsistent - driven by real-time market availability	High - pool activated on committed fill rates before demand events
Response to demand spikes	Weeks (recruitment cycle)	Days - driven by real-time market availability	≤24 hours from pre-qualified pool (author's assessment based on SLA design principles)
Candidate quality consistency	High for permanent staff; poor under shortage	Low - minimal pre-qualification at time of request	Medium-High - agency pre-qualifies against client standards in advance
Scalability	Low - growth requires new permanent hires	Low-Medium - constrained by real-time availability	High - pool scope expanded through agency partnership terms
Administrative burden	Medium - internal HR processes	High - repeated sourcing and onboarding cycles	Low-Medium - VMS infrastructure handles coordination

Source: compiled by the author based on [17; 7; 6; 5]

Table 2 indicates that, among the three model types assessed, the advanced integrated model demonstrates the greatest degree of alignment with all three performance parameters simultaneously, while the other configurations each show meaningful limitations on at least one. This finding reflects a comparative synthesis of how each model type is characterized in the reviewed literature and industry reports, not original measurement; the assessments represent the author's structured reading of source evidence and should be read as evidence-based qualitative characterizations rather than independently verified performance figures. The three components of the integrated model appear to function as an interdependent system, as illustrated in Figure 1. Permanent core staff fulfill roles requiring organizational continuity, institutional memory, and guest relationship management. Agency-maintained contingent pools address workforce volume above the core threshold on a demand-responsive basis: the staffing agency pre-screens and property-orientes workers with verified hospitality experience, enabling deployment within hours rather than days, governed by a

service-level agreement specifying fill rates, response windows, and accountability mechanisms. AI-assisted scheduling connects deployment decisions across both workforce tiers to demand forecasts derived from occupancy data, booking patterns, and event calendars. Liu et al. (2024) demonstrated that integrating demand forecasting with schedule optimization at property level produced measurable reductions in both labor cost and staffing inaccuracy [7]; the integrated model applies the same forecasting logic to activate contingent supply rather than optimize permanent deployment alone.

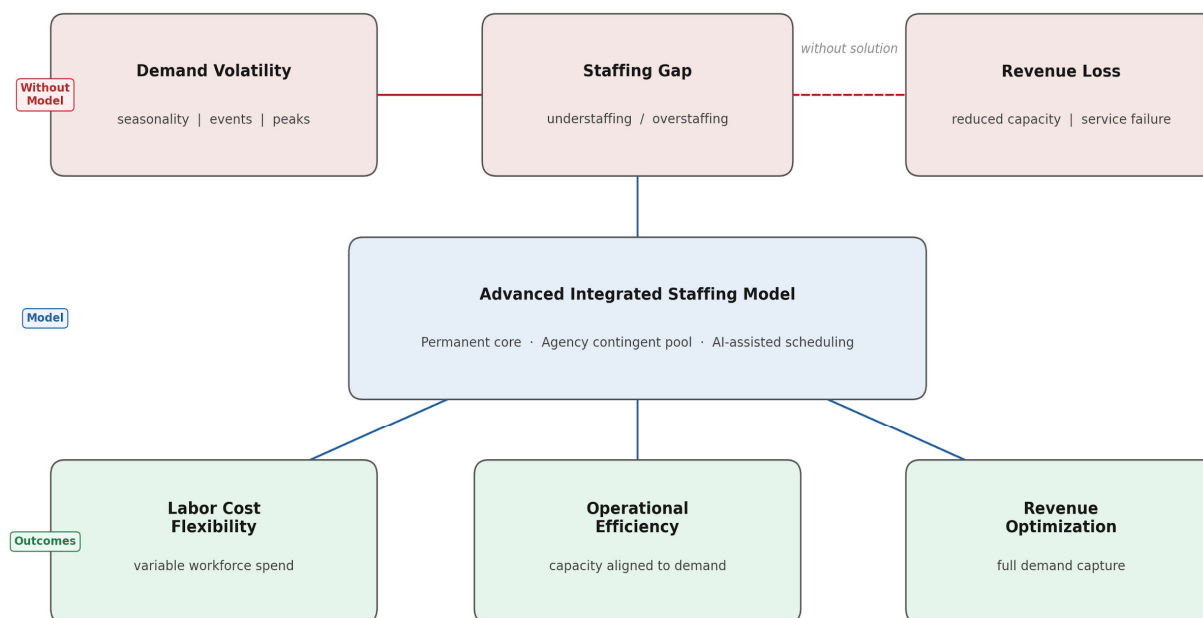


Figure 1. The Staffing-Revenue Nexus in High-Demand Hospitality Environments
Source: developed by the author

The repositioning of the staffing agency from transactional supplier to revenue-enabling partner, which constitutes the conceptual novelty of this study, is supported by several converging data points. Leisure and hospitality carries one of the highest contingent labor dependency rates among all U.S. industry groups [16], yet operates at a mean staff use efficiency of 46%, a structural mismatch that the integrated model is designed to help address, based on the reviewed evidence. Contingent workers contribute an estimated 15% to total workforce productivity across sectors where they are deployed [19], reflecting substantive operational output rather than marginal fill activity. Organizations that implemented Vendor Management Systems reported cost savings in 76% of documented cases [20]. Global contingent workforce management is projected to reach \$465 billion by 2031 [18], with AI-assisted placement analytics identified as the primary growth driver. The key differentiating factor between the integrated model and unstructured contingent dependency appears to be the architecture of the agency relationship: whether engagement is governed by committed fill rates, pre-qualification standards, and demand-linked activation protocols, or whether it operates as a spot-market transaction each time a vacancy appears.

Figure 2 illustrates a pattern visible across the reviewed data: high contingent labor dependency and low operational efficiency coexist across the sector. Available evidence suggests this coexistence reflects the largely unstructured nature of existing contingent reliance rather than a fundamental incompatibility between contingent labor and efficiency. Based on the reviewed evidence, four operational capabilities appear more accessible under the integrated model than under either the permanent-hire or the reactive contingent configuration.

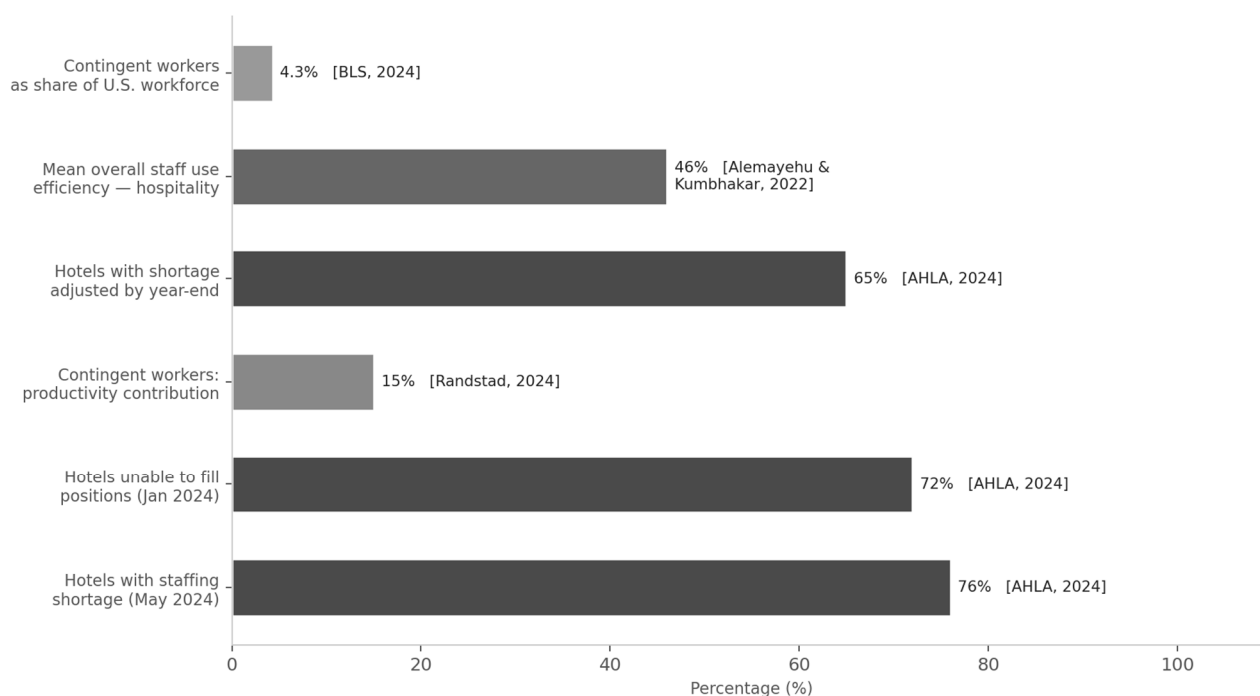


Figure 2. Key Metrics of the Contingent Workforce in the U.S. Hospitality Sector

Source: compiled by the author based on [16; 19; 6; 13; 17].

Pre-event capacity assurance: activating pre-qualified workers from the agency pool against confirmed demand forecasts may allow a property to secure staffing coverage for high-revenue periods without the lead times associated with new permanent hires. Demand-proportional cost structure: because the contingent component scales against pre-agreed rates rather than repeated market-rate placement fees, labor costs are expected to track revenue-generating activity more closely. Cross-property pool efficiency: a staffing agency serving multiple hospitality clients within a geographic market is positioned to maintain a broader and more continuously active talent pool than any single property could sustain internally. New business acceptance: event contracts and seasonal volume increases can potentially be taken on against a confirmed contingent capacity commitment, without the fixed-cost commitment that permanent hiring requires.

5. Discussion

The findings extend the Resource-Based View application in hospitality in a direction that prior scholarship has not pursued. Nolan et al. (2025) argue that human capital must be preserved and developed to function as a strategic resource [2]; the present analysis suggests that preservation and development are insufficient conditions when demand exceeds what any permanently employed workforce can supply. What RBV predicts about competitive advantage through human resources applies across both the composition of a permanent workforce and the architecture of how total workforce capacity is organized and governed. The three-component model operationalizes the RBV logic at the level of workforce system design rather than individual employee management. This distinction clarifies why internal HRM interventions documented in the literature (retention programs, flexible scheduling, career development) are necessary but structurally limited in high-demand environments: they address the quality and stability of the permanent tier but leave the capacity gap during demand spikes unresolved.

A second interpretive finding concerns the relationship between the integrated model and the scheduling optimization literature. Liu et al. (2024) demonstrated that demand-

forecast-linked scheduling produces measurable gains in staffing accuracy and labor cost at property level [7]; Alemayehu and Kumbhakar (2022) established that the efficiency ceiling under conventional approaches sits at 46% overall [6]. Together, both findings describe a system in which optimization appears constrained by supply availability. The integrated model does not compete with AI-assisted scheduling; rather, it provides the supply-side infrastructure that demand-responsive scheduling requires to be actionable. When a property scheduling platform forecasts elevated demand, the practical value of that forecast depends on whether additional qualified workers are available for deployment within the required timeframe. Without a pre-structured agency pool, the forecast may generate a staffing plan that cannot be fulfilled at short notice. With one, it activates a capacity reserve prepared in advance. The model's contribution is therefore upstream of scheduling: it creates conditions under which demand forecasting can translate into staffing decisions rather than remain constrained by headcount ceilings.

Analytically distinguishing the integrated model from reactive contingent engagement requires identifying what makes the difference operational rather than nominal. Four design characteristics identified in the results - fill-rate commitment, pre-qualification depth, VMS integration, and account management continuity - appear significant not primarily because they describe features of a capable agency, but because each addresses a source of operational uncertainty that tends to prevent hospitality managers from treating contingent labor as plannable capacity. In a reactive agency relationship, uncertainty operates across all four dimensions simultaneously: the fill rate is unknown until the request is made, candidate quality is unknown until placement, scheduling data exchange is manual or absent, and institutional knowledge resets with each engagement. When each of these dimensions becomes governed rather than ad hoc, the operational decisions available to property management change accordingly. The transition from reactive to integrated therefore involves a change in workforce system design and governance, not primarily a procurement substitution.

The analytical findings carry differentiated implications for hospitality businesses and staffing agencies that prior literature has not distinguished. For hospitality operators, the central implication is a reframing of how agency partnerships are evaluated: selecting a staffing agency on cost-per-placement alone systematically undervalues the operational capabilities that committed fill rates, pre-qualification infrastructure, and scheduling integration provide. A partnership that costs more per placement but delivers confirmed coverage before high-demand periods generates revenue-side returns through service capacity and event contract acceptance that a lower-cost reactive arrangement cannot produce. Relevant comparison is total workforce system cost against revenue capture, not placement fee against placement fee. For staffing agencies, the implication points toward a strategic positioning choice: investment in hospitality-specialist pre-qualified pools, VMS infrastructure, and sustained account management enables competition on operational value rather than on price, creating a defensible differentiation from commodity placement services and a more stable contractual revenue base.

Several substantive questions remain open that the present study cannot address through literature review alone. First, no empirical evidence currently exists on the revenue impact of transitioning from a reactive to an integrated staffing model at property level; the causal relationship between partnership architecture and revenue per available room has not been measured in a controlled or quasi-experimental setting, and this is the most direct extension of the present framework. Second, the analysis treats the three model types as discrete categories, but hospitality operations likely occupy positions along a continuum with varying degrees of pre-qualification, fill-rate commitment, and scheduling integration; a classification instrument capable of placing individual agency relationships on this continuum would enable comparative empirical research across properties. Third, the model was

developed in the context of hotels and large-format event environments in the U.S. market; its applicability in smaller operations, franchise properties with constrained procurement autonomy, and non-U.S. labor markets with different contingent workforce regulation requires separate investigation. Fourth, whether service quality consistency under the integrated model produces measurable differences in guest review scores, repeat booking rates, or net promoter scores compared to properties operating under permanent-hire or reactive models remains empirically untested and would materially strengthen the revenue case for the framework.

6. Conclusions

Four conclusions follow from the analysis. First, the staffing shortage documented across U.S. hotels throughout 2024, persistent despite sustained wage increases, is unlikely to be resolved through internal HRM or scheduling optimization alone, because both operate within a fixed permanent headcount ceiling that constrains service capacity during peak demand periods. Second, among the three model types analyzed in this study, the advanced integrated staffing model, which combines a permanent core workforce with a pre-qualified agency-maintained contingent pool and AI-assisted demand-linked scheduling, is the configuration that most comprehensively addresses labor cost flexibility, service capacity alignment, and scalability; traditional permanent-hire and reactive contingent models each address one of these parameters while demonstrating limitations on the others. Third, the staffing agency is more likely to function as a strategic revenue-enabling partner than as a transactional labor supplier when the engagement is governed by committed fill rates, pre-qualification standards, VMS-based scheduling integration, and sustained account management; what distinguishes a reactive from an integrated agency relationship is governance architecture rather than worker type. Fourth, the hospitality sector exhibits a structural gap between high contingent labor dependency rates and low staff use efficiency, a combination that the integrated model, based on the reviewed evidence, appears better positioned to narrow by converting unstructured contingent reliance into managed capacity aligned with demand cycles.

References

1. The Business Research Company. (2024). Hospitality Global Market Report 2024. Retrieved from <https://www.thebusinessresearchcompany.com>
2. Nolan, S., Wills, B., Baum, T., Devine, F., & Devine, A. (2025). Addressing global labour challenges: An integrative model for sustainable hospitality workplaces, informed by resource-based view theory and the kaleidoscope career model. *International Journal of Hospitality Management*, 128. <https://doi.org/10.1016/j.ijhm.2025.104025>
3. U.S. Bureau of Labor Statistics. (2024). Job Openings and Labor Turnover Survey (JOLTS), April 2024. U.S. Department of Labor. Retrieved from <https://www.bls.gov/jlt/>
4. World Travel & Tourism Council. (2024). Economic Impact Research 2024. Retrieved from <https://wtcc.org/research/economic-impact>
5. Unifocus. (2024). Operational Efficiency: The New Cornerstone of Hotel Profitability. Retrieved from <https://www.unifocus.com/blog/operational-efficiency-the-new-cornerstone-of-hotel-profitability>
6. Alemayehu, F. K., & Kumbhakar, S. C. (2022). Estimation of staff use efficiency: Evidence from the hospitality industry. *Technological Forecasting and Social Change*, 178, 121591. <https://doi.org/10.1016/j.techfore.2022.121591>
7. Liu, Y., Zhang, J., Wang, X., & Chen, M. (2024). Predicting and planning: An intelligent system for demand-based hotel staff scheduling. *International Journal of Hospitality Management*. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0278431925004025>

8. Park, J., & Min, H. (2020). Turnover intention in the hospitality industry: A meta-analysis. *International Journal of Hospitality Management*, 90, 102599. <https://doi.org/10.1016/j.ijhm.2020.102599>
9. Frye, W. D., Kang, S., Huh, C., & Lee, M. J. (2020). What factors influence Generation Y employee retention in the hospitality industry? An internal marketing approach. *International Journal of Hospitality Management*, 85, 102352. <https://doi.org/10.1016/j.ijhm.2019.102352>
10. Baum, T., Mooney, S. K. K., Robinson, R. N. S., & Solnet, D. (2020). COVID-19's impact on the hospitality workforce - new crisis or amplification of the norm? *International Journal of Contemporary Hospitality Management*, 32(9), 2813–2829. <https://doi.org/10.1108/IJCHM-04-2020-0314>
11. Kwok, L. (2022). Labor shortage challenge in post-pandemic hospitality. *International Journal of Contemporary Hospitality Management*, 34(12), 4674-4685. <https://doi.org/10.1108/IJCHM-07-2022-0857>
12. Muzaffar, R., Laitamaki, J., & McCaleb, T. (2024). Tech-Savvy Hospitality: A Strategic Approach to Overcoming Labor Shortages. *ICHRIE Research Reports*, 9(2). Retrieved from https://via.library.depaul.edu/ichrie_rr/vol9/iss2/2
13. American Hotel & Lodging Association. (2024). Front Desk Feedback Surveys: January 2024, May 2024, December 2024. Retrieved from <https://www.ahla.com>
14. Grigoryan, A. (2024). Labor Shortages in the Hospitality Industry. *Westcliff International Journal of Applied Research*, 8(1). Retrieved from <https://wjar.westcliff.edu>
15. Yaiprasert, C., & Hidayanto, A. N. (2024). Embracing open innovation in hospitality management: Leveraging AI-driven dynamic scheduling systems for complex resource optimization and enhanced guest satisfaction. *Journal of Open Innovation: Technology, Market, and Complexity*. <https://doi.org/10.1016/j.joitmc.2024.100480>
16. U.S. Bureau of Labor Statistics. (2024). Contingent and Alternative Employment Arrangements - July 2023. U.S. Department of Labor. Retrieved from <https://www.bls.gov/news.release/conemp.toc.htm>
17. Staffing Industry Analysts. (2024). US Staffing Industry Forecast: March 2024 Update. Retrieved from <https://www.staffingindustry.com>
18. Innovative Employee Solutions. (2024). Top Contingent Workforce Trends in 2025: How to Manage a Global, AI-Driven, and Multigenerational Workforce. Retrieved from <https://www.innovativeemployeesolutions.com/blog/the-evolving-global-workforce-contingent-workforce-trends-in-2024/>
19. Randstad. (2024). Contingent Workforce Statistics 2024. Randstad Employer Brand Research. Retrieved from <https://www.randstad.com>
20. Conexis VMS. (2022). Contingent Workforce Statistics You Need to Know in 2022. Retrieved from <https://www.conexismsssoftware.com/blog/contingent-workforce-statistics-you-need-to-know-in-2022>