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Bedbanks in Contemporary Hotel Distribution: Historical Evolution, Conceptual Positioning, and Evidence from Madrid Hotels

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Highlights

What are the main findings?

- Bedbanks remain observable components of hotel distribution portfolios despite accounting for a relatively small share of total room-night volume.
- Historical and empirical evidence suggests that bedbanks have evolved from traditional wholesalers into upstream B2B redistribution platforms embedded within digital distribution ecosystems.

What are the implications of the main findings?

- Hotel distribution systems should be understood as layered and hyperconnected ecosystems rather than through simplified direct-versus-OTA frameworks.
- Upstream B2B redistribution infrastructures remain strategically relevant despite their limited visibility in hotel reporting systems and hospitality research.

Abstract

Bedbanks constitute an important yet comparatively underexplored component of contemporary hotel distribution systems. While existing research has focused primarily on direct channels and online travel agencies (OTAs), upstream business-to-business (B2B) redistribution infrastructures remain under-theorised. This study examines the historical evolution, conceptual positioning, and empirical presence of bedbanks within hotel distribution systems. A sequential mixed-methods design was employed, combining a historical–analytical review of hotel distribution development with survey data collected in 2024 from 54 three-, four-, and five-star hotels in Madrid. The empirical analysis examined room-night allocations across direct channels, OTAs, and bedbanks for 2022 and 2023 and compared distribution patterns across hotel categories. The results show that bedbanks account for approximately 3–4% of total room-night volume, indicating a modest but consistent presence within hotel distribution portfolios. Significant differences in bedbank participation were observed across hotel categories, with four-star hotels displaying the highest levels of utilisation. The findings suggest that bedbanks are best understood as upstream B2B redistribution platforms that facilitate indirect demand access within layered and digitally interconnected distribution ecosystems. By integrating historical, conceptual, and empirical perspectives, the study contributes to hotel distribution research by showing that upstream redistribution infrastructures constitute observable and theoretically relevant components of contemporary tourism intermediation.

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Keywords: bedbanks; hotel distribution; B2B platforms; multichannel distribution; digital intermediation; online travel agencies (OTAs)

1. Introduction

Hotel distribution has undergone profound structural and technological transformations since the emergence of organised tourism. From the development of travel agencies in the nineteenth century to the introduction of Computer Reservation Systems (CRS) and Global Distribution Systems (GDS) in the second half of the twentieth century, the mechanisms through which hotels commercialise their rooms have expanded significantly in scale, reach, and organisational complexity (Buhalis, 2003; Del Alcázar Martínez, 2002). The commercialisation of the internet in the 1990s marked a decisive turning point, as Online Travel Agencies (OTAs) reconfigured hotel distribution by enabling global inventory access, real-time booking, and price transparency (Abrate et al., 2012). This transformation strengthened platform-based intermediaries and reshaped hotels' pricing strategies, visibility, and channel dependence (Toh et al., 2011; Berne et al., 2012).

Since the late 2000s, hotel distribution has entered a new phase characterised by platformisation, algorithmic pricing, and application programming interface (API)-based connectivity across travel ecosystems (Gretzel et al., 2015; Buhalis & Leung, 2018; Cusumano et al., 2019). These digital infrastructures enable the real-time redistribution of accommodation inventory through multiple intermediary layers, transforming hotel distribution from a linear supplier-to-consumer chain into an interconnected platform ecosystem (Hagiu & Wright, 2015; Buhalis & Leung, 2018; Cusumano et al., 2019). Despite this evolution, much of the hospitality literature continues to conceptualise hotel distribution primarily through a simplified dichotomy between direct channels and consumer-facing OTAs. Consequently, existing research has largely focused on disintermediation strategies, OTA dependence, online pricing, and consumer booking behaviour, while comparatively limited attention has been devoted to upstream business-to-business (B2B) redistribution infrastructures operating behind visible consumer interfaces (Buhalis & Licata, 2002; Law et al., 2015; Stangl et al., 2016).

One of the most relevant yet under-theorised components of these upstream redistribution infrastructures is the bedbank. Bedbanks are B2B accommodation intermediaries that aggregate hotel inventory and redistribute it to downstream partners—including travel agencies, tour operators, airlines, OTAs, and dynamic packaging platforms—through wholesale distribution networks (Kracht & Wang, 2010; Buhalis & Law, 2008). Although traditionally associated with negotiated allotments and wholesale contracting, they have evolved into digitally enabled distribution platforms operating globally through APIs, channel managers, and automated connectivity systems (Kracht & Wang, 2010; Buhalis & Leung, 2018). Unlike OTAs, which interact directly with consumers, bedbanks operate primarily within upstream B2B distribution layers and frequently remain invisible to both final consumers and hotel-level reporting systems (Anderson, 2011; Buhalis & Leung, 2018; de Vega-Ventura et al., 2025). This structural opacity has contributed to their limited visibility within hospitality research despite their continued operational relevance in contemporary accommodation distribution ecosystems.

The literature reveals three interconnected gaps: the historical evolution of bedbanks has received limited attention, their conceptual positioning within contemporary digital ecosystems remains insufficiently developed, and empirical evidence on their observable role within hotel distribution portfolios is still scarce.

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Against this backdrop, the present study combines historical analysis with hotel-level empirical evidence from Madrid to examine the role of bedbanks within contemporary hotel distribution systems. Specifically, it addresses the following research questions (RQs):

RQ1: How have bedbanks evolved within the historical development of hotel distribution systems?

RQ2: How can bedbanks be conceptually positioned within contemporary digital distribution ecosystems?

RQ3: To what extent are bedbanks observable within hotel-level distribution portfolios?

The empirical component of the study focuses on the Madrid hotel market. Madrid constitutes an analytically relevant setting because it is one of Spain's largest and most internationally connected urban hotel markets, characterised by strong digitalisation, high OTA penetration, and the coexistence of business and leisure demand segments (INE, 2024; Law et al., 2015; Stangl et al., 2016). These characteristics make it particularly suitable for examining intermediary structures within a mature urban tourism ecosystem.

The study contributes to the hospitality distribution literature in three ways. First, it integrates bedbanks into the historical narrative of hotel distribution. Second, it advances their conceptualisation as upstream B2B redistribution platforms embedded within contemporary digital distribution ecosystems. Third, it provides rare hotel-level empirical evidence on the observable role of bedbanks within a major urban hotel market. In doing so, the study moves beyond simplified direct-versus-OTA perspectives and demonstrates the importance of explicitly incorporating upstream redistribution infrastructures into contemporary models of multichannel hotel distribution.

The dataset analysed in this study forms part of a broader research project examining multichannel hotel distribution in the Madrid urban hotel market and has also been used in three related publications. Munoz JdeS (2026) examines the relationship between managerial perceptions of channel efficiency and booking allocation; Munoz JdeS and Alzua-Sorzabal (2026) investigate channel portfolio composition, distribution balance, and hotel performance; and Munoz JdeS et al. (2026) examine the broader evolution towards digitally reintermediated and increasingly interconnected hotel distribution ecosystems. The present study is analytically distinct from these publications and focuses specifically on bedbanks as upstream B2B redistribution platforms, combining historical–conceptual analysis with hotel-level empirical evidence to examine their visibility, conceptual positioning, and differentiated adoption across hotel categories. Although all four studies use data derived from the same underlying survey, they address different research questions, employ different analytical approaches, and make distinct contributions to the hotel distribution literature.

The remainder of the article is structured as follows. Section 2 presents the historical and conceptual background. Section 3 describes the research design and methodology. Section 4 reports the empirical results. Section 5 discusses the theoretical and managerial implications of the findings, and Section 6 concludes with the main contributions, limitations, and directions for future research.

2. Historical and Conceptual Background

2.1. Historical Evolution of Hotel Distribution

Hotel distribution has evolved through successive technological and organisational transformations. Early intermediation relied primarily on physical travel agencies and tour operators, with manual processes and negotiated allotments shaping market reach (Del Alcázar Martínez, 2002). A major structural shift emerged with the development of CRS in the 1960s and GDS in the 1970s, which enabled large-scale electronic intermediation and real-time access to hotel rates and availability (Buhalis, 2003; Buhalis & Law, 2008).

The commercialisation of the internet in the 1990s marked a second watershed in hotel distribution. OTAs introduced consumer-facing search, comparison, and real-time booking functionalities that reshaped channel dependence and reinforced the strategic role of intermediaries in demand generation (Abrate et al., 2012). Parallel to these developments, B2B accommodation wholesalers expanded significantly, supported by increasing connectivity, automation, and the diffusion of XML and API-based integration across distribution systems (Buhalis & Law, 2008; Thakran & Verma, 2013). While OTAs have received extensive scholarly attention due to their visibility in consumer markets, the parallel evolution of upstream B2B redistribution infrastructures received comparatively less attention in historical accounts of hotel distribution (Law et al., 2015; Buhalis & Leung, 2018). Table 1 summarises key milestones in the evolution of hotel distribution and the emergence of bedbanks as digitally enabled B2B intermediaries.

Table 1. Chronological milestones in the evolution of hotel distribution and the bedbank (B2B) model.

Year	Milestone	Key References
1867	Thomas Cook introduces prepaid hotel coupons, enabling fixed-price accommodation and early scalable intermediation between hotels and travel agencies.	Del Alcázar Martínez (2002)
1963	The New York Hilton implements one of the first computer-based systems for room management, representing an early application of information technology to hotel operations.	Buhalis (2003)
1960–1970	Development of Computer Reservation Systems (CRS) and Global Distribution Systems (GDS), enabling real-time inventory access and large-scale electronic intermediation in travel distribution.	Buhalis (2003); Buhalis and Law (2008)
1975	Founding of Gulliver's Travel Associates (GTA) in London, pioneering global-scale B2B hotel contracting and wholesaling.	Faz Albert (2018)
2001	Launch of Hotelbeds by First Choice, marking the emergence of a technology-driven global bedbank focused on B2B accommodation distribution.	Faz Albert (2018)
Early 2000s	Diffusion of channel managers and XML/API connectivity, enabling simultaneous multi-channel distribution and scalable B2B platform operations.	Buhalis and Law (2008); Gretzel et al. (2015)
2014–2018	WebBeds scales globally through a sequence of acquisitions—SunHotels (2014), JacTravel and TotalStay (2017), and Destinations of the World (DOTW) (2018)—consolidating supply access and wholesale distribution capacity.	Phocuswright (2018)
2017	Hotelbeds acquires GTA and Tourico Holidays, consolidating the largest pure-play bedbank platform worldwide.	Faz Albert (2018); Phocuswright (2018)
2018–2019	Expedia Partner Solutions (EPS) is formally positioned as Expedia Group's B2B partnership unit, scaling accommodation distribution through API-based and white-label partnerships.	Expedia Group (2019); O'Neill (2021)
2020s	Consolidation of digitally enabled B2B accommodation distribution, characterised by API-first architectures and automation.	Gretzel et al. (2015); Buhalis and Leung (2018)

Note. M&A events are supported by primary corporate disclosures. Source: Authors' own elaboration.

These developments transformed hotel distribution into an interconnected digital environment in which multiple intermediary layers coexist. While OTAs remain the most visible actors, upstream B2B redistribution infrastructures have become an integral component of contemporary accommodation distribution. Rather than representing successive waves of

replacement, this historical evolution illustrates the cumulative layering of intermediary functions that characterises contemporary hotel distribution ecosystems.

2.2. Intermediation, Digital Disintermediation, and Multichannel Complexity

The digitalisation of tourism distribution has significantly increased the number and diversity of intermediaries within hotel distribution systems (Buhalis & Licata, 2002; Law et al., 2015). Online Travel Agencies rapidly achieved a dominant position by offering global reach, sophisticated merchandising capabilities, and high conversion rates. However, this dominance also introduced new challenges for hotels, including commission costs, reduced pricing autonomy, and greater dependence on platform visibility (Beritelli & Schegg, 2016).

In response, hotels increasingly pursued disintermediation strategies through direct channels such as brand websites, mobile applications, loyalty programmes, and customer relationship management systems (Buhalis & Law, 2008; O'Connor & Frew, 2002; Kracht & Wang, 2010). At the same time, the rise of metasearch engines and online review platforms increased price transparency and consumer mobility across channels, intensifying competition and reinforcing cross-channel interdependencies (Anderson, 2009).

The contemporary distribution environment can therefore be characterised as multichannel and highly interconnected. A single booking may involve multiple intermediaries operating at different layers of the value chain (Anderson, 2011; Thakran & Verma, 2013). This blurring of roles complicates channel attribution, pricing strategies, and governance, and increases the relevance of specialised B2B intermediaries such as bedbanks. Recent empirical evidence from urban hotels further illustrates this multichannel complexity by showing that distribution portfolios typically combine multiple direct and intermediary channels rather than relying predominantly on a single distribution pathway (Munoz JdeS & Alzua-Sorzabal, 2026).

Rather than eliminating intermediaries, digitalisation has generated new forms of reintermediation characterised by increasing interdependence between direct channels, retail platforms, and upstream redistribution actors (Buhalis & Licata, 2002; Kracht & Wang, 2010; Munoz JdeS et al., 2026).

2.3. Bedbanks: Definitions, Terminology, and Theoretical Positioning

Unlike OTAs or GDSs, bedbanks lack a universally accepted academic definition. Broadly, bedbanks are B2B intermediaries that aggregate hotel inventory and redistribute it to downstream resellers—such as travel agencies, tour operators, OTAs, airlines, and dynamic packaging platforms—through indirect wholesale networks (Buhalis & Law, 2008; Kracht & Wang, 2010). The term overlaps with related labels in the literature (e.g., accommodation wholesaler, inventory aggregator, e-wholesaler, or banco de camas), reflecting both historical roots and technological evolution (Kracht & Wang, 2010; O'Connor & Frew, 2002).

Three perspectives are particularly useful for positioning bedbanks within contemporary distribution theory.

First, the contractual perspective frames bedbanks as risk-bearing wholesalers that contract inventory at net rates and resell it to intermediary clients, transferring part of demand uncertainty away from hotels (Kracht & Wang, 2010).

Second, the platform perspective emphasises their role as B2B distribution infrastructures enabling real-time redistribution through connectivity technologies such as APIs, channel managers, and booking engines (Buhalis, 2003; Gretzel et al., 2015).

Third, the market-structure perspective highlights how scale in B2B wholesaling may translate into influence over access to demand and downstream distribution pathways (Kracht & Wang, 2010).

Taken together, these perspectives suggest that bedbanks are more appropriately understood as upstream B2B redistribution platforms embedded within contemporary digital distribution ecosystems rather than as traditional wholesalers surviving within digital markets. Their strategic relevance appears to derive from their ability to aggregate fragmented supply, facilitate scalable redistribution, and connect hotels with diverse downstream demand networks through digital B2B infrastructures (Cusumano et al., 2019; Buhalis & Leung, 2018).

As illustrated in Figure 1, bedbanks occupy a structurally distinct position within hotel distribution systems by aggregating accommodation inventory upstream and redistributing it through multiple downstream B2B partners rather than interacting directly with final travellers. This positioning suggests that the observable role of bedbanks in hotel-level distribution portfolios may differ from their broader function within contemporary accommodation distribution networks. Figure 1 therefore provides the conceptual foundation for the empirical analysis that follows.

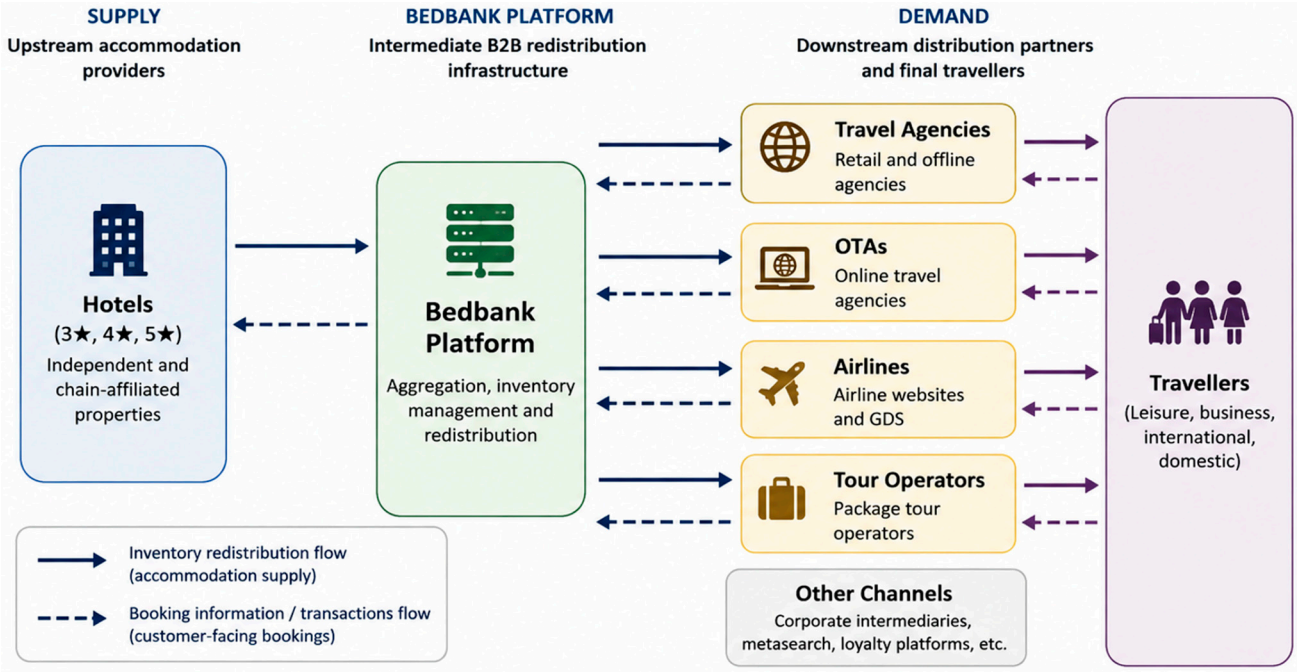


Figure 1. Conceptual framework of bedbank-mediated hotel distribution networks. Note: This figure presents a conceptual representation of the relationships among accommodation suppliers, bedbank platforms, downstream distribution partners, and final travellers. The model is illustrative and does not represent transactional volumes, market shares, or the complete sequence of commercial relationships that may occur within individual booking pathways. Source: Authors' own elaboration.

2.4. Consolidation and Market Structure of the B2B Accommodation Sector

Historically, the B2B accommodation sector developed as a fragmented market reflecting the atomised structure of hotel supply and the diversity of wholesale contracting practices (Kracht & Wang, 2010; Buhalis & Licata, 2002). However, a major wave of mergers and acquisitions between 2014 and 2019 reshaped the competitive structure of the sector, strengthening a small number of global-scale intermediaries while leaving a long tail of regional and specialised wholesalers.

This consolidation reflects broader dynamics observed in digital platform industries, where economies of scale, network effects, and technological integration favour increasingly dominant intermediary actors (Cusumano et al., 2019; Hagiu & Wright, 2015). Within accommodation distribution, these advantages derive from the growing value of supplier integration, API connectivity, inventory aggregation, and downstream redistribution as

distribution ecosystems become increasingly interconnected (Kracht & Wang, 2010; Buhalis & Leung, 2018).

Available industry evidence nevertheless suggests that wholesale accommodation distribution represents a substantial component of global hotel sales. Estimates range from approximately USD 50 billion in hotel room sales reported by the European Commission before the COVID-19 pandemic to around €53 billion estimated by Euromonitor and USD 59 billion reported by (Web Travel Group, 2023; European Commission, 2017; Euromonitor International, 2023). Although these estimates rely on different definitions and may include traditional wholesale, hybrid B2B–B2C models, and tour operator distribution in addition to digitally enabled bedbanks, they consistently indicate the continuing structural importance of upstream B2B redistribution within global accommodation markets.

Within this context, consolidation has reinforced the emergence of a dominant tier of global-scale B2B accommodation distributors. HBX Group (Hotelbeds) consolidated its market position following the acquisition of GTA and Tourico Holidays in 2017, while WebBeds expanded internationally through successive acquisitions including SunHotels, JacTravel, TotalStay, and Destinations of the World (DOTW). In parallel, Expedia Partner Solutions illustrates how wholesale redistribution functions may also be incorporated within broader OTA ecosystems rather than operating as standalone bedbank platforms (O'Neill, 2021).

Taken together, these developments point to a leader-dominated, though not fully consolidated, market characterised by pronounced scale asymmetries and redistribution concentration. Such concentration also increases the importance of governance, transparency, and coordination across upstream redistribution infrastructures, issues that remain underexplored in the hospitality literature. From a distribution-theory perspective, these developments reinforce the interpretation of bedbanks as infrastructural B2B coordination platforms whose strategic importance increasingly derives from enabling connectivity and redistribution across multilayered hotel distribution networks rather than from traditional wholesaling functions alone.

2.5. Conceptual Positioning of Bedbanks in Contemporary Hotel Distribution

The preceding sections provide a coherent conceptual foundation for understanding the role of bedbanks within contemporary hotel distribution systems. Taken together, the historical evolution of hotel distribution, the literature on digital intermediation, and the consolidation of the B2B accommodation sector collectively support the conceptualisation of bedbanks as upstream B2B redistribution platforms embedded within layered hotel distribution ecosystems. Unlike OTAs, which interact directly with consumers, bedbanks primarily facilitate the aggregation, coordination, and redistribution of accommodation inventory across downstream partners.

From this perspective, contemporary hotel distribution should be understood as a multi-layered network in which direct channels, retail intermediaries, and upstream redistribution infrastructures coexist and interact. Bedbanks therefore occupy a distinctive position within accommodation distribution architectures, operating as infrastructural coordination mechanisms whose strategic relevance derives less from consumer visibility than from their capacity to connect fragmented supply with diverse demand networks.

This conceptual positioning provides the theoretical foundation for the empirical analysis that follows, which examines the observable role of bedbanks within hotel distribution portfolios in the Madrid hotel market.

3. Materials and Methods

3.1. Research Design

This study adopts a sequential mixed-methods design that combines a qualitative historical–analytical approach with a quantitative descriptive component (Creswell & Plano Clark, 2018). The design responds to two issues identified in the literature: the limited integration of bedbanks within historical accounts of hotel distribution and the scarcity of empirical evidence regarding their observable presence within hotel distribution portfolios.

The qualitative phase reconstructs the historical evolution of hotel distribution systems, explicitly incorporating the emergence and development of B2B accommodation wholesalers and bedbanks within this trajectory. Historical analysis has increasingly gained recognition within management and organisation research as a means of examining the evolution of industries, institutions, and technological systems over time (Kieser, 1994; Üsdiken & Kieser, 2007; Rowlinson et al., 2014; Kipping & Üsdiken, 2014; Maclean et al., 2016). The quantitative phase complements this analysis by examining the observable presence of bedbanks within hotel distribution portfolios and comparing channel usage across hotel categories.

Rather than modelling performance outcomes or causal relationships between distribution channels, the empirical analysis focuses on documenting the structural presence of bedbanks within hotel distribution systems and examining differences in channel usage across hotel categories.

The qualitative and quantitative phases were integrated through a connected sequential design in which the historical analysis informed the conceptual framework used to interpret empirical evidence from the Madrid hotel market. Accordingly, bedbanks were examined both as historically evolved forms of tourism intermediation and as contemporary actors within digital hotel distribution ecosystems.

3.2. Qualitative Phase: Historical and Documentary Analysis

The qualitative phase was based on a structured documentary review designed to reconstruct the historical evolution of hotel distribution and to position bedbanks within contemporary B2B accommodation intermediation. The review was not intended as a formal systematic literature review (e.g., PRISMA), but instead adopted a structured historical–analytical approach appropriate for conceptual development in an under-researched field.

Searches were conducted in Scopus and Google Scholar using combinations of keywords related to hotel distribution, digital intermediation, bedbanks, accommodation wholesalers, GDS, CRS, channel managers, and API connectivity. The search focused primarily on publications from the 1990s onwards, when digital distribution technologies became central to tourism intermediation, while earlier sources were included where they provided historical context on pre-digital distribution systems and wholesale travel models.

Peer-reviewed publications were prioritised. Industry reports and corporate disclosures were used selectively to document market consolidation and firm-level developments where academic evidence was limited. These non-academic sources were triangulated with academic literature or multiple industry sources whenever possible.

The resulting documentary corpus was analysed using a three-stage thematic procedure involving document review, open coding, and axial coding (Corbin & Strauss, 2015). Open coding identified recurring themes related to technological infrastructures, contractual arrangements, and intermediary functions, whereas axial coding organised these themes into broader analytical categories representing the principal phases in the evolution of hotel distribution, including pre-digital travel agency intermediation, CRS/GDS systems, online platforms, and digitally enabled B2B redistribution platforms.

These analytical categories informed the reconstruction of the historical narrative and provided the conceptual framework for interpreting the empirical findings and positioning bedbanks within contemporary hotel distribution ecosystems.

3.3. Quantitative Phase: Survey Design and Data Collection

Primary data were collected through a structured online questionnaire administered to urban hotels in Madrid. The survey gathered operational information on room capacity and the allocation of room-nights across major distribution channels, specifically direct bookings, Booking.com, Expedia Group, bedbanks (HBX), and other intermediaries.

The focus on channel allocation aligns with the study's objective of assessing the empirical visibility of bedbanks within real hotel distribution mixes, acknowledging that such visibility reflects hotels' operational categorisation of channels within a hyperconnected distribution environment rather than the full upstream transactional path.

The questionnaire consisted of 10 predominantly closed-ended items implemented through SurveyMonkey (SurveyMonkey Inc., San Mateo, CA, USA). The instrument included (a) hotel profile variables, such as category, room inventory, and (b) realised room-night allocations by distribution channel. Respondents reported the number of room-nights sold through each distribution channel, including direct channels (brand website, phone, email, or walk-in), Booking.com, Expedia Group, bedbanks, and a residual "other intermediaries" category including GDS, tour operators, and other OTAs.

In this study, bedbank activity is operationalised through HBX Group (Hotelbeds–Bedsonline), which constitutes the dominant bedbank platform in the Spanish hotel market and is consistently identifiable within participating hotels' reporting systems (Faz Albert, 2018). Bookings were classified according to the channel that transmitted the reservation to the hotel, as recorded in the participating hotels' PMS/CRS, rather than according to the channel through which the customer originally made the booking. Accordingly, the study reflects the operational attribution of distribution channels from the hotel's perspective. This operational perspective is consistent with the objective of the study, which is to analyse hotel distribution structures from the supplier's perspective rather than to reconstruct the complete customer booking journey across multiple intermediaries. Consequently, the empirical analysis captures the observable presence of bedbanks within hotel distribution systems.

The questionnaire was pre-tested with four hotel managers to assess clarity, content validity, and internal coherence. Minor wording adjustments were introduced following the pilot phase, particularly to improve channel-category clarity and to distinguish bedbank-mediated B2B sales from retail OTA transactions.

Data collection took place between January and March 2024. Survey invitations were addressed to general managers and commercial or revenue directors, followed by two reminders to non-respondents. Participation was voluntary and confidential, and all responses were analysed exclusively in aggregated form for academic purposes. The full questionnaire is provided in Appendix A.

3.4. Population and Sample

The target population comprised $N = 259$ urban three-, four-, and five-star hotels in Madrid, including independent and chain-affiliated properties, according to data from the Instituto Nacional de Estadística (INE, 2024).

Madrid constitutes an analytically relevant empirical setting for examining contemporary hotel distribution structures because it represents one of Spain's largest and most internationally connected urban accommodation markets. Prior research suggests that highly competitive urban destinations tend to display greater intermediary penetration,

more diversified channel structures, and stronger multichannel complexity due to the coexistence of leisure, business, and international demand segments (Law et al., 2015; Beritelli & Schegg, 2016; Stangl et al., 2016). According to Instituto Nacional de Estadística (INE, 2024), Madrid concentrates a substantial volume of hotel capacity and international overnight stays while exhibiting high levels of digital platform penetration within accommodation distribution. These characteristics make the city particularly suitable for observing layered intermediary structures and upstream redistribution mechanisms within a mature urban tourism ecosystem.

A non-probability purposive sampling strategy based on voluntary participation was employed. Hotels were included in the sample if they were able to provide detailed operational information regarding room capacity and the allocation of reservations across distribution channels. All eligible hotels in the target population were invited to participate in the survey. The final valid sample consisted of $n = 54$ hotels, corresponding to a response rate of 20.8%.

Given the exploratory nature of the study and the use of a non-probability purposive sample, the findings should not be interpreted as statistically representative of the entire Madrid hotel population. Rather, the sample provides an empirical setting for examining the observable presence of bedbanks within a diverse set of urban hotels. Accordingly, the findings should be interpreted as analytically informative rather than statistically representative of the wider Madrid hotel population.

3.5. Data Analysis

The analytical strategy combined qualitative thematic analysis (Braun & Clarke, 2006) with quantitative descriptive and comparative techniques to integrate historical contextualisation with empirical observation of hotel distribution structures.

For the qualitative component, the coded documentary material was synthesised into an interpretive narrative linking technological change, governance structures, evolving intermediary functions, and redistribution mechanisms within tourism distribution systems. The analysis followed a hybrid inductive–deductive approach, combining theoretically informed categories derived from the literature with themes emerging from the documentary material through iterative analysis (Braun & Clarke, 2006). Coding was conducted manually by the researchers through systematic review, categorisation, and comparison of the documentary sources. The analysis was undertaken collaboratively by two researchers, who resolved coding discrepancies through discussion and maintained an audit trail documenting analytical decisions, category development, and interpretive memos.

For the quantitative component, descriptive statistics (medians and interquartile ranges) were calculated to estimate the proportion of room nights allocated to each distribution channel and the relative weight of bedbanks within hotel distribution portfolios. Hotels reporting zero room nights through HBX were retained in all analyses because zero values constitute informative observations reflecting the heterogeneous adoption of bedbank distribution rather than missing data or measurement error. The quantitative analysis adopted a channel-specific perspective because the objective of the study was to examine the observable participation of individual distribution channels—particularly bedbanks—within hotel distribution portfolios rather than to model the complete compositional structure of channel shares. Accordingly, each distribution channel was analysed separately to assess differences in its relative participation across hotel categories. Given the bounded and non-normally distributed nature of the channel shares, non-parametric Kruskal–Wallis tests followed, where appropriate, by Dunn post hoc pairwise comparisons with Holm-adjusted p-values were considered the most appropriate analytical approach for the study objectives. Effect sizes are reported for statistically significant pairwise compar-

isons alongside the corresponding Holm-adjusted *p*-values. The results should therefore be interpreted as describing channel-specific differences rather than modelling the joint compositional behaviour of hotel distribution portfolios. Statistical analyses were conducted using IBM SPSS Statistics, version 29 (IBM Corp., Armonk, NY, USA).

3.6. Ethical Considerations

The documentary analysis involved no personal or sensitive data. In the survey phase, limited identifying information was collected for administrative purposes but was removed during data preparation. All analyses were conducted using an anonymised dataset, and responses were treated confidentially and reported exclusively in aggregated form.

Several limitations should be acknowledged. The non-probabilistic sampling strategy and moderate response rate restrict statistical generalisability beyond the Madrid urban market. In addition, the retrospective nature of the survey relies on accurate managerial reporting and does not capture seasonal or booking-window dynamics. In addition, the two-year observation window limits the ability to assess longer-term structural evolution in intermediary usage patterns and therefore precludes robust conclusions regarding the long-term trajectory of bedbank participation. Finally, the hyperconnected structure of contemporary hotel distribution means that hotels observe distribution channels through the operational relationships recorded in their PMS/CRS rather than through the complete customer purchase journey. Consequently, the present study analyses hotel distribution from the supplier's operational perspective, reflecting the intermediary that transmits the reservation to the hotel. Although this approach does not reconstruct every upstream commercial relationship preceding the reservation, it is consistent with the study's objective of examining observable hotel distribution structures rather than customer purchasing pathways.

Despite these limitations, the mixed-methods design provides an appropriate framework for combining historical contextualisation with empirical observation in the investigation of an under-researched distribution segment (Creswell & Plano Clark, 2018; Maclean et al., 2016).

4. Results

4.1. Visibility of Bedbanks in Hotel Channel Portfolios

To assess whether bedbanks constitute an observable layer of intermediation in hotel distribution systems, we situate their presence within the broader distribution mix reported by hotels.

Figure 2 summarises the overall composition of hotel distribution portfolios in the Madrid urban hotel market. In both years, intermediary channels collectively accounted for the majority of room-night volume, while direct channels represented approximately one-third of bookings. Within this distribution structure, hotel-reported HBX participation represented a relatively small share of total room-night volume (approximately 3% in 2022 and 4% in 2023 at the hotel level). However, the distribution of HBX shares was highly uneven across properties. While many hotels reported minimal or no bedbank activity, others allocated considerably larger shares of inventory to this channel, indicating substantial heterogeneity in bedbank adoption. As shown in Table 2, median channel shares indicate that bedbank participation is concentrated primarily among four-star hotels, whereas three- and five-star properties report substantially lower HBX allocations.

As a robustness check, room-night weighted channel shares were calculated by aggregating the annual room-night allocations across all participating hotels. The resulting distribution remained broadly consistent with the hotel-level analysis, confirming the predominance of intermediary channels while indicating a somewhat larger aggregate contribution of HBX (approximately 6% in 2022 and 7% in 2023). This reflects the greater

participation of bedbanks among larger hotels and supports the robustness of the overall distribution patterns observed in the hotel-level analysis. The complete room-night weighted results are presented in Appendix B.

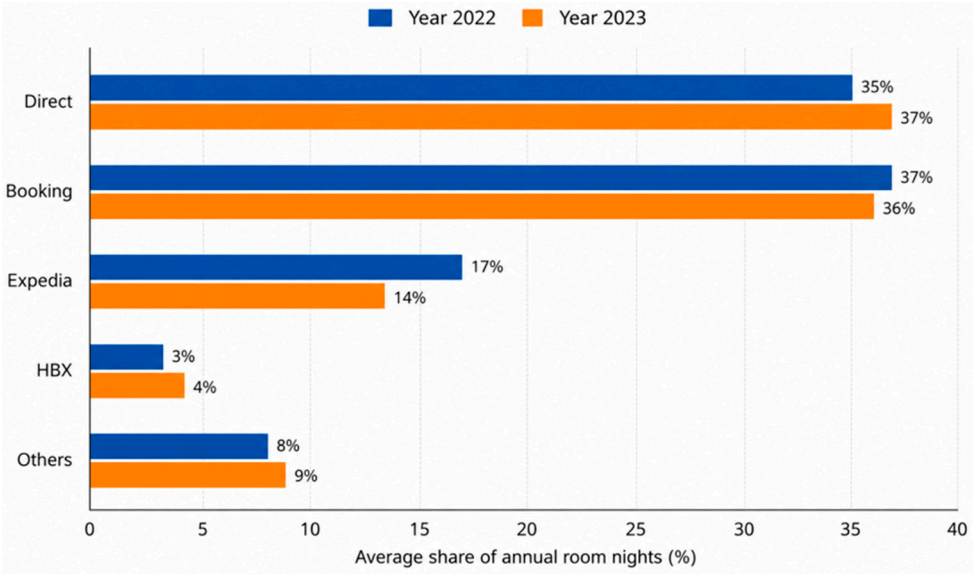


Figure 2. Distribution channel shares in the Madrid hotel sample, 2022–2023. Note. Values represent the average share of annual room nights allocated to each distribution channel across participating hotels. The figure is descriptive and is intended to facilitate comparison of overall channel portfolios between 2022 and 2023. Source: Authors' own elaboration.

Table 2. Descriptive statistics of channel shares by hotel category and year.

Category	Year	Direct	Booking.com	Expedia	HBX	Others
3-star	2022	0.36 (0.31–0.41)	0.45 (0.36–0.55)	0.15 (0.14–0.16)	0.01 (0.00–0.01)	0.03 (0.00–0.05)
4-star	2022	0.34 (0.27–0.42)	0.32 (0.27–0.38)	0.15 (0.12–0.18)	0.06 (0.02–0.10)	0.13 (0.05–0.20)
5-star	2022	0.34 (0.33–0.35)	0.31 (0.28–0.34)	0.24 (0.17–0.30)	0.01 (0.00–0.01)	0.10 (0.02–0.19)
3-star	2023	0.36 (0.25–0.46)	0.47 (0.33–0.61)	0.12 (0.08–0.16)	0.01 (0.00–0.02)	0.04 (0.00–0.06)
4-star	2023	0.35 (0.23–0.47)	0.29 (0.21–0.37)	0.12 (0.07–0.16)	0.07 (0.04–0.10)	0.15 (0.05–0.25)
5-star	2023	0.45 (0.40–0.50)	0.23 (0.16–0.32)	0.22 (0.14–0.31)	0.02 (0.01–0.03)	0.08 (0.00–0.18)

Note. Values are medians with interquartile ranges (IQR). Channel shares represent the proportion of annual room nights allocated to each distribution channel. Source: Authors' own elaboration.

4.2. Category-Based Differences in Bedbank Usage

To examine whether bedbank participation varies across hotel categories, Kruskal–Wallis tests were conducted to compare HBX shares across three-, four-, and five-star hotels.

The results indicate statistically significant differences in hotel-reported HBX shares in both years (2022: $H = 11.39$, $p = 0.003$; 2023: $H = 18.35$, $p < 0.001$). As shown in Table 3, four-star hotels display the highest median HBX shares and the largest interquartile ranges, whereas three- and five-star hotels report substantially lower central values. Post hoc Dunn pairwise comparisons with Holm-adjusted p-values indicated that these differences were driven by higher HBX shares among four-star hotels relative to three-star hotels in both years and relative to five-star hotels in 2023.

Table 3. Differences in channel shares by hotel category (Kruskal–Wallis tests).

Channel	Year	3-Star Median (IQR)	4-Star Median (IQR)	5-Star Median (IQR)	*H*	*df*	*p*
Direct	2022	0.36 (0.31–0.41)	0.34 (0.27–0.42)	0.34 (0.33–0.35)	1.37	2	0.504
Booking.com	2022	0.45 (0.36–0.55)	0.32 (0.27–0.38)	0.31 (0.28–0.34)	11.29	2	0.004 **
Expedia	2022	0.15 (0.14–0.16)	0.15 (0.12–0.18)	0.24 (0.17–0.30)	6.87	2	0.032 *
HBX	2022	0.01 (0.00–0.01)	0.06 (0.02–0.10)	0.01 (0.00–0.01)	11.39	2	0.003 **
Others	2022	0.03 (0.00–0.05)	0.13 (0.05–0.20)	0.10 (0.02–0.19)	12.36	2	0.002 **
Direct	2023	0.36 (0.25–0.46)	0.35 (0.23–0.47)	0.45 (0.40–0.50)	3.60	2	0.165
Booking.com	2023	0.47 (0.33–0.61)	0.29 (0.21–0.37)	0.23 (0.16–0.32)	13.51	2	0.001 ***
Expedia	2023	0.12 (0.08–0.16)	0.12 (0.07–0.16)	0.22 (0.14–0.31)	5.41	2	0.067
HBX	2023	0.01 (0.00–0.02)	0.07 (0.04–0.10)	0.02 (0.01–0.03)	18.35	2	<0.001 ***
Others	2023	0.04 (0.00–0.06)	0.15 (0.05–0.25)	0.08 (0.00–0.18)	7.50	2	0.024 *

Note. Channel shares represent the proportion of annual room nights allocated to each distribution channel. Values are medians with interquartile ranges (IQR). Results from two-tailed Kruskal–Wallis tests ($df = 2$). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Significant omnibus tests were followed by Dunn post hoc pairwise comparisons with Holm-adjusted *p*-values. Source: Authors' own elaboration.

For Booking.com, pairwise comparisons indicated that the significant overall differences were primarily explained by contrasts between three-star hotels and the higher-category hotels, whereas no significant differences were observed between four- and five-star hotels. For Expedia (2022), the significant overall difference reflected higher participation among five-star hotels than among both three- and four-star hotels, whereas for the Other distribution category, four-star hotels reported higher shares than three-star hotels in both years.

Beyond HBX, statistically significant category differences were also observed for Booking.com, Expedia (2022), and the Other distribution category, whereas direct booking shares did not differ significantly across hotel categories (Table 3). Together, these findings indicate that intermediary usage varies systematically by hotel category, whereas direct channel participation remains comparatively similar across segments.

The statistically significant Dunn post hoc pairwise comparisons, together with Holm-adjusted *p*-values and corresponding effect sizes, are reported in Table 4. The significant pairwise differences were associated with moderate to large effect sizes ($r = 0.40$–0.67).

Table 4. Significant Dunn post hoc pairwise comparisons across hotel categories.

Channel	Year	Comparison	Holm-Adjusted *p*	Effect Size (*r*)
Booking.com	2022	3★ vs. 4★	0.009	0.44
Booking.com	2022	3★ vs. 5★	0.014	0.51
Booking.com	2023	3★ vs. 4★	0.022	0.40
Booking.com	2023	3★ vs. 5★	0.004	0.59
Expedia	2022	3★ vs. 5★	0.006	0.57
Expedia	2022	4★ vs. 5★	0.012	0.50
HBX	2022	3★ vs. 4★	<0.001	0.63
HBX	2023	3★ vs. 4★	<0.001	0.67
HBX	2023	4★ vs. 5★	0.006	0.55
Others	2022	3★ vs. 4★	0.003	0.51
Others	2023	3★ vs. 4★	0.015	0.44

Note. Only statistically significant pairwise comparisons are reported. *p*-values are Holm-adjusted following Dunn post hoc tests. Effect sizes are reported as *r*. Source: Authors' own elaboration.

Figure 3 further illustrates the pronounced heterogeneity of HBX participation among four-star hotels. While many properties report little or no bedbank activity, a smaller group

allocates substantially larger shares of room nights to HBX, resulting in considerably greater within-category variability than is observed among three- and five-star hotels.

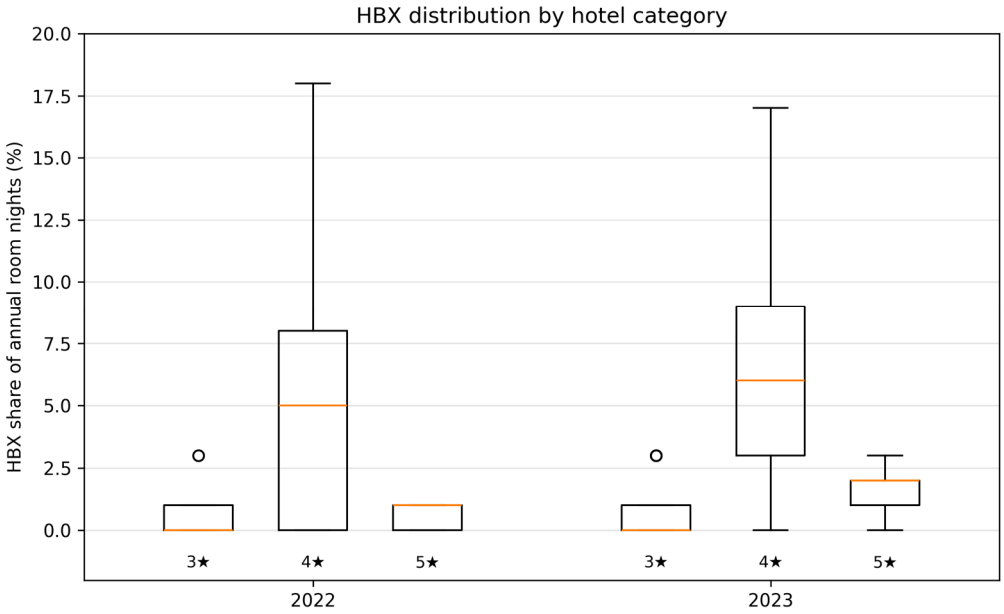


Figure 3. Distribution of hotel-reported HBX shares by hotel category. Note. Boxes represent the interquartile range (IQR), the horizontal line within each box indicates the median, whiskers extend to 1.5 × IQR, and points beyond the whiskers represent outliers. Boxplots correspond to the percentage of annual room nights allocated to HBX by participating hotels. The figure illustrates the distribution of hotel-level HBX participation across categories rather than market-level weighted shares. Source: Authors' own elaboration.

4.3. Empirical Presence of Bedbanks Within Distribution Portfolios

Taken together, the empirical findings indicate that bedbanks remain a visible, albeit comparatively small, component of contemporary hotel distribution portfolios. Their participation is highly heterogeneous across properties and concentrated particularly among four-star hotels, suggesting that bedbank adoption varies according to hotel characteristics and distribution strategies rather than representing a uniform market practice. Although retail intermediaries such as Booking.com and Expedia account for larger booking volumes, the consistent presence of HBX in hotel-reported distribution portfolios provides empirical evidence that upstream B2B redistribution platforms continue to constitute an active component of contemporary hotel distribution systems.

5. Discussion

This study contributes to the literature on hotel distribution by extending existing discussions of digital intermediation beyond the dominant focus on consumer-facing OTAs. While prior hospitality research has primarily examined retail platform competition, disintermediation strategies, and direct-channel management (Law et al., 2015; Stangl et al., 2016), the findings presented here indicate that upstream B2B redistribution infrastructures also remain embedded within contemporary hotel distribution systems despite their comparatively limited visibility in both academic research and hotel-level reporting practices.

Taken together, the historical reconstruction and the empirical findings indicate that bedbanks should not be interpreted as residual remnants of traditional wholesaling. Instead, they represent a persistent component of contemporary hotel distribution portfolios whose role has evolved alongside the digital transformation of tourism distribution. The historical analysis explains how this transformation occurred, whereas the empirical evi-

dence demonstrates that bedbanks continue to perform observable redistribution functions within urban hotel markets despite their comparatively modest volume share.

5.1. Persistence of Intermediary Dominance

The results confirm that hotel distribution in Madrid remains predominantly intermediary-driven during the post-pandemic recovery period. Intermediary channels continue to account for the majority of room-night volume, while direct channels represent roughly one-third of bookings.

This pattern is consistent with prior research documenting the structural embeddedness of intermediaries—particularly OTAs—within urban accommodation markets (Beritelli & Schegg, 2016; Stangl et al., 2016). More importantly, the findings extend this literature by showing that intermediary dominance is not limited to consumer-facing platforms but also involves upstream B2B redistribution infrastructures that remain largely absent from prevailing hotel distribution frameworks. Rather than indicating a progressive shift towards disintermediation, the findings reinforce research suggesting that digitalisation in tourism has generated new forms of reintermediation characterised by platform dependency, interconnected distribution layers, and multichannel complexity (Buhalis & Licata, 2002; Kracht & Wang, 2010; Munoz JdeS & Alzua-Sorzabal, 2026; Munoz JdeS et al., 2026). In this context, intermediary dominance appears less as a temporary post-pandemic condition than as a structural characteristic of digitally connected urban hotel markets.

From a sustainability perspective, the persistence of intermediary structures also has broader implications for the long-term resilience of hotel distribution systems. From a theoretical perspective, diversified distribution architectures may enhance the capacity of hotels to adapt to disruptions affecting individual sales channels or digital platforms, thereby potentially strengthening the resilience of hotels operating in increasingly volatile tourism markets. At the same time, the continued centrality of a limited number of large digital intermediaries raises broader questions regarding value capture, bargaining power, and the long-term competitiveness of accommodation providers, particularly independent hotels and small and medium-sized enterprises (SMEs). These issues fall beyond the scope of the present study but represent an important avenue for future research on the economic and social sustainability of digitally interconnected tourism distribution systems.

5.2. Bedbanks as Complementary Redistribution Platforms

Although marginal in much of the academic literature, bedbanks emerge empirically as a recurring—albeit secondary—component of hotel distribution portfolios. This finding contrasts with their limited visibility in the hospitality literature, where wholesale intermediaries are frequently subsumed within broad categories of distributors or treated as secondary actors relative to OTAs and direct channels (Law et al., 2015; Bigné et al., 2021). Their presence across hotels in the Madrid sample indicates that B2B wholesale distribution remains operationally relevant even in highly digitalised urban markets.

However, the findings suggest that bedbanks are better understood not simply as traditional wholesalers inherited from pre-digital tourism distribution, but as infrastructural B2B coordination platforms embedded within contemporary digital ecosystems. Their strategic role derives less from direct consumer interaction than from their capacity to aggregate fragmented supply, enable scalable redistribution, and connect hotels to differentiated downstream demand channels through digitally interconnected infrastructures. These demand channels differ structurally from retail OTA traffic and may be difficult for hotels to access efficiently through direct contracting alone (Kracht & Wang, 2010; Thakran & Verma, 2013). In this sense, bedbanks can be interpreted as mechanisms that facilitate indirect access to additional demand sources, consistent with previous conceptual work

on wholesale and hybrid distribution models in tourism (Kracht & Wang, 2010; Thakran & Verma, 2013). The present findings provide hotel-level empirical support for these conceptual interpretations, showing that such redistribution mechanisms remain observable within contemporary hotel distribution portfolios.

The observed presence of bedbanks should be interpreted from the hotel's operational perspective, reflecting the commercial channel through which reservations are received rather than the complete customer booking journey across multiple distribution layers. Consequently, the observed channel shares describe the operational role of bedbanks within hotel distribution systems rather than the complete sequence of upstream commercial relationships through which a reservation may pass before reaching the hotel.

These findings also suggest that upstream redistribution platforms should not be evaluated solely in terms of transaction volume. Their strategic relevance may also derive from their capacity to broaden international market access, diversify demand sources, and support the adaptive capacity of hotel distribution systems through multiple commercial pathways.

5.3. Differentiated Channel Portfolios Across Hotel Categories

The analysis also reveals systematic differences in intermediary usage across hotel categories. While direct channel shares remain relatively similar across three-, four-, and five-star hotels, the deployment of intermediary channels—including bedbanks—varies considerably between segments.

Three-star hotels show stronger reliance on Booking.com, whereas five-star properties exhibit comparatively higher exposure to Expedia. In contrast, four-star hotels exhibit both the highest average HBX participation and the greatest variability in bedbank usage, suggesting a more heterogeneous use of B2B redistribution platforms within this segment.

These patterns reinforce prior findings that hotels construct differentiated distribution portfolios according to market positioning, demand structure, and organisational capabilities rather than applying uniform channel strategies (Beritelli & Schegg, 2016; Stangl et al., 2016; Law et al., 2015). While previous studies have primarily focused on differences in OTA dependence and direct-channel strategies (Beritelli & Schegg, 2016; Stangl et al., 2016), the present findings extend this discussion by showing that bedbank participation also varies systematically across hotel categories. The substantial variability observed across hotel categories further suggests that bedbank participation is not uniformly distributed across the market but instead reflects differing commercial strategies and demand configurations.

The higher HBX participation observed among four-star hotels also merits consideration. Although the present study was not designed to identify the determinants of bedbank adoption, one plausible explanation is that four-star properties occupy an intermediate competitive position within urban accommodation markets. Compared with many five-star properties, which may rely more heavily on direct channels, stronger brand recognition, and negotiated corporate demand, four-star properties often compete across a broader mix of leisure, corporate, and international market segments while managing sufficient inventory volumes to benefit from wholesale redistribution networks. Consequently, the greater reliance on HBX may reflect differences in market positioning and distribution strategy rather than intrinsic differences in hotel quality. Future research incorporating organisational and market-level variables would be required to evaluate these explanations empirically.

Taken together, these findings further support views of hotel distribution portfolios as adaptive intermediary configurations that evolve according to contextual and organisational conditions rather than as stable channel structures dominated by a single platform logic.

5.4. Bedbanks Within Hyperconnected Distribution Ecosystems

The empirical patterns observed in Madrid are consistent with the concept of hyperconnectivity in hotel distribution (Anderson, 2011), whereby bookings may traverse multiple intermediary layers before reaching the hotel.

From this perspective, the relatively modest visibility of bedbanks within hotel-reported distribution portfolios should not be interpreted as evidence of limited structural relevance. Instead, the findings suggest that upstream redistribution mechanisms are only partially observable from the hotel perspective because transactions frequently involve multiple interconnected actors operating across digitally integrated distribution networks.

These findings support more analytically differentiated approaches to hotel distribution capable of capturing layered intermediary architectures and indirect demand pathways within contemporary tourism ecosystems (Anderson, 2011; Buhalis & Leung, 2018). Accordingly, hotel-reported channel attribution therefore provides only a partial representation of the underlying structure of digitally interconnected distribution networks, particularly where inventory is redistributed through multiple intermediary layers before reaching final consumers.

From a theoretical perspective, the results reinforce the view that contemporary hotel distribution systems are best understood as layered ecosystems in which multiple intermediary types coexist at different positions within the value chain. Contemporary hotel distribution increasingly operates through interconnected digital networks in which upstream redistribution infrastructures and downstream consumer-facing platforms perform complementary functions rather than operating as discrete and independent channels (Buhalis & Leung, 2018; Cusumano et al., 2019). This perspective extends existing multichannel distribution research by demonstrating that contemporary hotel distribution cannot be fully understood through consumer-facing platforms alone. Accordingly, bedbanks are best conceptualised not as direct substitutes for OTAs or direct channels, but as complementary redistribution platforms embedded within broader digital distribution ecosystems.

This interpretation also has broader implications for the governance of contemporary tourism distribution systems. The central role of digitally interconnected intermediary infrastructures raises questions regarding value capture, intermediary dependence, governance, transparency, and commercial coordination, particularly for independent hotels and small and medium-sized enterprises (SMEs). The partial observability of upstream redistribution relationships further highlights the need to examine accountability, data governance, and the long-term sustainability of increasingly interconnected tourism distribution systems. Although these issues extend beyond the scope of the present study, they reinforce the importance of incorporating upstream redistribution infrastructures into future research on tourism distribution governance.

Overall, the strategic significance of bedbanks derives less from their relative volume share than from their position within the architecture of interconnected intermediary networks through which accommodation inventory and demand are increasingly coordinated. Taken together, the findings suggest that understanding contemporary hotel distribution requires moving beyond simplified direct-versus-OTA frameworks and incorporating upstream redistribution infrastructures into theoretical models of tourism intermediation. From a managerial perspective, these findings suggest that distribution decisions should account for the strategic complementarity and interdependence of different intermediary layers rather than focusing exclusively on the booking volume generated by individual channels.

6. Conclusions

This study examined the role of bedbanks within contemporary hotel distribution systems by combining a historical–analytical review with hotel-level empirical evidence from Madrid.

In relation to the research questions, the study provides three main conclusions. First, it demonstrates that bedbanks have evolved alongside successive technological and organisational transformations in hotel distribution, becoming embedded within digitally interconnected distribution infrastructures (RQ1). Second, it supports the conceptualisation of bedbanks as upstream B2B redistribution platforms operating within layered distribution ecosystems rather than as complementary redistribution actors to retail OTAs (RQ2). Third, it demonstrates that bedbanks constitute a modest but persistent component of hotel distribution portfolios, with heterogeneous adoption across hotel categories, thereby providing empirical evidence that upstream B2B redistribution infrastructures remain observable from the hotel perspective despite their comparatively limited volume share (RQ3).

6.1. Contributions to Research and Practice

This study contributes to the literature on hotel distribution in three ways. First, it reconstructs the historical evolution of hotel distribution while explicitly incorporating bedbanks into that trajectory. Second, it clarifies the conceptual positioning of bedbanks as upstream B2B redistribution platforms within contemporary digital distribution ecosystems. Third, it provides rare hotel-level empirical evidence from Madrid showing that bedbanks remain observable, though secondary, components of distribution portfolios. Collectively, these contributions extend prevailing models of hotel distribution by explicitly incorporating upstream B2B redistribution infrastructures into the conceptual architecture of contemporary multichannel ecosystems.

From a managerial perspective, the findings highlight that indirect B2B redistribution networks continue to matter in urban hotel markets and that intermediary mixes vary across hotel categories. Managers should therefore recognise that not all indirect channels are functionally equivalent and that bedbanks may serve distinct redistribution roles within broader multichannel strategies. Rather than optimising individual channels in isolation, hotel managers may benefit from approaching distribution as a diversified portfolio in which direct channels, retail intermediaries, and upstream B2B redistribution platforms fulfil complementary strategic functions. Such an approach may reduce concentration risk, strengthen organisational adaptability, and improve transparency across increasingly interconnected distribution ecosystems, although the present study does not assess the optimal composition of such portfolios. Beyond these practical implications, the findings suggest that incorporating upstream B2B redistribution infrastructures into theoretical models of hotel distribution contributes not only to a more comprehensive understanding of contemporary tourism intermediation, but also to a stronger conceptual foundation for more resilient, transparent, and economically sustainable tourism distribution systems.

6.2. Limitations and Future Research

Several limitations should be acknowledged. First, the use of a non-probability purposive sample and the focus on a single urban destination limit the statistical generalisability of the findings beyond the Madrid hotel market. Consequently, the results should be interpreted as analytically rather than statistically generalisable. Second, the survey relies on retrospective self-reported data, which may introduce measurement uncertainty in the reported channel shares. Finally, the hyperconnected structure of tourism distribution systems makes it difficult to fully trace the upstream origin of bookings and to distinguish

purely wholesale flows from transactions that may subsequently be redistributed through other intermediaries.

Future research could complement the present exploratory analysis through additional robustness procedures, including bootstrap estimation and alternative sensitivity analyses, to further assess the stability of the empirical estimates. It could also extend the present channel-specific analytical approach by applying compositional data analysis techniques, such as log-ratio transformations (ALR, CLR, or ILR) or Dirichlet regression, to investigate the joint dependence among distribution channel shares within complete hotel distribution portfolios. Beyond methodological extensions, future studies should also examine multiple destinations and hotel typologies to determine whether similar distribution patterns emerge in different market contexts. Access to transactional datasets from property management systems or channel managers could further improve attribution of upstream booking sources and provide more precise measurement of wholesale distribution flows within contemporary hotel distribution ecosystems. Such data would also facilitate explanatory analyses of the organisational and market characteristics associated with bedbank adoption, including chain affiliation, hotel location, international demand, business versus leisure orientation, and the use of channel management technologies or API connectivity. In addition, longer observation periods would allow assessment of the long-term structural evolution of intermediary usage patterns.

Overall, the findings suggest that the future of hotel distribution is unlikely to be adequately explained through direct-versus-OTA frameworks alone. As accommodation markets become increasingly interconnected through platform ecosystems and redistribution networks, greater attention must be paid to the upstream infrastructures through which inventory and demand are coordinated. Bedbanks represent one manifestation of this broader transformation. Recognising these upstream redistribution layers is therefore essential for developing more comprehensive theoretical models of hotel distribution and for understanding how value is created, coordinated, and captured within increasingly interconnected tourism ecosystems.

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Data Availability Statement: The data presented in this study are available on request from the corresponding author due to the dataset containing commercially sensitive information that could potentially identify participating hotels. Anonymised summary data supporting the findings of this study (e.g., aggregated channel-share distributions and descriptive statistics) are available from the author upon reasonable request.

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Appendix A. English Translation of the Online Survey Questionnaire on Multichannel Distribution in Madrid Hotels (Data-Collection Instrument)

We are conducting a research project on hotel multichannel distribution. The purpose of this survey is to collect confidential statistical information on the structure and evolution of hotel distribution channels. All responses will be treated confidentially and analyzed only in aggregated form. Participation is voluntary.

Table A1. Survey questionnaire items and response options.

Item	Survey Question (English Translation)	Response Format
1	Hotel name (optional)	Open text
2	Hotel category	3★/4★/5★/Other
3	Number of hotel rooms	Numeric
4	Postal code of the hotel (optional)	Numeric (5 digits)
5	Annual occupancy rate (%)	Numeric (2022 and 2023)
6	Annual RevPAR (€)	Numeric (2022 and 2023)
7	How were your room-night reservations for the 2023 operating year distributed across the following booking channels? (Percentages must sum to 100%)	Percentage (%)
	-Hotel website/own CRS	%
	-Direct integrations with OTAs, tour operators, and travel agencies	%
	-Telephone reservations	%
	-Email	%
	-Walk-in reservations	%
	-Other	%
8	How efficient do you consider each of the following booking channels? (1 = very inefficient; 5 = very efficient). Please consider both advantages and disadvantages in terms of booking volume, commissions, payment conditions, operational incidents, connectivity, etc.	Five-point Likert scale
	-Hotel website/own CRS	1–5
	-Direct integrations with OTAs, tour operators, and travel agencies	1–5
	-Telephone reservations	1–5
	-Email	1–5
	-Walk-in reservations	1–5
	-Other	1–5
9	Number of room nights sold through each distributor during 2022	Numeric
	-Direct bookings	Numeric
	-Booking.com	Numeric
	-Expedia	Numeric
	-Trip.com	Numeric
	-Agoda	Numeric
	-Hotelbeds	Numeric
	-Webbeds	Numeric
	-Other (please specify channel)	Numeric
10	Number of room nights sold through each distributor during 2023	Numeric
	-Direct bookings	Numeric
	-Booking.com	Numeric
	-Expedia	Numeric
	-Trip.com	Numeric
	-Agoda	Numeric
	-Hotelbeds	Numeric
	-Webbeds	Numeric
	-Other (please specify channel)	Numeric

Note. The questionnaire was originally administered in Spanish. The version reproduced in this appendix is an English translation provided for reporting purposes. Minor linguistic adaptations were made to improve readability while preserving the substantive meaning of the original survey items. Source: Authors' own elaboration.

Appendix B. Room-Night Weighted Channel Shares

Table A2. Room-Night Weighted Channel Shares.

Channel	2022	2023
Direct	33%	34%
Booking.com	31%	30%
Expedia	14%	14%
HBX	6%	7%
Others	16%	15%

Note. Values represent room-night weighted channel shares obtained by aggregating annual room-night allocations across all participating hotels. Unlike the hotel-level descriptive statistics reported in the main text, these weighted shares give proportionally greater influence to larger hotels and are presented solely as a robustness check. The weighted distribution confirms the overall predominance of intermediary channels while indicating a higher aggregate contribution of HBX, reflecting its greater utilisation among larger hotels. Source: Authors' own elaboration.

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