

Low-Cost Carriers and the Gig Economy: A Theoretical-Documentary Analysis of Air-Ground Mobility and Platform Labor

LOW-COST CARRIERS E A GIG ECONOMY: UMA ANÁLISE TEÓRICO-DOCUMENTAL DA MOBILIDADE AÉREA-TERRESTRE E DO TRABALHO EM PLATAFORMAS

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(Abstract) The expansion of Low-Cost Carriers (LCCs) has reshaped international air travel by broadening access and stimulating demand in previously underserved markets. Beyond their well-documented effects on pricing and competition, LCCs may create favorable conditions for the expansion of platform-mediated mobility and logistics services, particularly in airport cities and tourist destinations. By generating increased passenger volumes, expanding secondary airport ecosystems, and shifting consumer behavior toward price-sensitive, flexible travel, LCCs can plausibly contribute to conditions associated with the proliferation of platform-based, on-demand transport work, a phenomenon that, in Brazil, coincides with a documented growth of approximately 827% in the number of self-employed workers potentially engaged in gig arrangements in the freight and delivery transport segment between 2016 and 2021, according to data from IBGE's PNAD Contínua as analyzed by Góes, Firmino and Martins (2021). This article examines the theoretical intersection of LCC market dynamics and the Gig Economy, drawing on a framework that references Porter's Cost Leadership and Five Forces models alongside labor market analysis. Using a qualitative and documentary research design, the study brings together evidence from a Master's dissertation on LCC market impacts, Brazilian labor survey data (PNAD Contínua and PNAD Covid-19), and the emerging regulatory literature on platform labor in the European Union. The findings are correlative and theoretical rather than causal: the temporal coincidence between LCC expansion and the growth of platform-mediated ground transport work is consistent with, but does not demonstrate, a structural relationship between air travel growth and demand for passenger transport, last-mile delivery, and airport-adjacent logistics services. The study contributes to a cross-disciplinary understanding of how aviation market liberalization may interact with the flexibilization of labor markets, and calls for coordinated policy responses and future econometric research that address both sectors simultaneously.

Keywords: Low-Cost Carriers. Gig Economy. Platform Work. Air Travel Market. Labor Flexibility. Transport.

(Resumo) A expansão das companhias aéreas de baixo custo (Low-Cost Carriers - LCCs) transformou o mercado internacional de aviação, ampliando o acesso e estimulando a demanda em mercados historicamente sub-atendidos. Além de seus efeitos bem documentados sobre preços e concorrência, as LCCs podem criar condições favoráveis

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à expansão de serviços de mobilidade e logística mediados por plataformas, especialmente em cidades aeroportuárias e destinos turísticos. Ao gerar maiores volumes de passageiros, expandir os ecossistemas de aeroportos secundários e alterar o comportamento dos consumidores em direção a uma viagem mais flexível e orientada ao preço, as LCCs podem contribuir para condições associadas à proliferação do trabalho sob demanda por plataformas, fenômeno que, no Brasil, coincide com um crescimento de aproximadamente 827% no número de trabalhadores autônomos potencialmente inseridos em arranjos gig no segmento de transporte de mercadorias entre 2016 e 2021, segundo dados da PNAD Contínua do IBGE. Este artigo examina, em nível teórico, a intersecção entre as dinâmicas do mercado das LCCs e a Gig Economy, adotando uma abordagem qualitativa e documental que dialoga com o modelo de Liderança de Custo de Porter, o modelo das Cinco Forças e a análise de mercado de trabalho. Os resultados apontam uma coincidência temporal e correlativa, não causal, entre o crescimento do transporte aéreo impulsionado pelas LCCs e o crescimento do trabalho gig no nível terrestre, por meio da demanda por transporte de passageiros, entregas de última milha e serviços logísticos adjacentes a aeroportos. O estudo contribui para uma compreensão interdisciplinar de como a liberalização do mercado de aviação pode interagir com a flexibilização dos mercados de trabalho, sem, no entanto, estabelecer relação de causalidade entre os dois fenômenos.

Palavras-chave: Companhias Aéreas de Baixo Custo. Gig Economy. Trabalho em Plataformas. Mercado de Transporte Aéreo. Flexibilidade Laboral. Transporte.

INTRODUCTION

The emergence and consolidation of Low-Cost Carriers (LCCs) over the past five decades represents one of the most transformative developments in global transportation. Beginning with the pioneering model of Southwest Airlines in the 1970s and rapidly spreading to Europe through carriers such as Ryanair and EasyJet, and to Asia through AirAsia and IndiGo, the LCC model has fundamentally altered the competitive landscape of air travel. By stripping away amenities, standardizing fleets, utilizing secondary airports, and operating point-to-point networks, LCCs have reduced operational costs and passed savings to consumers, effectively democratizing international air travel (Budd & Ison, 2017; Bilotkach *et al.*, 2015).

The consequences of this disruption extend well beyond the aviation sector. As LCCs expand their networks and stimulate new travel flows, particularly toward secondary cities and underserved regions, they generate cascading demand for ground transportation, hospitality, logistics, and delivery services. This is precisely the terrain of the Gig Economy: a labor arrangement characterized by the absence of formal employment bonds, the use of digital platforms to match supply and demand, and sporadic, on-demand work patterns (Góes, Firmino & Martins, 2021).

The term “gig” borrowed from the history of American jazz musicians who performed on specific dates without fixed employment, has come to describe a broader transformation in labor markets. In Brazil, the Gig Economy in the transport sector, measured through self-employed workers in passenger and freight transport, grew exponentially between 2016 and 2021, reaching an estimated 1.4 million workers according to PNAD Contínua data from the Brazilian Institute of Geography and Statistics (IBGE). At the same time, the country saw the rise of app-based platforms such as Uber, 99, iFood, and Rappi, whose growth is structurally intertwined with mobility patterns that LCCs helped shape (Góes, Firmino & Martins, 2021).

Despite the intuitive connection between aviation market liberalization and gig labor proliferation, the academic literature has largely treated these phenomena in isolation.

Studies on LCCs focus predominantly on pricing strategies, market share, and consumer behavior (Khan *et al.*, 2019; Varella *et al.*, 2017), while labor market research on platform work tends to concentrate on regulatory and social dimensions (Castanho *et al.*, 2026; Góes *et al.*, 2021). This article seeks to bridge this gap by examining, from a theoretical and documentary standpoint, how LCC-driven market dynamics may create conditions favorable to the expansion of platform-based transport labor, without assuming that this relationship has been causally established.

The study is organized as follows: Section 2 reviews the relevant literature on LCCs and the Gig Economy. Section 3 presents the theoretical framework and methodological approach. Section 4 analyzes the intersection of LCC market growth and gig labor dynamics, with evidence from both global aviation trends and Brazilian transport labor data. Section 5 discusses implications for stakeholders and policy. Section 6 presents final considerations.

LITERATURE REVIEW

Low-Cost Carriers: Business Model and Market Impact

The LCC business model rests on a systematic reduction of all non-essential costs. This includes operating from secondary airports with lower landing fees, maintaining standardized single-type fleets to reduce maintenance complexity, achieving rapid aircraft turnaround times, and unbundling services so that passengers pay individually for baggage, seat selection, and meals. This architecture allows LCCs to offer base fares substantially below those of Full-Service Carriers (FSCs), capturing price-sensitive market segments while maintaining profitability through ancillary revenues (Bachwich & Wittman, 2017; Efthymiou & Christidis, 2023).

Recent empirical evidence from the post-pandemic era highlights that the financial viability of LCCs has become structurally tethered to aggressive, technology-driven ancillary revenue mechanisms rather than base airfares alone. According to marketplace reports, leading ultra-low-cost carriers (ULCCs) frequently generate more than 50% of their total operating revenues from unbundled, à la carte choices (IdeaWorksCompany, 2025; IBA, 2026). Modern LCCs leverage artificial intelligence and mobile application ecosystems to upsell localized services, explicitly integrating ground mobility options—such as digital ride-hailing and last-mile delivery partnerships—directly into the passenger's booking flow. This digital convergence creates a seamless transaction loop that funnels air passengers directly into the localized gig economy infrastructure upon arrival (Efthymiou & Christidis, 2023).

The market impact of LCCs has been extensively documented. In Europe, their entry into routes previously dominated by FSCs led to significant fare reductions, increased passenger volumes, and the repositioning of legacy carriers toward hybrid service models (Alderighi *et al.*, 2012; Fageda *et al.*, 2015). In Asia-Pacific, LCCs have accelerated international tourism growth and stimulated regional economies, particularly in less-

developed areas (Wang *et al.*, 2024; Bilotkach *et al.*, 2019). In Latin America, liberalization policies have enabled carriers like Azul and Gol in Brazil to generate significant new demand among previously excluded socioeconomic segments.

A consistent finding across regions is that LCC growth is positively correlated with tourism expansion, regional economic development, and the growth of secondary airports. Álvarez-Díaz *et al.* (2019) demonstrated this effect in the case of Porto, Portugal, where LCC entry transformed the airport into a major hub and reshaped the regional economy. Similar dynamics have been observed in Southeast Asia and Central and Eastern Europe (Jankiewicz & Huderek-Glapska, 2016; Moreno-Izquierdo *et al.*, 2015).

The Gig Economy: Concepts and Labor Market Transformations

The Gig Economy encompasses a diverse range of alternative work arrangements, united by the absence of formal employment bonds, the use of digital platforms as intermediaries, and compensation based on discrete tasks or services rather than fixed salaries. According to the Cambridge Dictionary (CAMBRIDGE UNIVERSITY PRESS, 2026), a Gig Economy is characterized by “a way of working that is based on people having temporary jobs or doing separate pieces of work, each paid separately, rather than working for an employer”. In Brazil, Góes, Firmino and Martins (2021) proposed an operational definition grounded in three characteristics: the absence of formal labor bonds (such as a signed work card); the possibility of serving multiple clients simultaneously; and sporadic work schedules.

The conceptualization of Gig Economy work presents significant challenges for statistical measurement. Brazil's national household surveys (PNAD Contínua and PNAD Covid-19) were not specifically designed to capture platform-mediated work. Góes *et al.* (2021) developed a methodological approach to approximate the number of gig workers in the transport sector by combining occupational codes (self-employed drivers and delivery workers) with sectoral activity codes (passenger transport, freight transport, and mail/delivery activities). Their analysis revealed that, within the universe of transport, storage, and postal services workers tracked by PNAD Contínua, the proportion in potentially gig arrangements rose from 18.8% in the first quarter of 2016 to 31.0% in the second quarter of 2021, a growth of 12.2 percentage points.

The COVID-19 pandemic played a complex and ambiguous role in this trajectory. While it initially reduced demand for passenger transport (with gig workers in that segment dropping sharply in mid-2020), it simultaneously accelerated the growth of delivery platform work, which grew by more than 50% between May and August 2020 before stabilizing. By November 2020, freight transport gig workers were 48.3% more numerous than in May of the same year, according to PNAD Covid-19 data (Góes *et al.*, 2021).

On the regulatory front, the European Union has emerged as the leading laboratory for platform labor governance. Castanho *et al.* (2026) document how the EU's Platform Work Directive and related AI regulation frameworks attempt to address the systemic precarity of gig workers, establish minimum labor protections, and govern algorithmic management systems. These regulatory innovations represent a global reference point for countries, including Brazil, that are still developing their legal frameworks for platform labor.

The Structural Connection: Aviation Liberalization and Platform Labor

Despite their distinct literatures, LCC market dynamics and the Gig Economy share structural roots in the broader processes of economic liberalization, digital platform mediation, and consumer demand for flexible, on-demand services. The theoretical basis for their connection can be articulated through several mechanisms.

First, LCCs generate new mobility flows that stimulate ground-level transport demand. Passengers arriving at secondary airports, often located far from city centers, require transportation services, a need increasingly met by app-based ride-hailing platforms. The growth of Uber, Lyft, and their equivalents in markets where LCC traffic is highest is not coincidental; it reflects a structural complementarity between air and ground mobility (Reynolds-Feighan, 2020).

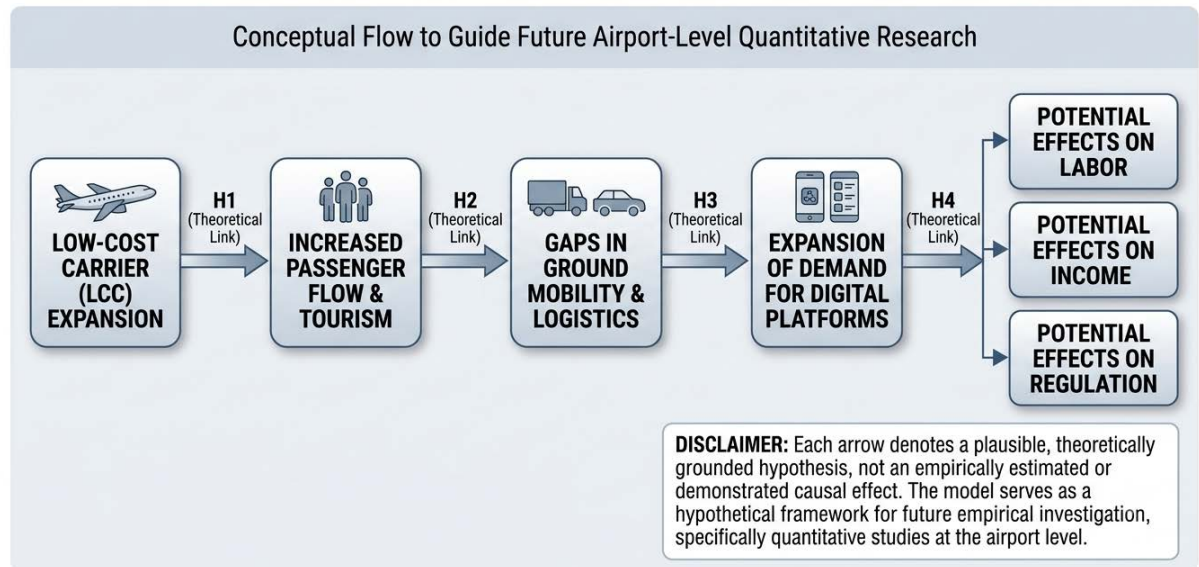
Second, the LCC business model's emphasis on cost efficiency and service unbundling mirrors the logic of platform work. Just as LCCs charge passengers only for the services they use, gig platforms pay workers only for the tasks they complete, creating parallel economies of on-demand, disaggregated service delivery. The cultural and economic normalization of "paying per service" in air travel may plausibly be related to the broader social acceptance of gig-based consumption patterns, although this connection remains a theoretical proposition rather than an empirically tested relationship.

Third, LCC-driven tourism growth creates demand for last-mile delivery and hospitality-adjacent logistics services, food delivery, courier services, and short-term rental support, that are overwhelmingly fulfilled by gig workers. This is particularly visible in cities with major tourist footprints and high LCC traffic, such as Lisbon, Barcelona, and Bangkok, where the concentration of app-based delivery platforms correlates strongly with tourism-driven consumption patterns.

A Conceptual Model: Theoretical Proposition, Not a Tested Relationship

To make the mechanisms discussed above explicit, and to avoid conflating theoretical proposition with demonstrated causality, this study organizes its argument into the conceptual sequence presented in Figure 1. Each arrow denotes a plausible, theoretically grounded relationship, not an empirically estimated effect; the model should be read as a hypothesis to guide future research, particularly the airport-level, quantitative studies proposed in the Final Considerations.

Figure 1 – Proposed theoretical sequence linking LCC expansion to platform labor (hypothesis, not a tested causal chain)



Source: elaborated by the authors.

METHOD

This study adopts a qualitative, documentary research design, following the parameters established by Gil (2008) for bibliographic and document-based investigations. The research draws on three primary sources: (i) a Master's dissertation titled "The Impact of Low-Cost Carriers in International Air Travel Market Dynamics" Mirella Powolna, supervised by Ph.D. Rui Alexandre Marcai Dias Castanho, WSB University, Dąbrowa Górnicza, Poland, 2025, which provided empirical data on LCC market behavior, industry-professional perceptions, and competitive dynamics through a questionnaire applied to airline and travel-industry professionals; (ii) Brazilian labor market microdata from IBGE's PNAD Contínua (2016–2021) and PNAD Covid-19 (May–November 2020), analyzed through the methodological framework developed by Góes, Firmino and Martins (2021) to estimate the size and trajectory of the gig transport workforce; and (iii) the regulatory and conceptual literature on the Gig Economy in the European Union, as synthesized by Castanho *et al.* (2026).

Regarding source (i), the dissertation questionnaire was applied to 50 respondents from the airline and travel industry, comprising Pricing/Revenue Analysts (50.0%), Aviation Policy Makers (14.0%), Marketing Executives (12.0%), Travel Agency Consultants (8.0%), Airline Managers (6.0%), and other industry roles (10.0%); in terms of professional tenure, respondents ranged from less than 1 year (10.0%) to more than 10 years of airline/travel-industry experience (12.0%), with the largest group (36.0%) reporting 1 to 3 years of experience. The dissertation does not report exact calendar dates for data collection, indicating only that the questionnaire was administered over a period of approximately one to two weeks in 2025, following a pilot test with 5 to 10 respondents. Respondents were selected through non-probability convenience sampling among accessible airline and

travel-industry professionals, and the instrument consisted of a self-administered structured questionnaire, combining closed-ended demographic items, four-point Likert-scale items (Strongly Disagree to Strongly Agree) on perceptions of LCC price competitiveness, service quality, and reliability, and open-ended qualitative questions, applied through a combination of online survey and face-to-face administration. Responses were analyzed using SPSS: descriptive statistics, Cronbach's alpha for scale reliability, Pearson correlation, multiple regression, and chi-square tests, adopting a significance threshold of $p < 0.05$, complemented by thematic coding of the open-ended responses. Regarding sources (ii) and (iii), the documentary and bibliographic analysis followed a content-analysis procedure: publicly available reports, regulatory texts, and secondary datasets were selected based on their direct relevance to LCC market dynamics and platform labor regulation, read in full, and coded manually into recurring analytical categories (market structure, labor precarity, and regulatory response), which were then cross-referenced across sources to identify convergences and divergences. This procedure follows the documentary analysis parameters proposed by Gil (2008).

The theoretical framework references Porter's (1985) Cost Leadership Theory and Five Forces Model, widely applied in LCC competitive analysis, alongside a labor market perspective informed by the Resource-Based View (RBV) of the firm (BARNEY, 1991) and the theory of consumer behavior. These frameworks are used descriptively rather than as formally tested analytical models: Cost Leadership and the Five Forces help situate why LCCs are structurally driven toward ancillary-revenue and unbundling strategies that mirror gig-platform remuneration logic (rivalry, bargaining power of price-sensitive consumers, and threat of substitutes from ground-mobility platforms), while the RBV frames platform-mediated labor as a flexible, low-fixed-cost resource that firms in both sectors can mobilize on demand. None of these frameworks is operationalized through formal indicators or hypothesis testing in this study; they function as interpretive lenses for the qualitative-documentary analysis, and their systematic empirical operationalization is left as an avenue for future research. This multi-framework approach allows the study to examine the LCC-Gig Economy nexus from both the supply side (firm strategy and market structure) and the demand side (consumer behavior and labor market outcomes).

Data triangulation was achieved by comparing findings across the three source types: aviation market evidence from the dissertation survey, transport labor statistics from PNAD microdata, and normative analysis of platform work regulation. Content analysis was used to identify recurring themes and structural connections across these domains. The study does not employ statistical inference; rather, it seeks to articulate plausible theoretical propositions and correlative connections that merit further quantitative and causal investigation.

RESULTS AND DISCUSSION

LCC Market Dynamics: Evidence from the Aviation Sector

Evidence gathered from airline and travel-industry professionals in the Master's dissertation survey ($N = 50$) suggests that LCCs have altered competitive dynamics in

international air travel, according to respondents' perceptions. Respondents, predominantly Pricing/Revenue Analysts (50.0% of the sample), alongside Aviation Policy Makers (14.0%), Marketing Executives (12.0%), Travel Agency Consultants (8.0%), Airline Managers (6.0%), and professionals in other industry roles (10.0%), most with between 1 and 10 years of airline or travel-industry experience, consistently identified fare reduction, increased market accessibility, and the expansion of secondary airport usage as the most significant LCC contributions. The survey also indicated that, in respondents' perception, FSCs have been compelled to adopt hybrid business models, introducing basic economy fares and low-cost subsidiaries to remain competitive, a finding consistent with the global literature (Alderighi *et al.*, 2012; Fageda *et al.*, 2015).

A particularly salient finding was the role of LCCs in stimulating demand among previously excluded consumer segments. The dissertation data indicated that budget-conscious travelers, including students, families, and low-income leisure travelers, represent the primary beneficiaries of LCC fare reduction. This democratization of air travel has expanded the total market rather than simply redistributing demand from FSCs, generating new flows of passengers at regional airports and secondary destinations. These new flows, in turn, create demand for the ground-level services that constitute the ecosystem of the Gig Economy.

The survey findings also highlighted the infrastructure implications of LCC growth. Secondary airports, which LCCs favor for their lower operational costs, have experienced significant traffic growth, often outpacing the development of surrounding transportation infrastructure. This gap between airport growth and ground connectivity has created structural demand for flexible, on-demand transport solutions, precisely the niche occupied by app-based ride-hailing platforms.

Furthermore, the contemporary airline landscape reveals a strategic reset among global carriers driven by intensifying cost pressures, fluctuating fuel indexes, and capacity constraints (IBA, 2026). To sustain margins, several traditional LCCs have pivoted toward sophisticated product segmentation and volatile network schedules, shifting flight frequencies away from predictable hourly intervals to high-density, block-arrival windows at secondary airports. This operational volatility directly reshapes ground connectivity requirements; it produces localized 'demand shocks' where hundreds of budget-conscious travelers disembark simultaneously in under-served suburban zones. Consequently, this dynamic mandates platform-based transport algorithms to respond through real-time surge pricing and rapid driver reallocation, underscoring how deeply LCC operational volatility dictates the temporal deployment of platform labor.

Gig Economy Growth in the Transport Sector: Brazilian Evidence

Brazilian PNAD Contínua data, analyzed through the methodological framework of Góes, Firmino and Martins (2021), indicates a substantial trajectory of growth among occupations potentially associated with gig arrangements in the transport sector. Between the first quarter of 2016 and the second quarter of 2021, the number of self-employed workers in passenger transport, an occupational proxy for platform-mediated work that also includes

traditional taxi drivers not necessarily affiliated with digital platforms, grew from approximately 840,000 to 1.114 million, reaching a peak of 1.341 million in the third quarter of 2019 before being temporarily reduced during the COVID-19 pandemic.

The growth in freight and delivery transport was even more pronounced. From approximately 30,000 self-employed workers, used here as a proxy for platform-mediated work, in 2016, the segment reached 278,000 by the second quarter of 2021, a growth of approximately 827% (calculated as $[(278,000 - 30,000) / 30,000] \times 100$), based on the PNAD Contínua data reported by Góes, Firmino and Martins (2021). This substantial increase is consistent with, though not proof of, the emergence and consolidation of app-based delivery platforms (iFood, Rappi, Uber Eats) in Brazil, whose business models share structural features with those of LCCs: disaggregated service delivery, cost efficiency, and worker remuneration per task rather than fixed salary. It is important to note that these self-employed occupations associated with freight and delivery transport are a national-level proxy for platform-mediated work rather than a direct count of gig-platform workers, since PNAD Contínua does not identify platform affiliation directly.

The temporal parallel between LCC passenger growth and gig transport labor growth in Brazil deserves attention, though it must be interpreted with caution given a mismatch in the spatial scale of the two data sources. The period of most rapid LCC expansion in Brazil, roughly 2015 to 2019, coinciding with the growth of domestic carriers and gradual liberalization of international routes, corresponds temporally to the period of most rapid gig labor growth in the PNAD Contínua data. However, PNAD Contínua is a national household survey and does not disaggregate gig labor by airport catchment area or city, whereas the mechanism proposed in this study operates at a territorial and airport-specific level (secondary airports and their surrounding mobility gaps). The national-level correspondence is therefore suggestive rather than probative: it is not sufficient to establish direct causation, nor does it demonstrate the proposed airport-level mechanism, and it should be read as a theoretical proposition consistent with, but not confirmed by, the available data. Future research using airport-level or municipal-level gig labor indicators is needed to test the proposed mechanism directly.

Regulatory Implications: Learning from the European Experience

The European Union's experience with Gig Economy regulation offers important lessons for markets where LCC-driven tourism growth has accelerated the proliferation of platform work. Castanho *et al.* (2026) document how the EU's Platform Work Directive establishes a presumption of employment for platform workers, requires transparency in algorithmic management systems, and mandates minimum labor protections regardless of formal contractual status. These measures represent a significant departure from the laissez-faire approach that characterized the early years of the Gig Economy and have been accompanied by sector-specific regulations, such as Spain's "Riders Law", that directly address the working conditions of delivery platform workers.

For markets where LCC expansion is ongoing, including Latin America, Southeast Asia, and sub-Saharan Africa, the EU regulatory model suggests that policymakers should

anticipate the gig labor consequences of aviation liberalization rather than responding reactively. Specifically, the expansion of LCC networks into secondary airport cities should be accompanied by policies that address the working conditions of app-based transport workers who will inevitably fill the ground connectivity gaps created by new air traffic.

The Brazilian regulatory environment remains underdeveloped in this regard. While the country has made initial steps toward regulating app-based transport (including the Lei do Motorista App, Law 13.640/2018), comprehensive protections for platform workers, including social security contributions, occupational health and safety coverage, and algorithmic transparency requirements, remain absent. The explosive growth documented in PNAD data underscores the urgency of this regulatory gap.

Strategic Implications for Industry Stakeholders

For LCC management, the findings suggest that the relationship between aviation market development and ground-level gig labor is not merely an externality but a strategic opportunity. LCCs that invest in partnerships with ride-hailing and delivery platforms, offering seamless airport-to-destination mobility solutions, can enhance the passenger experience, increase ancillary revenue streams, and differentiate their offering in competitive markets. Several LCCs have already begun exploring this model, with some offering integrated ground transportation booking through their apps.

For airports, particularly secondary airports that depend heavily on LCC traffic, the growth of gig transport workers in their catchment areas represents both an opportunity and a governance challenge. Airports that actively coordinate with municipal authorities and platform companies to develop clear standards for driver access, safety, and fair remuneration can become models of integrated mobility governance that serve both travelers and gig workers equitably.

For policymakers in aviation and labor markets, the central implication is the need for cross-sectoral coordination. The historically siloed management of aviation regulation (typically within transport ministries) and labor market policy (within labor and social security ministries) is inadequate for a world in which the two domains are structurally intertwined. The development of new LCC routes should trigger assessments of ground mobility demand and platform labor conditions in the destination regions, just as environmental impact assessments are now standard in major infrastructure decisions.

FINAL CONSIDERATIONS

This article has argued that Low-Cost Carriers are not merely disruptors of the aviation industry but potential structural catalysts of the Gig Economy in the transport sector, a proposition supported theoretically and correlatively rather than causally. By generating new passenger flows, expanding secondary airport ecosystems, and normalizing disaggregated service consumption, LCCs may create conditions under which app-based,

on-demand transport labor proliferates. Brazilian PNAD data, showing self-employed transport Workers, used here as a proxy for platform-mediated work, growing by approximately 827% between 2016 and 2021 in the freight segment, is consistent with this proposition, although it does not, on its own, constitute proof of the mechanism proposed.

The theoretical contribution of the study lies in its integration of aviation market analysis (Porter's Cost Leadership and Five Forces frameworks) with labor market theory (the Gig Economy literature) through the mediating concept of demand-driven structural conditions. This cross-disciplinary approach reveals mechanisms that are invisible when each domain is studied in isolation: the structural complementarity between price-sensitive air travel and on-demand ground transport, the normalization of unbundled service consumption, and the infrastructure gaps created by secondary airport growth.

The study has important limitations. First, the causal relationship between LCC growth and gig labor expansion is established theoretically and correlatively, but not through econometric or causal identification methods. Future research should attempt to quantify this relationship using airport-level LCC traffic data linked to local gig labor market indicators. Second, the empirical evidence is drawn primarily from Brazilian data and the EU regulatory context; comparative studies across different national regulatory environments would strengthen the generalizability of the findings. Third, the questionnaire-based evidence from the Master's dissertation is limited to aviation industry professionals and does not capture the perspective of gig workers themselves.

Future research should explore three priority directions: (i) econometric analysis of the relationship between LCC route expansion and app-based transport platform growth at the city level; (ii) comparative regulatory analysis of how different jurisdictions have managed the intersection of aviation liberalization and platform labor protection; and (iii) qualitative research with gig transport workers in secondary airport cities to understand how LCC-driven tourism affects their work conditions and earnings.

In conclusion, the democratization of air travel achieved by LCCs is inseparable from the democratization of work, a democratization that, without adequate regulation, risks becoming a race to the bottom in labor standards. Addressing this challenge requires policymakers, industry stakeholders, and researchers to recognize the structural links between these two domains and develop integrated responses that promote both affordable mobility and decent work.

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