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FACTORS INFLUENCING THE SUCCESS AND SUSTAINABILITY OF THREE-SIDED MARKETS: A QUALITATIVE CASE STUDY OF POSTMATES COMPANY

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Abstract

Three-sided markets, which facilitate interactions between consumers, service providers, and platform operators, have emerged as an important model in the platform economy. This research explores the factors influencing the success and sustainability of these markets, with a focus on Postmates, a key player in the gig economy. Utilizing a qualitative case study approach, the paper analyzes existing literature and company data to examine how Postmates operates and sustains interactions between its users.

Key factors identified include platform design, user experience, and the role of network effects, where the platform's value increases as more users join. The study also highlights the significant impact of three-sided platforms on consumer behavior, with convenience and variety driving customer loyalty. In terms of gig economy dynamics, the research underscores the need for balancing flexibility and income stability for couriers.

This study provides practical insights for platform operators, policymakers, and researchers, emphasizing the need for continuous innovation to adapt to evolving market conditions and regulatory frameworks. The findings conclude with recommendations for overcoming challenges in three-sided markets and suggest future research directions, including broader case studies and the integration of primary data.

Keywords: Three-Sided Markets, Postmates Case Study, Gig Economy, Network Effects.

I. Introduction

According to Evans (2003), a three-sided market is a market structure in which three different user groups engage on a single platform or ecosystem. Each user group contributes significantly, and their interactions and interdependencies are essential to the

platform's success. Consumers, service providers, and platform owners or facilitators are typically the three user groups. Consumers are the main users who profit from the services or goods provided on the platform in a three-sided market. Consumer

demand is met by service providers who transport items or render services, such as drivers or couriers. To facilitate transactions and enable the exchange of value, the platform owner or facilitator builds and maintains the infrastructure that links customers and service providers. Three-sided markets are important in the modern economy because they can provide network effects, in which the platform's worth rises as more users sign up. Three-sided markets can create synergies, encourage efficiency, and open up new prospects for companies and customers by bringing together several user groups.

Although the idea of three-sided marketplaces has been used in many different sectors, the credit card sector is one of the oldest examples (Rochet & Tirole, 2003). The three-sided market strategy was invented in the 1950s and 1960s by credit card firms like Visa and Mastercard, who brought together cardholders (consumers), retailers, and issuing banks. Using credit cards, customers could make purchases at participating businesses while the issuing banks handled the transactions, and the businesses received payment. The development of electronic payment systems was aided by this three-sided market structure used in the credit card sector. It also made transactions simpler for customers, increased retailer acceptance and gave issuing banks a source of income through transaction fees and interest rates. The three-sided market strategy was adopted in various industries as a result of the credit card industry's success with this model.

Postmates is a well-known example of the contemporary phenomenon of digitalization for the three-sided market, aside from credit cards. Consumers, delivery drivers (often referred to as "Postmates"), and nearby retailers can all connect through the on-demand delivery platform known as Postmates. Customers can order meals, groceries, or other items from neighboring retailers via the platform. The orders are subsequently filled by Postmates drivers, who ultimately deliver the goods to the customers. As additional users, drivers, and merchants sign up, the platform gains from network effects, spurring an upward spiral of demand, greater business options, and improved consumer convenience. Industries like food delivery and gig economy services have been transformed by three-sided markets like Postmates, which have upset conventional business structures.¹ These platforms have changed how customers access goods and services, given service providers new ways to make money, and offered cutting-edge business models that make use of connectivity and technology.

The objective of this research is to investigate the critical factors influencing the success and long-term viability of three-sided markets, with a specific focus on the case of Postmates Company. By employing a qualitative case study approach, this research aims to provide insights into how the presence of a three-sided market impacts consumer behavior, merchant strategies, and the gig economy.

To guide the investigation, the research questions that will be addressed are: How does the presence of a three-sided market, like Postmates, impact consumer behavior, merchant strategies, and the gig economy? By addressing these questions, the study aims to identify the unique characteristics and dynamics that influence the functioning and outcomes of three-sided markets, providing

¹ Platt, R., & Rink, D. R. (2019). Digital platforms and three-sided markets: An exploratory study of Uber, Airbnb, and Postmates. *Technology in Society*, 59, 101152.

valuable insights for platform operators, policymakers, and researchers.

The research methodology for this study entails a qualitative approach, utilizing a case study design. Data will be collected through the analysis of documents and archival sources related to the Postmates Company, including annual reports, beneficiary profiles, and other relevant documents. The collected data will undergo a rigorous qualitative analysis to identify themes, patterns, and insights that address the research questions.

The paper's structure is as follows: after this introduction, Section 2 provides a literature review for understanding three-sided markets. Section 3 outlines the research methodology, explaining the qualitative case study approach and data collection methods. Section 4 delves into the factors influencing the success and sustainability of three-sided markets. Section 5 presents the findings and discussion, while Section 6 offers implications and recommendations for platform operators, policymakers, and stakeholders. The paper concludes with Section 7, summarizing the key findings and suggesting future research directions.

II. Literature Review

Comparison between Three-sided Market vs Two-sided Market

Three diverse user groups interact and generate value on the same platform or ecosystem, and this is known as a three-sided market. Consumers, service providers, and platform owners or facilitators often make up these user groups. Each group is essential to the platform's performance, and their interactions and interdependencies are what make them successful. Consumers are the main users who make demands on the platform for goods or services in a three-sided market. Service providers meet this demand by giving consumers the products or services they want. In order to enable transactions and facilitate the exchange of value, the platform owner or facilitator builds and maintains the infrastructure that connects customers and service providers.

A three-sided market differs from conventional two-sided marketplaces due to its unique structure. Buyers and sellers are the two main user groups in a two-sided market (Rochet & Tirole, 2003). In order to facilitate transactions between these two groups, the platform serves as a middleman. Newspaper advertising (where buyers are advertisers and sellers are readers) and ride-hailing platforms (where buyers are passengers and sellers are drivers) are two examples of two-sided markets.

The presence of a third user group creates new dynamics and complications in a three-sided market. In order to ensure value generation and exchange, the platform must balance the demands and interests of all three parties (Hagiu and Wright, 2015). Network effects, where the platform's value rises as more users join, are frequently seen in interactions across user groups. This network effect may result in beneficial feedback loops that spur growth and draw new users to the platform. In-depth research has been done on the idea of three-sided marketplaces and their unique structure in economics and management literature. Researchers have examined the particular difficulties, chances, and effects of three-sided markets in a variety of sectors, from online platforms to payment systems. Platform owners, decision-makers, and academics must comprehend the dynamics and structure of three-sided marketplaces in order to successfully traverse these complex ecosystems (Parker and Alstyne, 2017).

Three Key Participant Groups in Three-sided Market

Three main participant groups play crucial roles in the operation and success of the platform in a three-sided market. Consumers, service providers, and platform owners or facilitators often make up these groupings. Here are the key participant groups:

- 1) **Consumers:** The platform's main users are consumers who are looking for the goods, services, or experiences the platform has to offer. To find, order, and receive goods or services from the participating service providers, they engage with the platform. Demand is driven by consumer pleasure and preferences, and platform development and viability depend greatly on customer involvement and loyalty (Hagiu & Wright, 2015).
- 2) **Service Providers:** Also known as suppliers or participants, satiate consumer needs. Through the platform, they make their offerings—goods, services, or experiences—available to customers. In a three-sided market like Postmates, service providers can be merchants, independent contractors, couriers, or delivery services that work directly with customers. Maintaining a healthy supply side and ensuring the availability and caliber of offerings for consumers depend heavily on the involvement and satisfaction of service providers (Rochet & Tirole, 2003).
- 3) **Platform Owners/Facilitators:** These individuals design and run the platform that connects customers and service providers. They offer the tools, user interface, and technology framework needed for interactions and transactions between the two parties. By offering a dependable and practical platform, maintaining confidence and safety, and simplifying transactions, platform owners play a significant role in luring and keeping both customers and service providers. Through a variety of channels, including transaction fees, commissions, and advertising, they make money (Parker & Van Alstyne, 2017).

Ecosystem of the Three User Groups

Consumer	<ul style="list-style-type: none"> ○ Customers can order a variety of things, including meals, groceries, and other items, effortlessly using the Postmates platform. ○ Customers can browse the platform's extensive selection of products from nearby restaurants, supermarkets, and merchants. ○ Through the Postmates app or website, customers can place orders, specify their preferences, and make payments. ○ To keep track of the status of their orders, customers can utilize options like real-time order monitoring and delivery notifications.
Couriers (Delivery drivers)	<ul style="list-style-type: none"> ○ Through the Postmates app, couriers register as independent contractors, revealing details about themselves and their vehicles as well as

	<ul style="list-style-type: none"> ○ submitting to a background check. ○ Once approved, couriers are free to accept delivery requests in accordance with their schedules. ○ Through the app, couriers can receive order offers that detail the pick-up location, the things being delivered, and the drop-off destination. ○ In order to collect orders from the given merchants and deliver them to the consumers' stated locations within the predetermined time frame, couriers take the most direct routes.
Merchants	<ul style="list-style-type: none"> ○ Merchants offer their products and services to consumers. ○ Postmates allows merchants to register their enterprises by giving details about their location, menu or product offerings, prices, and business hours. ○ Once registered, they can use the Postmates merchant portal or app to control their inventory and availability. ○ When a customer places an order, retailers receive the information and get the products ready for delivery by a courier. ○ Customers are more likely to be satisfied when orders are fulfilled quickly and at a high standard by merchants.

References: Postmates website <https://postmates.com/> & (Hickey, 2019).

Interdependencies and Interactions

The three participant groups in a three-sided market—consumers, service providers, and platform owners or facilitators—show interdependencies and interact in a variety of ways. These are the interdependencies and interactions among the three group sides:

	Interdependencies	Interactions
Consumer-Service Provider	By providing goods, services, or experiences, service providers help consumers satisfy their wants and desires. At the same time, service providers rely on customer demand for their products and services to make money and maintain their operations.	Through the platform, customers communicate with service providers by making orders, requesting services, or offering comments. The user interface of the platform, chat services, or rating/review methods can all be used for this engagement.

Consumer-Platform	-	Customers engage with the platform by visiting its website or mobile app, browsing for available products, placing orders, paying for them, and leaving reviews or ratings. Consumer experiences are shaped by these encounters, which also affect how they will participate in the future.
Service Provider-Platform	Service providers rely on the platform to interact with customers, gain access to a larger clientele, and use the infrastructure and capabilities of the platform for transactions. The platform depends on service providers to provide alluring offers that draw and keep customers on the platform in exchange.	The platform is used by service providers to manage their offers, update availability, get order notifications, and take care of logistics. They can also use the platform's tools and resources to increase their performance and their visibility to customers.

References: (Hagiu & Wright, 2015), (Parker & Van Alstyne, 2017), (Rochet & Tirole, 2003)

Three-sided market cannot run or be successful without these interactions and interdependencies among the three sides. Platform owners may maximize the user experience, speed up transactions, and create a vibrant ecosystem by comprehending and regulating these dynamics.

Challenges and Opportunities

Comparatively speaking to conventional two-sided markets, three-sided markets provide distinct opportunities and problems. The following are some specific possibilities and problems that exist in the three-sided market:

➤ Challenges:

1. Balancing Interests (Hagiu & Wright, 2015)

Balancing the demands and interests of all three participant groups is one of the main issues in three-sided markets. Because the interests of each group may not always coincide, it can be difficult to ensure that interactions between customers, service providers, and platform owners are fair and mutually beneficial.

2. Network Effects and Critical Mass (Parker & Van Alstyne, 2017)

Three-sided markets rely largely on network effects, where the platform's value rises as more users sign up. The value for each participant group depends on the presence and involvement of the other participant groups; therefore, reaching critical mass and getting over the first chicken-and-egg dilemma can be difficult.

3. Trust and Quality Assurance (Hagiu & Wright, 2015)

Establishing and preserving participant trust is essential in three-sided markets. Gaining the trust of customers requires service providers to provide products and services that are safe, dependable, and of high quality. Furthermore, building trust with customers and service providers on the platform is essential for long-lasting connections.

Opportunities

1. Synergistic Value Creation (Parker & Van Alstyne, 2017)

Three-sided markets present the potential for the production of synergistic value. All participant groups can produce more value as a whole than in a conventional two-sided market when they work together efficiently and interact on the platform. For instance, platforms can collect more data and deliver improved services, service providers may reach a broader customer base, and customers have access to a wider variety of offerings.

2. Revenue Diversification (Evans, 2003)

The possibility of revenue diversification exists in three-sided markets. Platforms can make money in a variety of ways, including commissions, subscription fees, advertising, and premium services. Platforms are able to develop viable business models and make adjustments to changing market conditions because of this diversification.

3. Ecosystem Expansion (Parker & Van Alstyne, 2017)

Successful three-sided markets can grow their ecosystems by luring fresh players, including extra service providers or complementing platforms. The value proposition for current participants is further improved by this expansion, and network effects are strengthened.

Contribution User Groups

This is how each user group contributes to the functioning and success of the three-sided market, with Postmates as the specific case:

1. Consumers

- a. Generating demand

Due to their ability to generate demand for products and services, consumers are essential in three-sided markets like Postmates. The demand-side of the platform is driven by their tastes, demands, and purchase patterns, which affects the kinds of services and merchants that are offered on Postmates.

- b. Data Insights

Through their interactions with the platform, consumers generate valuable data that can provide insights into consumer behavior, preferences, and trends. Postmates can leverage this data to improve its services, personalize recommendations, and optimize operations.

4. Revenue Contribution

Transaction fees collected from customers help Postmates recoup its costs. Customers pay for the goods or services they order

through the platform, and a percentage of their cash is given to Postmates as a charge for transactions, helping the company to remain financially viable.

2. Couriers

a. Efficient Order Fulfillment

The delivery service offered by Postmates is made possible by couriers, or Postmates. When picking up and delivering orders from retailers to customers, they are essential. The promptness, dependability, and effectiveness with which they complete orders enhance the general happiness of the clientele (Parker & Van Alstyne, 2017).

b. Customer Satisfaction

During the delivery procedure, couriers deal directly with customers. Customer satisfaction and repeat business can be strongly impacted by their professionalism, friendliness, and adherence to delivery instructions. The face of Postmates is represented by couriers, who stand for the platform's dedication to providing dependable and on-time delivery services (Hagiu & Wright, 2015).

3. Merchants

a. Wide Range of Products

Food, groceries, and numerous other commodities are among the many goods that merchants on Postmates sell. Consumers have more options thanks to their engagement, which raises the platform's appeal and value proposition.

b. Inventory Management

To fulfill orders received through Postmates, retailers must keep sufficient stock levels. To effectively fulfill consumer demand, they must manage inventory, guarantee the availability of products, and update their platform offerings.

c. Driving Sales Volume

Through Postmates, merchants gain more visibility and possible sales volume. The platform gives retailers an extra route to a larger audience, boosting their visibility and possible earnings.

Revenue Generation in Postmates Three-sided Market

Here are the different revenue streams in the Postmates ecosystem, according to the statement on Postmates' website²:

1. Transaction Fees

Postmates makes money by charging both customers and businesses transaction fees. When customers use the platform to place orders, they make a payment for the goods or products and services, and a percentage of that amount is sent to Postmates as a charge for transactions. The same applies to retailers, who pay a percentage or flat fee for each transaction handled by Postmates. These charges support the platform's operations and help Postmates generate revenue.

2. Advertising and Promotions

Using advertising and promotional efforts, Postmates makes more money. With the help of the platform's sponsored listings, businesses may buy more app visibility and marketing. To reach a larger consumer base and boost sales, retailers might choose to market their products. Additionally, Postmates collaborates with brands and partners to create marketing campaigns in which they might be paid to highlight certain goods or deals. The overall

revenue of the platform is influenced by these marketing and promotional efforts.

3. Advertising and Promotions

Through marketing and advertising initiatives, Postmates makes additional money. The platform provides sponsored listings, enabling businesses to pay for more app visibility and marketing. Retailers have the option of advertising their products to reach a larger audience and boost sales. Postmates also works with brands and partners to create marketing campaigns, and they may get paid for highlighting certain goods or deals in these campaigns. The platform's total revenue is influenced by these marketing and advertising initiatives.

The Challenges and Future Outlook

Some of the ways to Overcome the potential challenges and problems faced by a three-sided marketplace platform like Postmates:

1. Balancing Interests

For long-term success in a three-sided market like Postmates, it is essential to balance the interests of all three user groups. Managing the demands and expectations of customers, service providers (such as couriers), and retailers is difficult. To ensure fair pricing, effective operations, and a satisfying user experience for all parties involved, considerable consideration is necessary. Platforms like Postmates may help create a thriving environment that promotes ongoing participation and growth by achieving the proper balance.

2. Competition and Differentiation

Platforms for three-sided markets like Postmates are heavily challenged by competitors who provide comparable services. Platforms must differentiate themselves with a variety of tactics to stay competitive. This entails providing distinctive features, increasing their service offerings, establishing business alliances with retailers, improving customer assistance, and streamlining logistics processes. In a highly competitive environment, uniqueness enables platforms like Postmates to attract and keep customers, service providers, and merchants.

3. Technological Advancements

New technologies could have a big impact on the future of three-sided businesses like Postmates. The use of artificial intelligence, machine learning, automation, and blockchain are examples of innovations that can streamline processes, boost productivity, and improve user experience. For instance, blockchain technology can improve trust and transparency in transactions, while AI-powered algorithms may optimize route planning for couriers. Platforms like Postmates may be positioned for future success and growth by embracing and utilizing these technical advancements.

III. Methodology

This research adopts a qualitative case study approach to examine the factors influencing the success and sustainability of three-sided markets, with a specific focus on the Postmates Company. This methodology allows for an in-depth exploration of the complex dynamics and interactions within the three-sided market context (Aloisi, 2015).

The case selection for this study focuses on Postmates, a prominent player in the three-sided market space (Netzer, Krause, Hausmann, Bauer and Ecker, 2017). Postmates is chosen due to its significant presence in the gig economy and its role in facilitating interactions

² Postmates website: <https://postmates.com/>

between consumers, merchants, and gig workers (Duggan, McDonnell, Sherman and Carbery, 2021; Ganapati and Reddick, 2018) By selecting Postmates as the case study, the research aims to gain insights into the specific strategies and practices employed by the company that contribute to its success and long-term viability.

Data collection for this research involves the analysis of various documents and archival sources related to the Postmates Company. These sources include annual reports, which provide valuable information about the company's performance, growth, and strategic initiatives (Mills and Helms, 2018). Additionally, beneficiary profiles will be examined to understand the experiences and perspectives of consumers, service providers, and merchants on the platform. Relevant documents such as industry reports, market analyses, and policy documents will also be reviewed to gain a comprehensive understanding of the contextual factors that influence three-sided markets (Bose, 2009).

To analyze the collected data, a systematic review and synthesis approach will be employed. This method involves critically evaluating and integrating relevant documents to identify recurring themes, patterns, and trends related to the success and sustainability of three-sided markets. By synthesizing the information from these documents, the study will generate a comprehensive understanding of the factors that contribute to the success and sustainability of these market structures. This approach allows for a rigorous analysis of existing knowledge, enabling the formulation of evidence-based conclusions.

The chosen methodology, which combines a qualitative case study approach with document analysis and systematic review and synthesis (Synder, 2019), ensures a rigorous investigation into the factors influencing the success and sustainability of three-sided markets. By thoroughly examining relevant documents and synthesizing existing literature (Booth, 2016), the study aims to provide valuable insights into the strategies, challenges, and best practices associated with these markets. The findings will contribute to the existing body of knowledge and offer practical implications for businesses, policymakers, and researchers interested in understanding and promoting the success and sustainability of three-sided markets.

IV. Findings: Factors Influencing the Success and Sustainability of Three-Sided Markets

Several factors contribute to the success and sustainability of three-sided markets, encompassing various aspects of platform design, user engagement, network effects, merchant strategies, consumer behavior, gig economy dynamics, and regulatory considerations.

- Platform Design and User Experience

An integral factor in the success of three-sided markets is the platform's design and user experience (Andreassen, Lervik-Olsen, Snyder, Van, Sweeney and Vaerenbergh, 2018). A seamless and intuitive user interface plays a crucial role in attracting and retaining users (Carson, Chu, Evans and Goldman, 2021). By providing a user-friendly interface, platforms like Postmates enable customers, service providers, and merchants to navigate the platform effortlessly (Roggevee and Sethuraman, 2020). Personalization and customization feature further enhance the user experience, allowing users to tailor their interactions based on

preferences. Efficient order placement and delivery processes, including accurate tracking and timely delivery, contribute to customer satisfaction and trust in the platform (Singh, 2002).

- Network Effects and Critical Mass

The success of three-sided markets depends on the presence of network effects (Jullien, Pavan and Rysman, 2021). Platforms aim to build a balanced and expansive user base across consumers, service providers, and merchants (Andreassen, Lervik-Olsen, Snyder, Van, Sweeney and Vaerenbergh, 2018). Achieving critical mass, where the value of the platform increases as more users join, is a significant goal (David, Aubert, Bernard and Luczak-Roesch, 2020). Platforms facilitate positive network effects by creating incentives for users to engage with the platform and inviting new participants (Belleflamme and Peitz, 2018). It is also important to manage negative network effects, such as congestion or coordination challenges, to ensure a smooth and efficient user experience.

- Merchant Strategies and Engagement

Platforms focus on onboarding and retaining merchants to ensure a diverse range of offerings for customers. Merchants can utilize pricing and promotional strategies to attract and retain customers, such as offering discounts or exclusive deals (Grewal, Krishnan, Baker and Borin, 1998). Collaboration and feedback mechanisms between platforms and merchants foster a strong partnership, enabling continuous improvement and addressing any concerns or issues promptly (Evans, 2010).

- Impact on Consumer Behavior

Three-sided markets have a significant impact on consumer behavior. The convenience and choice offered by these platforms influence consumer preferences and decision-making (Amoako, Omari, Kumi, Agbemabiase and Asamoah, 2021). Customers value the ease of accessing a wide range of goods and services, resulting in increased usage and repeat purchases (Angelova and Zekiri, 2011). Building consumer loyalty and retention is crucial for the sustained success of the platform. Additionally, evolving consumer expectations, driven by the continuous development of technology and changing market trends, require platforms to adapt and provide innovative solutions to meet customer needs (Romero and Molina, 2011).

- Gig Economy Dynamics

Gig workers provide essential services and contribute to the overall ecosystem, so the gig economy plays a vital role in three-sided markets (Onyango, 2022). Three-sided markets create opportunities for gig workers, offering income-generating opportunities, job flexibility, and a means of leveraging their skills (Moroane, 2023). Ensuring income stability and balancing worker rights and protections are critical for the sustainability of the gig economy within these platforms (Ahsan, 2020). Striking a balance between providing flexibility and safeguarding worker rights is crucial for long-term success.

- Regulatory Environment and Policy Considerations

The regulatory environment and policy considerations significantly impact the success and sustainability of three-sided markets (Rieder and Sire, 2014). Platforms must navigate legal frameworks and ensure compliance with regulations. Addressing consumer protection and data privacy concerns is essential to foster trust among users (Zissis and Lekkas, 2012). Furthermore, worker

classification and labor regulations need to be taken into account to uphold the rights and protections of gig workers within the platform ecosystem (Todoli-Signes, 2017).

Considering these factors and addressing them effectively allows three-sided markets like Postmates to thrive, attract a diverse user base, foster positive network effects, facilitate meaningful engagement with merchants, shape consumer behavior, empower gig workers, and navigate the regulatory landscape to ensure long-term success and sustainability.

V. Analysis and Discussion

• Platform Strategies and User Engagement

Platforms like Postmates employ various strategies to enhance user engagement and drive growth. By focusing on platform design and user experience, including a seamless and intuitive interface, personalization features, and efficient order placement and delivery processes, Postmates attracts and retains customers³. These strategies contribute to increased user satisfaction, repeat usage, and customer loyalty. Moreover, Postmates leverages data insights from user interactions to improve its services, optimize recommendations, and tailor the platform experience to meet evolving consumer needs.⁴

• Network Effects and Critical Mass

Postmates understands the importance of building a balanced and expansive user base across consumers, service providers, and merchants. Positive network effects are fostered by creating incentives for users to participate and invite others, reinforcing the value proposition of the platform.⁵ By expanding the network and facilitating interactions between participants, Postmates generates a virtuous cycle of growth, enhancing the platform's overall value.⁶ It is also vital for Postmates to manage negative network effects, such as congestion or coordination challenges, to ensure a seamless and efficient user experience.

• Merchant Strategies and Consumer Behavior

Merchant strategies and consumer behavior have a significant influence on the success and sustainability of three-sided markets. Postmates focuses on onboarding and retaining merchants, ensuring a diverse range of offerings for customers.⁷ Merchants can utilize various strategies such as competitive pricing, promotions, and collaborations to attract and retain customers.

These strategies contribute to customer satisfaction, repeat business, and increased engagement on the platform.⁸ The convenience and choice provided by Postmates influence consumer behavior, as customers value the easy access to a wide range of goods and services. Additionally, the evolving expectations of consumers require platforms like Postmates to continually innovate and provide solutions that meet customer needs, driving consumer behavior and shaping market trends.

• Gig Economy Implications

Three-sided markets have significant implications for the gig economy and gig workers.⁹ Postmates provides opportunities for gig workers to generate income, offering job flexibility and the ability to leverage their skills. By participating in the platform as couriers, gig workers can access a pool of potential customers and earn income on their own terms.¹⁰ This flexibility and income-generating potential make three-sided markets like Postmates attractive for gig workers seeking additional income streams or flexible employment. However, it is crucial to ensure income stability and strike a balance between providing flexibility and protecting worker rights. Balancing the rights and protections of gig workers with the platform's operational requirements and economic viability is essential for the sustainable growth of the gig economy within three-sided markets.

• Regulatory Challenges and Opportunities

Three-sided markets like Postmates face regulatory challenges and opportunities. Compliance with legal frameworks and regulations is necessary to operate within the boundaries of the law. Platforms must navigate consumer protection and data privacy concerns to maintain user trust and ensure the responsible handling of user data.¹¹ Additionally, worker classification and labor regulations pose challenges for platforms operating in the gig economy.¹² Striking a balance between worker rights and the flexibility inherent in gig work is a regulatory challenge that platforms like Postmates must address.¹³ However, regulatory challenges also present opportunities for platforms to demonstrate their commitment to worker well-being, contribute to shaping regulations that support gig workers, and collaborate with policymakers to create a favorable regulatory environment for the sustainable growth of three-sided markets.

Through the analysis and discussion of platform strategies and user engagement, network effects and critical mass, merchant strategies

³ Furlan, A. (2021). Food delivery: an analysis of existing and future business models based on digital platforms.

⁴ Paul, C. S. (2018). The architecture of digital labour platforms: Policy recommendations on platform design for worker well-being. *ILO future of work research paper series*, 3.

⁵ Gregory, R. W., Henfridsson, O., Kaganer, E., & Kyriakou, H. (2021). The role of artificial intelligence and data network effects for creating user value. *Academy of management review*, 46(3), 534-551.

⁶ Garud, R., Kumaraswamy, A., Roberts, A., & Xu, L. (2022). Liminal movement by digital platform-based sharing economy ventures: The case of Uber Technologies. *Strategic Management Journal*, 43(3), 447-475.

⁷ Apte, U. M., & Davis, M. M. (2019). Sharing economy services: Business model generation. *California Management Review*, 61(2), 104-131.

⁸ Constantiou, I., Marton, A., & Tuunainen, V. K. (2017). Four models of sharing economy platforms. *MIS Quarterly Executive*, 16(4).

⁹ Pober, I. (2019). *The gig economy-an avenue to women's economic empowerment?* (Master's thesis).

¹⁰ Vallas, S., & Schor, J. B. (2020). What do platforms do? Understanding the gig economy. *Annual Review of Sociology*, 46, 273-294.

¹¹ Hang, L., Chen, C., Zhang, L., & Yang, J. (2022). Blockchain for applications of clinical trials: Taxonomy, challenges, and future directions. *IET Communications*, 16(20), 2371-2393.

¹² Barratt, T., Goods, C., & Veen, A. (2020). 'I'm my own boss...': Active intermediation and 'entrepreneurial' worker agency in the Australian gig-economy. *Environment and Planning A: Economy and Space*, 52(8), 1643-1661.

¹³ Collier, R. B., Dubal, V., & Carter, C. (2017). Labor platforms and gig work: the failure to regulate.

and consumer behavior, gig economy implications, and regulatory challenges and opportunities, this research provides insights into the factors influencing the success and sustainability of three-sided markets. Understanding and effectively addressing these factors are crucial for platforms like Postmates to thrive, attract diverse participants, foster positive network effects, drive user engagement, shape consumer behavior, empower gig workers, and navigate the regulatory landscape for long-term success and sustainability.

VI. Conclusion

This research has explored the factors influencing the success and sustainability of three-sided markets, with a specific focus on the case study of Postmates. The analysis and discussion have highlighted several key points. Firstly, the unique structure of three-sided markets, with consumers, service providers, and platform owners/facilitators, sets them apart from conventional two-sided markets. The interactions and interdependencies among these user groups are critical to the functioning and outcomes of three-sided markets.

Platform design and user experience, network effects and critical mass, merchant strategies and consumer behaviour, gig economy implications, and regulatory challenges and opportunities emerged as significant factors influencing the success and sustainability of three-sided markets. Platforms like Postmates employ strategies to enhance user engagement, foster positive network effects, collaborate with merchants, shape consumer behaviour, empower gig workers, and navigate the regulatory landscape. Understanding the structure and user contributions in three-sided markets is of utmost importance. These markets have reshaped the modern economy by providing convenient access to goods and services, creating income-generating opportunities for gig workers, and offering a vibrant ecosystem for consumers, service providers, and merchants. By leveraging technology, data insights, and innovative business models, platforms like Postmates have transformed the way transactions occur and economy's function.

However, this research has certain limitations. The focus on Postmates as a single case study may limit the generalizability of the findings. Additionally, reliance on document analysis and archival sources may restrict the depth of understanding compared to primary data collection methods. Future research should address these limitations and explore multiple cases and diverse research methodologies to enrich the knowledge on three-sided markets.

In short, the success and sustainability of three-sided markets rely on a delicate balance between the needs and interests of consumers, service providers, and platform owners. By comprehending the complex dynamics and adopting strategies that enhance user engagement, foster positive network effects, support merchant strategies, cater to evolving consumer behaviour, empower gig workers, and navigate regulatory challenges, platforms like Postmates and other actors in the three-sided market ecosystem can drive innovation, economic growth, and provide value to all participants.

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