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A Tale Of A Three-Sided Market:

Understanding Online Food Delivery Services

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PROGRESSIVE POLICY INSTITUTE

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INTRODUCTION

In recent years, several state and local governments have passed or considered new regulations on services providing rapid delivery of items such as restaurant-prepared meals, groceries, and time-sensitive packages like medicine. These regulatory efforts are ostensibly intended to help consumers, workers, and businesses by forcibly lowering prices, raising wages, and eliminating "junk fees." Perversely, however, they run the risk of disrupting these complicated markets and actually hurting market participants. For example, New York City's experiment with fee caps led to reduced orders and revenue for small businesses, and the policy was ultimately rolled back.[1, 2]

In this paper, we examine and explain how these complicated "three-sided" markets work, facilitating near-simultaneous transactions between three different groups of economic actors: the merchants, the people doing the delivery, and the ultimate consumers. Such services require near-flawless coordination between the business providing the product and the people doing the delivery because of the time-sensitive nature of the goods being delivered. The result, if done well, is a huge increase in consumer welfare, in the form of time saved; an increase in flexible earning opportunities for individuals doing delivery and other related tasks, such as personal time to spend with loved ones or relaxing; and an increase in demand for restaurant meals and groceries by reaching new consumers who couldn't access the good or didn't know about the merchant previously.

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[1] Zhuoxin Li and Gang Wang, "Regulating Powerful Platforms: Evidence from Commission Fee Caps," Information Systems Research, June 22, 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3871514.
[2] Joe Guszkowski, "New York City Council Votes to Lift Cap on Delivery Fees," Restaurant Business, May 1, 2025, https://www.restaurantbusinessonline.com/technology/new-york-city-council-votes-lift-cap-delivery-fees.

The novel structure of these newly created markets has also sparked new questions and the interest of policymakers. For instance, how should compensation for delivery drivers be structured? How should consumers be informed about the costs associated with delivery? These questions — and any potential policy changes — should be considered in parallel with their impacts on the market functions of these platforms.

In this paper, we will first offer a basic explanation of how these marketplaces work, and why they benefit all the participants — the merchants who supply the products, consumers, and the people who handle the actual deliveries. Though some academic and corporate publications have focused on related topics, an easily accessible explanation is unfortunately missing from the public policy discussion.[3, 4, 5]

Then, we will look more closely at the price structure of three-sided delivery markets and show how fees and prices in these markets are structured. The section will directly address the ongoing debate about "junk fees" and the flurry of recent legislation at the state level.[6] Junk fees, affecting goods like hotels, concerts, and airplane tickets, have drawn sharp criticism in recent years from consumers and regulators.[7, 8] There is no agreed-upon definition of junk fees, but in one 2023 report, the Biden White House implicitly defined junk fees as "unnecessary, unavoidable, or surprise charges that inflate prices while adding little to no value."[9] Though regional variation makes definitive generalization challenging, most online food delivery fees do not fit these criteria.

[3] Sina Bahrami et al., "The Three-Sided Market of on-Demand Delivery," Transportation Research Part E: Logistics and Transportation Review, October 18, 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3944559.
[4] Wenli Zhou et al., "Analysis of an On-Demand Food Delivery Platform: Participatory Equilibrium and Two-Sided Pricing Strategy," *Journal of the Operational Research Society,* July 28, 2023, https://www.tandfonline.com/doi/full/10.1080/01605682.2023.2239853.
[5] Robert Siegel, "The Complexity of Marketplaces — Tony Xu, CEO DoorDash," Medium, March 9, 2017, https://medium.com/the-industrialist-s-dilemma/the-complexity-of-marketplaces-tony-xu-ceo-doordash-61441cd25269.
[6] "Say Goodbye to 'Junk' Fees: A Wave of US and State Laws Target Hidden Fees," Dentons, March 6, 2024, https://www.dentons.com/en/insights/alerts/2024/march/6/say-goodbye-to-junk-fees.
[7] Emily Stuart, "Joe Biden Is Mad About Hidden Fees and You Should Be, Too," *Vox,* February 15, 2023, https://www.vox.com/policy-and-politics/2023/2/15/23599953/biden-junk-fee-protection-act-white-house-ticketmaster-resort.
[8] Justin Curto, "StubHub Sued Over Hidden Fees," *Vulture,* July 31, 2024, https://www.vulture.com/article/stubhub-sued-hidden-fees.html.
[9] "Guide for States: Cracking Down on Junk Fees to Lower Costs for Consumers," The White House, March 8, 2023 https://web.archive.org/web/20250118003201/https://www.whitehouse.gov/wp-content/uploads/2023/03/WH-Junk-Fees-Guide-for-States.pdf.

BASICS OF THREE-SIDED MARKETS

One of the hallmarks of economic growth is the ability to provide new goods and services for people at a price that they can afford and are willing to pay. Delivery of a small number of standardized food items, such as pizzas, has been possible for decades.[10] However, during the pandemic, people became used to having a much wider array of meals and food items delivered to their homes through app-based services. And in recent years, these app-based services have expanded to include delivery of other time-sensitive goods, like medicine and other household necessities. A form of three-sided market, these services have now become a routine part of daily commerce for many Americans.

Rapid delivery is unique because it exists to fulfill small, time-sensitive, one-time orders with drastically differing demand levels to an ever-changing array of destinations through a dynamic supply of drivers. While traditional delivery carriers like UPS, FedEx, or USPS are built largely on moving large quantities of non-perishable parcels on a predictable schedule through a highly centralized network, the needs for on-demand delivery are very different. An order from a traditional ecommerce platform like Amazon involves just two parties (a seller and a traditional delivery carrier) and ships from a pre-stocked warehouse on a flexible timeline. By contrast, a rapid delivery order requires three parties to coordinate in real-time within a window of minutes.

These markets have created unique opportunities and time savings for consumers. This section will take a closer look at one type of rapid delivery service — food delivery — to explain three-sided markets.

Here's one way of thinking about it: For all individuals — regardless of income level — time is money. Modern food delivery markets are attractive to customers because of the convenience that they provide and the time that they save. Because time is so valuable to everyone, from the lowest income earners to the highest, the opportunity to save time by not needing to travel to restaurants is attractive to all. This reality means that there are new opportunities for transactions to make this happen, as customers are willing to pay a bit more to save lots of time.

[10] The pizza delivery chain Domino's was founded in 1960, for example.

Here we will summarize our analysis of the value of time savings from food delivery services (the detailed analysis is in the appendix). In 2018-19, before the pandemic, the average adult American spent roughly 42.1 hours per year in travel time to and from "eating and drinking", according to time-use survey data from the Bureau of Labor Statistics (BLS).[11] That translated into a total of about 11 billion hours annually — time that could have been used for other activities.[12]

In 2023-24, by comparison, time spent traveling to and from "eating and drinking" was 16% lower or an average of 35.3 hours per year (Figure 1). In total, that came to about 9 billion hours annually, or roughly 2 billion hours less than in 2019. (This food-based example is likely an underestimate of the time savings from delivery services, which also include items such as pet supplies, diapers, and medicines.)

How much is that decline in travel time worth to consumers? Drawing on a research paper analyzing a large ridesharing database, we estimate the value of an hour of travel time at $25. Thus, the value of reduced travel time to and from "eating and drinking" in 2023-24 came to roughly $46 billion.[13]

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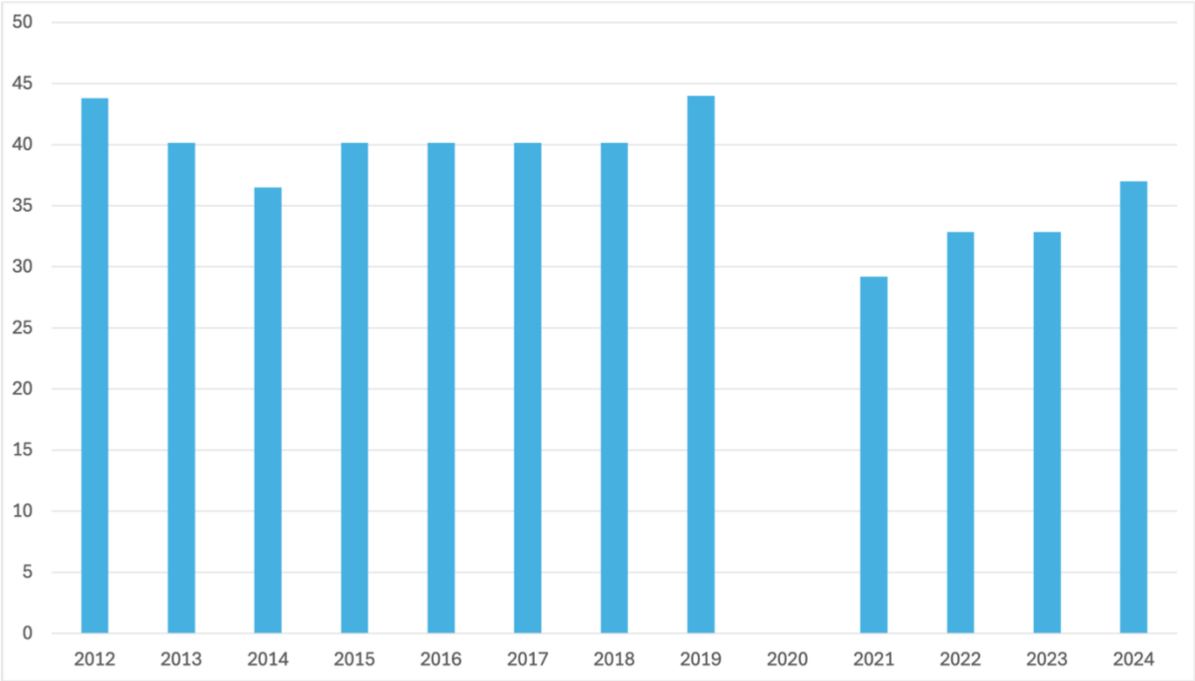
[11] "American Time Use Survey — 2024 Results," U.S. Bureau of Labor Statistics, June 26, 2025, https://www.bls.gov/news.release/atus.nr0.htm.
[12] PPI calculations using BLS data.
[13] "The Value of Time in the United States: Estimates from Nationwide Natural Field Experiments" (Ariel Goldszmidt et al., NBER Working Paper, December 2020, https://www.nber.org/papers/w28208) found the value of time to be $19 per hour in 2015 dollars. Updating for inflation brings us to $25 per hour.

FIGURE 1: TRAVEL RELATED TO EATING AND DRINKING (AVERAGE HOURS PER YEAR PER PERSON)



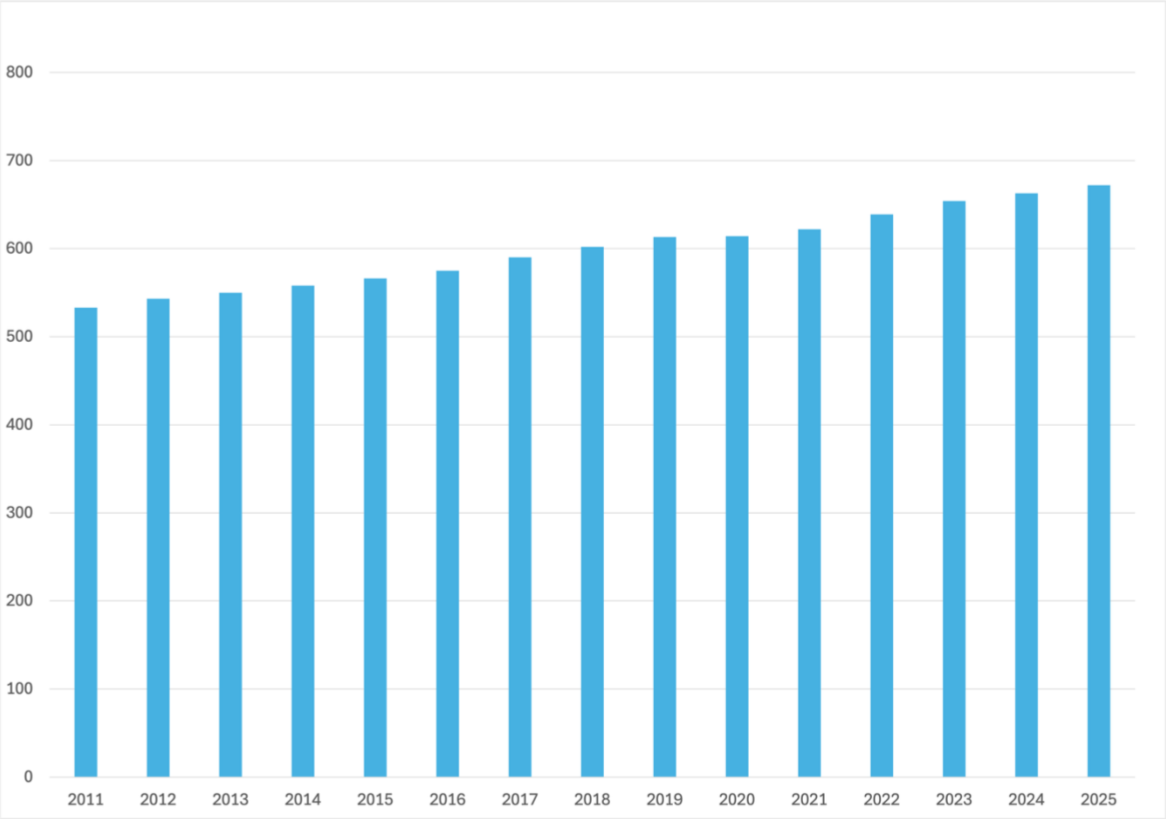
Data: BLS, PPI (2020 data unavailable because of pandemic)

This reduction in travel time, along with the gains to consumers, happened over the same period as an enormous expansion in the use of food delivery services. For example, DoorDash's total orders globally rose from 263 million in 2019 to 2.6 billion in 2024.[14]

It should also be noted that the "eating and drinking" industry appears to have prospered in the era of online food delivery. After dropping precipitously during the pandemic, employment at restaurants and bars has recovered and now stands at 11.4 million, close to an all-time high. And there are now 670,000 eating and drinking establishments, up almost 10% from 2019 (Figure 2).

[14] "SEC Filings," DoorDash, Inc., accessed June 8, 2026, https://ir.doordash.com/financials/sec-filings/default.aspx.

FIGURE 2: EATING AND DRINKING ESTABLISHMENTS (THOUSANDS)



Data: BLS

THE NEED FOR COORDINATION

Where do these huge consumer welfare gains come from? Setting up a real-time delivery service for meals and other perishable items is a complicated and tricky endeavor. Most meals for delivery need to be prepared and delivered within narrow time windows. Moreover, demand for delivery is highly variable and unpredictable across locations, times of day, days of the week, and weeks of the year. In practice, this means many restaurants and stores, and especially small businesses, don't have the infrastructure to handle this endeavor, nor the money to individually pay delivery workers full-time.

Most commonly built around food and grocery delivery apps like DoorDash, Uber Eats, and Instacart, these ecosystems are notable because they facilitate coordination across many parties in ways that previously would not have been possible. The "three sides" in these markets represent each of the parties involved in these transactions — consumers, individuals doing delivery and custom shopping, and businesses such as restaurants — and are connected by the platform that facilitates transactions, matching supply and demand levels.

The value of these ecosystems is their function as a coordination mechanism to match varying levels of supply and demand across each of the three sides. The timeliness, unique to these three-sided markets, creates new possibilities for consumers, businesses, and workers.

WHY PEOPLE PARTICIPATE IN THREE-SIDED MARKETS

For customers, delivery gives them access to a wide array of meals, groceries, and other perishable items from the comfort of their own home, eliminating the need to travel to a restaurant to dine in person or pick up an order themselves. In exchange for this convenience (time saved, distance traveled, variety of options), consumers pay delivery and service fees. The platform gives consumers an organized marketplace to view available merchants and provides them information — in the form of delivery time and fees — that they can use to decide whether to place an order.

To better understand why people participate in three-sided markets, this section considers the example of a food delivery market from each of the three participants' perspectives. Similar but not identical considerations would hold for grocery delivery services.

Restaurants may choose to participate in a delivery service because of the expanded customer base that the platform provides. In exchange, restaurants pay a commission to the platform on each delivery. Moreover, platforms give restaurants a variety of different payment, delivery, and marketing options, letting stores decide whether it is worthwhile for them to continue offering deliveries on the platforms.

For many restaurants, three-sided delivery platforms are valuable because they are able to reach additional customers for a comparatively low price. Prior to the existence of platforms like DoorDash and Uber Eats, only a select few businesses — like pizza shops — offered delivery services. Though there are a number of reasons for this, the foremost reason is that operating an independent ordering and delivery service is extremely expensive. Doing so involves hiring drivers as employees to be on standby, because individual restaurants typically lack the order volume to attract on-demand contractors as a platform would. It also involves building the digital infrastructure to accept online orders and payments, routing drivers, providing customers with estimated-time-of-delivery (ETD), and potentially buying and maintaining delivery vehicles. Further, these operations are inflexible — drivers must be paid even when business is slow, and it is difficult to bring in additional drivers if demand is unexpectedly high. To put it another way, a single restaurant doesn't have the ability to tap into a platform of contractors interested in accepting, on demand, one-off tasks, so a restaurant's only option is to hire a driver as an employee to be at the restaurant ready for when an order comes in.

Three-sided markets present a far simpler proposition for restaurants. Restaurants get access to a larger pool of customers but do not have to bear the high costs of creating, maintaining, and staffing a delivery service. Further, these operations are more flexible and less risky because restaurants incur no additional costs when business is slow. For small businesses like restaurants, the economies of scale that come from delivery services make such an offering financially viable.

Drivers complete deliveries in exchange for payment for each order. Similar to restaurants, drivers benefit from the economies of scale that make operating a delivery service profitable. Platforms have invested significantly in sophisticated routing software that saves drivers time (and consequently makes them additional money) by making sure orders are ready in advance and allowing multiple deliveries along efficient routes. Drivers also get additional flexibility as compared to being an employee working a schedule in a traditional delivery system, like a pizza shop. Instead, drivers are classified as contractors, choosing to work whenever they decide and getting paid per delivery. With a sizable number of individuals working as delivery drivers as a second job or in their spare time, this schedule flexibility is a major factor for many.[15]

PRICING STRUCTURE AND THE THREE-SIDED MARKET BUSINESS MODEL

When a user opens up a delivery app and chooses their order, they are presented with several key pieces of information: the cost of the goods, a delivery ETD, and the associated delivery fees. Simultaneously, drivers can see the potential payments for taking on deliveries and choose to accept any order that they want to take on.

[15] "Dashers with Full-Time Jobs Value Supplemental Income and Flexible Hours," DoorDash, Inc., January 26, 2023, https://about.doordash.com/en-us/news/dashers-with-full-time-jobs-value-supplemental-income-and-flexible-hours.

Merchants have choices as well. Platforms offer a variety of different options for merchants beyond the most common delivery options: they can also provide stores with mobile ordering pick-up services, interface with businesses' existing delivery infrastructure, integrate with payment infrastructure, offer promotional and advertising options, and more. The two largest delivery platforms, DoorDash and Uber Eats, have multiple options for their core delivery services, each with varying levels of commission fees in exchange for other forms of promotion, fee structure, and delivery priority.

Platforms differ in their approach to managing changes in supply and demand. Across all platforms, though, technology and mobile devices allow responses to changing conditions that would not otherwise be possible. Without these tools, platforms would struggle to address changes in driver availability, restaurant capacity, and order volume, meaning slower deliveries and a worse experience for all participants.

THE STABILITY OF THREE-SIDED MARKETS

Delivery markets require tight coordination of supply and demand to ensure goods are delivered on time and at a reasonable cost. For some types of merchants, like restaurants, even for dine-in service, it's difficult to staff appropriately and buy the right amount of provisions to meet demand. Restaurants manage this demand with reservations and lines.

Delivery adds another logistical challenge: driver availability. Shortfalls can slow delivery, depress orders, and potentially trigger a feedback loop of customer dissatisfaction and fewer orders that reduce merchant and driver participation. When there are enough drivers at a given time, merchants don't always have a guarantee that they will have enough business in a given day or time period to justify keeping the driver working.

Table 1: Balancing Supply and Demand in a Three-Sided Market

Price/policy lever	**If set too low**	**If set too high**
Driver pay/per-order payout	Fewer drivers online → slower/unreliable delivery → consumers and merchants stop participating	Higher costs passed to consumers/merchants → order volume drops; merchant revenue falls → merchants stop participating; fewer driver opportunities with fewer orders
Merchant commission	Platform margins decrease → platforms lower driver pay or increase fees to compensate → fewer drivers, slower delivery; fewer orders	Lower merchant participation → less selection → lower consumer demand; consumer orders drop → fewer driver opportunities with fewer orders
Consumer fees	Platform margins decrease → platforms reduce capabilities or lower driver pay to compensate → fewer drivers, slower delivery → consumers and merchants stop participating	Higher all-in prices for consumers → order volume drops → merchant revenue falls and merchants stop participating → fewer driver opportunities with fewer orders and merchants

As a result, online delivery platforms have to pay special attention to making sure supply and demand are roughly in balance (Table 1). A key feature of the business models of multisided markets is that drivers are considered independent contractors rather than employees. Among the many implications this has for platforms, the fact that drivers are not bound to a set schedule and use their own vehicles for delivery plays a significant role in how and why drivers choose to work. Drivers are free to begin working at any time and continue for a duration of their choosing, with real-time information about prices and demand. They do not require lengthy training, authorization from the company, company vehicles, scheduling, or salary dilemmas, or face the other logistical complexities that standard employees would. This has allowed for the rapid expansion of new drivers scaling to increased demand as compared to a traditional employee-based approach.

For many drivers, delivery is a supplemental form of income rather than their main source.[16] It is easy for drivers to start delivering quickly and to do so for short periods of time when it is convenient for them. It also means that drivers may not be heavily dependent on driving as their source of income. In sum, because drivers can pick their schedule, see payments in real-time, do not rely on delivery as their sole income source, and because new drivers can sign up quickly, driver supply is highly elastic and responsive to prices.

Different types of merchants also face unique constraints. Though restaurants have less ability to respond to changes in demand in the short run, they have unique options surrounding price structure, which give them flexibility. Restaurants are responsible for a variety of ongoing, fixed costs like paying staff on a scheduled basis and ordering ingredients and other materials in advance. These costs mean that restaurants cannot rapidly decide to open or close based on demand or price levels like drivers and consumers are able to.

However, the multiple options discussed previously give restaurants a choice of how to allocate their resources. For example, a new restaurant that is looking to expand may choose to pay a higher commission in exchange for lower delivery fees for customers. New customers might be more willing to try a new restaurant if the costs are low, and for these types of restaurants, low profits might be worth the additional volume of orders and potential for future growth. By

[16] "Dashers with Full-Time Jobs."

comparison, an established restaurant that already has a local reputation for good food may choose to pay a lower commission in exchange for higher delivery fees for customers. For this sort of business, there is no need to give the platform a larger share of sales in exchange for advertising and promotion in the app.

Because three-sided markets depend on reasonable prices and maximizing participation, these markets entice consumers and merchants to participate by offering a variety of ways to structure their costs in order to meet people at their individual willingness to pay. For consumers, Uber Eats provides an option to pay an additional fee at checkout to have their orders prioritized. During busy times, drivers may pick up multiple orders at once from a single merchant and deliver them consecutively to increase driver efficiency, but that may potentially come at the cost of a longer delivery time for consumers. Uber and DoorDash both offer the option for prioritized handling to help secure a faster delivery, getting consumers who are willing to do so to pay more for a premium or higher quality experience.[17, 18] Similarly, drivers can receive incentives for delivering orders in areas specified by the platform, like orders that must be delivered farther away or in areas where few other drivers are accepting orders. Through these mechanisms, platforms are able to maximize participation in the service by capturing the business of those who are willing to pay more.

Through flexibility for drivers and merchants, delivery platforms reflect the market's willingness to pay for these services. However, this flexibility is dependent on the tools described in this section. The next section examines how recent regulatory efforts have impacted platforms' ability to use these tools.

FEE REGULATION

Despite the success of three-sided delivery markets, a number of legislative proposals have been introduced in various jurisdictions to regulate these services. These proposals respond to complaints that merchant commission fees and user delivery fees are too high, and driver pay

[17] "Introducing Priority Delivery and Restaurant Rewards Programs," Uber, June 15, 2020, https://www.uber.com/newsroom/introducing-priority-delivery-and-restaurant-rewards-programs/.
[18] "Making Our Platform Even More Transparent & Affordable for Customers," DoorDash, Inc., June 28, 2023, https://about.doordash.com/en-us/news/transparency-and-affordability.

rates are too low.[19, 20, 21] However, given the complexity associated with balancing these markets, poorly calibrated legislative efforts could jeopardize their long-term viability and survival.

In 2020, California voters passed Proposition 22, establishing the country's first minimum pay rate (120% of the state minimum wage) for drivers' "engaged time" with additional floors for per-mile compensation. The legislation opened the door for similar rules in other large cities and states. Seattle's city council followed with its own "PayUp" legislation in 2022, and New York City approved a similar policy in 2023. However, the specifics of each bill vary significantly, from the definition of workers covered under these policies to pay rates and structure.

While well-intentioned, these efforts can limit the flexibility of three-sided markets. These concerns are not purely hypothetical. Seattle's PayUp policy imposed a driver pay minimum above market rates when it went into effect in early 2024. Because these increased driver wages could not be paid at prior fee levels, the platforms said, they imposed additional fees on consumers' orders to help cover the wages. While these higher wages did, of course, incentivize more drivers to begin working, DoorDash said that customers ordered less frequently because of higher prices, leading to less work and longer wait times between orders for drivers.[22]

In July 2025, DoorDash announced a further fee increase for the Seattle area, citing an operating loss for the region in 2024. The platform claimed the market had the highest fees in the country (more than double those of cities like San Francisco and Portland), with longer wait times and a more than 20% decline in average hourly earnings for drivers compared to a year prior.[23] For customers, who value timeliness and freshness, restaurants, who value reputation

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[19] Laura Hayes, "D.C. Becomes Third City to Pass Law Temporarily Capping Food Delivery Commissions," *Washington City Paper,* May 5, 2020, https://washingtoncitypaper.com/article/174585/dc-becomes-third-city-to-pass-law-temporarily-capping-food-delivery-commissions/.

[20] New Jersey Legislature, Bill A5751, Regular Session 2022 to 2023, https://s3.amazonaws.com/fn-document-service/file-by-sha384/d6c8f311bc6aed2f40d7f90b16c237abd894bc5302c9fdc26b4c284d44792a053c3552bba437919505fd67ebf2115023.

[21] "App-Based Worker Minimum Payment Ordinance," Seattle Office of Labor Standards, May 31, 2022, https://www.seattle.gov/laborstandards/ordinances/app-based-worker-ordinances/app-based-worker-minimum-payment-ordinance.

[22] Jackie Kent, "Seattle Council May Revise Delivery Pay Law Following Restaurant, Gig Worker Controversy," *ABC 33/40 News,* March 29, 2024, https://abc3340.com/news/nation-world/seattle-council-may-revise-delivery-pay-law-following-restaurant-gig-worker-controversy-doordash-ubereats-instacart-payup-law-grocery-food-delivery-services-controversial-delivery-pay-ordinance-fight-the-fee-minimum-wage.

[23] "Extreme Regulations Lead to Price Increases in Seattle," DoorDash, July 18, 2025, https://about.doordash.com/en-us/news/extreme-regulations-lead-to-seattle-price-increases.

and customer satisfaction, and drivers, who value flexibility and strong compensation, these failures of the system can have substantial impacts on their satisfaction and desire to use the platform.

JUNK FEES

A separate but related question is whether food delivery charges should be regulated as "junk fees." Junk fees have been a hot topic of discussion in recent years, spanning areas from concert ticket fees to mortgage closing fees to hotel resort fees and beyond. Junk fees have gotten a bad reputation, and the delivery and service fees included in food delivery markets are often characterized as junk fees by activists. However, we do not consider the fees involved in many food delivery markets to fall in this category. This section will take a closer look at what junk fees are to explain their applicability to three-sided markets.

In recent years, several state-level bills targeted at junk fees have been enacted, but they have used varying policies (like fee restrictions or transparency requirements) to address concerns around the fees. Minnesota's HF3438, passed in 2024, prohibits businesses from adding service fees, health and wellness surcharges, or other mandatory charges to customers' bills, but still permits restaurants and hotels to add a mandatory gratuity (going directly to workers) if customers are notified beforehand.[24] Passed in 2023, California's SB 478 requires posted prices to include all mandatory fees, but follow-up legislation ensures that the law's application to restaurants and grocery stores is more limited.[25] As of fall 2025, a number of other states, including Connecticut and Massachusetts, have introduced policies requiring similar fee transparency.

To the public, there has been no consensus on the definition of a junk fee. Often, the lack of consensus around a definition means that the term is applied in whatever manner is most convenient in the current moment. For instance, the Biden White House emphasized transparency, defining them as "fees that are mandatory but not transparently disclosed."[26] By

[24] Madison McVan, "Governor Signs 'Junk Fee' Ban Into Law," *Minnesota Reformer,* May 20, 2024, https://minnesotareformer.com/2024/05/20/governor-signs-junk-fee-ban-into-law/.
[25] "Hidden Fees," California Department of Justice, Office of the Attorney General, October 7, 2023, https://oag.ca.gov/hiddenfees.
[26] "The Price Isn't Right: How Junk Fees Cost Consumers and Undermine Competition," The White House, March 5, 2024, https://bidenwhitehouse.archives.gov/cea/written-materials/2024/03/05/the-price-isnt-right-how-junk-fees-cost-consumers-and-undermine-competition/.

contrast, Senators Booker and Warren introduced legislation targeting junk fees, which they described as "excessive and unnecessary surcharges."[27]

For the purposes of this paper, there are several important characteristics that define a junk fee. First, the advertised price is different from the final price, with additional fees being presented late in the process or accounting for a large percentage of the total cost. These include charges not disclosed until after the collection of payment information, or any other practices that make direct price comparisons difficult for consumers. Second, the fees are not explained, identified, or attributed clearly and accessibly. Third, the fees are presented as conditional, but the condition cannot be avoided (for example, an electronic payment fee in a digital-only storefront).

Consider a hotel that promotes rooms at a cost of $200 per night, but adds a mandatory $50 resort fee at the end of the checkout process, after payment information has been entered. The hotel claims that the fee covers "operational costs" — vague expenses that most consumers would assume were included in the base price. This is a junk fee, because it is hidden, poorly explained, and unavoidable. These sorts of fees are a problem because they make it more difficult for consumers to make decisions about what option suits them best.

In many major U.S. metro areas, platforms present delivery fees early in the ordering process — alongside the restaurant's name and menu — and provide explanations of what fees are used for. Service fees, which include fees that go towards maintaining the delivery platform, are also often labeled and accessible in the shopping cart screen, before proceeding to checkout. It's important to note that these conditions can vary across geographic areas and different delivery platforms.[28] But in general, these charges do not meet the definitions of junk fees and are essential tools that help keep three-sided markets functioning.

[27] "Booker, Warren Introduce Legislation to End Predatory Junk Fees Imposed on Incarcerated Individuals and Their Families," Senator Cory Booker, May 23, 2024, https://www.booker.senate.gov/news/press/booker-warren-introduce-legislation-to-end-predatory-junk-fees-imposed-on-incarcerated-individuals-and-their-families.
[28] For this report, we considered major U.S. rapid delivery platforms but could not evaluate all options.

CONCLUSION

As society's ability to communicate and exchange information has evolved, so too have markets, unlocking new abilities for business and commerce. Three-sided markets, like food delivery platforms, represent a new form of market organization, providing consumers with new opportunities for convenience and choice that are made possible through technology. Food delivery platforms allow complex coordination between multiple parties — customers, restaurants, and delivery drivers — that is made possible through a platform and marketplace designed to make these transactions as frictionless as possible. They are novel because food delivery presents unique challenges that require speed, communication, and the involvement of several parties to achieve success.

Food delivery platforms are built on the same principles of supply and demand that organize all markets, and leverage flexibility in supply to accommodate uncertain and ever-changing conditions. The tools used by platforms like driver incentives and tiered commission structures help to create a self-stabilizing system that has the potential to grow quickly as demand rises. When operating successfully, these platforms provide real value, helping customers save time and effort while providing increased sales opportunities for restaurants and income for drivers.

However, these platforms are complex and potentially fragile. Regulations like price controls can limit these markets' tools to self-correct and, consequently, their ability to provide high-quality service, leading to worse outcomes for all parties. While fees can be frustrating for consumers, they serve a critical role in regulating demand and ensuring a sufficient supply of drivers to complete orders. As decades of economic research have indicated, these sorts of policies frequently have detrimental impacts on market performance that hurt everyone involved. For policymakers considering the function of these markets, they should consider not only how they benefit consumers, restaurants, and drivers, but also the principles that have made them successful to date.

ABOUT THE AUTHORS

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APPENDIX

Online food delivery services save time for consumers. The question is: How much? The best guide to how people spend their time is the American Time Use Survey (ATUS), conducted annually by the Bureau of Labor Statistics.[29] The ATUS reports both the percentage of people who are engaged in a particular activity on an average day and how much time they spend on that activity.

We can use the ATUS to develop an estimate of the benefits to consumers of food delivery platforms. There is no category that directly corresponds to "ordering food delivery." However, the ATUS does report "travel related to eating and drinking", which includes travel to restaurants and bars, but not travel to buy food and groceries (which is a separate category).

As of 2018-19, 22% of adult Americans engaged in travel related to eating and drinking on an average day, or 1.5 times per week. By comparison, as of 2023-24, that percentage had dropped to 16.8%, or slightly over once a week.

Combining this data with other ATUS data, we find that as of 2018-19, adult Americans spent an average of 42.1 hours per year traveling for eating and drinking, compared to 35.3 hours as of 2023-24, a 16% decline. Keeping in mind that there are roughly 270 million adult Americans, that's a reduction of 1.8 billion hours per year (Table A).

How much is that time worth? One research paper analyzing a large ridesharing database found the value of time to be $19 per hour in 2015 dollars. Updating for inflation brings us to $25 per hour.

[29] With the exception of 2020, when collection of the annual ATUS was suspended because of the pandemic.

TABLE A: VALUE OF REDUCED TIME IN TRAVEL RELATED TO EATING AND DRINKING		
	Time spent in travel time to and from "eating and drinking"	
	Per person (hours per year)	Total annual hours (millions)
2018-19	42.1	11363
2023-24	35.3	9522
Difference	6.8	1840
Value of time saved (at $25 per hour)		≈ $46 billion

Data: BLS American Time Use Survey; PPI calculations based on 270 million adult Americans, with a value of time equal to $25 per hour.

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A Tale of a Three-Sided Market: Understanding Online Food Delivery Services

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INTRODUCTION

In recent years, several state and local governments have passed or considered new regulations on services providing rapid delivery of items such as restaurant-prepared meals, groceries, and time-sensitive packages like medicine. These regulatory efforts are ostensibly intended to help consumers, workers, and businesses by forcibly lowering prices, raising wages, and eliminating "junk fees." Perversely, however, they run the risk of disrupting these complicated markets and actually hurting market participants. For example, New York City's experiment with fee caps led to reduced orders and revenue for small businesses, and the policy was ultimately rolled back.[1, 2]

In this paper, we examine and explain how these complicated "three-sided" markets work, facilitating near-simultaneous transactions between three different groups of economic actors: the merchants, the people doing the delivery, and the ultimate consumers. Such services require near-flawless coordination between the business providing the product and the people doing the delivery because of the time-sensitive nature of the goods being delivered. The result, if done well, is a huge increase in consumer welfare, in the form of time saved; an increase in flexible earning opportunities for individuals doing delivery and other related tasks, such as personal time to spend with loved ones or relaxing; and an increase in demand for restaurant meals and groceries by reaching new consumers who couldn't access the good or didn't know about the merchant previously.

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[1] Zhuoxin Li and Gang Wang, "Regulating Powerful Platforms: Evidence from Commission Fee Caps," Information Systems Research, June 22, 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3871514.
[2] Joe Guszkowski, "New York City Council Votes to Lift Cap on Delivery Fees," Restaurant Business, May 1, 2025, https://www.restaurantbusinessonline.com/technology/new-york-city-council-votes-lift-cap-delivery-fees.

The novel structure of these newly created markets has also sparked new questions and the interest of policymakers. For instance, how should compensation for delivery drivers be structured? How should consumers be informed about the costs associated with delivery? These questions — and any potential policy changes — should be considered in parallel with their impacts on the market functions of these platforms.

In this paper, we will first offer a basic explanation of how these marketplaces work, and why they benefit all the participants — the merchants who supply the products, consumers, and the people who handle the actual deliveries. Though some academic and corporate publications have focused on related topics, an easily accessible explanation is unfortunately missing from the public policy discussion.[3, 4, 5]

Then, we will look more closely at the price structure of three-sided delivery markets and show how fees and prices in these markets are structured. The section will directly address the ongoing debate about "junk fees" and the flurry of recent legislation at the state level.[6] Junk fees, affecting goods like hotels, concerts, and airplane tickets, have drawn sharp criticism in recent years from consumers and regulators.[7, 8] There is no agreed-upon definition of junk fees, but in one 2023 report, the Biden White House implicitly defined junk fees as "unnecessary, unavoidable, or surprise charges that inflate prices while adding little to no value."[9] Though regional variation makes definitive generalization challenging, most online food delivery fees do not fit these criteria.

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[3] Sina Bahrami et al., "The Three-Sided Market of on-Demand Delivery," Transportation Research Part E: Logistics and Transportation Review, October 18, 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3944559.
[4] Wenli Zhou et al., "Analysis of an On-Demand Food Delivery Platform: Participatory Equilibrium and Two-Sided Pricing Strategy," *Journal of the Operational Research Society,* July 28, 2023, https://www.tandfonline.com/doi/full/10.1080/01605682.2023.2239853.
[5] Robert Siegel, "The Complexity of Marketplaces — Tony Xu, CEO DoorDash," Medium, March 9, 2017, https://medium.com/the-industrialist-s-dilemma/the-complexity-of-marketplaces-tony-xu-ceo-doordash-61441cd25269.
[6] "Say Goodbye to 'Junk' Fees: A Wave of US and State Laws Target Hidden Fees," Dentons, March 6, 2024, https://www.dentons.com/en/insights/alerts/2024/march/6/say-goodbye-to-junk-fees.
[7] Emily Stuart, "Joe Biden Is Mad About Hidden Fees and You Should Be, Too," *Vox,* February 15, 2023, https://www.vox.com/policy-and-politics/2023/2/15/23599953/biden-junk-fee-protection-act-white-house-ticketmaster-resort.
[8] Justin Curto, "StubHub Sued Over Hidden Fees," *Vulture,* July 31, 2024, https://www.vulture.com/article/stubhub-sued-hidden-fees.html.
[9] "Guide for States: Cracking Down on Junk Fees to Lower Costs for Consumers," The White House, March 8, 2023 https://web.archive.org/web/20250118003201/https://www.whitehouse.gov/wp-content/uploads/2023/03/WH-Junk-Fees-Guide-for-States.pdf.

BASICS OF THREE-SIDED MARKETS

One of the hallmarks of economic growth is the ability to provide new goods and services for people at a price that they can afford and are willing to pay. Delivery of a small number of standardized food items, such as pizzas, has been possible for decades.[10] However, during the pandemic, people became used to having a much wider array of meals and food items delivered to their homes through app-based services. And in recent years, these app-based services have expanded to include delivery of other time-sensitive goods, like medicine and other household necessities. A form of three-sided market, these services have now become a routine part of daily commerce for many Americans.

Rapid delivery is unique because it exists to fulfill small, time-sensitive, one-time orders with drastically differing demand levels to an ever-changing array of destinations through a dynamic supply of drivers. While traditional delivery carriers like UPS, FedEx, or USPS are built largely on moving large quantities of non-perishable parcels on a predictable schedule through a highly centralized network, the needs for on-demand delivery are very different. An order from a traditional ecommerce platform like Amazon involves just two parties (a seller and a traditional delivery carrier) and ships from a pre-stocked warehouse on a flexible timeline. By contrast, a rapid delivery order requires three parties to coordinate in real-time within a window of minutes.

These markets have created unique opportunities and time savings for consumers. This section will take a closer look at one type of rapid delivery service — food delivery — to explain three-sided markets.

Here's one way of thinking about it: For all individuals — regardless of income level — time is money. Modern food delivery markets are attractive to customers because of the convenience that they provide and the time that they save. Because time is so valuable to everyone, from the lowest income earners to the highest, the opportunity to save time by not needing to travel to restaurants is attractive to all. This reality means that there are new opportunities for transactions to make this happen, as customers are willing to pay a bit more to save lots of time.

[10] The pizza delivery chain Domino's was founded in 1960, for example.

Here we will summarize our analysis of the value of time savings from food delivery services (the detailed analysis is in the appendix). In 2018-19, before the pandemic, the average adult American spent roughly 42.1 hours per year in travel time to and from "eating and drinking", according to time-use survey data from the Bureau of Labor Statistics (BLS).[11] That translated into a total of about 11 billion hours annually — time that could have been used for other activities.[12]

In 2023-24, by comparison, time spent traveling to and from "eating and drinking" was 16% lower or an average of 35.3 hours per year (Figure 1). In total, that came to about 9 billion hours annually, or roughly 2 billion hours less than in 2019. (This food-based example is likely an underestimate of the time savings from delivery services, which also include items such as groceries, pet supplies, diapers, and medicines.)

How much is that decline in travel time worth to consumers? Drawing on a research paper analyzing a large ridesharing database, we estimate the value of an hour of travel time at $25. Thus, the value of reduced travel time to and from "eating and drinking" in 2023-24 came to roughly $46 billion.[13]

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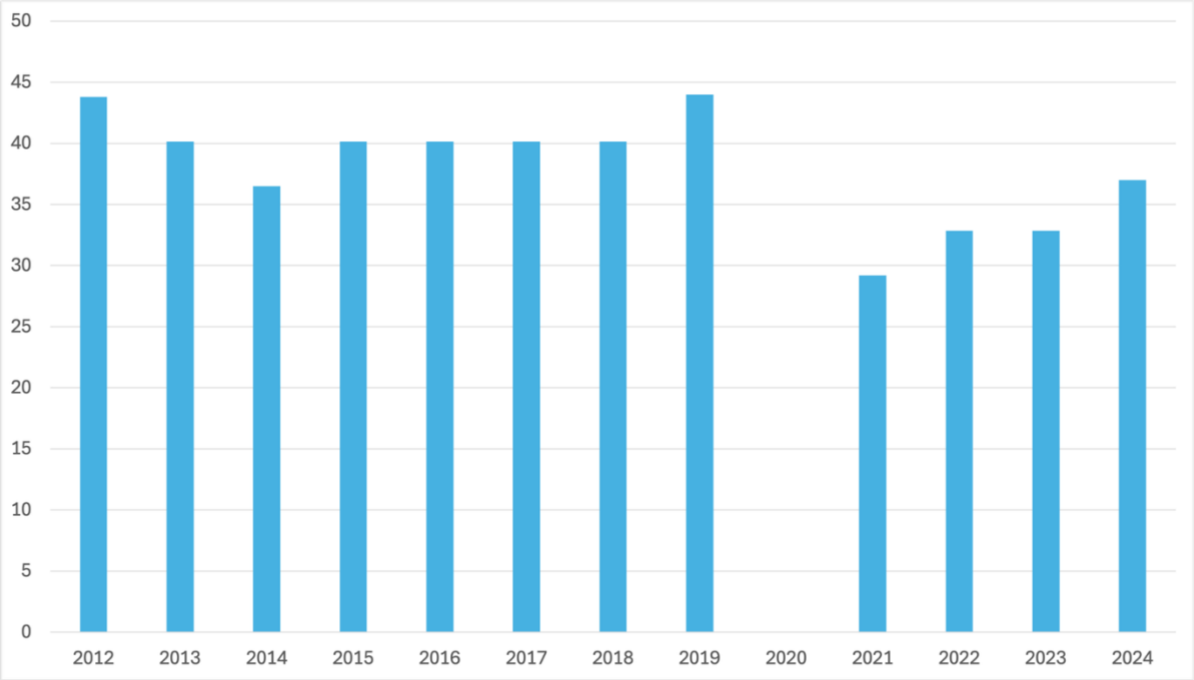
[11] "American Time Use Survey — 2024 Results," U.S. Bureau of Labor Statistics, June 26, 2025, https://www.bls.gov/news.release/atus.nr0.htm.
[12] PPI calculations using BLS data.
[13] "The Value of Time in the United States: Estimates from Nationwide Natural Field Experiments" (Ariel Goldszmidt et al., NBER Working Paper, December 2020, https://www.nber.org/papers/w28208) found the value of time to be $19 per hour in 2015 dollars. Updating for inflation brings us to $25 per hour.

FIGURE 1: TRAVEL RELATED TO EATING AND DRINKING (AVERAGE HOURS PER YEAR PER PERSON)



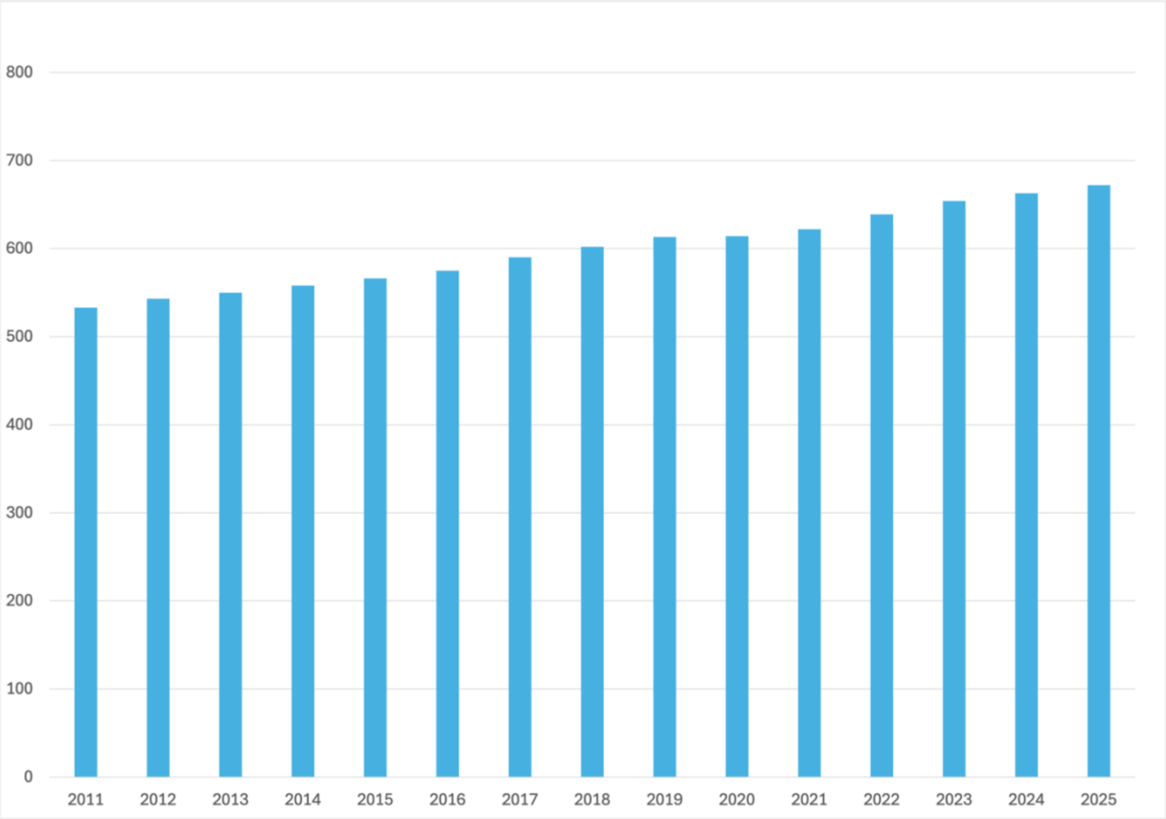
Data: BLS, PPI (2020 data unavailable because of pandemic)

This reduction in travel time, along with the gains to consumers, happened over the same period as an enormous expansion in the use of food delivery services. For example, DoorDash's total orders globally rose from 263 million in 2019 to 2.6 billion in 2024, and almost 3.2 billion in 2025.[14]

It should also be noted that the "eating and drinking" industry appears to have prospered in the era of online food delivery. After dropping precipitously during the pandemic, employment at restaurants and bars has recovered and now stands at 11.4 million, close to an all-time high. And there are now 670,000 eating and drinking establishments, up almost 10% from 2019 (Figure 2).

[14] "SEC Filings," DoorDash, Inc., accessed June 8, 2026, https://ir.doordash.com/financials/sec-filings/default.aspx.

FIGURE 2: EATING AND DRINKING ESTABLISHMENTS (THOUSANDS)



Data: BLS

THE NEED FOR COORDINATION

Where do these huge consumer welfare gains come from? Setting up a real-time delivery service for meals and other perishable items is a complicated and tricky endeavor. Most meals for delivery need to be prepared and delivered within narrow time windows. Moreover, demand for delivery is highly variable and unpredictable across locations, times of day, days of the week, and weeks of the year. In practice, this means many restaurants and stores, and especially small businesses, don't have the infrastructure to handle this endeavor, nor the money to individually pay delivery workers full-time.

Most commonly built around food and grocery delivery apps like DoorDash, Uber Eats, and Instacart, these ecosystems are notable because they facilitate coordination across many parties in ways that previously would not have been possible. The "three sides" in these markets represent each of the parties involved in these transactions — consumers, individuals doing delivery and custom shopping, and businesses such as restaurants — and are connected by the platform that facilitates transactions, matching supply and demand levels.

The value of these ecosystems is their function as a coordination mechanism to match varying levels of supply and demand across each of the three sides. The timeliness, unique to these three-sided markets, creates new possibilities for consumers, businesses, and workers.

WHY PEOPLE PARTICIPATE IN THREE-SIDED MARKETS

For customers, delivery gives them access to a wide array of meals, groceries, and other perishable items from the comfort of their own home, eliminating the need to travel to a restaurant to dine in person or pick up an order themselves. In exchange for this convenience (time saved, distance traveled, variety of options), consumers pay delivery and service fees. The platform gives consumers an organized marketplace to view available merchants and provides them information — in the form of delivery time and fees — that they can use to decide whether to place an order.

To better understand why people participate in three-sided markets, this section considers the example of a food delivery market from each of the three participants' perspectives. Similar but not identical considerations would hold for grocery delivery services.

Restaurants may choose to participate in a delivery service because of the expanded customer base that the platform provides. In exchange, restaurants pay a commission to the platform on each delivery. Moreover, platforms give restaurants a variety of different payment, delivery, and marketing options, letting stores decide whether it is worthwhile for them to continue offering deliveries on the platforms.

For many restaurants, three-sided delivery platforms are valuable because they are able to reach additional customers for a comparatively low price. Prior to the existence of platforms like DoorDash and Uber Eats, only a select few businesses — like pizza shops — offered delivery services. Though there are a number of reasons for this, the foremost reason is that operating an independent ordering and delivery service is extremely expensive. Doing so involves hiring drivers as employees to be on standby, because individual restaurants typically lack the order volume to attract on-demand contractors as a platform would. It also involves building the digital infrastructure to accept online orders and payments, routing drivers, providing customers with estimated-time-of-delivery (ETD), and potentially buying and maintaining delivery vehicles. Further, these operations are inflexible — drivers must be paid even when business is slow, and it is difficult to bring in additional drivers if demand is unexpectedly high. To put it another way, a single restaurant doesn't have the ability to tap into a platform of contractors interested in accepting, on demand, one-off tasks, so a restaurant's only option is to hire a driver as an employee to be at the restaurant ready for when an order comes in.

Three-sided markets present a far simpler proposition for restaurants. Restaurants get access to a larger pool of customers but do not have to bear the high costs of creating, maintaining, and staffing a delivery service. Further, these operations are more flexible and less risky because restaurants incur no additional costs when business is slow. For small businesses like restaurants, the economies of scale that come from delivery services make such an offering financially viable.

Drivers complete deliveries in exchange for payment for each order. Similar to restaurants, drivers benefit from the economies of scale that make operating a delivery service profitable. Platforms have invested significantly in sophisticated routing software that saves drivers time (and consequently makes them additional money) by making sure orders are ready in advance and allowing multiple deliveries along efficient routes. Drivers also get additional flexibility as compared to being an employee working a schedule in a traditional delivery system, like a pizza shop. Instead, drivers are classified as contractors, choosing to work whenever they decide and getting paid per delivery. With a sizable number of individuals working as delivery drivers as a second job or in their spare time, this schedule flexibility is a major factor for many.[15]

PRICING STRUCTURE AND THE THREE-SIDED MARKET BUSINESS MODEL

When a user opens up a delivery app and chooses their order, they are presented with several key pieces of information: the cost of the goods, a delivery ETD, and the associated delivery fees. Simultaneously, drivers can see the potential payments for taking on deliveries and choose to accept any order that they want to take on.

[15] "Dashers with Full-Time Jobs Value Supplemental Income and Flexible Hours," DoorDash, Inc., January 26, 2023, https://about.doordash.com/en-us/news/dashers-with-full-time-jobs-value-supplemental-income-and-flexible-hours.

Merchants have choices as well. Platforms offer a variety of different options for merchants beyond the most common delivery options: they can also provide stores with mobile ordering pick-up services, interface with businesses' existing delivery infrastructure, integrate with payment infrastructure, offer promotional and advertising options, and more. The two largest delivery platforms, DoorDash and Uber Eats, have multiple options for their core delivery services, each with varying levels of commission fees in exchange for other forms of promotion, fee structure, and delivery priority.

Platforms differ in their approach to managing changes in supply and demand. Across all platforms, though, technology and mobile devices allow responses to changing conditions that would not otherwise be possible. Without these tools, platforms would struggle to address changes in driver availability, restaurant capacity, and order volume, meaning slower deliveries and a worse experience for all participants.

THE STABILITY OF THREE-SIDED MARKETS

Delivery markets require tight coordination of supply and demand to ensure goods are delivered on time and at a reasonable cost. For some types of merchants, like restaurants, even for dine-in service, it's difficult to staff appropriately and buy the right amount of provisions to meet demand. Restaurants manage this demand with reservations and lines.

Delivery adds another logistical challenge: driver availability. Shortfalls can slow delivery, depress orders, and potentially trigger a feedback loop of customer dissatisfaction and fewer orders that reduce merchant and driver participation. When there are enough drivers at a given time, merchants don't always have a guarantee that they will have enough business in a given day or time period to justify keeping the driver working.

Table 1: Balancing Supply and Demand in a Three-Sided Market		
Price/policy lever	**If set too low**	**If set too high**
Driver pay/per-order payout	Fewer drivers online → slower/unreliable delivery → consumers and merchants stop participating	Higher costs passed to consumers/merchants → order volume drops; merchant revenue falls → merchants stop participating; fewer driver opportunities with fewer orders
Merchant commission	Platform margins decrease → platforms lower driver pay or increase fees to compensate → fewer drivers, slower delivery; fewer orders	Lower merchant participation → less selection → lower consumer demand; consumer orders drop → fewer driver opportunities with fewer orders
Consumer fees	Platform margins decrease → platforms reduce capabilities or lower driver pay to compensate → fewer drivers, slower delivery → consumers and merchants stop participating	Higher all-in prices for consumers → order volume drops → merchant revenue falls and merchants stop participating → fewer driver opportunities with fewer orders and merchants

As a result, online delivery platforms have to pay special attention to making sure supply and demand are roughly in balance (Table 1). A key feature of the business models of multisided markets is that drivers are considered independent contractors rather than employees. Among the many implications this has for platforms, the fact that drivers are not bound to a set schedule and use their own vehicles for delivery plays a significant role in how and why drivers choose to work. Drivers are free to begin working at any time and continue for a duration of their choosing, with real-time information about prices and demand. They do not require lengthy training, authorization from the company, company vehicles, scheduling, or salary dilemmas, or face the other logistical complexities that standard employees would. This has allowed for the rapid expansion of new drivers scaling to increased demand as compared to a traditional employee-based approach.

For many drivers, delivery is a supplemental form of income rather than their main source.[16] It is easy for drivers to start delivering quickly and to do so for short periods of time when it is convenient for them. It also means that drivers may not be heavily dependent on driving as their source of income. In sum, because drivers can pick their schedule, see payments in real-time, do not rely on delivery as their sole income source, and because new drivers can sign up quickly, driver supply is highly elastic and responsive to prices.

Different types of merchants also face unique constraints. Though restaurants have less ability to respond to changes in demand in the short run, they have unique options surrounding price structure, which give them flexibility. Restaurants are responsible for a variety of ongoing, fixed costs like paying staff on a scheduled basis and ordering ingredients and other materials in advance. These costs mean that restaurants cannot rapidly decide to open or close based on demand or price levels like drivers and consumers are able to.

However, the multiple options discussed previously give restaurants a choice of how to allocate their resources. For example, a new restaurant that is looking to expand may choose to pay a higher commission in exchange for lower delivery fees for customers. New customers might be more willing to try a new restaurant if the costs are low, and for these types of restaurants, low profits might be worth the additional volume of orders and potential for future growth. By

[16] "Dashers with Full-Time Jobs."

comparison, an established restaurant that already has a local reputation for good food may choose to pay a lower commission in exchange for higher delivery fees for customers. For this sort of business, there is no need to give the platform a larger share of sales in exchange for advertising and promotion in the app.

Because three-sided markets depend on reasonable prices and maximizing participation, these markets entice consumers and merchants to participate by offering a variety of ways to structure their costs, giving consumers the option to pay a premium for faster service. For consumers, Uber Eats provides an option to pay an additional fee at checkout to have their orders prioritized. During busy times, drivers may pick up multiple orders at once from a single merchant and deliver them consecutively to increase driver efficiency, but that may potentially come at the cost of a longer delivery time for consumers. Uber and DoorDash both offer the option for prioritized handling to help secure a faster delivery, getting consumers who are willing to do so to pay more for a premium or higher quality experience.[17, 18] Similarly, drivers can receive incentives for delivering orders in areas specified by the platform, like orders that must be delivered farther away or in areas where few other drivers are accepting orders. Through these mechanisms, platforms are able to maximize participation in the service by capturing the business of those who are willing to pay more.

Through flexibility for drivers and merchants, delivery platforms reflect the market's willingness to pay for these services. However, this flexibility is dependent on the tools described in this section. The next section examines how recent regulatory efforts have impacted platforms' ability to use these tools.

FEE REGULATION

Despite the success of three-sided delivery markets, a number of legislative proposals have been introduced in various jurisdictions to regulate these services. These proposals respond to complaints that merchant commission fees and user delivery fees are too high, and driver pay

[17] "Introducing Priority Delivery and Restaurant Rewards Programs," Uber, June 15, 2020, https://www.uber.com/newsroom/introducing-priority-delivery-and-restaurant-rewards-programs/.
[18] "Making Our Platform Even More Transparent & Affordable for Customers," DoorDash, Inc., June 28, 2023, https://about.doordash.com/en-us/news/transparency-and-affordability.

rates are too low.[19, 20, 21] However, given the complexity associated with balancing these markets, poorly calibrated legislative efforts could jeopardize their long-term viability and survival.

In 2020, California voters passed Proposition 22, establishing the country's first minimum pay rate (120% of the state minimum wage) for drivers' "engaged time" with additional floors for per-mile compensation. The legislation opened the door for similar rules in other large cities and states. Seattle's city council followed with its own "PayUp" legislation in 2022, and New York City approved a similar policy in 2023. However, the specifics of each bill vary significantly, from the definition of workers covered under these policies to pay rates and structure.

While well-intentioned, these efforts can limit the flexibility of three-sided markets. These concerns are not purely hypothetical. Seattle's PayUp policy imposed a driver pay minimum above market rates when it went into effect in early 2024. Because these increased driver wages could not be paid at prior fee levels, the platforms said, they imposed additional fees on consumers' orders to help cover the wages. While these higher wages did, of course, incentivize more drivers to begin working, DoorDash said that customers ordered less frequently because of higher prices, leading to less work and longer wait times between orders for drivers.[22]

In July 2025, DoorDash announced a further fee increase for the Seattle area, citing an operating loss for the region in 2024. The platform claimed the market had the highest fees in the country (more than double those of cities like San Francisco and Portland), with longer wait times and a more than 20% decline in average hourly earnings for drivers compared to a year prior.[23] For customers, who value timeliness and freshness, restaurants, who value reputation

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[19] Laura Hayes, "D.C. Becomes Third City to Pass Law Temporarily Capping Food Delivery Commissions," *Washington City Paper,* May 5, 2020, https://washingtoncitypaper.com/article/174585/dc-becomes-third-city-to-pass-law-temporarily-capping-food-delivery-commissions/.

[20] New Jersey Legislature, Bill A5751, Regular Session 2022 to 2023, https://s3.amazonaws.com/fn-document-service/file-by-sha384/d6c8f311bc6aed2f40d7f90b16c237abd894bc5302c9fdc26b4c284d44792a053c3552bba437919505fd67ebf2115023.

[21] "App-Based Worker Minimum Payment Ordinance," Seattle Office of Labor Standards, May 31, 2022, https://www.seattle.gov/laborstandards/ordinances/app-based-worker-ordinances/app-based-worker-minimum-payment-ordinance.

[22] Jackie Kent, "Seattle Council May Revise Delivery Pay Law Following Restaurant, Gig Worker Controversy," *ABC 33/40 News,* March 29, 2024, https://abc3340.com/news/nation-world/seattle-council-may-revise-delivery-pay-law-following-restaurant-gig-worker-controversy-doordash-ubereats-instacart-payup-law-grocery-food-delivery-services-controversial-delivery-pay-ordinance-fight-the-fee-minimum-wage.

[23] "Extreme Regulations Lead to Price Increases in Seattle," DoorDash, July 18, 2025, https://about.doordash.com/en-us/news/extreme-regulations-lead-to-seattle-price-increases.

and customer satisfaction, and drivers, who value flexibility and strong compensation, these failures of the system can have substantial impacts on their satisfaction and desire to use the platform.

JUNK FEES

A separate but related question is whether food delivery charges should be regulated as "junk fees." Junk fees have been a hot topic of discussion in recent years, spanning areas from concert ticket fees to mortgage closing fees to hotel resort fees and beyond. Junk fees have gotten a bad reputation, and the delivery and service fees included in food delivery markets are often characterized as junk fees by activists. However, we do not consider the fees involved in many food delivery markets to fall in this category. This section will take a closer look at what junk fees are to explain their applicability to three-sided markets.

In recent years, several state-level bills targeted at junk fees have been enacted, but they have used varying policies (like fee restrictions or transparency requirements) to address concerns around the fees. Minnesota's HF3438, passed in 2024, prohibits businesses from adding service fees, health and wellness surcharges, or other mandatory charges to customers' bills, but still permits restaurants and hotels to add a mandatory gratuity (going directly to workers) if customers are notified beforehand.[24] Passed in 2023, California's SB 478 requires posted prices to include all mandatory fees, but follow-up legislation ensures that the law's application to restaurants and grocery stores is more limited.[25] As of fall 2025, a number of other states, including Connecticut and Massachusetts, have introduced policies requiring similar fee transparency.

To the public, there has been no consensus on the definition of a junk fee. Often, the lack of consensus around a definition means that the term is applied in whatever manner is most convenient in the current moment. For instance, the Biden White House emphasized transparency, defining them as "fees that are mandatory but not transparently disclosed."[26] By

[24] Madison McVan, "Governor Signs 'Junk Fee' Ban Into Law," *Minnesota Reformer,* May 20, 2024, https://minnesotareformer.com/2024/05/20/governor-signs-junk-fee-ban-into-law/.
[25] "Hidden Fees," California Department of Justice, Office of the Attorney General, October 7, 2023, https://oag.ca.gov/hiddenfees.
[26] "The Price Isn't Right: How Junk Fees Cost Consumers and Undermine Competition," The White House, March 5, 2024, https://bidenwhitehouse.archives.gov/cea/written-materials/2024/03/05/the-price-isnt-right-how-junk-fees-cost-consumers-and-undermine-competition/.

contrast, Senators Booker and Warren introduced legislation targeting junk fees, which they described as "excessive and unnecessary surcharges."[27]

For the purposes of this paper, there are several important characteristics that define a junk fee. First, the advertised price is different from the final price, with additional fees being presented late in the process or accounting for a large percentage of the total cost. These include charges not disclosed until after the collection of payment information, or any other practices that make direct price comparisons difficult for consumers. Second, the fees are not explained, identified, or attributed clearly and accessibly. Third, the fees are presented as conditional, but the condition cannot be avoided (for example, an electronic payment fee in a digital-only storefront).

Consider a hotel that promotes rooms at a cost of $200 per night, but adds a mandatory $50 resort fee at the end of the checkout process, after payment information has been entered. The hotel claims that the fee covers "operational costs" — vague expenses that most consumers would assume were included in the base price. This is a junk fee, because it is hidden, poorly explained, and unavoidable. These sorts of fees are a problem because they make it more difficult for consumers to make decisions about what option suits them best.

In many major U.S. metro areas, platforms present delivery fees early in the ordering process — alongside the restaurant's name and menu — and provide explanations of what fees are used for. Service fees, which include fees that go towards maintaining the delivery platform, are also often labeled and accessible in the shopping cart screen, before proceeding to checkout. It's important to note that these conditions can vary across geographic areas and different delivery platforms.[28] But in general, these charges do not meet the definitions of junk fees and are essential tools that help keep three-sided markets functioning.

[27] "Booker, Warren Introduce Legislation to End Predatory Junk Fees Imposed on Incarcerated Individuals and Their Families," Senator Cory Booker, May 23, 2024, https://www.booker.senate.gov/news/press/booker-warren-introduce-legislation-to-end-predatory-junk-fees-imposed-on-incarcerated-individuals-and-their-families.
[28] For this report, we considered major U.S. rapid delivery platforms but could not evaluate all options.

CONCLUSION

As society's ability to communicate and exchange information has evolved, so too have markets, unlocking new abilities for business and commerce. Three-sided markets, like food delivery platforms, represent a new form of market organization, providing consumers with new opportunities for convenience and choice that are made possible through technology. Food delivery platforms allow complex coordination between multiple parties — customers, restaurants, and delivery drivers — that is made possible through a platform and marketplace designed to make these transactions as frictionless as possible. They are novel because food delivery presents unique challenges that require speed, communication, and the involvement of several parties to achieve success.

Food delivery platforms are built on the same principles of supply and demand that organize all markets, and leverage flexibility in supply to accommodate uncertain and ever-changing conditions. The tools used by platforms like driver incentives and tiered commission structures help to create a self-stabilizing system that has the potential to grow quickly as demand rises. When operating successfully, these platforms provide real value, helping customers save time and effort while providing increased sales opportunities for restaurants and income for drivers.

However, these platforms are complex and potentially fragile. Regulations like price controls can limit these markets' tools to self-correct and, consequently, their ability to provide high-quality service, leading to worse outcomes for all parties. While fees can be frustrating for consumers, they serve a critical role in regulating demand and ensuring a sufficient supply of drivers to complete orders. As decades of economic research have indicated, these sorts of policies frequently have detrimental impacts on market performance that hurt everyone involved. For policymakers considering the function of these markets, they should consider not only how they benefit consumers, restaurants, and drivers, but also the principles that have made them successful to date.

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APPENDIX

Online food delivery services save time for consumers. The question is: How much? The best guide to how people spend their time is the American Time Use Survey (ATUS), conducted annually by the Bureau of Labor Statistics.[29] The ATUS reports both the percentage of people who are engaged in a particular activity on an average day and how much time they spend on that activity.

We can use the ATUS to develop an estimate of the benefits to consumers of food delivery platforms. There is no category that directly corresponds to "ordering food delivery." However, the ATUS does report "travel related to eating and drinking", which includes travel to restaurants and bars, but not travel to buy food and groceries (which is a separate category).

As of 2018-19, 22% of adult Americans engaged in travel related to eating and drinking on an average day, or 1.5 times per week. By comparison, as of 2023-24, that percentage had dropped to 16.8%, or slightly over once a week.

Combining this data with other ATUS data, we find that as of 2018-19, adult Americans spent an average of 42.1 hours per year traveling for eating and drinking, compared to 35.3 hours as of 2023-24, a 16% decline. Keeping in mind that there are roughly 270 million adult Americans, that's a reduction of 1.8 billion hours per year (Table A).

How much is that time worth? One research paper analyzing a large ridesharing database found the value of time to be $19 per hour in 2015 dollars. Updating for inflation brings us to $25 per hour.

[29] With the exception of 2020, when collection of the annual ATUS was suspended because of the pandemic.

TABLE A: VALUE OF REDUCED TIME IN TRAVEL RELATED TO EATING AND DRINKING		
	Time spent in travel time to and from "eating and drinking"	
	Per person (hours per year)	Total annual hours (millions)
2018-19	42.1	11363
2023-24	35.3	9522
Difference	6.8	1840
Value of time saved (at $25 per hour)		≈ $46 billion

Data: BLS American Time Use Survey; PPI calculations based on 270 million adult Americans, with a value of time equal to $25 per hour.

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