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Payment Strategies

BRIEF

Solving Real Pain Points: How Parking Apps Drive Mobile Payment Adoption

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Paying for parking is often a common pain point associated with driving for many drivers, including myself, especially if you live and drive around a city. It typically requires adding exact change to a meter or searching for one that accepts credit cards, and worrying about when it will expire. Recently, more mobile apps to pay for parking have been emerging across the United States, helping to alleviate some of the frustration. Consumer adoption and implementation of mobile parking apps have been growing in large and small cities and towns. Once registered, commuters are likely to use the apps on a daily basis. Parking apps can provide benefits to customers and operators. They offer drivers a more convenient way to pay for parking, and help parking operators collect revenue more efficiently.

A simpler way for customers to pay for parking

Paying for public parking has become one of the top usages for mobile payment – nearly one-in-five U.S. consumers (19%) paid for parking via mobile, according to Deloitte's *2015 Global Mobile Consumer Survey*.[1] ParkMobile and PayByPhone are two examples of mobile parking apps that offer consumers an easier way to pay and manage meter time.

To pay for parking via smartphone, a driver first registers by downloading the app and entering his name, license plate number, mobile phone number (which becomes his account number), PIN, and a credit or debit card.[2] (Some mobile parking apps also accept digital wallets, such as PayPal and Visa Checkout, or a prepaid account for funding.[3]) To initiate a transaction, the user manually enters the parking location (e.g., zone number listed on meter decal) and required parking time, and confirms payment. In some municipalities (e.g., San Francisco and Seattle), users can scan or tap parking signs containing QR codes

[1] Deloitte (2015). *2015 Global Mobile Consumer Survey: US Edition – The rise of the always-connected consumer*. Retrieved from http://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-global-mobile-executive-summary-2015.pdf.

[2] Users can also access their mobile parking account via mobile web browser. Some solution providers also offer customers the option to call a free interactive voice response number to set-up an account.

[3] To pay with a prepaid account (e.g., ParkMobile Wallet), the customer's parking transactions are deducted from that balance instead of being individually charged to the customer's credit or debit card. When the prepaid balance reaches $0, the customer's primary credit/debit card on file will be charged the amount he has chosen as the load amount to replenish the balance.

and near field communication (NFC) technology[4] to launch the app and automatically prepopulate the parking location and space number. Mobile app users are subject to maximum time that the meter allows (e.g., a maximum of two hours for most city meters), but receive notification when their parking session is about to expire, and have the option to add more time remotely to reduce the risk of getting parking citations. Mobile parking users also receive electronic receipts via email, and can view their mobile parking transaction history via the app and online. Drivers may use their mobile parking app in multiple locations, and even different cities, because some solution providers partner with numerous municipalities.

A more efficient way for municipalities to manage parking

Municipalities can reduce cash handling costs by accepting mobile payments for parking. Mobile parking apps do not require new equipment and associated maintenance costs. Upfront expenses are limited to signage and meter stickers with instructions to drivers on how to use the service. Mobile parking solution providers typically do not charge monthly fees, but take a small percentage of each parking transaction. Municipalities in 40 states and Washington, DC currently offer mobile payment parking apps.[5]

Another potential value to municipalities is the ability to easily integrate their parking enforcement and mobile parking software platforms. This enables parking enforcement officers to view their handheld devices to determine which vehicles paid for parking via mobile app. The systems are updated in real-time. Most solutions offer multiple search options, including search by license plate number or space number. Similar to any new payment technology, initial implementation requires adequate staff training and consumer preparation. For example, the mobile parking app cannot change the meter to reflect a driver's paid time, so parking enforcement officers need to become accustomed to entering license plates numbers into their handheld devices to determine a vehicle's payment status.

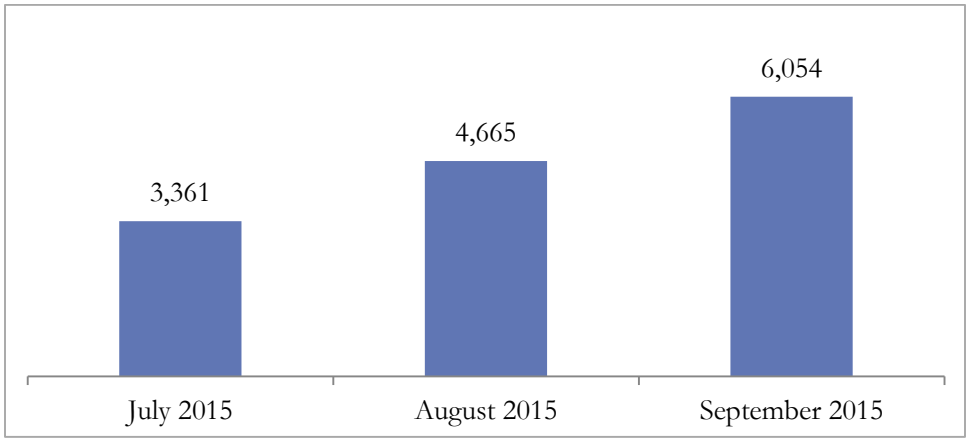
Mobile parking around Boston

In January 2015, Boston launched the *ParkBoston* mobile parking app. The app has been well received by drivers who park in Boston, as demonstrated by growing adoption. Over 130,000 downloads of the app have occurred since January, and it is now used more than 8,000 times a day.[6] Figure 1 shows the average number of transactions per day has been increasing month-over-month, while a one-day high of

[4] Meters displaying NFC stickers are not equipped with contactless readers or wireless connectivity. The NFC stickers contain a unique identifier that tells the app what meter it is, and allows users with NFC phones to enter the parking location manually.
[5] Number of states and municipalities based on data from www.parkmobile.com and www.paybyphone.com.
[6] Shenoy, R. (2015, October 26). *Can Smartphone Apps Tame Boston's Hellish Traffic? Will They Yield More Tickets?* WGBH News. Retrieved from http://wgbhnews.org/post/can-smartphone-apps-tame-bostons-hellish-traffic-will-they-yield-more-tickets.

8,571 transactions was reached on October 8, 2015.[7] Users pay a $0.15 convenience fee for each mobile payment parking transaction, but customers are clearly informed of the fee before confirming the payment. The city hopes the technology can help reduce parking enforcement costs.

Figure 1. Number of daily ParkBoston transactions[8]



To update its transit parking services, the MBTA in July 2015 eliminated its honor box payment system (which required T-riders to fold individual dollar bills and stuff them into tiny slots in the box) at about 80 parking lots, and encouraged customers to sign up for the PayByPhone parking app. According to the MBTA, critical mass had been achieved at the time of conversion with 75% of its parking lot customers already using the mobile parking app.[9] T-riders who can pay for parking via mobile experience several benefits. Mobile parking saves time by eliminating the need to carry dollar bills to insert into a box. If a commuter arrives late to the train station, having to pay cash for parking may result in missing the train. Instead, using a mobile parking app enables a commuter to pay for parking while on the train. However, for T-riders who prefer not to pay for parking via their smartphones, the MBTA provides options to pay by calling an automated system, purchase a monthly permit, or receive a monthly invoice.

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[7] Shenoy, R. (2015, October 26). *Can Smartphone Apps Tame Boston's Hellish Traffic? Will They Yield More Tickets?* WGBH News. Retrieved from http://wgbhnews.org/post/can-smartphone-apps-tame-bostons-hellish-traffic-will-they-yield-more-tickets.
[8] Shenoy, R. (2015, October 26). *Can Smartphone Apps Tame Boston's Hellish Traffic? Will They Yield More Tickets?* WGBH News. Retrieved from http://wgbhnews.org/post/can-smartphone-apps-tame-bostons-hellish-traffic-will-they-yield-more-tickets.
[9] Pattani, A. (2015, June 15). *MBTA to eliminate honor box payment system for parking lots*. The Boston Globe. Retrieved from https://www.bostonglobe.com/metro/2015/06/15/mbta-eliminate-honor-box-payment-system-for-parking-lots/aRl6U5DMQAVh4JYaxEetpJ/story.html.

Opportunities for improvement

Despite the convenience that mobile parking apps afford parking customers and providers, there are still opportunities to increase the apps' capabilities and robustness. For example, transit agencies and mobile parking solution providers could collaborate to combine the mobile payment process for transit fare and parking fees into one app. Currently, transit riders must download separate mobile apps for ticketing and parking, and conduct two transactions. A combined mobile app would create greater efficiency for customers. Better use of alerts, similar to notifications of parking sessions expiring soon, can also improve parking experiences for customers. Examples include warning of parking restrictions (e.g., street cleaning, overnight resident parking, commercial vehicle loading, valet zone, construction or special events), which could possibly be created using geolocation or other mobile technology.

Mobile parking apps yield a substantial amount of customer data that could be useful to the municipality for planning purposes, including route planning, congestion relief, and turnover improvements so more people can access parking in an expedited manner. Using the data for targeted parking enforcement (i.e., using information from the mobile parking app to plan where and when to deploy parking enforcement officers) is also feasible. However, this use would have to be weighed against the risk that it would deter some people from using the mobile parking app to avoid potential privacy concerns.

Takeaways

- The success of mobile parking apps is growing because they help address specific pain points that drivers experience with paying for parking.
- Since paying for parking is habitual, mobile payments for parking can serve as a trigger to influence change in consumer payment behavior.
- The convenience and positive experiences provided by mobile payments for parking can build awareness and encourage consumers to use mobile payments in other retail locations.