

Insights on GrabTaxi: An Alternative Ride Service in Thailand

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ABSTRACT

With the emergence of technology integration and long-existent complaints from passengers and taxi drivers, demands for alternative ride services have seen a momentum in many urban cities. GrabTaxi, the taxi booking mobile application that first debut in Malaysia, is now operating in Thailand. Since GrabTaxi is fairly new in the Thai taxi market, the influential factors and motives behind Thai passengers' usage of and drivers' participation in this alternative ride service and concerns and challenges toward its operation have not yet been studied in depth. Through a literature review, the results of an online survey with 198 Thai passengers, and on-sight interviews with seven taxi drivers, this study presents important insights, particularly on views of market demand and market supply.

Keywords: passenger; taxi driver; alternative ride service; influential factor; challenge

INTRODUCTION

In most urban cities, getting a taxi that is reliable and safe drive can be a major challenge. Being overcharged, refused to go by meters, refused to take passengers, did not know the directions, and lacked of service mind are some common scams that most of taxi passengers have long suffered (Spencer, 2014; Wiseman, 2014; Taxi Singapore, n.a.). Some cases have even escalated into forms of crime (Yaniv, 2014; Herrera, 2013; Malm, 2013).

Bangkok is Thailand's capital city and one of the world's most populated cities; every day, millions of people commute around the city and many predominantly rely on taxis and public transportation (Thailand Transport Portal, 2014). According to the general director of the Land and Transport Department, there are approximately 110,000 registered traditional taxis currently on the road, and on average people take taxis three to five times a week (Thairath, 2014). The numbers appear promising, but as a result of many complaints—in which more than 34,000 complaints had been reported against taxi drivers during the first nine months of 2014—Thai passengers have thus revealed their disappointment with traditional taxi services and the performance of the taxi market does not meet their expectations (Thepbamrung, 2013; Phacharat, 2014). Rudeness, reckless driving, refusing passengers, and lack of reliability from taxi drivers constitute the majority of the complaints (Cybermax, 2013). What's more, on the other hand, taxi drivers also feel distressed and worried about the current situation as well. Many have raised their voices about higher initial costs of car rental fees, gasoline, and

additional burdens when a number of passengers turn them down in the middle of a ride and at the heart of traffic jam; in these circumstances, they make hardly enough revenues. To some extent, these affect the quality of their services (Voice of Taxi, 2014).

The poor experiences of Thai passengers and the difficulties faced by taxi drivers have created tension and frustration among passengers, taxi drivers, and the Thai taxi market. The third-party transportation technology-based applications, namely Uber, Easy Taxi, and GrabTaxi have considered these in building opportunities and have recently been dispatched as alternative ride services in Thailand.

To be very precise, this study only focuses on GrabTaxi, a taxi booking mobile application with origins in Malaysia. The background of GrabTaxi, the perspectives and behaviors of passengers and taxi drivers, the influential factors, and ongoing concerns as well as challenges are highlighted through the lens of a literature review, the online survey, and the on-site interviews.

CONTEXT

2.1 GrabTaxi: The fastest, safest, and largest taxi-booking app in Southeast Asia

The initial idea for GrabTaxi came up when a classmate of Anthony Tan, the group's CEO and co-founder, visited Malaysia and experienced an unpleasant journey in a local taxi. His friend's grievances triggered a response from Tan, the grandson of a taxi driver; he began to think about what was wrong with the taxi services in Malaysia and how they could improve. When Tan returned to Harvard, he and his team drew up a business plan for a mobile application that assigned available taxis nearby to passengers by using online mapping and location sharing. With the viability and social issues addressed, the business plan was given a runner-up award at the Harvard Business School's 2011 Business Plan Contest (Pornwasin, 2014; Phillip, 2014).

In June 2012 and back in Malaysia, Tan and his team turned the award-winning idea into a fully functional business called MyTeksi—nowadays known as GrabTaxi. Quickly following its launch, GrabTaxi has changed the dynamics of taxi services, having expanded its businesses and rapidly grown to be the fastest, safest, and largest taxi booking mobile application in the Southeast Asian region (Phillip, 2014). The company thus far operates in seventeen cities across six countries, including Malaysia, the Philippines, Thailand, Singapore, Vietnam, and Indonesia, with secured financial funds of over 90 million USD (GrabTaxi, 2014; Holliday, 2014). To date, there have been 2.5 million downloads, 500,000 monthly active users, and 60,000 taxi drivers counted on the GrabTaxi system, with an average of three bookings per second made from somewhere in those operating countries (Ferguson, 2014). According to Tan, as smartphone usage is projected to grow further in Asia, the demand for taxi booking mobile application service, as a consequence, will continue to rise. Thus, GrabTaxi aims

to accelerate its gains and spread its fleets, offering safer and more efficient transport service to all and becoming a leader in Asia (GrabTaxi, 2014).

2.2 GrabTaxi, Thailand

GrabTaxi first debuted in Bangkok in October of 2013. It was the first taxi booking mobile application to enter into the Thai market and introduced Thai passengers to booking taxis through smart devices. With the company's strong social missions of improving the lives of Thai passengers and taxi drivers, as well as revolutionizing the Thai taxi market, GrabTaxi quickly made its mark in the Thai taxi market (GrabTaxi, 2014). "One of our goals is to lower the costs and increase revenue, our system cares about the ecosystem in the taxi industry—the taxi owner, the driver and the passenger. Our system helps taxi owners and taxi drivers reduce costs and increase overall revenues, since they do not need to drive around, or towards a traffic jam to find a fare, and now they have a choice to pick up the nearest passengers. In addition, speed, safety, and certainty are all times our promises to deliver to the passengers," says Juthasree Kuvinihckul, a co-founder and director of GrabTaxi Thailand. GrabTaxi aims to partner with thirty percent of the existing 110,000 taxis in Bangkok in order to serve around one-third of the 2 million who take daily taxi journeys for the upcoming years (Pornwasin, 2014).

How does GrabTaxi work? According to GrabTaxi, the company utilizes simple, cost-effective mobile-based technology in both supply (taxi fleet and drivers) and demand (passengers). To be part of the service, the existing taxi driver have to register with GrabTaxi, pass a background check, and carry a smart device/smartphone with the installed of GrabTaxi application. At this point, there might be some drivers who do not own smart device but wish to serve on the GrabTaxi platform; the company supports them by micro-financing smart devices, in which the fees would be deducted from monthly installments. On the customers' end, passengers would need to download the GrabTaxi application, register, and create their own profiles. Once customers have successfully registered and desire to book a taxi, they simply activate the application, and the system will automatically display all available taxis from within a specified range on the online map. The customers must then insert their desired destination to complete their booking, and with less than a minute, their booking confirmation, along with the driver's name and contact details, vehicle registration number, and estimation of arrival time will be sent to them. In the case that more than one taxi would be willing to take the job, the taxi drivers would need to bid for the job, with the one who is nearest and has the highest rate in the system likely to get the assignment.

Although the application is free to download and available on all major operating systems, including iOS, Android, and Windows, GrabTaxi Thailand also accepts direct booking through its call center.

Where is GrabTaxi available? After just over a year of operation, GrabTaxi can now be easily spotted anywhere in metro Bangkok, the company has also expanded its services into premium rides with GrabCar, and Pattaya being its latest destination (GrabTaxi, 2014; Barrow, 2014).

How much does GrabTaxi cost? While riding, all the passengers have to pay is the actual metered fare and an additional 25 baht booking fee, in which 20 baht goes directly to the driver and 5 baht goes to the company (32 baht being equivalent to 1 USD as of December 2014). This booking fee is meant to cover the expenses of a taxi driver's commute to a passenger's location and to cover the costs of the operating system, and the meter only starts once the passenger is on board. The fare may be paid either by cash or by credit card and many promo codes may be used to discount the fare. Indeed, that is all for the riding costs. However, for the service provider, besides the obvious costs of car rental fee and gasoline, there is also a prepaid cost that taxi drivers have to install in order to become part of the fleet and active players in the GrabTaxi system. Each time a taxi driver gets a booking, the company will deduct a small commission from his prepaid account, and when the account balance falls low, the taxi driver has to top up in order to obtain more bookings (Auyong, 2014). Moreover, for passengers, GrabTaxi also provides promo codes and bonuses to the most active and best-rated drivers. These come in the form of extra credits, hour incentives, monthly bonus rewards, and others (GrabTaxi, 2014).

Overall, GrabTaxi presents itself as a new alternative ride service that offers speed, safety, and certainty through the use of a smart device application. Many forms of media have started to endorse this technology integration, and the market, regulators, and local people have begun to talk about GrabTaxi's services; however, there are currently very few studies revealing insights on its services, particularly from the views of passengers and taxi drivers. Therefore, the results of this study offer an early-informed perspective on the both market demand and market supply sides of GrabTaxi, specifically in the case of Thailand.

METHODOLOGY

Why do passengers choose to ride with GrabTaxi? Why do taxi drivers become part of GrabTaxi's fleet? What are the influential factors behind passengers' usage of and drivers' participation in GrabTaxi? What are the concerns and challenges present in GrabTaxi's operation? To address these questions, the study applied a combination of an online survey with general taxi passengers and on-site interviews with GrabTaxi drivers to gather the results. The online survey was distributed through Thailand's top discussion forum, under the topic "taxi", together with the hashtag "#taxi," "#passengers," "#social issue," and "#complaint," as well as through the social network channel, Facebook. The on-site interviews with the GrabTaxi drivers were conducted so that the actual voices of the GrabTaxi drivers could be collected while the author was experiencing real taxi rides. From December 2014 to January 2015, 198 respondents completed the online survey and seven GrabTaxi drivers were interviewed.

RESULTS AND DATA ANALYSIS

4.1 Survey results and data analysis

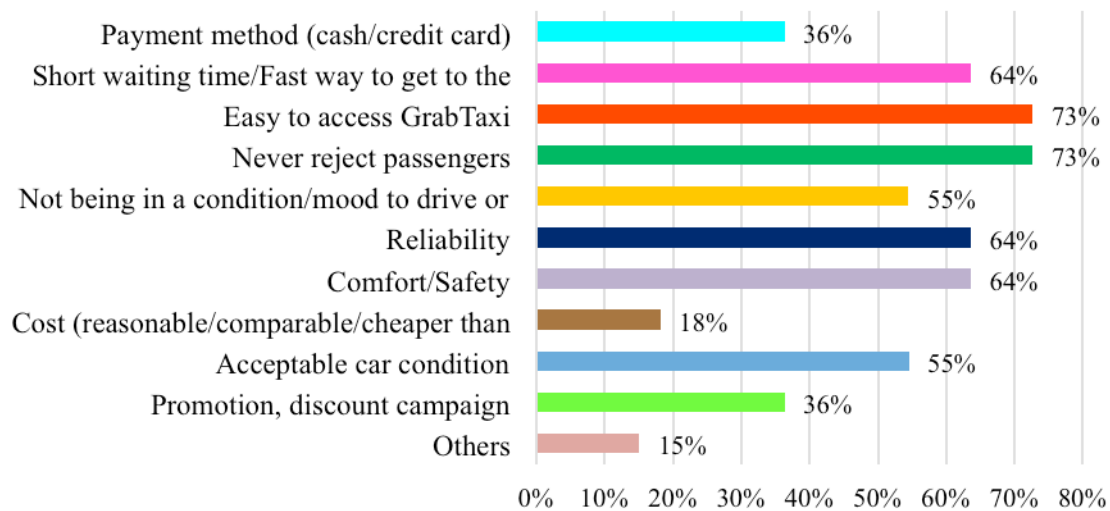
Out of 198 online survey respondents, 126 respondents completed the survey on the discussion forum and 72 respondents completed the survey on Facebook. 73 percent of the respondents were female and 27 percent were male, ages predominantly ranging from twenty five to thirty years old. The majority of the total respondents, or 92 percent, had already completed their bachelor's degrees as well as higher education levels, with their average monthly income before tax varying from 25,001 baht to 45,000 baht and above. 138 respondents or 70 percent of the total number, had already heard of GrabTaxi prior to being surveyed, mostly through media advertisements (75 percent); social media channels (72 percent); word of mouth (50 percent); and very few by chance and other sources such as the press and news reports (15 percent and 12 percent respectively). However, only 33 respondents, or 24 percent among those who had heard of GrabTaxi, had actually experienced a ride using the service. Among those 33 respondents, 21 respondents, or 63 percent had ridden with GrabTaxi at least twice so far. Furthermore, they rated their riding experience with GrabTaxi as "satisfactory" (57 percent) and "very satisfactory" (43 percent). All of them felt positive about using GrabTaxi to commute around the city more often in the future.

The overall results of the survey respondent profiles reveal that GrabTaxi is moderately known among Thai passengers, and proves to be satisfactorily rated by those who have already availed of a ride with the service. But even considering all of these, only less than one third of Thai passengers have experienced riding with GrabTaxi. What factors into why passengers choose to ride or not to ride with GrabTaxi, and the influential factors versus the concerns are expounded more in the following paragraphs.

4.1.1 Why do passengers choose to ride with GrabTaxi? – *The influencing factors*

Among the eleven enumerated factors of influence, including the open-ended "others" option, majority of the respondents who had experienced a ride with GrabTaxi quoted easy to access to GrabTaxi (73 percent), never rejecting passengers (73 percent), short waiting time/fast way to get to destination (64 percent), reliability (64 percent), and comfort/safety (64 percent) to be the top influential factors behind their decisions to ride with GrabTaxi, over payment method (36 percent), promotion, discount campaign (36 percent), cost (18 percent), and others (15 percent). Meanwhile, not being in a condition/mood to drive or not being in a condition to travel by other alternatives and acceptable car condition also had extensive influence at 55 percent. It is to be noted that previous good experiences, less trouble with communication barriers, and knowing exactly where to go were mentioned as part of the "others" influential factor option. (See Chart 1 for the influential factors behind riding with GrabTaxi.)

Chart 1: Why do you choose to ride with GrabTaxi (can answer more than one)



Passengers wish to ride in a taxi that is nice and clean, consistent, and predictable; with a driver who is professional; using a booking that is fast and easy; and utilizing a payment method that is transparent. By considering the leading factors of influence above, it may be said that a prompt ride, sure ride, safe ride, and comfortable ride are the primary motives behind the Thai passengers' decision to ride with GrabTaxi. The results strongly support the aforementioned selling points of speed, safety, and consistency made by the company.

Prompt ride: Through the app and just few finger taps, GrabTaxi provides passengers with easy access to find a taxi that is nearest to them in real time—no more standing outside in the middle of the heat, waving their hands in the air until they can hail a taxi, or guessing what time a taxi will arrive (in the case of traditional call center taxi). The following comments made by respondents are good confirmation of a prompt ride: “I have ridden with GrabTaxi three times, and not once has it kept me waiting, feeling hopeful for Thai taxi[s]...”; “Just few days ago I had my first ride with GrabTaxi, I was not sure how to use the app so I booked my ride through its call center. Ten minutes later the car arrived at my office, I was very surprised.”

Sure ride: Being unable to hail or book a taxi during peak hours or rainy days has always been an issue, as passengers often call or book with only one taxi company. In order to avoid that problem, GrabTaxi partners with small existing taxi providers, and with the integration of the app as well as the usage of the call center, passengers are now able to check on their booking and track their taxi's location. Thus, the rate of rejection and non-arrival are not an issue for GrabTaxi's passengers. “Once, we were trying to hail a cab in front of Central World Department Store, and after five failed attempts, we decided to use [the] GrabTaxi service and effortlessly we got our ride,” one respondent mentioned.

Safe ride: Since one of many benefits of using the app are sharing the ride location; knowing the driver's name, plate number, phone number; and the estimated fare beforehand, to a certain degree the passengers feel more secure and less anxious when riding with GrabTaxi. "Last week my company had a year-end party, I was having too many drinks and of course I was not able to drive. So my friends put me into [a] GrabTaxi, and without notice, I was woken up by the driver and surprisingly I already arrived at my condo. Thanks for a safe ride"; "I almost lost my phone but I got it back because of GrabTaxi's system," are some of the statements given by respondents.

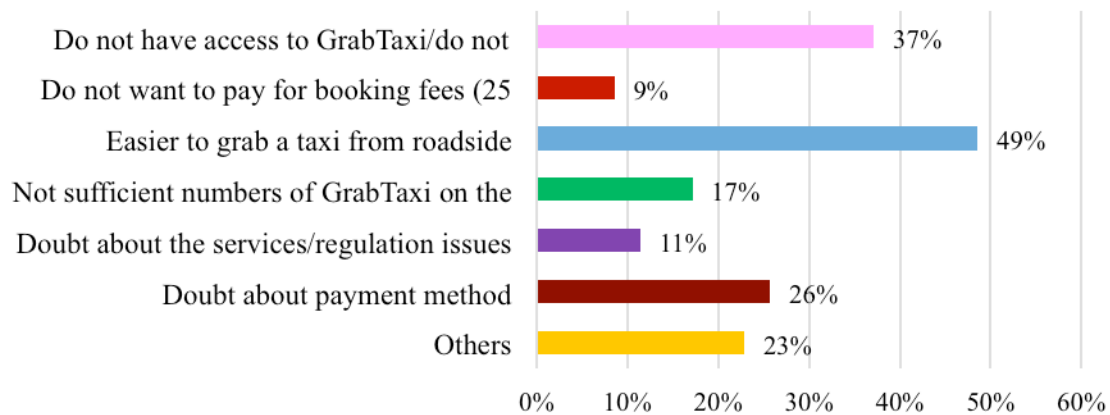
Comfortable ride: To make sure that passengers have a pleasant ride, GrabTaxi applies feedback, in which taxi drivers who get complaints and are rated unsatisfactorily by passengers regarding their service, manner, and car condition may face penalties, suspensions, and bans. "What I like about GrabTaxi is the drivers never talk about politics or their drama stories to force me to give them tips. Instead, they give me a promo code to discount my ride, I really like this stress free experience!" reveals one respondent.

Although GrabTaxi is evidenced to provide prompt rides, sure rides, safe rides, and comfortable rides to Thai passengers, there are nevertheless certain concerns that may hold some Thai passengers back from commuting by GrabTaxi. This study duly examines these concerns.

4.1.2 Why do passengers choose not to ride with GrabTaxi? – *The concerns*

105 of the respondents or, 76 percent, had heard of GrabTaxi but had not availed of the service at the time that the survey was conducted. The main causes for hesitation were that it was easier to grab a taxi from the roadside (49 percent) and that they did not have access to GrabTaxi/did not know how to contact GrabTaxi (37 percent); despite owning a smart device, the respondents felt like accessing the app was complicated, particularly those who did not feel confident about operating new technology. Furthermore, a number had doubts about the payment method (26 percent), being of the mind that the service can only be paid for through credit card. Not having a sufficient numbers of GrabTaxis on the road (17 percent), doubt about the services and ongoing regulation issues (11 percent), and unwillingness to pay for the booking fees (9 percent) were the minor concerns that the respondents had. Chart 2 exhibits the concerns that hold Thai passengers back from riding with GrabTaxi, noting that 23 percent of the respondents who cited "others" mentioned only seldom commuting by taxi or by other alternatives as their drawbacks. The following are some comments given by the respondents to support their answers: "It doesn't mean I don't want to have a ride with GrabTaxi, but most of the time I commute by my own car"; "I already had the app, but one time I really needed a taxi, I switched on the app but it said the nearest taxi would take about 30 minutes to come to my place... since then, I never switched on the app again."

Chart 2: What concerns make you hesitate to ride with GrabTaxi? (can answer more than one)



According to the results shown above, it may be said that the major concerns among Thai passengers are mostly related to perception, accessibility, and technology adoption. If these concerns could be enhanced, particularly simplicity and clarity in GrabTaxi operation as well as availability of service area coverage, 89 percent said they feel positive about commuting with GrabTaxi. In addition, 80 percent of those who had never heard of GrabTaxi before stated their willingness to commute with the service in the case that GrabTaxi could get them connected.

All these taken into consideration—factors of influence, satisfaction rates, ongoing concerns, and willingness to ride—there are prospective demands for this alternative ride as well as some concerns from the Thai passengers' point of view.

4.2 Interview results and data analysis

“More and more cars are on the roads, the living expenses are increasing, and it is getting harder and harder for us to make enough money, especially during the heavy traffic jam[s]. For [a] long [time], we keep complaining, we are waiting for help and expecting sympathy from the others. But we forgot one thing that, if we want a change, we have to change,” said one taxi driver who was part of the interview. The study accounted for seven trips using GrabTaxi, in which informal interviews on the site were carried out with the taxi drivers.

During the rides, the taxi drivers were asked how they came to know about GrabTaxi, why they wanted to become GrabTaxi partners, how long they had been serving on the fleet, and what their impressions had been so far. In response, three drivers said that they were new to the fleet, having only recently joined GrabTaxi (less than three months at the time of the interview); three drivers said that they had been part of the fleet for the last five to eight months; and one driver said he had been with GrabTaxi for nearly a year. They had all gotten to know about GrabTaxi through their friends and the owners of their fleet. They learned from both of them and then decided to become one among

GrabTaxi's partners. Freedom in job selection, multiple channels that would help them connect with passengers, efficient system, higher income with real evidence, and various support for their wellbeing were the main driving forces behind their participation. Thus, they were very much satisfied with their partnerships and they expressed their intent to introduce GrabTaxi to more of their friends.

The following comments were collected from the taxi drivers regarding their impressions:

“With this system, I know my schedule in advance, I know exactly where to pick up or send the passengers off. It's easier for me to manage my day, since I don't have to drive around to find passengers like before.”

“Actually, using the app is kind of fun and it is helping me to earn more money as well, as I have more channels to be connected with the passengers, from the app, call center, and off the road. Or sometimes if I don't want to go to some areas, I simply do not accept the offer. I really like this, since I don't have to say no to the passengers directly.”

“Yet, it was difficult in the beginning to use the app, especially for old people like me who barely know how to operate a smartphone, but after a while I kind of get used to it, and it is easy indeed. Now I am working fewer hours per day but earning slightly more revenues. I hope that when passengers know more about GrabTaxi, they will use the app and take more rides with us. Moreover, what I like the most about GrabTaxi is I feel more secure when I have to work at night, since now I become part of [the] selection process and feedback loop. As you know... there are good drivers and bad drivers out there, similarly, there are good passengers and bad passengers as well.”

“For the past six years of doing this job, I have heard of many bad stories and complaints from the passengers about other taxi drivers countless times, but with this system, the drivers have no choice except to perform well. I have a positive feeling about this.”

“Unlike others, GrabTaxi allows us to accept booking in advance, and believe it or not, last month, I received some cash backs as achieving a certain bar, although it was not that big amount, but I feel good about myself.”

“I think it is not only us that like GrabTaxi, the passengers like it as well. There are no more complaints about the fare, and in fact, I even receive more tips.”

Overall, the taxi drivers had positive impressions about their performance as being part of GrabTaxi. There were times, however, that they experienced frustration. Several taxi drivers mentioned encountering cancellation of bookings—when a job was accepted and they were already on their way to pick up a passenger, but unfortunately, the said passenger would opt instead to hop into any other taxi passing them by before the GrabTaxi driver could reach them. From time to time, passenger might also change their mind and get off before the agreed destination, leaving the GrabTaxi driver with the cost of an incomplete journey. There were some areas in the city that GrabTaxi's system

suffered weak signal and the drivers faced technical difficulties. Moreover, the taxi drivers expressed some worry about their friends who still behaved poorly and did not play the game according to the rules; for instance, they would directly deal with a passenger's booking with the attached GrabTaxi logo as service reference, but with an unsatisfactory performance. This kind of improper behavior somewhat disrupted the image and effected the trustworthiness and credibility of the fleet.

Some of these issues might be solved by technology advancement, infrastructure improvement, and regulation enforcement. But to a certain degree, the soft issues, such as people's behaviors, communal responsibility, and accountability might prove to be the true challenges.

4.3 Finding the problems, solving the problems – *Ongoing challenges*

Up to now, the results of the survey and interviews have shown evidence that GrabTaxi, to a certain extent, has proved to be a valued ride service from the perspective of both Thai passengers and taxi drivers. With the mutual trust and joint value that GrabTaxi has created, it has gradually moved into the phase of problem solving: the long-existent complaints are now being solved; the values of wellbeing and quality ride and drive are being upheld. Nevertheless, there are many concerns that need to be improved and challenges are likewise waiting along the line.

As GrabTaxi operates through mobile-based technology without having to obtain a taxi operator's license or owning a taxi, the company can be seen as a threat to traditional taxi operators. But rather than struggling to compete in order to survive or else die, all should strive for healthier operations through co-opetition. In addition, regulation could be the next challenge; as of the time that this study was conducted, there is no article in Thailand's Land and Transportation's law that supports taxi hailing through application or website. Thus, despite the prospective demand from Thai passengers and supply from taxi drivers, the Thai taxi market cannot not move forward unless regulators and all service ride providers and suppliers can work hand in hand. The push for new regulation would make a substantial mark that benefits not only the alternative ride service providers, but also the passengers, as regards the security of their data sharing and rides, as well as the Thai taxi market at large, for better transparency and systematic operation. Last but not least, besides the aforementioned challenges and noticeable challenges in dealing with people's behaviors and daily operational activities such as complaints, large data bases, and technology complications, another potential challenge that GrabTaxi might confront is rapidly growing competition. When the number of taxis within GrabTaxi and the other alternative ride services grows, so does the competition. Consequently, GrabTaxi's drivers might be faced with a deficit in bookings and be left with disappointment. Thus, only keeping promises and offering discount rides might not adequate in maintaining or gaining new passengers. Delivering an "aha!" moment might be an additional rule to up the coming game.

"Change in [the] Thai taxi market will happen and the change will come, it's [a] matter of willingness and time," says one taxi driver, to end.

CONCLUSION

The results of this study highlighted a number of insights regarding GrabTaxi from both the market demand and the market supply perspectives. Thai passengers cited prompt ride, sure ride, safe ride, and comfortable ride to be the most influencing factors behind their decision to ride with GrabTaxi. Likewise, taxi drivers appraised freedom in job selection, multiple channels to connect with passengers, an efficient system, higher income, and wellbeing and support to be the motives for their participation. Both Thai passengers and taxi drivers shared moments about their satisfactory experiences through their individual comments. Given that, there are prospective demands for GrabTaxi in the Thai taxi market. However, there are concerns and challenges to be faced in GrabTaxi's operation as well, with shaping traditional practices and enhancing regulations appearing to be the foremost challenges. Whether or not GrabTaxi can achieve its mission to improve the lives of Thai passengers and taxi drivers, as well as revolutionize the Thai taxi market and to what extent, the next stage of GrabTaxi as an emergent alternative ride service in Thailand depends on all players involved.

LIMITATIONS

This study is an exploratory study rather than a confirmatory study, where the analysis is principally based on a literature review, the results of an online survey, and on-site interviews. With the limited number of survey respondents and interview participants, as well as a limited time of execution, this study was subjected to land and transportation regulatory disputes, and the results might reflect the restrictions from these boundaries.

REFERENCES

- [1] Auyong, H. (2014). Why GrabTaxi is giving Singapore's largest taxi operator a run for its money. Retrieved December 10, 2014 from <http://ares.lids.mit.edu/fm/documents/grabtaxi.pdf>.
- [2] Auntanupong. (2014, Nov. 27). Voice of Taxi. Message to <http://pantip.com/topic/32911074>.
- [3] Barrow, R. (2014). GrabTaxi launches their mobile app in Pattaya city. Retrieved December 10, 2014 from <http://www.richardbarrow.com/2014/09/grabtaxi-launches-their-mobile-app-in-pattaya-city/>.
- [4] Cybermax. (2013, June 29). Message to <http://pantip.com/topic/30663246>.
- [5] Ferguson, T. (2014). SoftBank pays \$250 M fare to hitch ride with GrabTaxi. Retrieved December 9, 2014 from <http://www.mobileworldlive.com/softbank-250m-fare-grabtaxi>.
- [6] GrabTaxi Bangkok, Thailand. (2014). FAQ. Retrieved December 8, 2014 from <http://grabtaxi.com/bangkok-thailand/faq/>.
- [7] Herrera, E. F. (2013). Taxi terrors. Retrieved December 8, 2014 from <http://www.manilatimes.net/taxi-terrors/19443/>.

- [8] Holliday, K. (2014). Battle of the taxi apps heats up in Southeast Asia. Retrieved December 9, 2014 from <http://www.cnn.com/id/102117559#>.
- [9] Malm, S. (2013). The American tourist hacked to death by Thai taxi driver over \$2 fare. Retrieved December 8, 2014 from <http://www.dailymail.co.uk/news/article-2358114/Pictured-The-American-tourist-Troy-Lee-Pilkington-hacked-death-Thai-taxi-driver-2-fare.html>.
- [10] Parry, M. & Teng, C. (2014). *Singapore land transport: A primer on how technological innovations are disrupting Singapore's taxi market*. Standard Chartered, Equity Research.
- [11] Phatchararat. (2014, Feb 6). Tired of hailing cabs in Bangkok? You've just got yourself a solution! Message post to <http://phachararats.wordpress.com/tag/grabtaxi/>.
- [12] Phillip, S. (2014). Harvard inspires man to ditch family riches for taxis. Retrieved December 8, 2014 from <http://www.bloomberg.com/news/2014-06-10/harvard-inspires-man-to-ditch-family-riches-for-taxis.html>.
- [13] Pomlaktong, N., Jongwilaiwan, R., Theerawattanakul, P., & Pholpanich, R. (2011). *Road transport in Thailand*. APEC Policy Support Unit Report on The Impacts and Benefits of Structural Reforms in Transport, Energy and Telecommunications Sector.
- [14] Pornwasin, A (2014). On-demand cab service at your fingertips. Retrieved December 9, 2014 from <http://www.nationmultimedia.com/homeOn-demand-cab-service-at-your-fingertips-30229943.html>.
- [15] Quadri, V. (2014). Bangkok's top three taxi apps put to the test. Retrieved December 10, 2014 from <http://bk.asia-city.com/city-living/news/review-bangkok-taxi-apps>.
- [16] Rayle, L., Shaheen, S., & Chan, N. (2014). *App-based, on-demand ride services: Comparing taxi and ride sourcing trips and user characteristics in San Francisco*. University of California Transportation Center (UCTC).
- [17] Spencer, T. (2014). *Personal Security, a guide for international traveler*. Taylor & Francis Group: Florida.
- [18] Taxi Singapore, (n.a.). Taxi experiences - your taxi stories. Retrieved from <http://www.taxisingapore.com/taxi-stories/page/3/>.
- [19] Thailand Transport Portal, (2014). Transportation statistics. Retrieved December 10, 2014 from <http://vigportal.mot.go.th/portal/site/PortalMOT/>.
- [20] Thairath. (2014). Retrieved December 9, 2014 from <http://www.thairath.co.th/content/467428>.
- [21] Thepbamrung, N. (2013). Taxi owners, passengers say they're not getting a fare deal. Retrieved December 8, 2014 from <http://www.bangkokpost.com/news/local/368542/more-than-23000-complaints-against-drivers-on-taxi-consumer-hotline>.
- [22] Voice of Taxi. (2014). Retrieved December 8, 2014 from <https://www.facebook.com/voiceoftaxis>.
- [23] Wiseman, A. (2014). Cabs behaving badly: Your taxicab horror stories. Retrieved December 9, 2014 from <http://dc.curbed.com/archives/2014/07/your-dc-taxicab-horror-stories.php>.
- [24] Yaniv, O. (2014). Taxi driver sentenced to 20 years in prison after raping passenger at knifepoint. Retrieved December 9 from

<http://www.nydailynews.com/new-york/nyc-crime/taxi-driver-20-years-raping-passenger-article-1.1789225>.