Strategies for Dispatch Operations in Ride-Hailing Apps: Balancing Rider Patience vs. Driver Responses.

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Abstract: Focusing on the era of the electronic revolution, smartphone applications are the most discussed topic between commercial stockholders and those who are about to produce new projects to gain money. This study is designed to recommend and evaluate different strategies for dispatching in ride-hailing apps that balance the patience vs. driver responses in different conditions for different rider demographics. Furthermore, this study aims first to investigate how time is so important for both riders and drivers and how it will affect the number of requests the rider makes and the way the driver responds, and how much time they need. The population of this study consists of people who live in Jordan of all ages, genders, and different levels of education. Using quantitative data, the researcher developed a questionnaire to collect data consisting of the use of closed questions designed using a Likert scale that was distributed online and conducted on the appropriate sampling method for 303 respondents. Results are calculated using SPSS and other analysis software. The analysis showed that the strategy used for the dispatching system has a significant impact on both customers (Riders) and drivers' behavior. Moreover, the study showed a positive relationship between rider patience and driver response. Moreover, the research also revealed that time, regardless of the price, also has a significant positive impact on the loyalty of the customer(rider). The proposed study is based on scientific and academic research as it is concerned with the effect of the way of dispatching the request on the customers' behavior, and to the knowledge of the authors, it was found that there is no other study on this research, and this includes the model with all variables.

INTRODUCTION

Smart life is what our lifestyle is all about, due to the huge technological revolution that we are currently living in. With the proliferation of smart applications, the majority of the

planet's population met most of their needs through these applications, such as banking transactions, online shopping, ride-hailing apps, and the latest buzz: virtual reality. The fact that tech companies make a huge amount of money makes people wonder how to benefit from such technologies, which leads them (in most cases) to the idea of building ride-hailing apps like Uber and Careem.

On the other hand, building such apps is not easy as it sounds, aside from the advanced features every ride-hailing app should have, the mechanism is complicated and that is because of the three parties that are involved and it is challenging for the owners to make the first two parties (riders and drivers) happy and convinced by their services.

There are a lot of competitors in this sector, and for this, the company must analyze many strategies to find out how and what is the best strategy to maintain drivers' gratitude and riders' loyalty, and that is what we will figure out after reading this research.

Problem statement

In the past ten years, we have witnessed the great development of technology that has become an integral part of our lives, and the biggest example of our use of technology is a great way is our use of mobile applications in many areas of our lives, and one of the examples of these applications is delivery and ride applications.

We have seen many company owners enter the competition in such sectors, and everyone is looking for the most appropriate strategies to follow to reach the top in terms of income, customer satisfaction, and gain the largest number of drivers from their side.

From our point of view, because we work in this type of sector, we found it important to study the methods of distributing and dispatching requests in terms of time and accuracy in a way that suits the driver and the customer.

Research questions

Due to the increase of mobile applications all over the world and the increasing use of ride-hailing apps such as Uber and Careem, the reputation of these apps within the community is very precious for the owner because it causes huge profits. The researcher will examine the problem of the research by answering the following questions:

- Does the driver's late response impact customer behavior?

- Does the dispatch system impact the corporate reputation?

- Does the time have a direct impact on canceling the ride from the customer?

- Does the application's reputation explain the relationship between the driver's response and the customer's patience behavior?

- What are the most effective strategies for increasing your ride-hailing app turnout?

- How could ride-hailing apps improve public transportation instead of undercutting it?

- What are the most effective strategies for increasing your ride-hailing app turnout?

Research objectives

The objectives of this research are to recommend different strategies and evaluate them to find out the most effective way or strategy to maintain two important parties for ride-hailing app owners.

The aim of this research will be achieved by the following points:

- Finding and listing different strategies for dispatching the requests

- Develop a conceptual model to study the effect of driver response time on passenger patience

- Evaluating the model and knowing the purpose of this research

- To figure out the effect of the dispatch system for ride-hailing applications

- To assess the effect of a mediator variable that influences the relationship between driver response and passenger patience, and loyalty

- Investigate the factors that could explain the relationship between riders and drivers, and how to balance this in order to reach high levels of profits.

Literature Review & Hypothesis Development

The ride-hailing and ride-sharing offerings have brought on adjustments within the journey behavior of human beings and concrete mobility patterns. Today, hundreds of thousands of human beings use those offerings each day for everyday by day commutes and leisure functions. Therefore, as ride-hailing offerings emerge as increasingly more famous amongst human beings, it's critical to understand their effects.

Be that as it may, in light of the fact that the field is unmistakably new, there's a limited assortment of exploration concerning the ride-hailing contributions themselves and the examination of the impacts of the ride-hailing contributions on transportation frameworks (Henao and Marshall, 2018; Komanduri et al., 2018; Wenzel et al., 2019). In earlier research, ride-hailing contributions have been correlated with traditional cabs. The gender of Cramer and Krueger (2016) is an occasion for such examination. They played out a similar glance to explore the potential usage cost of ride-hailing down contributions and customary taxicabs. They assembled records for 5 fundamental towns inside the USA from related associations. As an outcome, other than New York, in various 4 other towns (Boston, Los Angeles, San Francisco, Seattle), ride-hailing contributions have had moderately forty-nine percent and sixty-one percent better time-principally based absolutely and mileage-basically based absolutely potential use statements than taxis separately (Cramer and Krueger, 2016).

Review of the dispatch system

An Assessment of Computer Dispatch Technology, organized in 1982 for the FTA Office of Technical Assistance and Safety, that report's authors cataloged the kingdom of the artwork and the modern running talents of CASD software program in taxi scheduling and dispatch, reviewed the technology avail capable of enhancing hardware and software program, and endorsed destiny technological instructions for computer-aided dispatch.

However, they maintained that those adjustments might have at best a marginal effect on the mobility of a community, for the final aim must be to provide the overall public the possibility for shared experience, and on-the-spot reaction service. The research, which in large part involved interviews with taxi corporations, concluded that "taxi corporations that transitioned from voice dispatch or computer-assisted dispatch to fully-automatic

dispatch have skilled a discount in employees' costs, extra patron satisfaction, increased ridership, quicker reaction times, and a usual extra friendly operation". Automation additionally facilitated the era of news and extra accurate document keeping, in addition to decreased employees and gas costs.

The importance of the dispatching system

One more issue with the present matching rules is the difficulty of the decision value. The present matching rules uniquely grant the thought process power to decide if to just acknowledge or grasp the request, and the stage decides the final matching outcome. Travelers just issue orders without a huge amount of want. The advantage of this matching principle is that it lessens halfway hyperlinks and accurately guarantees matching productivity. Nonetheless, the matching guideline might try and deny travelers the appropriate choice. Drivers can select travelers while travelers can't choose drivers, which is a part of the thought process in the momentum of awful occurrences of online ride-hailing. To a couple of degrees, the value of want impacts clients' satisfaction with drivers and ride-hailing frameworks. To clear up the difficulty of individual joy and intricacy of matching rules coming about because of the value of the decision, through the method of a method for the utilization of a shared decision system, essentially founded on secret factors. There are 3 huge positions inside the ride-hailing matching part: driver, rider, and ride-hailing stage. A driver-had vehicle may be clear as a thing that would take the rider to their goal. In the association of organizations, the aim power can go probably as a dealer within the business community. Riders' unsettling needs and offers the money. As the celebration searches for organizations, riders' concerned providers request ride-hailing systems and offer costs after the aim force sends them to their destination, which may be seen considering the way that the client is inside the business place. The ride-hailing stage bears the expense of charge work, suits drivers and riders, and incurs a positive supervising charge as pay. The two drivers and riders are clients of the stage. As the celebration offers the stage, the ride-hailing stage may be seen as a business place maker inside the business community (really take a look at the figure underneath).

Hypothesis

In active studies, speculations are derived to assess associations between selected variables. Since there are multiple variables within the study question, there may be four hypotheses examined within the study. Table 1 shows each speculation, where H(x)

represents guesswork, and H0 represents zero speculation. Studies may also be of additional value in providing information about how time affects customer behavior, and statistics may also be useful for the global transportation industry, as they provide a perception of a rider's ability to wait before they finish their trip because there is no driver available at that moment.

Coming up next are the principal research hypotheses created by the factors utilized in the examination:

H1: Quick driver response has a positive effect on the corporate reputation.

H2: Riders' illusion that the driver accepts the request will be positive in gaining the rider to your side.

H3: Frequent cancellations for the request by the driver negatively affect riders' patience.

H4: Distributing the request for as many drivers as possible using the appropriate dispatch method has a positive effect on riders' satisfaction.

Existing theories

The first study: "Ride-Hailing app strategies of Finnish Taxi dispatch organizations". The Finnish taxi industry has already long been technologically developed, and since 2011 taxi taxi-hailing apps have been available in Finland. The number of these apps has steadily increased, spurred by the arrival of Uber and Taxify in Finland in 2014, and by the deregulation of the Finnish taxi industry in July 2018. In the present paper, the aim was to identify ride-hailing app acquisition-related strategies that traditional Finnish dispatch organizations (DOs) employ. A qualitative case study with five focus organizations was conducted between 2018-2020. This study contributes to extant research in two ways. First, by identifying five ride-hailing app strategies employed by DOs (three related to the question of make vs. buy, two related to discontinuing/selling). Second, by showing that different ride-hailing apps can play different strategic roles, which helps explain DOs' multihoming strategy, and that the strategic role of a specific ride-hailing app can change over time (Vayrynen Karen,2020).

The Second Study: Jiang, Xia, Cheng, Xu (2020) argue that"A Mutual Selection Mechanism of Ride-Hailing Based on Hidden Points", ride-hailing has brought great

convenience to the public. However, the demand expression ability of passengers in the existing ride-hailing platforms is weak, and the accuracy of the matching results is low, resulting in a large number of transaction losses and the loss of platform revenue. In this paper, we propose a kind of mutual selection mechanism of ride-hailing based on hidden points, which is composed of a platform benefit calculation algorithm and a driver assignment algorithm. The platform benefit calculation algorithm mainly calculates the benefits obtained by the platform after the order is completed, while the driver allocation algorithm meets the mutual selection needs of passengers and drivers. Through experiments and theoretical analysis, the mutual selection mechanism proposed in this paper has improved user satisfaction by 5%-21% compared to the traditional methods of order-snatching mechanism and order-sending mechanism, which has significantly improved passenger satisfaction and solved the problem that the existing platform cannot meet the passengers' individual travel needs and the problem that the passengers' choice is not fair. The issue of platform revenue was discussed in the context of improved passenger satisfaction.

The Third Study: "A new real-time map-matching algorithm at Lyft." When you request a ride, Lyft tries to match you with the driver most suited for your route. To make a dispatch decision, we first need to ask: where are the drivers? Lyft uses GPS data from the drivers' phones to answer this question. However, the GPS data that we get is often noisy and does not match the road. To get a clearer picture from this raw data, we run it through an algorithm that takes raw locations and returns more accurate locations that are on the road network. This process is called map-matching. We recently developed and launched a completely new map-matching algorithm and found that it improved driver location accuracy and made Lyft's marketplace more efficient. In this post, we'll discuss the details of this new model (Marie Douriez,2020).

METHODOLOGY

This section covers the strategy adjusted to address the target of this exploration. Additionally, this section offers an unmistakable clarification on the number of inhabitants in the study, besides the sample that has been considered. The poll will be disseminated to the populace, and SPSS and other statistical apparatuses will be utilized to investigate the outcome. In addition, the poll will be utilized to accumulate the fundamental information to address the research questions, relying upon the past examinations and existing literature, Additionally, this section

will contain the information assortment, information source, and impediments. The consequences of this study will be normal in the following phase of this examination.

Exploring the connection between the rider(client) persistence and drivers' reactions and conduct. This examination will explore numerous techniques that can be picked for the dispatch framework. Moreover, the review will examine the impact of the late reactions by the driver on the rider's cancellation inspiration.

The quantitative assessment has been portrayed to be the investigation strategy that involves activity, along with focusing quantifiably and in a quantitative way on the association for all elements. Babbie (2013) focused on getting together the numbers, and the model focuses on statistics. Clough and Nutbrown (2009) attested that the quantitative procedure is inclined toward more since it gives authenticity and reliability to the survey, and embraces suggested strategies. Besides, the investigation similarly use the illuminating assessment methodology where this assessment is known as the investigation which focuses on the components of some quirk, as this assessment procedure is used to respond to the requests of "WHAT" where it helps with sorting out a specific variable current situation (Shields and Rangarajan,2013).

Thus, this exploration is a quantitative examination that will learn about a few factors, among these factors, the corporate benefits, the rider's dedication, the dispatch framework, the rider's cancellation reasons, and the drivers' reactions. The exploration depends on an essential examiner.

The population of the study

For this exploration, the study of population in the review is the Jordanian public. Jordanians are a blended culture with alternative points of view and different standards and values. Jordan, like some other nations, contains more than one cultural gathering, which are recorded beneath:

- Associate Degree
- Bachelor's Degree
- First-professional Degrees
- Master's Degree
- Doctoral Degree

Study sample

The sample of this exploration has been picked relying upon individuals who utilize ride-hailing applications, each of the designated individuals of all ages and different degrees of training as well and the understudy's orientation has been considered to obtain the most noteworthy reaction.

Methods for data collection

This research plans to concentrate on the effect of the drivers' reactions in tolerating the solicitations received by the rider, and what are the best procedures to circulate the solicitations to the closest available drivers. Additionally, how to adjust between these two gatherings.

The data that ought to have been accumulated in this investigation is collected from fundamental sources, the time of social affairs this data was fundamental since it drives the expert to another stage that is the examination stage, where this stage helps in delivering the assessment results by tracking down the reaction to for the investigation questions. Also, including the right procedure in social events, the investigation data helped the expert in lessening the probability of errors, and the assessment of the focus became more significant and trustworthy.

The data will be accumulated by using a survey that is used to answer the investigation inquiries, considering past examinations and existing compositions that lead the researcher in social occasions to the significant data for the survey. The outline instrument system used to assemble the data in this study contain using close-ended questions that are arranged using the Likert scale that is gone from 1 to 5, the value 1 tends to the high assessments with the "firmly concur" scale and 5 worth tends to the low assessment with "unequivocally struggle" scale. Tests will be accumulated with no obvious end goal in mind by Jordan occupants. The concerned individuals will be educated about the poll review, morals, and authority will be conducted by the study and the information assortment.

This study shows that the designated population is individuals who utilize ride-hailing applications, this population has been taken by the analyst as the review sample.

Utilizing the example size number cruncher, the size of the example determined for the review population was 460. Subsequently, the poll conveyed haphazardly the number of individuals who live in Jordan and utilize such applications.

Sampling

The inspection strategy used to analyze the review test is the non-likelihood examining test, specifically one sort of non-likelihood examining method, which is the comfort testing that is also called the coincidental testing, opportunity examining, or accessibility testing. This inspection technique includes gathering Data from individuals who utilize ride-hailing applications and are nearby and are accessible to participate in gathering the fundamental information in this review. At the end of the day, the comfort examining strategy utilized in this study includes getting any individual who is completely welcome to participate in any place they are accessible and can be found within Jordan. This procedure can be utilized by any individual who utilizes ride-hailing applications with various degrees of training at whatever stage in life, as it is seen to be simpler for analysts, and financially savvy, as well as it requires less investment in gathering information in regards to different methods utilized in getting-together concentrating on the information.

Study tools

The instruments that the researcher will use to accomplish the purpose of the review research depend on the examiner, which depends on the survey of the writing and is connected with the principal questions connected with the examination. The survey was used to gather the information that is connected with our review factors (corporate productivity, riders' faithfulness, dispatch framework, riders' cancelation reasons, and drivers' reactions). The SPSS, Power BI, AMOS, or some other breaking down programming will be utilized to analyze the gathered review information.

Measurement Model

The review poll has been assembled utilizing the estimation of past exploration studies, and all the examination questions have been changed and modified in light of the necessities of this review.

RESULTS & FINDINGS

The segment displays the audit assessment, which gets a handle on and furthermore depicts the properties of the outcome data, which is collected from the respondents and has been used in the investigation. The portion factors we used were (Age, Gender, and Education), we coordinated the examination inside Jordan with a 460 online survey, the returnable number of responses was 303 by and large. The mark of the overview was to

test the response for the out factor, where we made a show for a couple of events that the school has performed, and asked a (15) general requests. To portray these traits, an explanation will be shown as the frequencies and not entirely set in stone in that frame of mind, like the accompanying:

Table 2: The responder's statistics

	Age	Gender	Education
Valid	301	300	303
Missing	2	3	0

Reliability and Validity

The legitimacy and validity test is used in the investigation examination to check both within and external authenticity of the survey concentrate as it helps with assessing what is fit to be assessed. As the table under displays the outcome's authenticity of the dispatch structure for the applications, as the requests are believed to be colossal, as well as the requests for drivers' responses, riders' comprehension, and riders' cancelation reasons are completely shown to be basic.

Riders Cancellation Validity Test

Table 3: Cancellation Correlations

		Correlations				
				Statistic		
Variable	Variable2	Correlation	Count	Lower C.I.	Upper C.I.	Notes
AcceptanceTime	Comfortability	.050	297	-.064	.163	
	TimeAccuracy	-.090	295	-.202	.024	
	CancellationBcsOfTime	1.000	298	--	--	
	RidersTime	.151	296	.037	.260	
	TimeAndMoney	.185	296	.072	.293	
ArrivedTime	Comfortability	.130	296	.016	.241	
	TimeAccuracy	.085	294	-.030	.197	
	CancellationBcsOfTime	.185	296	.072	.293	
	RidersTime	.092	295	-.022	.204	
	TimeAndMoney	1.000	297	--	--	
Drivers	Comfortability	-.169	297	-.278	-.056	
	TimeAccuracy	-.178	294	-.286	-.065	
	CancellationBcsOfTime	-.061	296	-.174	.053	
	RidersTime	-.070	295	-.182	.045	
	TimeAndMoney	.014	295	-.100	.128	
Missing value handling: PAIRWISE, EXCLUDE. C.I. Level: 95.0						

Riders' patience time test

Correlations

Table 4: Dispatch Correlations

		Acceptance Time	Arrived Time	Riders Time	Total
Acceptance Time	Pearson Correlation	1	.185**	.155**	.645**
	Sig. (2-tailed)		.001	.007	<.001
	N	303	303	303	303
Arrived Time	Pearson Correlation	.185**	1	.104	.604**
	Sig. (2-tailed)	.001		.071	<.001
	N	303	303	303	303
Riders Time	Pearson Correlation	.155**	.104	1	.403**
	Sig. (2-tailed)	.007	.071		<.001
	N	303	303	303	303
Total	Pearson Correlation	.645**	.604**	.403**	1
	Sig. (2-tailed)	<.001	<.001	<.001	
	N	303	303	303	303

**. Correlation is significant at the 0.01 level (2-tailed).

Cronbach Alpha reliability

Cronbach's alpha is a proportion of inner consistency, that is to say, how firmly related a bunch of things is collective. Being a proportion of scale reliability is thought of. A "high" incentive for alpha doesn't imply that the action is unidimensional. In the event to as well as estimating inner consistency, you wish to give proof that the scale being referred to is unidimensional; further investigations can be performed. The explanatory variable examination is one strategy for actually looking at dimensionality. Actually speaking, Cronbach's alpha is definitely not a measurable test - it is a coefficient of unwavering quality (or consistency).

$$\alpha = \frac{N.\bar{c}}{\bar{v}+(N-1).\bar{c}}$$

Here, N is equivalent to the number of things, is the normal between-thing covariance among the things, and approaches the typical difference; $\bar{c}$ is the average covariance among items, $\bar{v}$ the average difference, and α addresses the Alpha outcome.

After testing all questions for Cronbach's alpha by using the SPSS program, the result was as the table below:

Reliability Statistics

| Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.662	.648	12

Demographics

The table underneath displays the rate and the repetition of the member's orientation. The table displays the examination where we can check that the female individuals were 123, while the male individuals were conceivably more than the females, and they were 177. The female rate was 41%, and the level of the male rate was 59%.

Table 5: Characteristics findings for gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Female	123	41	41	41
Male	177	59	59	100.0
Total	300	100.0	100.0	

Figure 4 Gender
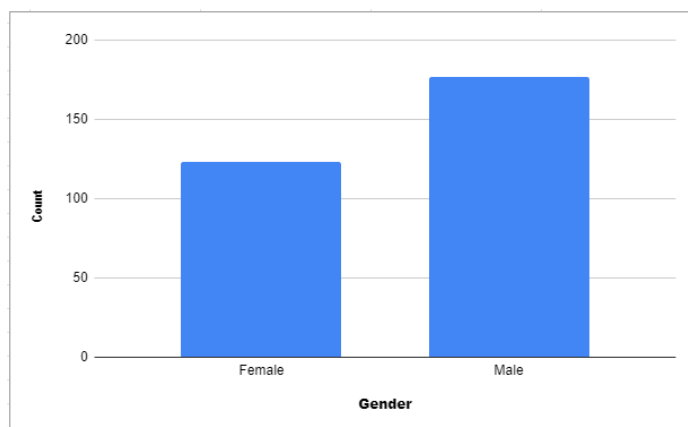
This table underneath displays the consequences of the members' age range, where the most elevated level of support was for those over 31 years of age, with a level of 73.8%, and the second-most elevated rate for age range was for 44 members between the 24 and 30 with a level of 14.6%. The third most noteworthy rate from the members was the age somewhere in the range of 19 and 23, where the rate was 6.6% and there were 20 members,

Finally, the last age of the members was somewhere in the range of 15 and 18, where the rate is 5% with 15 members.

	Frequency	Percent	Valid Percent	Cumulative Percent
15 to 18	15	5	5	5
19 to 23	20	6.6	6.6	11.5
24 to 30	44	14.6	14.6	26.1
31 and above	222	73.8	73.8	100
Total	301	100	100	

Figure 5 Age
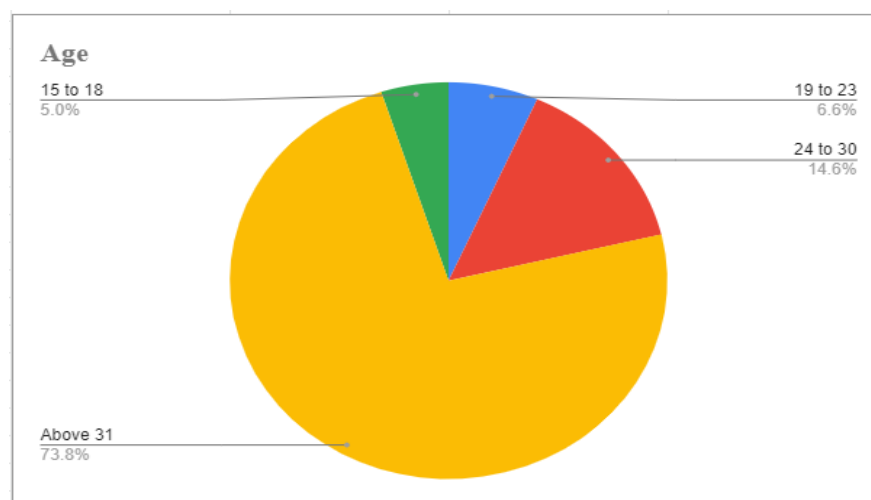
The last segment level utilized through this survey was the instruction, and the analyst got some information about the instructive capability that the members have or are currently pursuing. The high rate is the four-year certification with a level of 56.1%, with a recurrence of 170 members, and the subsequent position goes for both the recognition and expert degree holders, and the rate was 17.2% with a recurrence of 52 members. The Ph.D. degree holders have a level of 5% with a recurrence of 15 members. For different degree holders, the rate was 4.6%, and its number was 14 members.

Table 6: Characteristics findings for education

	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma	52	17.2	17.2	17.2
Bachelor	170	56.1	56.1	73.3
Master	52	17.2	17.2	90.5
PhD	15	5	5	95.5
Other	14	4.6	4.6	100
Total	393	100	100	

Figure 6 Education
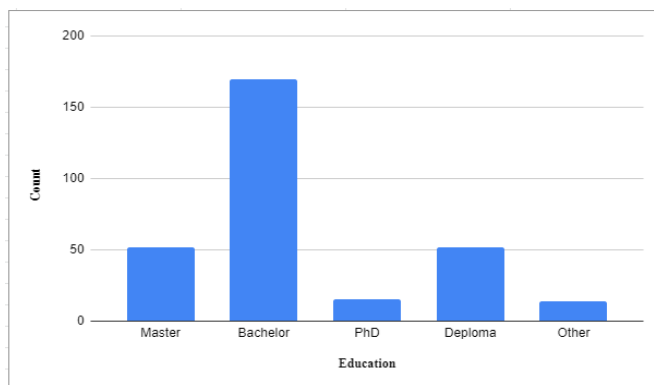
Table 7 Correlation

Variable	Variable2	Correlation	Count	Statistic Lower C.I.	Upper C.I.	Notes
AcceptanceTime	**CancellationBcsOfTime**	1.000	303	--	--	
	RidersTime	.155	303	.043	.263	
ArrivedTime	**CancellationBcsOfTime**	.185	303	.074	.292	
	RidersTime	.104	303	-.009	.214	

Missing value handling: PAIRWISE, EXCLUDE. C.I. Level: 95.0

Series Pair: Acceptance Time with Arrived Time

Table 8 Cross-correlation

Lag	Cross Correlation	Std. Error[a]
-7	.008	.058
-6	-.006	.058
-5	.045	.058
-4	.048	.058
-3	.008	.058
-2	.042	.058
-1	-.024	.058
0	.183	.058
1	.041	.058
2	-.026	.058
3	.024	.058
4	.073	.058
5	.044	.058
6	-.040	.058
7	-.140	.058

a. Based on the assumption that the series are not cross-correlated and that one of the series is white noise.

Table 9 Cross correlation 2

Series Pair: Acceptance Time with Time and Money

Lag	Cross Correlation	Std. Error[a]
-7	.008	.058
-6	-.006	.058
-5	.045	.058
-4	.048	.058
-3	.008	.058
-2	.042	.058
-1	-.024	.058
0	.183	.058
1	.041	.058
2	-.026	.058
3	.024	.058
4	.073	.058
5	.044	.058
6	-.040	.058
7	-.140	.058

a. Based on the assumption that the series are not cross-correlated and that one of the series is white noise.

Table 10 Cross Correlation3

Series Pair: Time Accuracy with Riders Time

Lag	Cross Correlation	Std. Error[a]
-7	.056	.058
-6	.024	.058
-5	.012	.058
-4	-.032	.058
-3	.052	.058
-2	.014	.058
-1	-.056	.058
0	.084	.058
1	.131	.058
2	-.035	.058
3	.049	.058
4	-.009	.058
5	-.041	.058
6	.066	.058
7	-.036	.058

a. Based on the assumption that the series are not cross-correlated and that one of the series is white noise.

Hypothesis testing

Regression models will be utilized in the theory testing to gauge the connection between the factors, the reliant variable, and the free factor. Besides, the relapse models will be utilized to test the relationship between the middle person variable and the arbitrator variable.
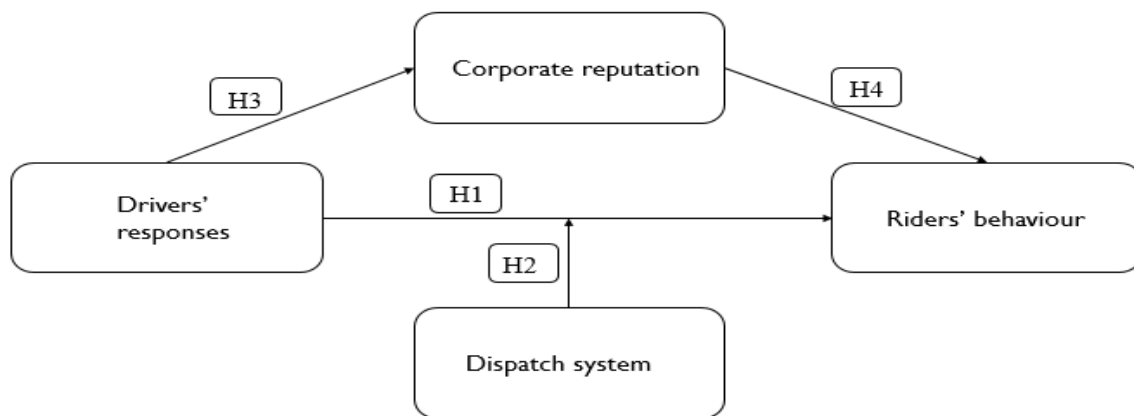
Hypothesis 1

H1: Quick driver reaction meaningfully affects the corporate standing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.177ᵃ	.031	.021	1.32790	2.094

a. Predictors: (Constant), LongTimeToArrive, LeaveAppsWhenNoDriver, LongTimeDispatching

b. Dependent Variable: RiderWaitingTime (Rider Patience)

When the driver has a quick reaction, this will affect the number of trips during the day, and also means that the company will take their commission from every single trip, which will help the corporate standing.

ANOVA testing results:

ANOVAª

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.380	3	5.460	3.096	.027ᵇ
	Residual	507.839	288	1.763		
	Total	524.219	291			

a. Dependent Variable: RiderWaitingTime

b. Predictors: (Constant), LongTimeToArrive, LeaveAppsWhenNoDriver, LongTimeDispatching

Hypothesis 2

H2: Riders' illusion that the driver accepts the request positive effect on gaining the rider to your side

Model Summaryᵇ

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.195ª	.038	.025	1.32080	2.074

a. Predictors: (Constant), AlternativeApp, LeaveAppsWhenNoDriver, PromisedTime, LongTimeDispatching

b. Dependent Variable: RiderWaitingTime

As we can see here that some riders, when the application displays the driver has accepted the request without already accepting it, this will give the company the ability to win more time while distributing the request for other drivers and without allowing the rider to cancel the request because of no driver found.

ANOVA testing results:

ANOVAª

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.756	4	4.939	2.831	.025ᵇ
	Residual	498.931	286	1.745		
	Total	518.687	290			

a. Dependent Variable: RiderWaitingTime

b. Predictors: (Constant), AlternativeApp, LeaveAppsWhenNoDriver, PromisedTime, LongTimeDispatching

Hypothesis 3

H3: Frequent cancellations for the request by the driver negatively affect riders' patience.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.146[a]	.021	.014	1.33020	2.127

a. Predictors: (Constant), DirectRequestAfterCancel, CancelationTime

b. Dependent Variable: RiderWaitingTime

Once the driver cancels the request, this will cause an extra waiting time from the rider's side, and that will affect the riders' patience.

ANOVA testing results:

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.989	2	5.495	3.105	.046[b]
	Residual	507.825	287	1.769		
	Total	518.814	289			

a. Dependent Variable: RiderWaitingTime
b. Predictors: (Constant), DirectRequestAfterCancel, CancelationTime

Hypothesis 4

H4: Distributing the request for as many drivers as possible using the appropriate dispatch method has a positive effect on riders' satisfaction

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.211[a]	.044	.034	1.18165	1.872

a. Predictors: (Constant), PromisedTime, LeaveAppsWhenNoDriver, LongTimeDispatching

b. Dependent Variable: TimeIsMoreImportantThanPrice

When the companies choose to distribute the request for many drivers at one time, this will help to catch more riders and doesn't allow them to leave your application and prefer another one**.**

ANOVA testing results:

ANOVAª

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.612	3	6.204	4.443	.005ᵇ
	Residual	400.735	287	1.396		
	Total	419.347	290			

a. Dependent Variable: TimeIsMoreImportantThanPrice
b. Predictors: (Constant), PromisedTime, LeaveAppsWhenNoDriver, LongTimeDispatching

Summary of Hypothesis Test Results

Table 11: Hypothesis testing results

Hypothesis Number	Hypothesis	Result
H1	**Quick driver reaction meaningfully affects the corporate standing**	Accepted
H2	**Riders' illusion that the driver accepts the request positive effect in gaining the rider to your side**	Accepted
H3	**Frequent cancellation for the request by the driver negatively affects riders' patience.**	Accepted
H4	**Distributing the request for as many drivers as possible using the appropriate dispatch method has a positive effect on riders' satisfaction**	Accepted

DISCUSSIONS & CONCLUSIONS

The results from the examination show and endorse that the dispatch framework altogether affects the rider's persistence and conduct. Where the examination additionally supports that there are multiple ways of circulating solicitations in ride-hailing applications, yet probably the best technique utilized is to send the solicitation to the closest driver and hang tight for 3 seconds, on the off chance that he doesn't acknowledge the solicitation during this period, it is shipped off someone else, etc. until the solicitation is an in the acknowledged by a driver encompassing region of the rider. The investigation can be a way to upgrade and further develop the dispatch framework techniques that are utilized for dispersing demands. Section four introduced the investigation that the specialist utilized to accomplish the outcomes, that is what the analyst understood, "Fast driver reaction meaningfully affects the corporate standing.", "Riders' deception that the driver acknowledges the solicitation's positive impact in acquiring the rider to your side.",

"Disseminating the solicitation for whatever number as could reasonably be expected drivers utilizing the suitable dispatch technique emphatically affect riders' fulfillment," and "Regular retraction for the solicitation by the driver adversely influences riders' understanding." As a concise end, the dispatch framework procedures that ride-hailing applications perform have an effect on the rider's way of behaving, where the review showed the critical effect. In this way, as a closely held individual belief to upgrade the dispatch framework soon, the application proprietor ought to believe in more systems to be more effective to acquire riders' fulfillment and loyalty, and to create more demand to get the most noteworthy benefit.

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