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## Article

# Factors influencing Uber adoption in Bangladesh and Pakistan

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## Research Article

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# Factors Influencing Uber Adoption In Bangladesh And Pakistan

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**Abstract:** The paper's intention is to investigate the behavioral intentions of consumers towards the adoption of Uber with focus on effects of digitalization and shared economy on the adoption of Uber. The aim of the article is to examine the cultural factors of Bangladesh and Pakistan, which are leading people towards adoption of non traditional source of transport. Particularly, these countries' comparison was not done before by other researchers. Theory of Planned Behavior integrated with Hofstede's Cultural Dimensions has been used to examine the Behavioral Intention of customers of these two countries towards adoption of Uber in the research. A great comparison was done in the study by using factors of TAM, TPB and Hofstede Cultural Models. Dependent variables played important roles in showing positive and negative attitudes on independent variables. This article's findings show that "Risk" negatively affects the Behavioral Intention. Research data is collected through online close-ended questionnaires from 145 total respondents, which limits the generalization of the study. At the end, where it identified "female" as a bigger market and provided an opportunity for Uber to categorize the risks prevalent in the society and define new strategies by adapting to the local culture by being a global company. Factors examination produced a great findings which created recommendations for future researchers followed by a conclusion.

**Keywords:** Theory of Planned Behavior, Technology Adoption Model, Hofstede's Cultural Dimensions, Digital Transformation, Shared Economy, Customer's Acceptance

## 1 Introduction

The transport sector has been facing problems in many a country due to enhanced urbanization because of globalization and concentration of industries in big cities. To overcome these challenges of increased urbanization, better urban transportation is inevitable to reduce poverty and enhance economic growth. For this purpose, there is a need to decrease dependencies upon traditional modes of doing business in the transport sector. This has been possible with the invention of the internet, or particularly with digitalization. This digitalization has transformed the ways of businesses by actively responding to the rapidly changing needs of people. It has to compare the resources possessed by different entities for the collective benefits of the society, thus establishing the shared economy. Shared economy is a sustainable economic system built around the sharing of private assets (Korona & Grzunov 2014). This sharing of resources with the help of technology brings the underutilized resources into mobilization, and thus maximum output would be possible from limited resources. These new ventures such as Airbnb and Uber have caused a threat for traditional businesses such as hotel industry or taxi industry. Uber had accumulated over \$1.5 billion in venture capital and operates in more than 70 cities in 45 countries (Cusumano, 2015) by aiming to gather

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the resources held by one person and make it useful for the other person in generating revenue for all stakeholders.

The world is in the midst of unprecedented urbanization, with cities expected to hold 5.2 billion residents by 2050 (Irigoyen, 2014). Transport industry has been affected in developing and underdeveloped countries, like Bangladesh and Pakistan, due to inefficient planning and insufficient funding. The number of vehicles on city roads in Bangladesh increased 16 times between 2001 and 2013, while motorized public transport accounts for only 23 percent of trips (Bank, 2016). In the transport sector, although taxi service is highly regulated, it is not commonly available in small and underdeveloped societies whereas private cars can be found abundantly. This study is of much practical implication to businesses and policymakers concerning strategies for maximum utilization of underutilized resources to look upon the ways for the maximum utilization of underutilized resources by motivating consumers to reduce the dependencies upon traditional businesses.

## 2 Purpose of the Study

The purpose of the study is to explore the behavior patterns of consumers towards the intention of adoption of Uber in Bangladesh and Pakistan and focused on finding out the cultural factors which can mold the behaviors of people towards the adoption of technology. However, response of people towards this digitalization could be different in different societies. Every society is a combination of different mental and practical approaches and thus differs from other societies in terms of cultures. The existing researches did not focus on these South Asian countries much regarding ride-sharing and did not compare its scenarios. The field is almost brand new for the researchers to analyze. Specifically, the study focuses on a major question: which factors influence the adoption of non-traditional models of transport in a developing country? The following section describes the main concepts of this study and provides a theoretical foundation for their interrelationship. The paper also shows the limitations and future research suggestions.

## 3 Theoretical Foundation

### 3.1 Theory of Planned Behavior

The theory of planned behavior is an extension of the theory of reasoned action made necessary by the original model's limitations in dealing with behaviors over which people have incomplete volitional control (Ajzen, 1991). According to George (2004), for TPB, attitude toward the target behavior and subjective norms about engaging in the behavior are thought to impinge intention, and TPB includes perceived behavioral control over engaging in the behavior as a factor influencing intention. According to Ajzen (1991), the theory of planned behavior postulates three conceptually independent determinants of intention. The first is the attitude toward the behavior and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. The second predictor is a social factor termed subjective norm; it refers to the perceived social pressure to perform or not to perform the behavior. The third antecedent of intention is the degree of perceived behavioral control, which refers to the ease or difficulty of performing the behavior, and it is assumed to reflect past experience as well as anticipated impediments and obstacles.

### 3.2 Technology Adoption Model

In the era of globalization, companies try to compete in the divergent markets with the help of advanced and effective technologies. Expansion in the new markets brings challenges for the parent firm to adapt the technology according to the local culture. For effective implementation of any technology in a market, it is mandatory that the unique mixture of the local market should not be neglected during strategy planning and implementation. According to Hakanson (2000), the inability of an MNC to adapt to local conditions,

or cultural incompatibility, and the inappropriateness of the imported technology are considered major obstacles to the successful adoption of new technology (Calantone et al., 2006).

Technology adoption model (TAM) was proposed by (Davis, Bagozzi, & Warshaw, 1989). It is widely accepted as the most authentic model to study technology adoption in different scenarios. TAM has been used in several IS studies and has proven useful in determining technology acceptance (McCoy, Everard, & Jones, 2005). There have been a lot of extensions in TAM, but the final model suggested by Davis (1989) has three components, which are perceived ease of use, perceived usefulness and behavioral intention. According to Davis et al. (1989), perceived usefulness is the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context and perceived ease of use refers to the degree to which the prospective user expects the target system to be free from effort (McCoy et al., 2005). This model suggests that users develop the perception regarding usefulness and ease of use of technology and then this perception can lead to behavioral intention. If users find the technology useful and easy to use, it will positively affect the behavioral intention.

### 3.3 Hofstede's Cultural Dimensions

Hofstede's research on cultural dimensions provides a theoretical foundation for exploring the impact of cultural differences on the adoption and diffusion of technology innovations (Straub, Keil, & Brenner, 1997). Power distance has been defined as the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally where else uncertainty avoidance is not the same as risk avoidance; it deals with a society's tolerance for ambiguity. It indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Individualism defines the individualist side of cultures in which the ties between individuals are lost and everyone is expected to look after him/herself and his/her immediate family. The assertive pole has been called 'masculine' and the modest, caring pole 'feminine'. In less assertive societies, technology acceptance is higher because of low need of face to face communication. Future orientation deals with cultures tidied by a long-term orientation are oriented towards future rewards, in particular perseverance and thrift, while a short-term orientation is characterized by values relating to both the past and present, in particular, the respect for tradition, preservation of "face" and the completion of social obligations (Al-Gahtani, Hubona, & Wang, 2007).

### 3.4 Digital Transformation

Internet has changed our everyday lives. Digital transformation provides the value to the customers and technical solutions provide outcomes of the business innovation. For this transformation, people across the world have come together virtually. Businesses are aiming to generate value propositions to the end-users. Digital technologies are usually used for the greater interaction with the customers. On the other hand, the toughest approach of the digitalization is the customer service. Customers are eager to a convenient way of shopping nowadays, especially the current young generation. The interaction of the customers actually encourages the innovation for the online communities who seek for the digital transformation.

Meanwhile, for the transformation, enterprises need to transform their operating models (Berman, 2012). It is the mixture with the analogue materials of the traditional form of commerce (Routhier Perry, 2014). Along with the traditional way of commerce, digitalization has paved a very desirable way to provide superior satisfaction to the customers nowadays. Today, the "light organizations" (digital businesses) are taking over the "heavy organizations" (physical or tangible businesses). In the digital transformation, businesses are connected with the customers via technologies (Tapscott, 1996). Organizations are facing new competitors and technologies have been re-shaped accordingly for the delivery of goods and services to the end-users. However, in the future, the consequences of digital transformation will change the goals and motives of the organizations.

### 3.5 Shared Economy

As previously discussed that the world has become digitalized and businesses are engaged across boundaries. This facilitates online marketers, especially. Shared economy is being born due to these dramatic changes in the usage of modern technologies. Sharing economy means “sharing” of the factors in the market across the borders. The current generation has been brought up by the openness of the internet. This sharing is a potential tool for the social movement, but the potentiality requires something beyond accessing the internet (Schor, 2016). The practice of sharing the personal services for the demand of it distinguishes the proper definition of the sharing economy. The distinction between on-demand and sharing economy has been apparent throughout the time, as many people call “Uber” instead of calling taxi (Frenken & Schor, 2017).

In a demand economy, people purchase personal services. In second-hand economy, consumer to consumer is the access to temporary physical goods that means consumers are trading off the second-handed goods. Sometimes, people give away their goods even without payment. In the product service economy, companies provide goods for rent to the consumers, but the ownership is not passed on to the consumers (Frenken & Schor, 2017). Trust issues are arising regarding Uber in many cities. Safety is mentioned continuously, and it has been claimed that Uber is not safe to ride compared to the traditional taxi rides. The safety is not properly delivered regarding the third-party, passenger, or even with the driver, but on the other hand, there is no much evidence regarding this unsafe condition (Feeney & companies Uber, 2015).

### 3.6 Customer's Acceptance

Uber and other competitors are focusing on the mass service in the future by utilizing advanced technology, but it is not certain that the customers will respond positively or will accept it (Zhang et al., 2016). Certainly, the customer's perception of acceptance scenarios is different in the built-up and rural areas. On the other hand, political pressure is another factor that may put some restrictions on the Uber business in the long term if it starts capturing the transport market fully. To gain customer's acceptance, the policymakers of Uber have to highlight the positive consequences far more than the unintentional negative outcomes of ride-sharing (Zhang et al. 2016). Overall, Uber has to adopt the new strategies and concentrate on tailoring the business model as there are threats that can affect the service and its adoption. If Uber fails to build a strong position, i.e., no chance for alternatives, strong advertisement campaign or fulfilling dynamic changes of customer's demand, it won't be possible to last long in the market.

Traffic congestion is a great social issue that has been examined before and after the ride-sharing entry in the urban areas of the selected countries. Surprisingly, Uber reduced the traffic congestion in the urban areas due to a number of customers using the same vehicle, which reduces the aggregate number of cars and customers in the urban areas. Secondly, Uber has a price movement policy that means the price of the ride-sharing is higher in the peak time, so people can adjust the time of travelling or can use alternatives. It results in a smoother traffic on the road, which reduces the congestion. Thirdly, the advanced technologies like GPS in Uber help the driver to reach the exact destination without roaming around in the streets, which saves time, fuel, cost, and reduces the congestion (Zhang et al., 2016).

## 4 Methodology

A systematic review has been done according to the guidelines suggested by (Tranfield, Denyer, et al. 2003) as follow:

- Building the scope of the study,
- Identification of research,
- Discussion of the literature,

- Study quality assessment,
- Data monitoring.

This paper has been stated by designing keywords and by processing following the questions of interest. The inclusion and exclusion criteria have been decided. The discussions of the literature were done from the studies which have been published online. All the topics were collected from different scholars' write up, but unfortunately, not many publications were up to the standard level and very generic. To retrieve the relevant articles, the author has used keywords, i.e. "globalization in transport", "South Asia transports", "Sharing economy in South Asia", "Uber in South Asia", etc.

Primary and secondary methods are used to collect the data for a particular project. Authors collected the survey from every class of Uber customers. For secondary data, authors had searched for most recent and valid articles regarding ride-sharing, shared economy, and digitalization. Though recent articles or journals were not sufficiently available on the sources, there was no limit of the year of publications as the previous studies have the importance as well though there are many new ideas added up with the new or recent papers. Taking into consideration both the most recent and most significant literature gives the opportunity to deliver a more accurate analysis.

Researchers decided to integrate two models; Theory of Planned Behavior and Technology Acceptance Model and Hofstede factors as mediator variables. The whole re-developed model has been subdivided, and hypothesis is explained individually. The overall research model presented had 17 hypotheses in total. From the integrated model, based on the concept, authors have chosen 7 independent variables, dependent variables which are opposite of the independent variable and control variables which are the experimental elements and are constant.

## 5 Findings and Discussions

Researchers have gathered total 145 respondents via survey and all of them have used Uber as their shared transportation in both the countries Bangladesh and Pakistan. All the respondents were asked to rank each measuring questions from 1 till 7. "1" stands for completely disagree and "7" stands for completely agree in the survey questionnaire. From the descriptive analysis of data, researchers found out that most respondents are under the age of 45 years. Slightly more respondents were male, which is merely due to the Asian culture. In the study, a dummy variable for female was 0 while for male was 1. Compared to Pakistani customers, Bangladeshi customers have responded more, and it shows that this ride-sharing is more popular in Bangladesh. The result showed that females have more intention to use the Uber service as compared to males. Mostly, participants were singles and students of undergraduate level. Therefore, students are higher than any other occupation. Even though the price of Uber service is a bit higher than other local ride-sharing services, people do prefer Uber as this is global and more risk-free. On the other hand, people do have a slight demand or requirements from Uber to be a bit cheaper.

Certainly, there have been other ride-sharing (local) which were also preferred by many of the respondents. After conducting the research, results also show that in uncertain situations, people tend to rely on word of mouth, so this technique should be adopted by Uber to spread awareness. Moreover, it shows how risk decreases the tendencies towards intentions towards using the Uber service. As given in literature, how risk is affecting the perception of people towards shared services, this study provides a specified phenomenon of risk associated with Uber. One more factor to work on is how people are responding to the digitalization in these masculine societies. Therefore, Uber has earned both negative and positive feedbacks from general customers. The authors have mixed three business models i.e. Theory of planned behavior, Technology Acceptance Model and Hofstede cultural dimensions theory, and created our business model where researchers have one dependent variable, seven independent variables, five moderating variables, and seven control variables. Ordinary Least Square (OLS) Regression Model has been followed for the estimation of the model. Model is described in the form of following equation:

The theoretical implication of this study was that it explored factors that contributed towards behavioral intention of consumers towards buying a service. Three of the independent variables are moderated by five moderating variables and six control variables have been included along with one constant ( $b_0$ ) error term. The study also showed how Technology Adoption Model interacts with the dependent variable.

<b>b<sub>0</sub></b>	<b>Constant</b>
<b>Dependent Variable</b>	
BI	Behavioral Intention
<b>Independent Variable</b>	
ATB	Attitude Towards Behavior
PU	Perceived Usefulness
PEU	Perceived Ease of Use
SN	Subjective Norm
PBC	Perceived Behavioral Control
T	Trust
R	Risk
<b>Moderating Variables</b>	
PD	Power Distance
IND	Individualism
UA	Uncertainty Avoidance
LTO	Long Term Orientation
MAS	Masculinity
<b>Control Variables</b>	
AGE	Natural log of age
GEN	Gender (Female 0, Male 1)
MSTATUS	Marital Status
EDU	Education
OCCU	Occupation
NAT	Nationality (Pakistan 0, Bangladesh 1)
$\epsilon$	<b>Error term</b>

Hypotheses were tested by utilizing the estimation technique named OLS (Ordinary Least Square). Earlier, nineteen hypotheses were presented, some of them showed the direct relation, and some were having a moderation effect. After analyzing the results, some hypotheses were removed and came up with a total of seventeen hypotheses.

After the findings, researchers had come to throw some discussions about the ride-sharing of Uber in Bangladesh and Pakistan. Undoubtedly, it is the pioneer of ride-sharing in both the countries, which has upgraded the transport standard and won the hearts of many ride users. Eventually, Uber has become a threat for public transportation, but despite that, most people enjoy using it as it has made their lives much flexible in busy traffics. To become a successful market leader in long term, Uber must adapt “localization” too. In the long run, the position can be hunted by any other local ride-sharing company as they are more customized according to the local choice. Being global and adapting localization or tailoring the place’s taste makes the business stay longer and raises the barriers of entry for newcomers. A local company named “Pathao” in Bangladesh and “Careem” in Pakistan do offer bike service to customers which is faster than car in heavy traffics as both the countries are always heavily congested. These services are also cheaper compared to Uber. Customers demand Uber to introduce bike services at a cheaper rate. Therefore, Uber

must beat its small local competitors to be a long-time market leader.

Certainly, Uber has been maintaining its safety in both the research countries, but some female customers do have doubts or fear of being alone in the car late at night with a stranger. As this ride share is a tailored service, it can introduce female drivers that will serve female customers, and if any male customer wants to travel in case of emergency then he must have a woman with him in the car as ride-share. The system can vigorously increase the usage of Uber among customers, which may make the demand for this near to perfectly inelastic in both countries. Then a high price of Uber will not make any big change in its demand because people will ultimately look at the proper safety as a valuable part of the service.

## 6 Conclusion

Digitalization has affected the population of Bangladesh and Pakistan to get more synchronized and customized transportation services. Certainly, there have been other than Uber local ride-sharing companies, which were also preferred by many of the respondents. Therefore, Uber has earned both negative and positive feedbacks from general customers. Compared to Pakistani customers, Bangladeshi customers have responded more, which shows that Uber is more popular in Bangladesh than in Pakistan. Overall it is a rapidly changing demand era where people have been seeking something which is beyond the traditional transportation service. Authors have created a research model with many independent variables and hypotheses. Not all the hypotheses have supported this research, and neither all the independent variables had. On the other hand, the behavioral intention was evaluated by the customers whether they are in favour or not in favor of using a particular product or service.

### 6.1 Limitations of the Study

First limitation of the study is the collection of data on social media. Going to the selected countries of the study was not possible, hence limiting the direct interaction with the consumers. This method alone cannot be sufficient as there should be more methods of collecting data to get responses of people. This study involves different theories and combines different countries, making it a complex model to study. To complete this study in a limited time is also a limitation of this study. Data of the two countries had been collected and combined. On the basis of inductive reasoning, it is supposed that result would have similar implications in both countries. The study would be more refined if the comparison of different cultured countries could have been done.

### 6.2 Suggestions for Future Research

This research has been conducted from the views of only two countries, and both the countries (Bangladesh & Pakistan) share almost similar cultures. Therefore, in future it will be better if the research will be conducted between more countries or at least countries which have different cultures so, the effects will be more diversified. Moreover, this research had a very limited time frame; it is recommended to conduct any research on Uber's customer satisfaction with a vast time period. This is how more primary respondents can be connected. The future research in Uber should be in a country where there is Uber service available and not from a long distance so that the data can be collected through face-to-face and one-on-one interviews.

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## Appendix:

### Control Variables:

- Age: Researchers have put a blank on the questionnaire survey to write the age of the respondents
- Sex: Either it is a man or a woman responding
- Marital Status: Single, married, unmarried, divorced, widowed, other; options were in the survey.
- Education: Primary, secondary, additional training, undergraduate, postgraduate or other; options were put in the survey for respondents.
- Occupation: Student, unemployed, public or private employee, entrepreneur or other; alternatives were specified in the public survey of Uber.
- Nationality: blank space was there as customers belong from Bangladesh and Pakistan.
- Country of Residence: Customers can reside anywhere in the world but has to be citizen of Bangladesh and Pakistan so; researchers put the blank space to be written the answer.

### Independent Variables:

- Attitude Towards Behavior (ATB): According to Mathieson (1991), the intention of the behavior is dependent on the attitude of the people towards a particular product or service. According to George (2004), any attitude towards the specific or targeted behavior drives the intention of that particular product or service. The construction, source, original items and the adapted questions of attitude towards behavior from (Puriwat & Tripopsakul, 2017).
- Perceived Usefulness (PU): (Davis, 1993), explained that perceived usefulness enhances the performance of the work. It motivates the behavioral intention of the customers either positive or negative. We adopted question items for perceived usefulness from (GlaveeGeo et al., 2017).
- Perceived Ease of Use (PEU): means the degree to which a particular system would be free from effort. If customers are happy enough or satisfied regarding a usage of any product or service so, it affects the behavioral intention. We measured perceived ease of use by adapting items from Glavee-Geo et al (2017).
- Subjective Norm (SN): The usage intention is driven by the societal culture or norms and it varies from culture to culture (Bandyopadhyay & Fraccastoro, 2007). Subjective norm is powerful to maintain the behavioral intention as the acceptance or the rejection first comes from the society especially in South East Asia. We measured subjective norm by adapting item from (Puriwat & Tripopsakul, 2017) and (Glavee-Geo et al. 2017).
- Perceived Behavioral Control (PBC): This variable has the positive or negative effect on the dependent variable, behavioral intention (Ajzen, 1991). Pavlou and Fygenson (2006) discussed that individual's capabilities are truly important in behavioral control for affecting the behavioral intention. We measured perceived behavioral control by adapting items from (Makongoro, 2014).
- Trust (T): People need to have trust to purchase any product or service so, it is dictated by the variable, trust (Kamal & Chen, 2016). The development of the trust makes the behavioral intention work (Doney & Cannon, 1997). The construction, source, original items and the adapted questions from Glavee-Geo et al. (2017).
- Risk (R): People think that something unpleasant may happen while using the product or service (Quintal et al., 2010). That is why; we have considered risk as an independent variable. Therefore, these all do affect the intention of customers towards usage the product or service. The construction, source, original items and the adapted questions for risk from Glavee-Geo et al. (2017) and (Shaikh, Glavee-Geo, & Karjaluo, 2018).

**Moderating Variables:**

- Power Distance (PD): Power distance shows the degree of inequality among people which the people of a population considers normal (Straub et al., 1997). Power distance, measured by adapting questions from (Dash & Guin).
- Individualism (I): It shows the stature of people as individuals rather than being in groups. It will moderate the relationship between independent variables and dependent variable. Individualism, measured by adapting questions from (Heinz (2013).
- Masculinity (M): According to (Straub et al., 1997), masculinity is the degree to which value like assertiveness, performance, success and competition prevail among people of a culture over gentler values like the quality of life, maintaining warm personal relationship, service, care for the weak etc. Masculinity has been measure by adapting questions from (Heinz, 2013).
- Long-Term Orientation (LTO): Long-term orientation focuses on looking at the future goals sacrificing or undermining short term objectives. Long term orientation has been measure by ada Uncertainty Avoidance (UA): This factor shows the ambiguity and uncertainty in a culture about the future events which may create uncomfortableness among people.
- Uncertainty avoidance has been measured by adapting questions from (Laukkanen, 2015) and (AGU et al., 2016).