

Consumers' Perception towards the Taxi Management in Kathmandu Valley: Awareness, Challenges, and Way-Forward¹

Niranjan Devkota, Manish Oli, Udaya Raj Paudel and Seeprata Parajuli

Abstract

Taxi services are seen continuously growing throughout the globe. The service being able to cope with technological advancement has been benefitted to a greater extent. However, in Nepalese context taxi used in Kathmandu valley is still based on primitive technology and services still face several challenges. In this context, this research aims to examine consumers' perception of taxi management in Kathmandu valley. The study was carried out among 414 taxi users with the help of a structured questionnaire. The taxi users' awareness index is prepared to measure customers' awareness towards taxi management in Kathmandu valley. The data revealed that customers' awareness level regarding the taxi services in Kathmandu valley is moderate (43.5%) and still 21.8% of them are less aware. It is found that the majority (66.7%) have not faced any challenges while using taxi service and one-third (33.3%) have faced challenges - over price charge (93%), rude behaviors (89%), payment problem (64%), and communication problems are major ones. Such challenges are moderate and often occurred at night time and at office time. Respondents argued that taxi services can be managed by formulating proper rules and regulations by the government, online booking and payment systems, and the installation of GPS on taxis. These services would help to run the taxi service effectively in the valley.

Keywords: Consumers' perception, Kathmandu valley, Taxi management

1. Introduction

Taxis play a significant role as a source of transportation alternative in all parts of the world. Though sometimes defined as a semi-public transport mode, the taxi service is, in fact, the first public transport in small towns when the distances between common

¹ Cite this article as: Devkota, N., et al. (2021). *Contemporary Research: An Interdisciplinary Academic Journal*, vol. 5 (1) DOI: <https://doi.org/10.3126/craiaj.v5i1.40487>

Niranjan Devkota, Manish Oli, Udaya Raj Paudel, and Seeprata Parajuli, Quest International College, Pokhara University, Lalitpur, Nepal; Email: niranjandevkota@gmail.com (corresponding author)

Article history: Received on March 11; Accepted on September 20; Published on October 21

Peer reviewed under the authority of CRAIAJ, academic journal of Ghodaghodi Multiple Campus, Kailali, Nepal, with ISSN 2717-4611 (Print) and ISSN 2717-462X (Online).

© 2021 CRAIAJ

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

origins and destinations become too large to be traveled by non-motorized modes (Silva, Santos, & Balassiano, 2011). As Lowitt (2006) the need for taxi services is highly heterogeneous and vary in developed and developing countries. While observing in developed countries, taxis are used as a substitute for private vehicles by customers who use service for convenience or because they do not want to own a car, even though they can buy it (Silva et al., 2011). Taxi market tends to operate on a non-shared basis and their supply is limited by legislation, it can be a good source of income for taxi operators (Lowitt, 2006). Taxis are instantly recognizable form of transport, existing in almost every city in the world (Aarhaug, 2014).

Regulation of the taxi industry has a very long history. Taxis are an important part of the transport system in most developed and developing countries (South Africa Economic Outlook, 2006). Taxi service is continuously growing with the support of technology (Saha, Kalita, & Saha, 2018). Customers in the present era are using mobile apps to book a cab at any time and from any place in urban areas. The pricing strategy of taxi operators had been positively affecting customers to book a cab instead of the traditional mode of transportation like autos and local buses (Aarhaug, 2016). Like other industries, the car rental industry had undergone a lot of transformation with internet technology. Consumers can access cabs at competitive prices because of tough competition among the organized taxi operators in the developed countries (Nandini, Vanathi, Sivasakthi, 2019).

In Nepal, the total number of vehicles has reached up to 2,143,186 (Ministry Finance, 2019). Ministry of Finance (2019) stated that in the current fiscal year in comparison to the first eight months of the last fiscal year vehicles registration has dropped by the 18%. Driving licenses are being distributed in electronic smart cards from the transport management office, Bagmati and there is a program of distributing electronic smart cards gradually from the other offices. According to Sudha & Sudha, (2017) it is quite common to hear reports of criminal activities amongst taxi operators in Nepal. In addition, most of the drivers are not qualified to drive in the urban area which is illegal, without proper registration, underage, etc. The consequence of this scenario is that the lives and properties of passengers are at risk every time and every moment (Haddleston, 2014).

Also, the managers of the taxi parks manually record information because they do not have a proper system and this makes it difficult to get relevant reports or to confirm

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

needed information about the taxi. To overcome such problems in the taxi industry, there is a need for an automated database system to aid the registration and verification of the identity of taxi drivers (Himalayan Times, 2018). But, there is a lack of proper study related to taxi services and their management in the context of Nepal. Hence, this study attempts to identify consumers' perceptions in terms of their perception and challenges towards the taxi management in Kathmandu valley and the way forward. This study mainly focuses on understanding the present situation of the taxi users especially in Kathmandu valley, using descriptive analysis.

2. Methodology

Study Area and Population

The study is related to taxi management in Kathmandu valley. The valley includes the three districts, namely, Kathmandu, Lalitpur, and Bhaktapur and they lie in Bagmati Province of Nepal (Figure 1), between the latitudes 27° 32' 13" and 27° 49' 10" north and longitudes 85° 11' 31" and 85° 31' 38" east, located at a mean elevation of about 1,300 meters (4,265 feet) above sea level. The valley covers an area of 899 square kilometers, whereas the area of the valley as a whole is 665 square kilometers (Tandukar et al., 2021).

In Kathmandu valley, there is a presence of a large number of customers who use the taxi services. In their study, Bajracharya & Bhattarai (2016) mentioned that in 2016 around 25,386 taxis were running in Kathmandu valley, but due to several other reasons taxis have been added and by 2020, the number reached approximately to 25,000. Though taxis can be available everywhere, they are most specifically located in prime areas of the valley including Kalanki, Syambhu, Narayan Gopal Chowk, Teaching Hospital Area, Ratna Park, Maiti Ghar, Lagankhel, Jawalakhel, Koteshower, Airport, Naya Buspark, Gwarko Chowk, Bhatbhateni Area, Sano Thimi.

For this research, the target populations are the customers' who have used the taxi in the valley. The population included both male and female but they must be between 18 years and 50 years in age. A probability sampling was used for the survey and within that simple random sampling was used.

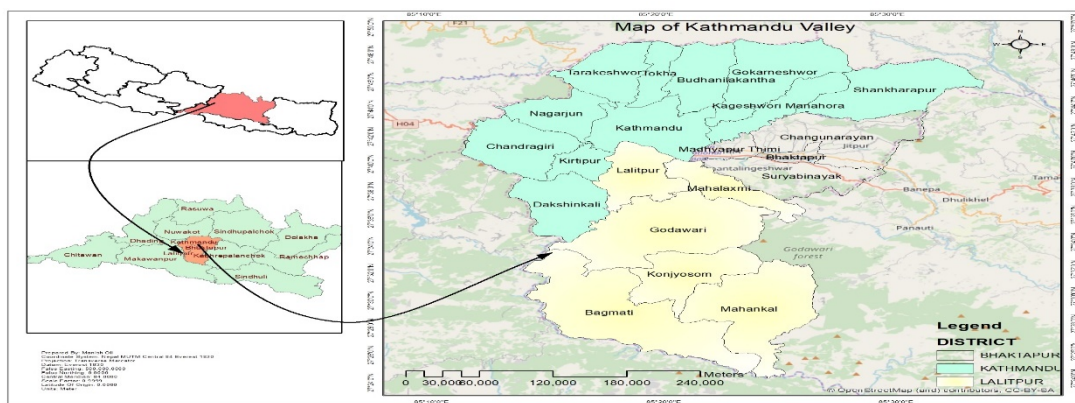
Sample Size Determination

This study is based on primary data. To select the respondents from the population, the sample selection formula recommended by Singh and Masuku (2014) and Paudel et al.

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

(2020) are adopted. The formula undertaken is $n_0 = z^2 pq/e^2$, where n_0 = sample size required for the study. The standard tabulated value for the level of significance (z) is taken 5% (i.e. 1.96). Similarly, the prevalence of customer of the taxi is taken 50 % (i.e. 0.5), then $q = 1 - p, = 0.5$. We assume 5% allowable error that can be tolerated (e) = 5 %. With this assumption, the total population required for the study becomes 384.16 people. Again, we assume 5% non-response error (i.e. $384.16 * 5/100 = 19.20$). Hence, from all the indications, the sample size required for this study was calculated $(384.16 + 19.20) = 403.36 (\approx 403)$. Hence, this study is based on the response of 414 taxi customers who have used the taxi service in Kathmandu valley.

Figure 11: Study Area



Research Instrument and Data Collection

A Structured questionnaire and KII were the instruments used to collect the relevant data related to taxi management in the Kathmandu valley. KII was done with the head of the taxi Samiti, CEO of the Sarathi who is recently providing the online cab service, a person related to the ministry of transportation, and so on. The KII has done in two ways first one is through the telephone and another one is through the face-to-face interview. A structured questionnaire has been prepared and provided to the customers who use the taxi service in the valley.

Data Analysis

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

Since this paper intends to measure customers' awareness towards taxi management in Kathmandu valley, taxi users' awareness index is prepared using a total of 24 questions that contains yes and no response that contains 6 different headings including assurance (5 items), responsiveness (5 items), reliability (4 items), economic (3 items), empathy (4 items) and safety (3 items). If an individual receives more than 18 questions yes or correct then – they are highly aware. Similarly, if respondents receive less than 12 questions no or incorrect then they are less aware. The general form to identify users awareness towards taxi management can be classified as suggested by Paudel et al. (2020):

$$Y = \begin{cases} Y = 1, & \text{if scale score} < 50\% \\ Y = 2, & \text{if scale score } 50\% \text{ to } 75\% \\ Y = 3, & \text{if scale score above } 75\% \end{cases}$$

3. Results and Discussion

Socio-demographic Characteristics

Under the analysis of socio-demographic characteristics of respondents factors like gender, age, level of education, employment status, and level of income are analyzed. In this study among the 414 respondents, 254 (61.35%) are male and 160 (38.65%) are female (Table 1). It shows the view in this study is covered from both the gender. Similarly age status of the respondents shows that the majority of respondents (107 respondents) belong to the age group 25-30 years, the age group of 40-45 (65), below 20 (61), 45-50 (55), and 7 respondents from the age group above 7, indicating that most of the taxi users are young. This study reveals that most of the respondents have a bachelor's level of education, that is 206, out of 414 total respondent, and very low numbers of respondents are from illiterate categorization, that is 5. The employment status of the taxi user shows that 185 (45%) are employed and 229 (55%) are unemployed. This fact revealed that to use the taxi, it is not necessary to be employed. People use taxis as per their necessity. Our study finds that most of the taxi users are unemployed. Here the majority of the respondents (i.e. 112) earn 20 thousand to 30 thousand per month salary while very few (8 respondents) are earning salary more than 60 thousand rupees per month. It indicates that taxi is the transport of emergency and urgency for many customers rather than the earning level.

Table 1: *Socio-Demographic Characteristics*

Title	Number	Percentage
-------	--------	------------

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

Gender		
Male	254	61.35
Female	160	38.65
Age		
Below 20	61	14.47
21 – 30	194	46.85
31 – 40	32	7.72
41 – 50	120	28.98
Above 50	7	1.69
Education Level		
Illiterate	5	1.20
Below Secondary	13	3.14
Secondary	4	0.966
Higher Secondary	89	21.49
Bachelor's	206	49.75
Master's	97	23.42
Employment Status		
Employed	229	55
Unemployed	185	45
Income Level		
Below 20000	44	24
20001 – 30000	66	36
30001 – 40000	31	17
40001 – 50000	19	10
50001 – 60000	16	8
Above 60000	9	5

General Information Regarding the Use of Taxi

This section mainly deals with the frequency of the taxi use, time of taxi use, method of using taxi, the basis of the bargain on the price of the fare, and so on. Mostly the discussion has been made regarding general information on the use of taxis in Kathmandu valley. This study finds that most of the respondents use taxi when it is necessary. As we know that taxi fare is expensive so people use only what they feel necessary. In detail, 27 respondents used the taxi every day, 54 respondents used the taxi sometimes in a week, 51 respondents used the taxi every two weeks, 17 respondents used the taxi every month, 250 respondents used the taxi only when they need and 15 respondents used the taxi for other reasons. The majority of the respondents (59.42%) used the taxi to go faster to their destination where a lower number of the respondents (7.25%) used the taxi for solo travel.

The main purpose of using the taxi by the customer in Kathmandu valley is personal work. This study reveals that the majority of the respondents, i.e. 260, used the taxi for personal work, and 150 respondents for office work. The percentage of such users comprises 62.8% and 36.24% respectively. How customers normally book the taxi is another query, this study finds 273 respondents (i.e. 65.94%) book the taxi by talking with the taxi driver, 87 respondents book the taxi by using the online site, 36 respondents use the taxi through the phone call and 18 respondents book the taxi through other methods. The study also finds that people feel more comfortable booking a taxi directly by talking with the driver.

The basis to pay the taxi fare is another important issue for taxi users. It gives the information on how customers are currently fixing the taxi fare. This study finds various ways to fix the fare by users in Kathmandu valley. It is revealed that 55% of the respondents pay the taxi fare based on a negotiable price that is bargaining with the taxi driver to fix the price. Similarly, 24% of respondents responded that they go with the fixed price, which means that they book the taxi through the online method which is fixed price. On the other hand, 19% of respondents pay fare based on metered price. Based on the information, it can be concluded that the majority of the respondents fix the price based on negotiating with the taxi driver.

Way of paying the taxi fare revealed that 275 respondents pay the taxi fare by cash on hand, 118 pay the fare through mobile pay and 48 respondents pay through e-payment, and 7 pay through another way. Indicating that the majority of the respondents pay the taxi fare by cash on hand which consists of 66.43%. It reveals that people still feel comfortable paying the taxi fare through the cash on hand. In this study, we ask customers to rate the overall taxi service in Kathmandu valley as per their experience from taxi services—services like price, the behavior of the driver, overall performance, and so on. In result, majority of taxi users give the rating on overall taxi service in Kathmandu valley is three stars which are 43% of taxi user. Then 31% rate the taxi service with two-star. So we can say that more than a majority of taxi users rate more than 3 stars for overall taxi service.

In a nutshell, majority of the taxi user uses the taxi when it is necessary. Not only that but from the result of the survey, we can say that most of the taxi users use the taxi for the comfort and faster purpose and they use more it for their work. Most of the taxi users

agreed that they book the taxi by talking with the driver and feel more comfortable to pay cash on hand than other. They fix the price of the taxi by negotiating with the driver.

Taxi Users' Awareness

As mentioned earlier, to measure customer awareness six variables such as assurance, responsiveness, reliability, empathy, economic, and safety were used. For this study, an awareness index was prepared to consider these six variables.

Assurance. Assurance of the respondents on the issue of overall taxi management has been identified on the basis of driver knowledge of the route, their friendly nature, trustworthiness and so on. Yao & Ding (2011) suggest that assurance plays an important role in maintaining the quality of service of the taxi. So it is very necessary to make taxi user assurance. Thus, we have taken assurance as an important index. We can see from the following table 2 that taxi users are assured with the driver knowledge of the route, their friendly nature, and trustworthiness. It shows that 62.56% of taxi users were assured that taxi drivers are trustworthy and 37.44% of taxi users are not assured of it. Similarly, 61.3% of taxi users have been assured that taxi driver has adequate knowledge about the route and 38.65% argued that taxi driver does not know the route. Likewise, only 43.24% were assured that the price tag of taxi fare is well displayed and 56.76% argued that it is not well displayed. Our study confirms that there are several factors under the assurance of taxi users. The findings reveal that most taxi users are assured with the friendly nature of the taxi driver, their knowledge regarding the route in Kathmandu valley, assured with the taxi drivers' trustworthy conduct.

Responsiveness. This section describes the awareness level of taxi users regarding the responsiveness of the taxi driver. Simply, responsiveness is the quality of reacting quickly and positively. So the responsiveness of the taxi driver towards the taxi user plays an important role. Swamy & Babu, (2018) found that responsiveness is one of the important and most effective elements of maintaining the quality of the service towards the customer, which helps retain the existing customer as well as attract the new customer. Taxi user agrees that taxi driver gives the quick response on the complaint and information about the lost luggage, that is, 60.38%, whereas 39.62% of the users are not agreed about taxi driver responsiveness. Customers are satisfied with the taxi drivers' patient attitude, arriving on right time when it is booked, arranging the reasonable route when it will be

requested and responding quickly. So the overall responsiveness of the taxi driver is satisfied.

Table 2: Taxi Users Awareness Level

	Yes		No	
	Number	Percent	Number	Percent
Assurance				
In my experience taxi, drivers have adequate knowledge about the route	254	61.35%	160	38.65%
I always see the price tag is well displayed in the taxi	179	43.24%	235	56.76%
The meter installed in the taxi that I use is trustworthy	209	50.48%	205	49.52%
In my opinion taxi driver are trustworthy	244	58.94%	170	41.06%
I often found taxi drivers are friendly and polite in nature	259	62.56%	155	37.44%
Responsiveness				
In my opinion taxi, the driver shows their patient attitude.	234	56.52%	180	43.48%
Taxi drivers give me a quick response to the complaint and information about the lost luggage	250	60.38%	164	39.62%
The taxi driver arrived at the right time when I book the taxi	239	57.7%	175	42.3%
.Taxi driver arrange the reasonable route when I request to them	235	56.76%	179	43.24%
Taxi driver quickly respond to my requests	238	57.59%	176	42.41%
Reliability				
Most of the time taxi drivers refuse when I request them to take a shortcut.	144	34.78%	270	65.22%
I often see that taxi drivers follow the traffic rules	261	63.05%	153	36.95%
In my opinion, there is unethical competition between the taxi drivers	253	61.2%	161	38.8%
I have seen that taxi drivers do not smoke, make a phone call and eat when driving	224	54.11%	190	45.89%
Empathy				
I feel comfortable talking with the taxi driver	263	63.53%	151	36.47%
In my opinion taxi driver have enough knowledge on recreation, shopping and tour sites	259	62.56%	155	37.44%
The taxi driver gives me the warm service	137	33.09%	277	66.91%
As per my experience taxi drivers are honest and righteous	104	25.12%	310	74.88%
Economy				
Taxi driver gives me the service in reasonable price	251	60.63%	163	39.37%
I feel more comfortable on fixed price	139	33.57%	275	66.43%

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

I feel more comfortable on negotiable price for the taxi service	310	74.88%	104	25.12%
Safety				
While I am using the taxi service driver ride smoothly	273	65.94%	141	34.06%
In my opinion, there is a low chance of an accident in a taxi than another vehicle	258	62.32%	156	37.68%
I have seen that there is a low probability of assault by the taxi driver to their customer	311	75.12%	103	24.88%

Reliability. In a general sense the reliability means the quality of being trustworthy or of performing consistently well (Annum, 2017). Haba & Dastane (2018), reveals that reliability creates trust among the customer. Table 2 presents the reliability level of taxi driver towards the customer. Total of 65% of the taxi user argued that most of the time taxi drivers do not refuse the request of the customer to take the shortcut. Similarly, 63% of respondents agree that taxi drivers follow traffic rules and regulations. Likewise, 61.2% of the customers agree that there is unethical competition between the taxi drivers in the Kathmandu valley. And last but not the least, the majority of the respondents agree that taxi drivers do not smoke or make a phone call during driving. Thus, the reliability of the taxi service is good but there is a lot of loops that can be filled to gain more advantage.

Empathy. Empathy is the ability to emotionally understand that what other people feel, see things from their point of view as well as imagine yourself in their place. Essentially, it is putting yourself in someone else's position and feeling what they must be feeling (Sharma & Das, 2017). Empathy means understanding the feelings of the other so that only after knowing other's problems, they can be solved (Govender, 2014). Here it is illustrated that 74.88% of people argued that taxi drivers are not honest and righteous well in giving a warm service. Similarly, 63.53% of respondents agree that they feel more comfortable talking with the taxi driver, and also 62.56% say yes that taxi drivers have enough knowledge on recreation, shopping, and tour sites. So, we can see that at what level of empathy the taxi driver has towards the customer or how much they understand the customer's feeling and their problem. Thus, the overall level of empathy of the driver towards the taxi user is average.

Economy. Economy is the level of fare of the taxi use. So the more economic fare the customer afford more and vice-versa. Sharma & Das (2017) suggest that the economy is the backbone of the business, as the first noticeable point for the customer is affordability of the services. So the fare of the taxi should be maintained not too high and should be

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

flexible that it can be minimized through the bargaining. Here, it is presented that 74.88 % of taxi users agree that they feel more comfortable on negotiable price for the taxi service. Similarly, 60.63% of the customers are satisfied with the price that taxi drivers offer to them, whereas 66.43% of taxi users are not agreed with the fixed price of the taxi. So, it is mentioned that they feel more comfortable with the negotiable price for the taxi use. Not only that but also we can say that Nepali people are still not habituated with the fixed price, only on bargaining price. So more or less it is economic in nature and customers can afford it.

Safety. Safety is the condition of being protected from or unlikely to cause danger, risk, or injury, accident, and so on. Archarworarit (2015) suggests that safety is the most important factor for the taxi service. Safety is the broad concept; it is not just the accident but also the caring of the customer, safety from noise and pollution, safe, girls from being assaulted, and safety of the customer property. The majority of the respondents feel safer in the taxi. As 75% of the taxi user believes that there is low chance or probability of assault by the taxi driver to their customer which is good for the customer especially for girls. Similarly, 65.94% of the customers agree that the taxi driver rides the taxi smoothly. Likewise, 62% of the taxi users agree that there is less chance of an accident in a taxi in comparison to the other vehicle in the Kathmandu valley. Thus, the safety of the taxi for the customer is satisfactory in the Kathmandu valley.

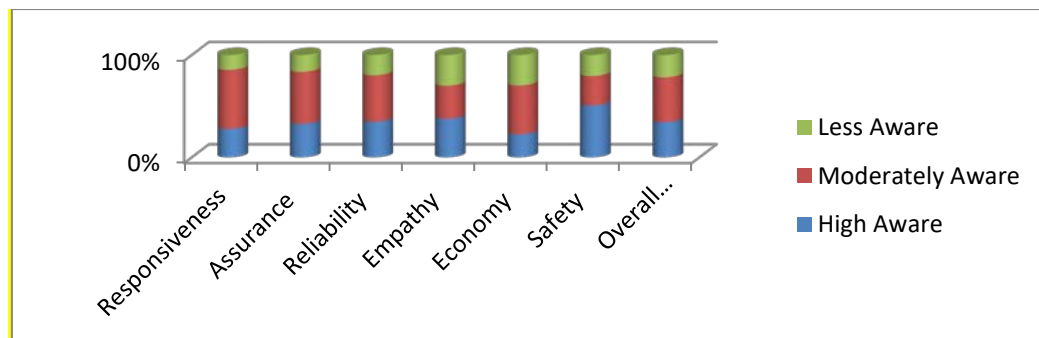
In a nutshell, it is confirmed that the assurance level of the taxi user towards is taxi driver is good, as well as the responsiveness of the taxi driver towards their customer is satisfied. It is also found that majority of the respondents thinks that taxi is safer in comparison to the other forms of vehicles.

Taxi Users Awareness Index

The customer awareness level index shows the awareness level of the customer regarding the taxi service in the Kathmandu valley. These results revealed that 57.37% of the respondents are moderately aware of the responsiveness of the taxi driver (Figure 2). Similarly, 27.78% of the taxi users are highly aware of the responsiveness of the taxi driver. So the majority of the respondents are moderately aware of the taxi drivers' responsiveness. Similarly, 51% of the customers are less aware regarding the assurance of the taxi service in Kathmandu valley, whereas 33% of the customer are highly aware of the assurance and

only 16% of the customer are moderately aware of the assurance. Likewise, the majority of the respondents are moderately aware of the reliability of the taxi service in the Kathmandu valley which is 45.41%. Similarly, 34.78% of the respondents agree that they have a high level of awareness regarding the reliability of the taxi service. Likewise, only 19.81% of the customers have a low level of awareness regarding the reliability in Kathmandu valley. On the other hand, there is a high awareness level of customer empathy which is 37.68%. Similarly, 32.37% of the respondents have a moderate level of awareness level of the customer regarding empathy. Finally, only 29.95% of the respondents have a low level of awareness. In terms of economy, the majority of the respondents have a moderate level of awareness on the economy factors which is 47.83%. Similarly, 29.71% of the customers have a low level of awareness regarding the economy. It means that taxi users are still not clear about the actual cost of taxi services. Also, the majority of the respondents have a high level of awareness on taxi service with safety which is 51%. Similarly, 29% of the respondents have a moderate awareness level and only 20% of the respondents have less awareness of taxi safety in the Kathmandu valley. In summary, in empathy and safety, there is a high level of awareness, while in responsiveness, reliability, and economy there is a moderate level of awareness. Similarly, in assurance, there is less level of awareness of the customer.

Figure 2: User's Awareness of Taxi Management



Challenges Faced by the Taxi Users

This section deals with identifying how many respondents faced the problem and also identifying the challenges, at what level they have faced such problem or challenges, and at what time that taxi user mostly faced such problems in Kathmandu valley. The majority of the respondents do not face any kind of challenges which is a good thing for

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

taxi management. However, 33.33% of the taxi user agree that they have faced the problem during the use or while they are using the taxi. In number 138 respondents out of the total respondents are 414 agree that they face faced the challenges. It indicates, only one-third portion of the respondent faces the problem during the use of the taxi.

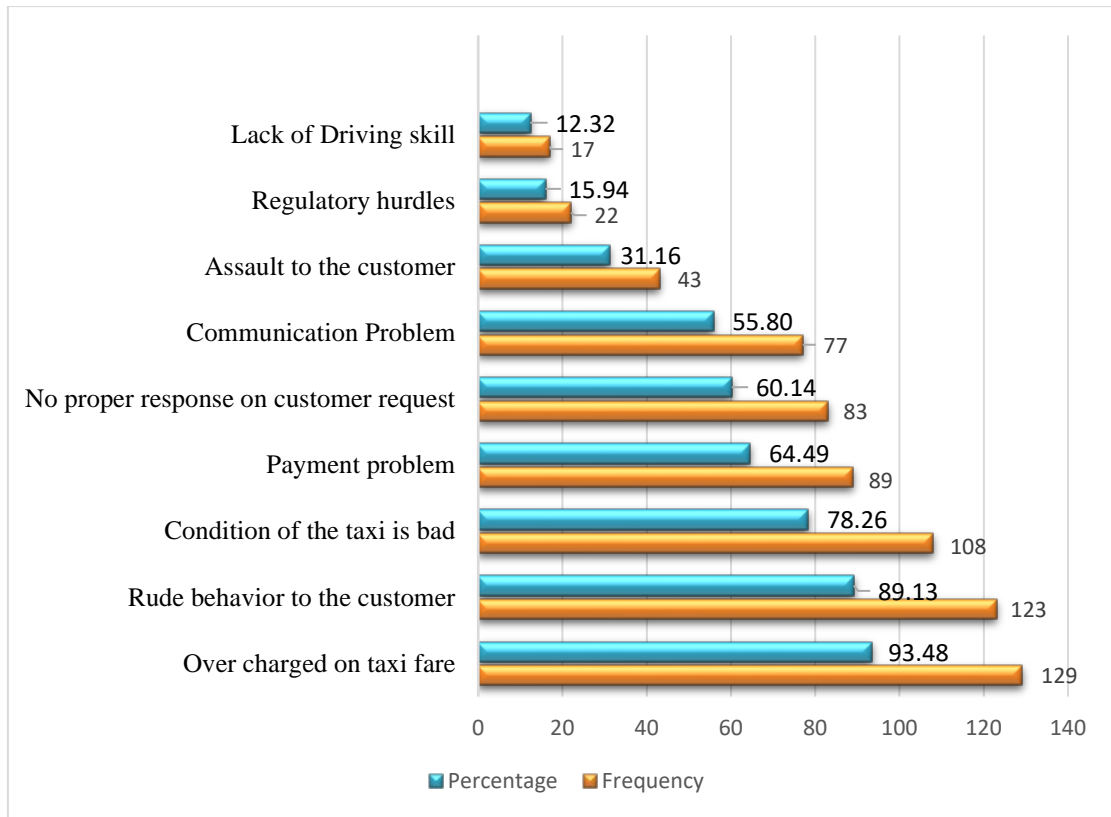
As per the survey out of 414 respondents, 138 respondents agree that they have faced the problem. So the basis of the respondents' view over price charge for the taxi is the major problem where 129 respondents agree out of 138. Similarly, the rude behavior of the taxi driver to the customer is the second major problem that the customer mostly faced during the use of the taxi. Likewise, the condition of the taxi, payment problem, no proper response on customer request, communication problem, assault to the customer and so on are the major problem faced during the use of a taxi. The driving skill problem is not the major issue because only 17 respondents agree that driving skill is a problem out of 138.

From the figure 3, it is suggested that the major problem that customer face during the use of a taxi is overcharging on taxi fare which is 93.48% of the respondents. According to Ojo (2017), the major issue related to taxi use is the differentiation in the taxi fare due to which many customers face problems.

As per the information illustrated in figure 4, it can be concluded that most customers face the problem at the night time and the official time. Similarly, at holiday time, at festivals time, weekend time, at evening and morning time customer mostly faced the problem.

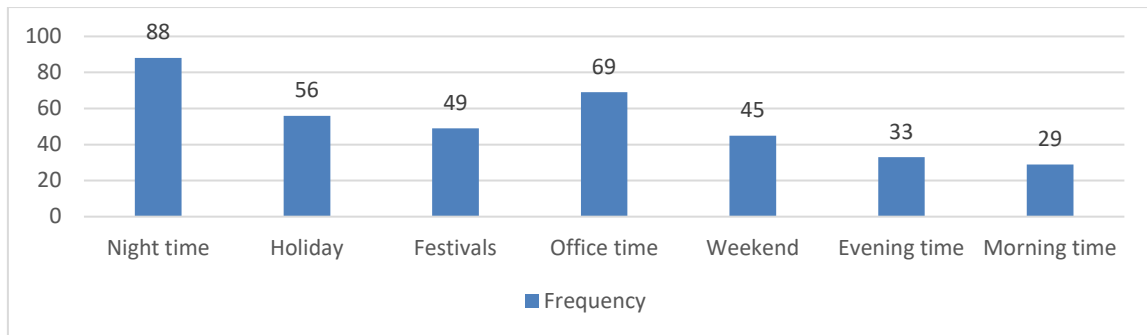
Figure 3: *Problems faced during the use of the taxi*

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info



Source: A field study

Figure 42: At What Time Mostly Taxi User Faced Problem



Source: A field study

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

In summary, out of 414 respondents, 138 respondents agree that they have faced the problem. The major problems are overcharge of fair to the customers, condition of the taxi, rude behavior of the taxi driver to customer, and payment. Similarly, customers mostly faced the problem at a moderate level and they faced such problems mostly at night time and the office time.

Managerial Solution

Different problems are associated with taxi management, however, some of them are avoidable and some of them are not avoidable. Out of the 414 respondents, the majority of the respondents said that taxis can be managed properly in Kathmandu which is 239 responses, and the rest of the respondents said that it cannot be managed properly in the Kathmandu valley.

There are different ways for solving the taxi management in Kathmandu valley. Some of the respondents said that proper rules and the regulation need to be set by the government to manage taxi, some suggest that to manage more effectively it should be run through the online system. Some other respondents said that there should be an increase in the number of the taxi due to which competition will be high and the taxi driver tries to provide better service to the customer. They also suggest that every taxi needs to maintain the GPS so that customer feels safe; the price of the taxi needs to be fixed as per the distance. They also try to suggest that traffic police should be involved directly to manage the taxi.

Some of the respondents said that there is a policy but it is not implemented if such policy is implemented properly there no further action is required to manage taxi in Kathmandu valley. The government, taxi Samiti, and Pathao need to work collaboratively so that it would be easy to manage the taxi system. Not only that but they also suggest proper parking for the taxi in the crowded area need to be fixed or maintained and monitoring the taxi services by the government with the improvement in technology.

Out of 414 total respondents 175 said that taxi cannot be managed properly in Kathmandu valley. Different taxi users give different points of view that it cannot be managed as per their perception. Most of the respondents said that because of the

carelessness and the monopoly market of the taxi Samiti it cannot be managed. They are against Pathao which runs through the online system. There is no proper coordination between the taxi driver and taxi Samiti due to which the price of the taxi fare varies from taxi to taxi. Taxi drivers do not afraid of the laws made by the government due to which it cannot be changed and cannot be managed. Another problem due to which taxi cannot be managed is the attitude of the taxi driver.

4. Conclusion

This study of customers' preferences towards taxi management depicts that for majority of the respondents taxi is the more safe transportation in comparison to other public vehicles available in the valley. They also believed that taxi is providing good and sound service. The findings indicated that customers are moderately aware of the responsiveness of the taxi driver. The awareness level of customers regarding the taxi services in Kathmandu valley was assessed and found that they are highly aware of empathy and safety, while in responsiveness, reliability, and economy they are moderately aware. Similarly in assurance, they are less aware. An interesting finding is that majority of the customers mentioned that they don't face any kind of challenges while using taxi services, which is a good thing for taxi management in Kathmandu valley. Only 33% of them face challenges among those challenges 93% of them faced overcharge on taxi fare while 89% of them argued rude behavior of driver to the customers; 64% mentioned there is payment problem as most of the time they use cash transaction. Mostly, customers face the problem at the night time and the official time. Thus, formulating proper rules and regulations by the government, increasing the number of taxis, installation of GPS would further enhance the service quality of taxis in Kathmandu valley.

References

- Aarhaug, Jorgen. (2014). Taxis as urban transport. In TØI Report. Retrieved from <http://trid.trb.org/view/2014/M/1308462>
- Aarhaug, Jørgen. (2016). Taxis as a part of public transport sustainable urban transport technical document #16. (September). Retrieved from <http://www.sutp.org>
- Annum, G. (2017). Research instruments for data collection method. *Research Methodology*, 1–4. http://campus.educadium.com/newmediart/file.php/137/Thesis_Repository/recds/assets/TWs/UgradResearch/ResMethgen/files/notes/resInstrsem1.pdf

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

- Archarworarit, W. (2015). The study of consumer behavior and selection criteria on alternative taxi service in Bangkok (Master's Thesis, *Thammasat University*, Bangkok, Thailand). Retrieved from http://ethesisarchive.library.tu.ac.th/thesis/2015/TU_2015_5702040949_3536_2209.pdf
- Bajracharya, I., & Bhattarai, N. (2016). Road transportation energy demand and environmental emission: A case of Kathmandu valley. *Hydro Nepal: Journal of Water, Energy and Environment*, 18(18), 30–40. <https://doi.org/10.3126/hn.v18i0.14641>
- Govender, K. K. (2014). Service quality in the South African road public transportation Industry-comparing bus and mini-bus taxi service. *Journal of Human Ecology*, 47(1), 7-15.
- Haba, H. F., & Dastane, O. (2018). An empirical investigation on taxi hailing mobile app adoption: A structural equation modelling. *Business Management and Strategy*, 9(2).
- Himalayan Times (2018). Private vehicle as means of public transportation. *Himalayan Times*, (december), 2.
- Huddleston, M. R. (2014). *Taxi drivers and the night time economy: an exploratory study on their experiences* (Doctoral dissertation, Auckland University of Technology, Auckland, New Zealand). Retrieved from <http://orapp.aut.ac.nz/handle/10292/8387>
- Lowitt, S. (2006). *The Job-creating potential of the metered taxi industry in South Africa's urban areas*. Human Sciences Research Council, (march), 9–26.
- Ministry of Finance. (2019). Economic survey, 2018/19. 1–312. Retrieved from <http://mof.gov.np/en/archive-documents/economic-survey-21.html?lang=>
- Ojo, T. K. (2017). Quality of public transport service : An integrative review and research agenda. *Transportation Letters*, 8(3), 1–14. <https://doi.org/10.1080/19427867.2017.1283835>
- Paudel, U. R.; Parajuli, S.; Devkota, N. and Mahapatra, S. K. (2020). What determines customers' perception on banking communication? Evidence from Nepalese commercial banks. *Global Economy Journal*, 20(4), 1-21.
- Saha, S. K., Kalita, J., & Saha, S. (2018). Consumers' perspective on cab services in Guwahati. *Business and Economics Journal*, 09(03). <https://doi.org/10.4172/2151-6219.1000364>
- Sharma, K., & Das, S. (2017). Service quality and customer satisfaction - with special focus on the online cab industry in India. *International Journal of Business and Management*, 12(7), 192. <https://doi.org/10.5539/ijbm.v12n7p192>

Full text of this article can be downloaded from www.craiaj.com and www.nepjol.info

- Silva, A. N. R. da, Santos, M. P. de S., & Balassiano, R. (2011). Global taxi schemes and their integration in sustainable urban transport systems. 34. Retrieved from <https://sustainabledevelopment.un.org/content/documents/synthesispaper.pdf>
- Singh, A.S., and Masuku, M. B. (2014). Sampling techniques & determination of sample size in applied statistics research: An overview. *International Journal of Economics, Commerce and Management*, 2(96), 32–33. Retrieved from <http://ijecm.co.uk/wp-content/uploads/2014/11/21131.pdf>
- Sivasakthi, D., Nandini, C., Priyadharshini, R., & Vanathi, D. (2019). Taxi services in India. *EPRA International Journal of Research and Development*, 4 (3), 34, 39.
- South Africa Economic Outlook(2006). *South Africa Economic Outlook*, (2005), 17131. <https://doi.org/10.4135/9781412953979.n572>
- Sudha, R., & Sudha, R. (2017). Problem Statement. *Research and Biostatistics for Nurses*, 28–28. https://doi.org/10.5005/jp/books/13016_3
- Swamy, V., & Babu, B. K. (2018). A study on factors influencing in selection of mobile hand sets , *guntur*. 20(2), 16–29.
- Tandukar, H., Devkota, N., Khanal, G., Padda, I. U. H., Paudel, U. R., Bhandari, U., ... & Parajuli, S. (2021). An empirical study in Nepalese commercial bank's performances on green banking: An analysis from the perspective of bankers. *Quest Journal of Management and Social Sciences*, 3(1), 49-62.
- Yao, Z. G., & Ding, X. D. (2011). Measuring passenger's perceptions of taxi service quality with weighted SERVPERF. In *Applied Mechanics and Materials*, 97, 1181-1184.