

GOVERNMENT OF PAKISTAN
MINISTRY OF COMMUNICATIONS
NATIONAL TRANSPORT RESEARCH CENTRE (NTRC)
SECTOR H-8/2, ISLAMABAD

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“AVAILABILITY OF PUBLIC TRANSPORT”
(A CASE STUDY OF PAK-SECRETARIAT TO FAIZABAD)

(ZIA-UL-ISLAM)
RESEARCH OFFICER

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1. EXECUTIVE SUMMARY

The study was carried out in August 2011 with the aim to analyze the availability of public transport from Pak-Secretariat to Faizabad. The sample size selected was of 200 questionnaires filled on four different locations from Pak-Secretariat to Faizabad. There were three sections of the questionnaire i.e. A: Passengers Views, B: Drivers Views and C: Policeman Views. After analysis of surveyed data the following results were obtained:

- 1) The most significant reason for the non-compliance of route by drivers was the fare structure issued by the Regional Transport Authorities (RTA). Regional Transport Authorities issue fare list (NIRKH NAMA) which is not visible to passengers during sitting in the wagons. There should be a rational proportion between fare and route length i.e. longer the routes higher the fare and vice versa. Reservations on fare list are mostly by commuters as drivers are managing fare list through making short trips.
- 2) Traveling time from origin to destination and waiting time on bus stops by pedestrians was variable. It depends on peak/off-peak hours and the traveling distance from origin to destination. On the average traveling time between Pak-Secretariat to Faizabad is forty to fifty (45) minutes for a route length of 11.7 Km. The average speed is 16 Km/hour.
- 3) Sixty three (63%) percent public are not satisfied with existing transport facility while thirty seven percent are satisfied. Travel time, seating capacity and attitude of driver/conductor were the different variables for determining the public satisfaction/dissatisfaction level.
- 4) Forty five percent are willing to pay more for good transport while fifty five are not willing to pay more.

- 5) Majority (83%) of public showed their interest in usage of wagons instead of taxi (4%) and Bus (13%). Wagon is preferred to taxi because of less fare while preferred to bus because of lower traveling time.
- 6) Majority of public are not satisfied with the attitude of drivers/conductors due to fare charging and non-compliance of route by drivers.
- 7) There is a mixed response regarding the attitude of drivers/conductors with passengers. Some passengers consider them friendly while others as rudely.

As the majority of passenger i.e. 83% showed their interest to use wagons as transportation mean therefore, the only option left for the time being is to further improve this mean of transport by taking following steps:

- Fare structure issued by RTA's should be according to route lengths.
- Strict action i.e. Cancellation of driving license/route permits if routes are not followed by the drivers.
- Law enforcement should ensure and keep eye on drivers that routes are followed and fares are charged properly.

2. LIST OF TABLES

- Table-1:** Table showing reasons for the non-compliance of route.
- Table-2:** Table showing travel time taken from origin to destination and the average individual time waiting for bus/wagon. Monthly income and daily expenditures on transport of commuters.
- Table-3:** Table showing public level of satisfaction and their willingness to pay more for a good transport service.
- Table-4:** Table showing the ratio of public choice for transport among taxi, bus, wagon and others.
- Table-5:** Tables showing the behaviour of passengers, driver/conductor and police among one another.

3. INTRODUCTION

The provision of efficient transport services in urban areas has become a problem of serious magnitude in all the larger cities of Pakistan and the twin cities of Rawalpindi and Islamabad are no exception. In spite of excessive over-loading of all public service vehicles, bus-stops remain desperately over-crowded with long queues of commuters. The gravity of the problem and its complexity are likely to increase with increase in size of the two cities which are growing rapidly. The problem therefore needs more attention than has hitherto been paid.

The first step in solving problem is to know the facts. However, very little information has been documented on the availability of transport services and how far the available services are being utilized efficiently in Rawalpindi – Islamabad area and in other cities as well. In order to highlight significant aspects of the problem, a survey of transport services from Pak-Secretariat to Faizabad was carried out. The survey mainly covered availability, quality and expenditure made on transport services. The results of the survey are presented in this Report.

Before concluding the results, it is pertinent to asses an overall view of transport pattern existing in the twin cities.

3.1 THE TRANSPORT PATTERN

Although the Federal Government offices are spread all over Islamabad and Rawalpindi, the main secretariat complex is located in the North-Eastern corner of Islamabad. Employees from all parts of Islamabad and Rawalpindi commute there. The main modes of transport are bus, wagon and personal vehicles including car, motorcycles, pedal cycles.

The proportion of traffic carried by different modes was not covered in the scope of this study. However, an earlier survey indicated that wagons and buses provide almost equal capacity between Rawalpindi and Islamabad (*Reference-I*). Wagons ply on main routes where they compete with buses. However, wagons are the only means of transport at places buses do not operate and generally carry people of low income groups. Hence the operation of bus services is a matter of significant importance for public convenience and ease.

3.2 OBJECTIVES

Some main objectives of the study are as under:

- 1) To know whether routes are completely followed by wagons or not and if not, then why they are not followed.
- 2) Travel time taken from origin to destination and the average waiting time for bus/wagon at stops.
- 3) To know monthly income plus daily expenditure made on transport.
- 4) To observe the level of satisfaction and willingness to pay more for a good transport service.
- 5) The public transport the public prefers the most, i.e. Taxi, Wagon, Bus, Rickshaw etc.
- 6) To study the behaviour of passengers, driver/conductors, level of enforcement and presence of traffic wardens.
- 7) To suggest remedial measures in improving public transport availabilities.

3.3 LIMITATIONS OF DATA

All possible attempts were made to collect the accurate information, but there were some limitation faced during survey. Some main barriers are as under:

- i. Most of the public were unaware of non-compliance of routes by the wagon drivers.
- ii. Travel time was not accurately determined as it depends on congestion of traffic during peak hours and delays caused during VVIP movements.

4. LITERATURE REVIEW

The significance of public transport for urban mobility varies in South Asian cities. The expansion of Pakistani cities has increased the trip length for most urban residents, which makes walking and cycling less feasible than before, encouraging a continuous shift from non-motorized to motorized modes. In this situation, public transport can provide high-quality services for urban population at a much lower cost than a system devoted to private motorized transport and road expansion. Due to low level of public transport services, middle- and higher-income people living in larger cities prefer private vehicles, either motorcycle or car, for travel.

Numerous factors have contributed to the upward trend of private vehicle use and the declining or static role of public transport in most cities. The most important factor is continuous investment in roads, which left few or no funds for public transport provision in most cities of the developing world (*Reference-2*).

5. METHODOLOGY

The study was carried out to determine the availability of public transport on the basis of information obtained from commuters, drivers/conductors and police officials. For this purpose, a field survey was made to fill up the approved questionnaires (*Annex-1*).

6. DATA ANALYSIS

Table-1: Reasons for the non-compliance of route.

DESCRIPTION	FARE STRUCTURE	LACK OF ENFORCEMENT BY POLICE	LUST FOR MANY TRIPS BY DRIVERS
	PERCENTAGE (%)		
REASONS FOR THE NON- COMPLIANCE OF ROUTE	62	30	8

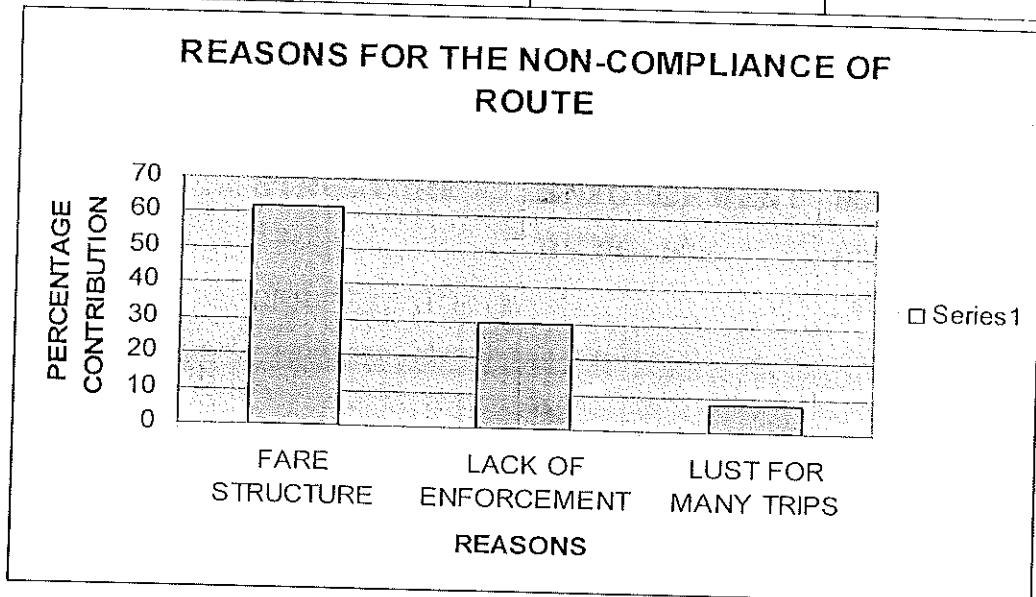


Figure-1: Reasons for the non-compliance of route.

As per the surveyed data, major reason for the non-compliance of route is fare structure (62%), while lack of enforcement by police (30%) and lust for many trips by drivers to earn more contributes 8%, in the non-compliance of route.

Table-2.1: Travel time taken from origin to destination (Pak-Secretariat to Faizabad)

DESCRIPTION	20-30 (MINS)	31-40 (MINS)	41-50 (MINS)	51 & ABOVE (MINS)
	PERCENTAGE (%)			
TRAVEL TIME FROM ORIGIN TO DESTINATION	22	34	40	4

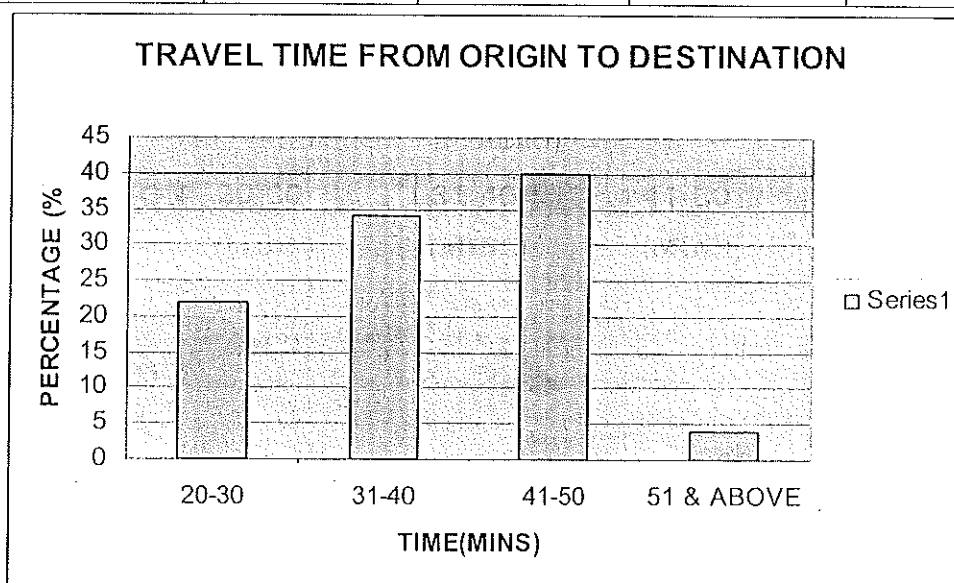


Figure-2.1: Travel time taken from origin to destination (Pak-Secretariat to Faizabad)

From the above table and figure it is shown that modal time from origin to destination is 41-50 minutes. The data obtained for travel time taken could not be finalised as it depends on distance, peak and off-peak hours. Model and mean travelling time of commuters are calculated below:

Class Interval	x	f	Fx
20-30	25	22	550
30-40	35	34	1190
40-50	45	40	1800
50-60	55	4	220
Total	160	100	3760

$$\text{Mean} = x = \frac{\sum fx}{\sum f} = \frac{3760}{100}$$

$$= 37.6 \text{ minutes}$$

$$\text{Modal} = 30 + \left[\frac{22}{56} \right] * 4$$

$$= 30 + 1.57$$

$$= 31.57 \text{ minutes}$$

Table-2.2: Average individual time waiting for bus/wagon.

DESCRIPTION	0-10	10-20	20-30	30-40
	(MINS)	(MINS)	(MINS)	(MINS)
	PERCENTAGE (%)			
WATING TIME	33	37	22	8

Based on survey analysis shown above, 11-20 minutes are taken as waiting time for bus/wagon and the perception was 37%. It again depends upon peak and off-peak hours. The variance calculated is 6336 while standard deviation is 79.59. In the given report, the data obtained was in off-peak hours. Model and mean waiting time of commuters are calculated below:

Class Interval	X	f	Fx
01-10	5	33	165
10-20	15	37	555
20-30	25	22	550
30-40	35	8	280
Total	80	100	1550

$$\text{Mean} = x = \frac{\sum fx}{\sum f} = \frac{1550}{100}$$

$$= 15.5 \text{ minutes}$$

$$\text{Modal} = 10 + \left[\frac{33}{33+37} \right] * 4$$

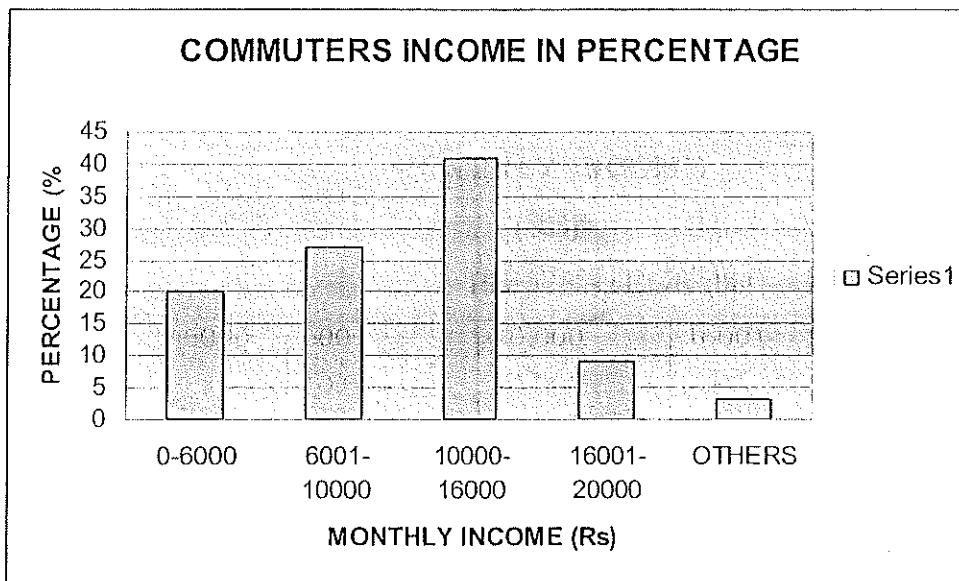
$$= 10 + 1.88$$

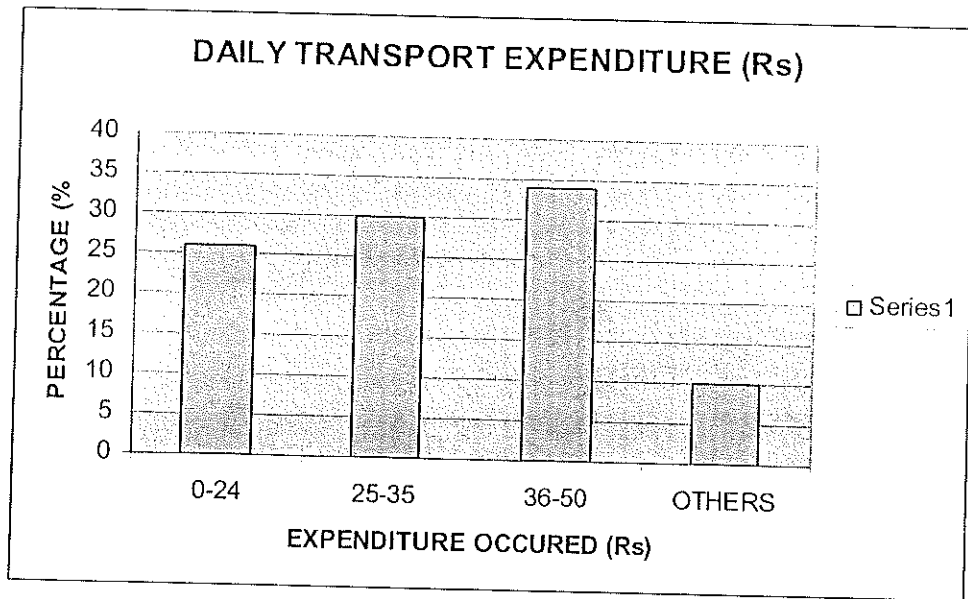
$$= 11.88 \text{ minutes}$$

Table-2.3: Commuters monthly income versus expenditure on transport

TYPE	MONTHLY INCOME (RS)					DAILY TRANSPORT EXPENDITURE (RS)			
	0-6000	6001-10,000	10,000-16,000	16001-20,000	OTHER	0-24	25-35	36-50	OTHER
TRANSPORT EXPENDITURE	20	27	41	9	3	26	30	34	10

Figure-2.3: Commuters monthly income versus expenditure on transport





From the above table and figure it is shown that mostly the monthly income of commuters and daily expenditure on transport is Rs.10,000-16,000 and Rs.36-50 respectively.

Table-3.1. Public levels of satisfaction from existing transport system.

DESCRIPTION		YES	NO
		PERCENTAGE (%)	
LEVEL OF SATISFACTION	OF	37	63

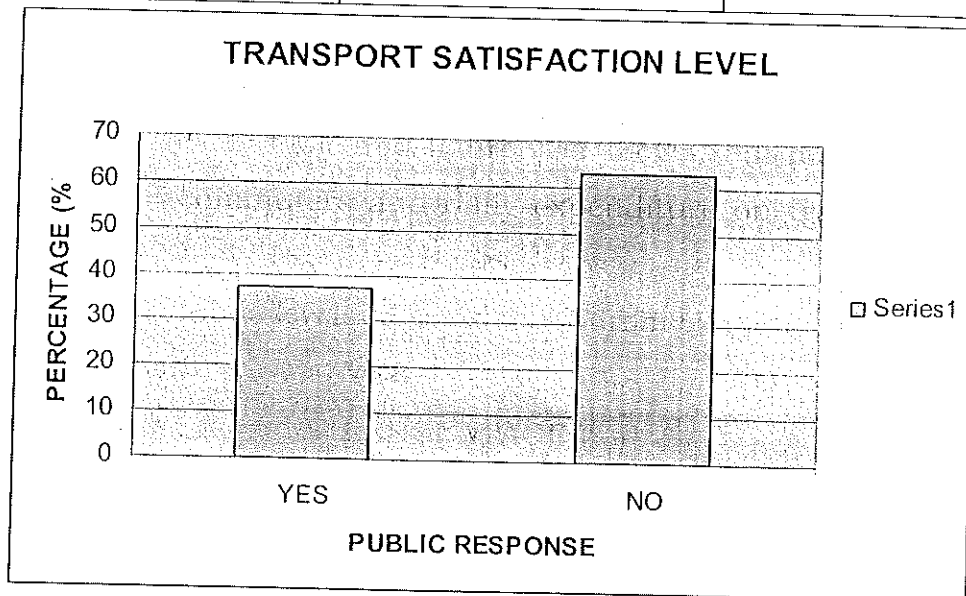


Figure-3.1: Satisfaction level with existing transportation system.

The analysis of data shows that sixty three (63%) percent public are not satisfied with existing transportation system. Seating capacity, fare structure and travelling time were few variables used for determining public level of satisfaction. The variance and standard deviation are 2500 and 50 respectively.

Table-3.2: Public willingness to pay more for a good transport service.

DESCRIPTION	YES	NO
	PERCENTAGE (%)	
WILLING TO PAY MORE	45	55

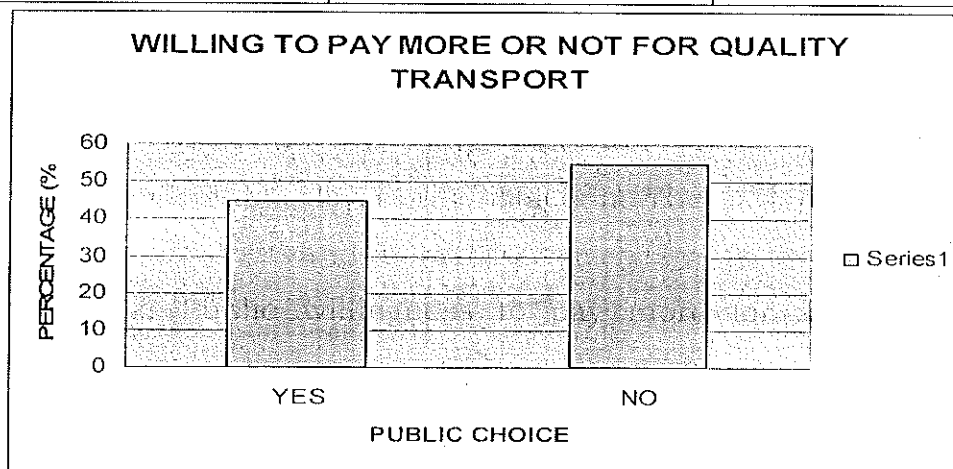


Figure-3.2: Public willingness to pay more for a good transport service.

As per the surveyed data, forty five (45%) percent public are willing to pay more for the provision of quality transport while fifty five percent has shown disagreement with increase in fares.

Table-4: Public choice for various transportation modes.

DESCRIPTION	TAXI	BUS	WAGON	OTHERS(SPECIFY)
	PERCENTAGE (%)			
PUBLIC TRANSPORT U PREFER	4	12	83	1

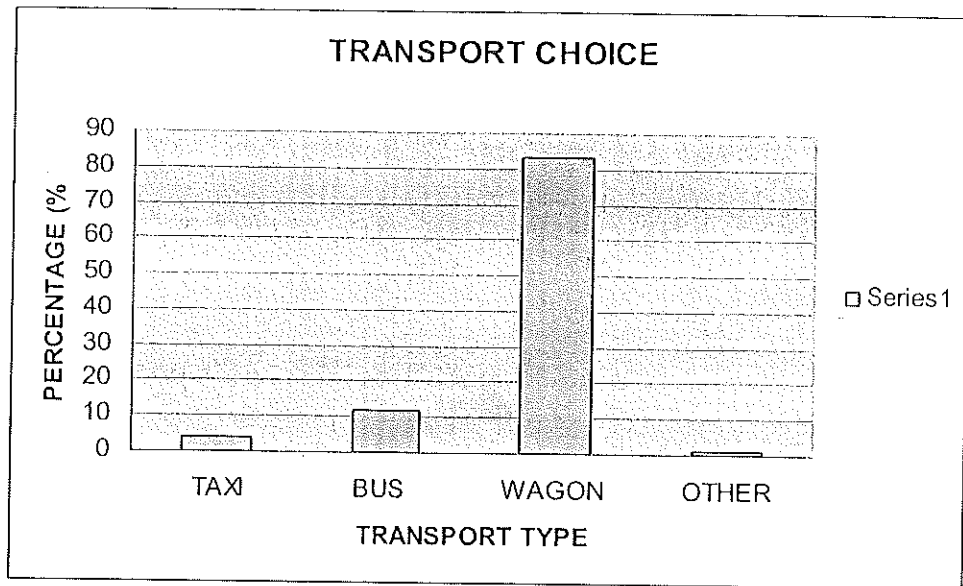


Figure-4: Public choice for various transportation modes.

Eighty three (83%) percent public has chosen wagon as their transport mean. The major reasons associated with it are travelling time and affordability. Taxi takes less time but charge more while bus charges less but take more time to reach from origin to destination.

Table-5.1: Behaviour of passenger with driver/conductor.

DESCRIPTION	FRIENDLY	RUDELY	NORMAL
BEHAVIOUR OF PASSENGER WITH DRIVER/CONDUCTOR	33	35	32

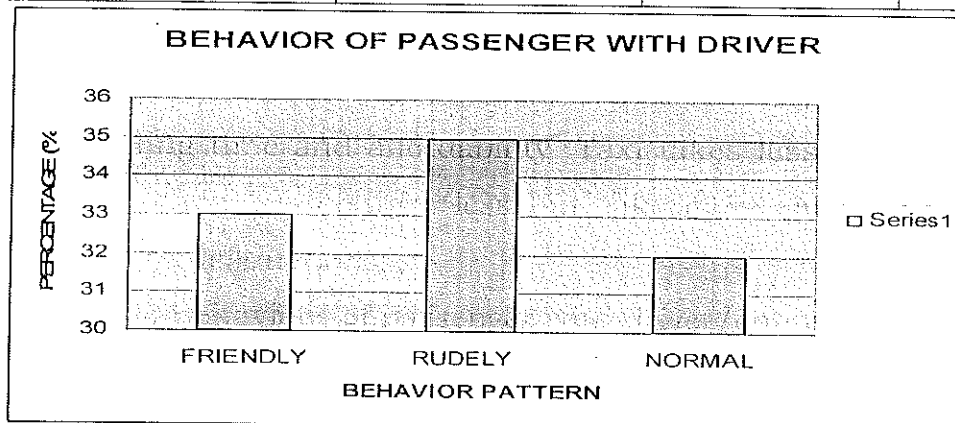


Figure-5.1: Behaviour of passenger with driver/conductor.

Based on survey data, thirty five percent (35%) of drivers hold the view that behaviour of passenger is rude while thirty three consider it friendly while thirty two consider it normal. Based on available a bench mark could not be established as the results are having matching approach.

Table-5.2: Behavior of Driver with Passenger.

DESCRIPTION	FRIENDLY	RUDELY	NORMAL
BEHAVIOUR OF DRIVER/CONDUCTOR WITH PASSENGER	21	46	33

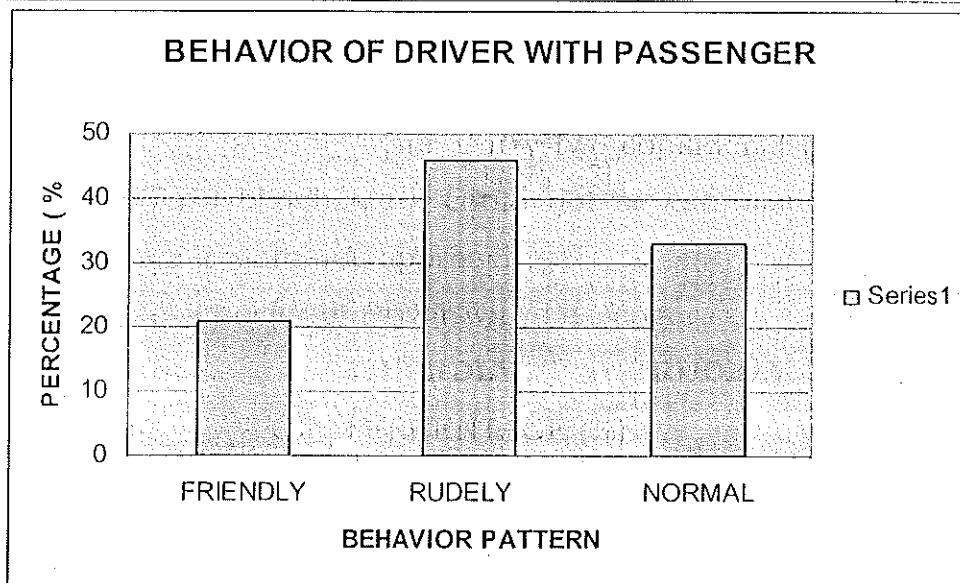


Figure-5.2: Behavior of Driver with Passenger.

As per the surveyed data, forty six percent of the passengers hold the view that behaviour of drivers is rude while thirty three considers it normal and twenty one as friendly.

7. CONCLUSIONS

Based on analysis of surveyed data the following conclusions are made:

- 1) The most significant reason for the non-compliance of route by drivers was the unrealistic fare structure issued by the Regional Transport Authorities. These authorities while issuing the fare list (NIRKH NAMA) should clearly take into consideration the length of route and impose fare accordingly. For example, as per Fare List of Route No.21 (Annex-II), Rs.12 is charged for initial 4Km while Rs.3 is charged for next 4Km and this keep on going. In this way, the commuters are charged Rs.3/Km in initial 4Km while approximately Rs.0.75/Km in next 20 Km.
- 2) Traveling time from origin to destination and waiting time on bus stops by pedestrians could not be accurately calculated. It depends on peak/off-peak hours and the traveling distance from origin to destination. Based on available data which was obtained in off-peak hours the average traveling time is forty to fifty minutes.
- 3) Sixty three percent (63%) public are not satisfied with existing transport facility while thirty seven percent are satisfied. Travel time, seating capacity and attitude of driver/conductor were the different variables for determining the public satisfaction level.
- 4) Forty five percent are willing to pay more for good transport while fifty five are not willing to pay more.
- 5) Majority (83%) of public shows their interest in usage of wagons instead of taxi (4%) and Bus (13%).Wagon is preferred to taxi because of lower fare while preferred to bus because of less travel time.
- 6) Majority of public are not satisfied with attitude of drivers/conductors. Fare and non-compliance of routes by drivers are major reasons of conflict between them.

7) There is a mixed response regarding the attitude of drivers/conductors with passengers. Some passengers consider them friendly while others as rudely.

8. RECOMMENDATIONS

Based on analysis of surveyed data the following are recommendations:

- 1) Fare structure issued by the Regional Transport Authorities should be according to route length i.e. longer routes should be charged more and vice verse.
- 2) Realistic fare structure be proposed by RTA by taking on board all stakeholders i.e. owners of bus/wagon, drivers, passengers etc to minimize the conflict between them.
- 3) Law enforcement agencies should ensure good working relationship among public, drivers and traffic wardens.

9. REFERENCES

- 1) SURVEY OF BUS SERVICES FOR ISLAMABAD SECRETARIAT , December 1978
BY: ABDUL MAJEED, DEPUTY CHIEF NTRC
- 2) Public Transport in Pakistan: A Critical Overview
Muhammad Imran Massey University, New Zealand
Journal of Public Transportation, Vol. 12, No. 2, 2009

10. ANNEXURES

ANNEX-I

(QUESTIONNAIRE TO ANALYSE THE AVAILABILITY OF PUBLIC TRANSPORT)

(A CASE STUDY FROM PAK-SECRETARIAT TO FAIZABAD)

ANNEX-II

FARE LIST OF ROUTE NO.21 APPROVED BY SECRETARY,
DISTRICT REGIONAL TRANSPORT AUTHORITY,
RAWALPINDI

ANNEX-III

ROUTE MAP FROM PAK-SECRETARIAT TO FAIZABAD

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NATIONAL TRANSPORT RESEARCH CENTRE (NTRC)
AVAILABILITY OF PUBLIC TRANSPORT IN RAWALPINDI-ISLAMABAD

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LOCATION: _____ NAME OF SURVEYOR: _____

ROUTE DIRECTION: FROM _____ TO _____; DATE: _____

ROUTE NO: _____ TIME: FROM: _____ TO _____

S. No	QUESTIONS	OPTIONS			
A: PEDESTRIANS VIEWS					
1	Are the routes completely followed by wagons?	Yes	No	Sometimes	
2	The most significant reason for the non-compliance of route by wagons	Fare structure		Lack of enforcement by Police	Lust for many trips
3	Travel time taken from origin to destination	Time(min): _____			
4	Income of the interviewee per month	Amount (Rs): _____			
5	Average expenditure on transport per trip in a single day	Amount (Rs): _____			
6	How long have you been waiting for the public transport?	<10 min	10-20 min	20-30 min	>30 minutes
7	How many wagons/buses you need to reach the destination?	One	Two	Three	More than three
8	Are you satisfied with existing public transport?	Yes	No		
9	Are you willing to pay more for a good transport service?	Yes	No		
10	The attitude of conductor/driver	Friendly		Rudely	
11	Public transport you prefer	Taxi	Bus	Wagon	Others(Specify)
B: DRIVER/CONDUCTOR VIEWS (ABOUT PASSENGER & POLICE)					
12	Behavior of passenger with you	a. _____ b. _____ c. _____			
13	Did the passengers wait for wagon at designated bus stop?	Yes	No		
14	Behavior of policeman with you.	Friendly	Rudely		
15	Reasons for the non-compliance of route	a. _____ b. _____ c. _____			

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C: POLICEMAN VIEWS (ABOUT PASSENGER & DRIVER)

A: Complain about driver like overloading, overcharge of fare, misbehavior etc

a. _____

b. _____

c. _____

B: Complain about passenger (if any):

a. _____

b. _____

c. _____

C: Any other:

a. _____

b. _____

c. _____

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رہمت آباد میں اراضی و پبلنگ ایجنسی کو رینٹ سٹریٹجی کے تحت پبلنگ ایجنسی کی پیشکش

روز نمبر 21

محکمہ زمین سروس: B4/DRTA-2010

روز: 22 مارچ، 2010

پبلنگ ایجنسی سے حاصل کی گئی زمین کی تفصیلات کے تحت زمین سروس سے رجوع کریں۔

0	to	4 km	12.00
4.1	to	8 km	15.00
8.1	to	14 km	20.00
14.1	to	22 km	23.00
Above		22 K.M.	25.00

نمبر شمار	مقامات	علاقہ	مورگہ سوڑ	مورگہ سوڑ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ	ڈیپتھ
1	پان کورٹ	-	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
2	مورگہ سوڑ	2.9	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
3	ڈیپتھ کورٹ	5.5	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
4	جھنڈا چوک	6.5	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
5	راج کلاں	7.8	15	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
6	انڈیا کورٹ	9.3	20	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
7	پانچ کلاں	10.9	20	15	15	15	12	12	12	12	12	12	12	12	12	12	12	12	12	12
8	کرلا چوک	12.6	20	20	15	15	15	12	12	12	12	12	12	12	12	12	12	12	12	12
9	کھنڈا	15.5	23	20	20	15	15	15	12	12	12	12	12	12	12	12	12	12	12	12
10	کرلا کورٹ	17	23	23	20	20	15	15	12	12	12	12	12	12	12	12	12	12	12	12
11	پانچ کلاں	19.3	23	23	20	20	20	15	12	12	12	12	12	12	12	12	12	12	12	12
12	ڈیپتھ کورٹ	24	25	23	23	23	23	20	20	20	20	20	20	20	20	20	20	20	20	20
13	پانچ کلاں	24.5	25	23	23	23	23	20	20	20	20	20	20	20	20	20	20	20	20	20
14	کھنڈا	26.6	25	25	23	23	23	23	20	20	20	20	20	20	20	20	20	20	20	20
15	پانچ کلاں	27.4	25	25	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
16	پانچ کلاں	28.3	25	25	25	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
17	پانچ کلاں	31	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25

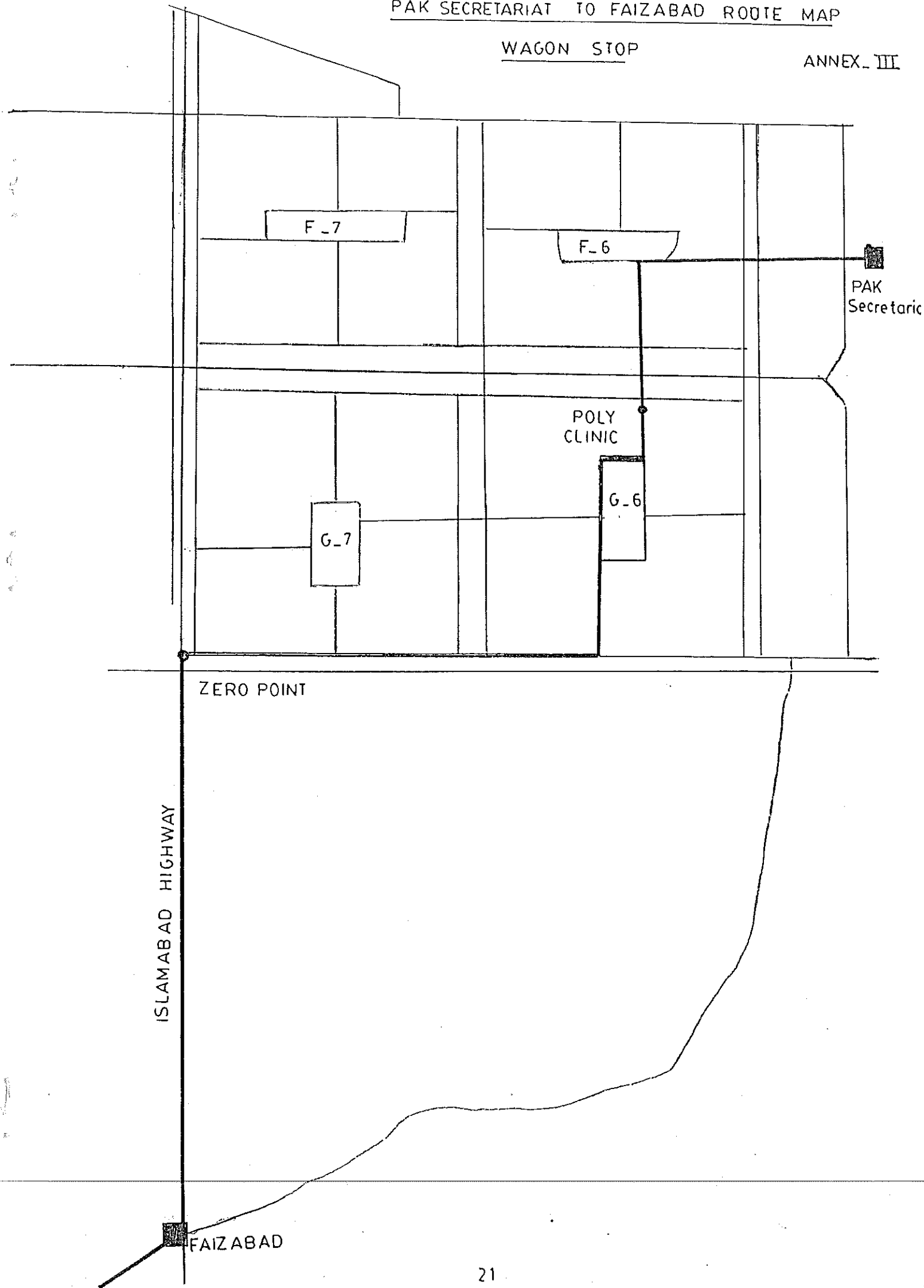
ATTESTED

Secretary
District Regional Transport
Authority, Ranaipatti

PAK SECRETARIAT TO FAIZABAD ROUTE MAP

WAGON STOP

ANNEX III



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