NATIONAL TRANSPORT RESEARCH CENTRE

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ROAD FREIGHT INDUSTRY SURVEY

NTRC - 106

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C O N T E N T S

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INTRODUCTION:

This report presents the results of roadside interview survey of Pakistan's Commercial Road Freight Transport Industry. A detailed description of how the survey was carried out together with questionnaires is described in NTRC Report No. 106 "A Study of Road Freight Transport In Pakistan: A Description of Survey Procedures And Data Files".

The survey forms part of a larger study of the trucking industry carried out under a programme cooperative research between the National Transport Research Centre and the Transport and Road Research Laboratory (UK).

For this survey 3,500 interviews were carried out at 39 survey stations located throughout Pakistan. The locations of the survey stations are shown in map 1 and are listed together with the number of trucks surveyed in Table 1. The survey stations were principally located at District Boundaries and so the survey is only representative of longer distance inter district traffic. As the main focus of the survey was on the private commercial trucking industry no interviews were carried out with trucks belonging to the National Logistics Cell. The survey was carried out in period from January to April,1986.

The main purpose of the survey was to collect basic data on a wide range of topics relating to the industry.

In particular data was collected on the ownership, management, finance, tariffs, loads, operating performance and costs, accidetns and insurance of the industry. This survey data was supplemented by other surveys of freight agents, freight consignors, trucks operations, and surveys of road roughness, freight tariffs and of drivers own cost and revenue logs. Further analysis of the data from the other surveys will be published in due course.

VEHICLE COMPOSITION:

Data relating to the main vehicle types found in Pakistan are shown in Table 2. The basic Bedford Truck has a small engine (98 HP) and a relatively small design G.V.W.

In the roadside survey it was not possible to distinguish between different model types within the Isuzu and Nissan range apart from the number of axles or whether the vehicle was ridgid or a tractor-trailer combination.

An additional complication is that trucks are often strengthened; many 3 axle vehicles were to start with 2 axle trucks and some of the tractor units were converted from ridgid trucks.

Further information on vehicle strengthing is contained later on in this report.

Table 3 gives a breakdown of the trucks surveyed by Interview Province, make and type. At present the commercial road transport industry is dominated by the two axle Bedford truck which accounted for 76 per cent of the trucks surveyed. The newer Japanese Trucks arenow growing in importance particularly in Baluchistan where they accounted for 42 per cent of trucks surveyed. Overall Japanese trucks accounted for 20 percent of the trucks surveyed. Mercedes trucks,

imported from Afghanistan account for a significant proportion of the remainder.

Of the trucks surveyed 3 axle vehicles accounted for 4 per cent and tractor trailer units for a further 3 per cent of the total. In both of these categories Nissan is the dominant make.

Table 4 gives the distribution of vehicle body type by vehicle make. In all categories apart from tractor trailer units high sided vehicles account for 80 per cent of the total. Tankers are the next most important body type accounting for about 10 per cent of the total. Overall tankers account for 8 per cent of the Bedfords and for 33 per cent of the two and three axle Japanese trucks.

VEHICLE OWNERSHIP AND MANAGEMENT:

Table 6 gives data on the real and registered owner of the truck and of the relationship between the truck and the driver.

In 62 percent of the total cases the registered owner of the truck was recorded to be the provider of finance for the truck purchase and not the owner who gained profits and losses from the truck operation.

Over 90 per cent of the trucks are owned by a single private individual; partnerships account for just 7 per cent of the total. Commercial companies own less than 1 per cent of the total trucks surveyed but a much higher proportion of the tractor trailers. This reflects the overwheling dominance of the "For Hire and Reward" nature of the industry. With a few rare exceptions (such as WAPDA) there is very little operation on an "Own Account" basis.

Overall 14 per cent of drivers were found to have either an outright or a part share in the ownership of the truck. Most drivers are Straightforward employees.

Table 7 gives data on truck fleets. Truck fleets under common management were reported to account for about 13 per cent of the total. The data suggests that the more expensive the vehicle the greater the likehood that the vehicle will be part of a fleet and the greater the probability that the fleet will be large. Over 40 per cent of the Japanese

Tractor Trailers were found to be part of a fleet. The mean fleet size recorded for Tractor Trailers was 28 vehicles compared with a mean fleet size of just 4.6 vehicles for the Bedford trucks.

Table 8 gives data on the length of time the current owner purchased the truck. The data points to a high turnover in purchase and resale of second hand trucks. Over 50 per cent of the Bedford trucks (and a higher proportion of the other newer trucks) had been purchased in the previous two years.

THE AGE AND VALUE SPECTRUM:

Tables 9 to 14 give data on the age and value spectrum of the 6 key vehicle types. The data shows that the average age of the Bedford fleet is very high. Of the Bedford trucks surveyed the Mean age was found to be 10 years old at the date of the survey. The data shows a very clear association between vehicle age and estimated current value.

At the time of the survey 78 per cent of the Hino's surveyed were less than 2 years old. Nissans and Isuzus were found to have mean ages of between 3 and 4 years.

VEHICLE PURCHASE AND FINANCE:

Table 15 gives data on how the trucks are purchased by the current owner. The data shows that approximately 75 per cent of the current vehicle fleet was purchased on a repayment basis. As expected trucks purchased outright by a single payment tended to be older and less valueable.

Reflecting the different nature of their ownership about half of the tractor trailers were purchased outright

Second hand vehicles are bought and sold between owners and agents and middlemen by a system of "hire purchase". If the vehicle is to be purchased by on a repayment basis a higher overall sum is quoted than if the truck is to be purchased outright. Instalments are paid by a series of payments over a period mostly lasting between 40 and 60 months. The terms imply an interest rate which is not openly stated as part of the agreement.

Table 16 gives data on the difficulty of making repayments and to whom the repayments are made.

Over 80 per cent of the trucks purchased on repayment basis still have repayments outstanding. Bedfords appear to have a higher proportion of late repayments than other trucks (with the possible exception of 2 axle Nissan) but in general it is not obvious that Bedfords have greater

difficulty in meeting their loans than other 2 and 3 axle trucks. Nissan Tractor Trailers appear to have by far the lowest proportion of late repayments and find making repayments the easiest.

Banks account for a very small proportion of truck finance. Less than 2 per cent of repayments were made to banks.

From the data provided on purchase time value, initial deposit, and the monthly repayment an estimate was made of the effective rate of interest being paid. The analysis was only carried out for those cases when the effective rate of interest was 60 per cent or less. In 13 per cent of cases the interest rate was estimated to be above 60%, it is possible that the data provided for many of these cases was faulty.

The results of this analysis are shown in Table 17 and in Diagram 1. The class interval with the greatest number of cases is that where the effective rate of interest is between 16% and 20%.

For those cases when the rate of interest was directly calculated (i.e below 60%) the average rate paid was about 25% although the average weighted by the amount paid is 22%. The table shows that the larger the sum borrowed then the lower the effective rate of interest paid.

VEHICLE TRIP DISTRIBUTION AND PERFORMANCE:

The freight survey principally collected data from trucks making long distance trips. To provide a comparison it is useful to consider an analysis of data from a nationwide Origin and Destination Survey carried out on inter district traffic by NTRC in 1979-80. Freight traffic data from this survey is shown is in Table 18 and in Diagrams 2 & 3 together with data from the Freight Survey. In the O-D Survey truck, travelling less than 300 kms accounted for 71 per cent of total trips and just over 30 per cent of vehicle kms. By contrast in the Freight Survey trucks travelling less than 300 kms accounted for 42 per cent of trips and just 8 per cent of vehicle kms. At the other end of the trip distance spectrum trucks making trips of over 1000 kms accounted for 6 per cent of trips and 29 per cent of vehicle kms in the O-D Survey but in the Freight Survey they accounted for 15 per cent of the trips and 45 per cent of vehicle Kms.

To facilitate the subsequent analysis of the survey data at each survey site the traffic direction was classified as either "To Karachi" or "From Karachi". An empty and loaded vehicle trip length distribution broken down by direction is shown in Table 19.

76 per cent of the trucks surveyed travelling from Karachi were loaded but only 62 per cent to Karachi.

By vehicle kilometres travelled 93 per cent travelling from Karachi were Loaded but only 74 per cent travelling to Karachi. In overall terms 69 per cent of trips and 48 per cent of vehicle kms were loaded. Diagram 4 shows how the percentage of loaded trips changes with trips distance.

Empty trucks travelling to Karachi have longer trip distances than empty trucks travelling in the opposite direction. For those travelling to Karachi 43 per cent travelled more than 200 km whilst travelling from Karachi only 17 per cent travelled more than 200 km. The differences in loaded trip distances are not so marked.

Table 20 provides overall data on trip distances, times and rest periods by the principal types of truck. The Bedfords have lower average trip distances compared with the higher capacity trucks yet overall their percentage of empty running appears to be little different to the larger trucks. This is in fact, largely because of the higher proportion of tankers (which have much greater difficulty in finding return loads) amongst the non Bedford trucks. This point is brought out later in subsequent tables.

The pattern of operation of all long distance trucks means that they stay away from their base for many days at a time. On average Bedford trucks returned to base after 7 days whils other trucks returned after somewhat longer

periods, 3 axle Nissan trucks return to base after 12 days. On average Bedford truck drivers returned to their families after 17 days. The drivers of other 2 axle trucks returned to their homes after similar periods but the drivers of 3 axle Nissans returned after 27 days and for Nissan Tractor Trailers after 38 days.

Table 21 gives data on empty trip purpose. For Bedford drivers making empty trips in over 80 per cent of cases their primary trip purpose is to look for a load. In 15 per cent of the cases the primary trip purpose is to return to base or return home. For 2 and 3 axle Japanese trucks returning to base or home only accounted for 7 per cent of empty trips. Although only a small sample count (out of 22 trips) returning to base accounted for 27 per cent of the empty Nissan Tractor Trailer trips.

Table 22 provides data on the use of freight agents. Overall 63 per cent of loaded trucks used freight forwarding agents in the survey to find their loads, the agents charge accounts for about 6 per cent of the mean trip revenue.

TRIP REVENUE AND LOAD:

Tables 23 to 30 provide data on truck revenues and loads for those loaded trucks travelling outside the Mekran area where the driver has given his load in weight terms. The Mekran area of Baluchistan was excluded because of the very rough roads throughout the area which increases tariff levels. Tanker trucks and trucks taking animals were also excluded.

The average load carried by Bedford trucks was found to be 8 tons whilst for other 2 axle trucks the average was 12 tons. For 3 axle trucks and Tractor Trailer units the average loads were 21 tons and 27 tons respectively. For the latter two categories average loads from Karachi were 6 tons more than average loads to Karachi. But for Bedfords and the other 2 axle trucks average loads were not significantly different in either direction.

Diagrams, 5,6 and 7 and tables 23 to 30 show a clear decline in revenue per km and revenue per ton km as trip distance increases. The data also shows that rates from Karachi are much higher than rates towards Karachi. For Bedford trucks the rates were found to be on average 38 per cent higher from Karachi. For other 2 axle trucks the difference was less but for 3 axle trucks and for tractor trailers the rates were found to be 62 per cent and 110 per cent higher from Karachi.

Comparing each distance and direction category there is little difference in revenue per ton km between Bedfords and other 2 axle trucks although the rates for 3 axle and Tractor trailers are substantially lower.

Table 31 provides an overall summary of trip revenues, distances and load weight data for the different vehicle types. The overall revenues per ton km for the Bedford truck was found to be Rs. 0.38. Because of their longer average trip distances the Overall rates per ton km for the 2 axle Japanese trucks was about 90 per cent of the Bedford rate. The larger Nissan trucks were found to have overall rates of between 0.24 and 0.26 Rs. per ton km; i.e. on average about 65 per cent of the Bedford truck rate.

In overall terms Bedford trucks were found to receive just Rs. 2.7 per empty and loaded km travelled. The 2 axle Japanese trucks received between 3.5 and 4.1 Rs. per km travelled and the longer Nissan trucks between 5.2 and 5.4 Rs. per km travelled.

Table 32 presents data relating to Tankers. It was pointed out earlier that tankers account for just 8 per cent of Bedfords but 23 per cent of the Japanese 2 and 3 axle trucks. The table shows that tankers receive much higher rates per loaded km travelled than other trucks. This is to make up for the very much higher rates of empty running

encountered. The data does suggest that Bedford tankers achieve a higher proportion of return loads than other types of tanker.

Table 33 gives the distribution of total ton kms provided by the different trucks for the whole survey.

Bedford trucks were shown to provide just under 50 per cent of the total ton kms surveyed. Because of the sample bias towards longer distance trips the figures probably under estimate the importance of Bedford trucks at the time of the survey.

Table 34 give examples of typical rates charged for a Bedford truck between important O-D pairs. The table shows a persistent pattern throughout the country whereby the rate towards Karachi is lower than the rate from Karachi. An exception is the rate from Hyderabad to Karachi which is higher than in the reverse direction.

Particularly high rates are found between Karachi to Turbat (7.0 Rs. per km) and from Rawalpindu to Gilgit (7.8 Rs. per km) reflecting the absence of return loads and the difficult operating conditions on the roads to these destinations.

OVERALL OPERATING PERFORMANCE AND COSTS:

During the survey questions were asked on the monthly revenue, the days off road under repair and on the weekly distance covered by each truck. It is recognised that togethere with estimates of operating costs such questions are more likely to be subject to greater uncertainly than most of the other questions in the survey. The results are shown in Table 35 and 36.

Three estimates of annual vheicle kilometres travelled were estimated as follows:-

i) From estimates of weekly distance travelled adjusted for days off road under repair.

ii) From estimated annual revenues divided by current trip revenues to estimate the current number of trips. This is then multiplied by the loaded and empty trip distances found in the survey.

iii) From estimating the number of trips made per year by dividing the total number of hours per year by estimates of the average time between starting each new loaded trip. And then multiplying the number of loaded trips by the empty and loaded trip distance to calculate the annual distance travelled. The average time between starting each new loaded trip was established from current loaded trip time, past empty time plus an allowance of 2 hours to account for loading and unloading.

The figures given in Table 35 are much higher estimates of annual vehicle kilometerage than have been estimated before for trucks in Pakistan. For each vehicle type the average pooled estimate is above 100,000 kms per year. Given the sampling bias towards long distance transport

recorded by the survey these estimates are almost certainly over estimates of the average value for the industry as a whole. Nevertheless the data does suggest that for vehicles travelling on the main highways of Pakistan average annual vehicle kilometerage is much higher than has been previous thought.

Table 36 gives estimates of certain key components of operating costs, fuel, repairs, tyres and labour costs. No attempt has been made to provide a full analysis of operating costs from this data. Additional data on operating costs was collected from other surveys and further details of operating costs will be published in due course.

INSURANCE AND ACCIDENTS:

Data on vehicle insurance is shown in Table 37. The table shows that 98 per cent of trucks only had the absolute Legal minimum insurance. Comprehensive insurance, which is usually a requirement when the truck is to be purchased via finance from a bank loan was only recorded for 6 trucks; 3 of those were tractor trailers.

Table 38 and 39 gives data on accidents encountered by the truck in the previous year. In total 9 per cent of drivers reported one or more accidents in the previous year. The most frequent type of accident reported was the roll over high sided trucks are particularly susceptible to this type of accident.

About three quarters of the accidents were reported to be 'no injury' accidents. The roll over accidents causing the least personal injury. Head on and pedestrian accidents caused most of the fatal and serious injuries. No accidents with animals were recorded.

VEHICLE MODIFICATIONS:

Most trucks in Pakistan are strengthened after they leave the factory to take heavier loads. Strengthening is applied to all trucks including the newer Japanese trucks. Table 40 gives data on some of the modifications which are frequently made.

The most popular modifications are to strengthen the engine compartment, to strengthen the axle springs and to strengthen the chassis. Other modifications are also made such as to change wheel rims and tyres and to change axles.

Modifications made to larger vehicles include adding an extra axle to make a 3 axle rigid truck. Many 3 axle Nissans and Isuzus (and also some 3 axle Hinos and Bedfords) have been modified in this way. Rigid trucks have also been turned into tractor units.

The trailers of tractor units are often strengthened to enable them to carry loads of up 50 tons.

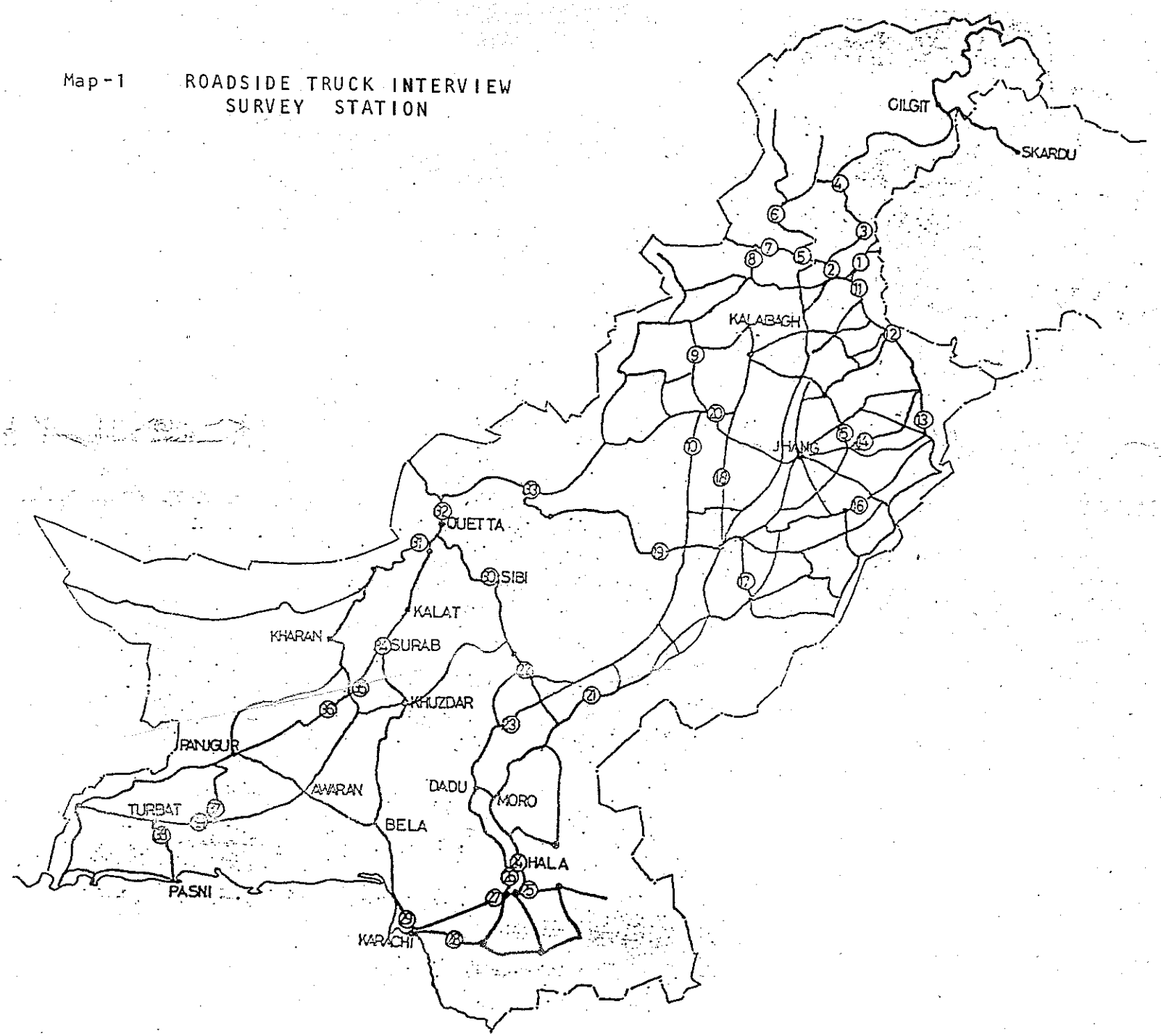
No evidence was found to suggest that bigger engines are put into the existing chassis. It appears that improved productivity is entirely directed to wards carrying heavier loads rather than by improving vehicle running speeds.

DRIVERS PROBLEMS:

During the survey drivers were asked to identify up to three key problems that they encountered in the course of their work. Two thirds of all drivers complained of police harassment and one third of Bedford drivers and 56 per cent of Japanese Truck drivers complained of poor roads. The higher proportion of Japanese Truck drivers complaining of poor roads reflects to some extent the greater proportion of Japanese trucks operating on the rough roads of Baluchistan.

Fear of Robbers (particularly in Sind) was the third most important problem identified and again a greater proportion of Japanese truck drivers mentioned this. The identification of problems relating to the economic performance of the truck (eg, low tariffs, high costs, competition, finding loads etc) were expressed much more frequently by the drivers of Bedford trucks than by the drivers of Japanese trucks. High operating costs were mentioned by 20 per cent of Bedford truck drivers but by only 4 per cent of Japanese truck drivers

Map-1 ROADSIDE TRUCK INTERVIEW SURVEY STATION



Distribution of Effective Rate of Interest for Hire Purchase of Bedford Trucks

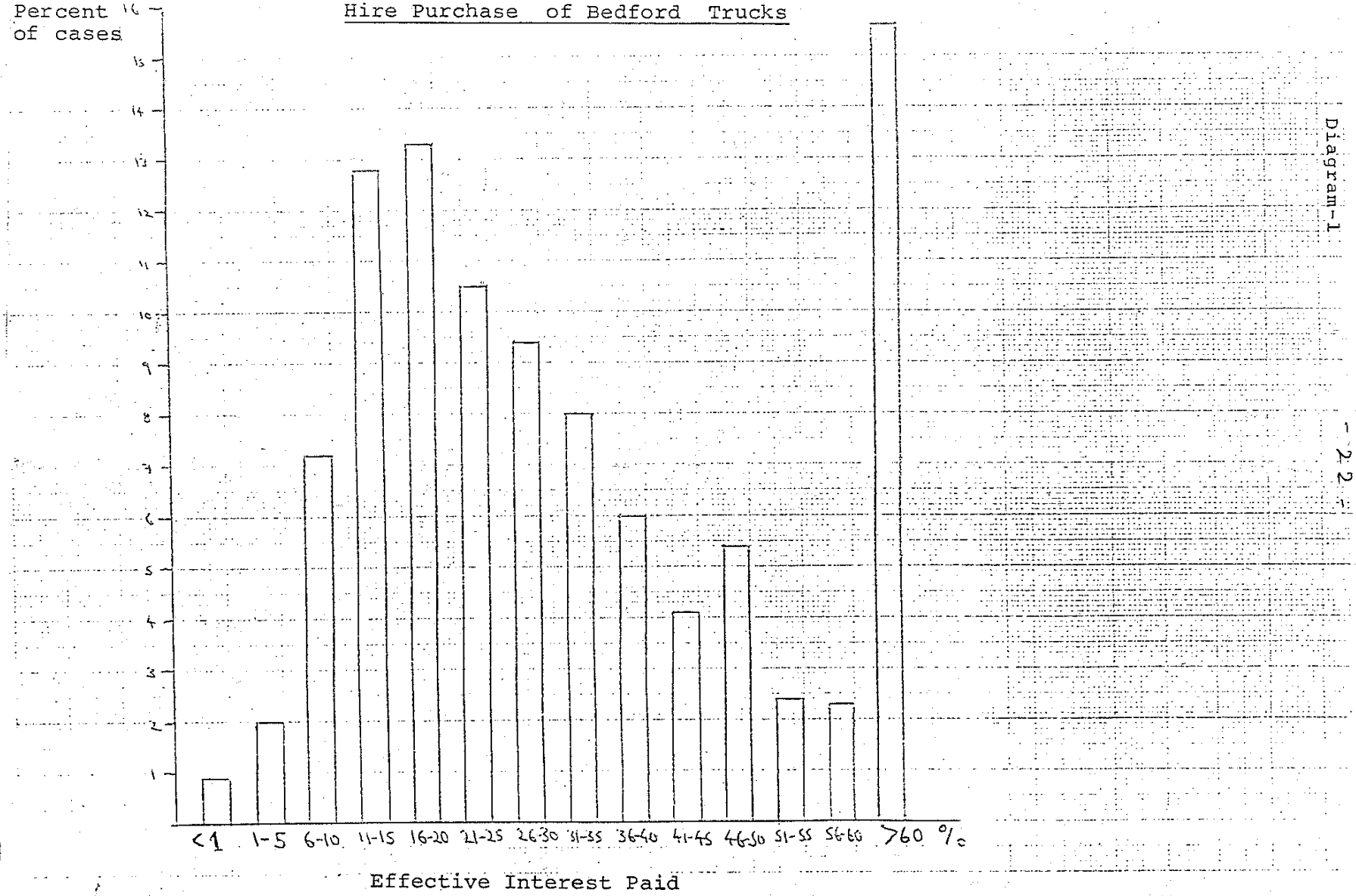


Diagram-1

Diagram-2

1979-1980 Origin and Destination Survey Trip Length Distribution (For Trucks)

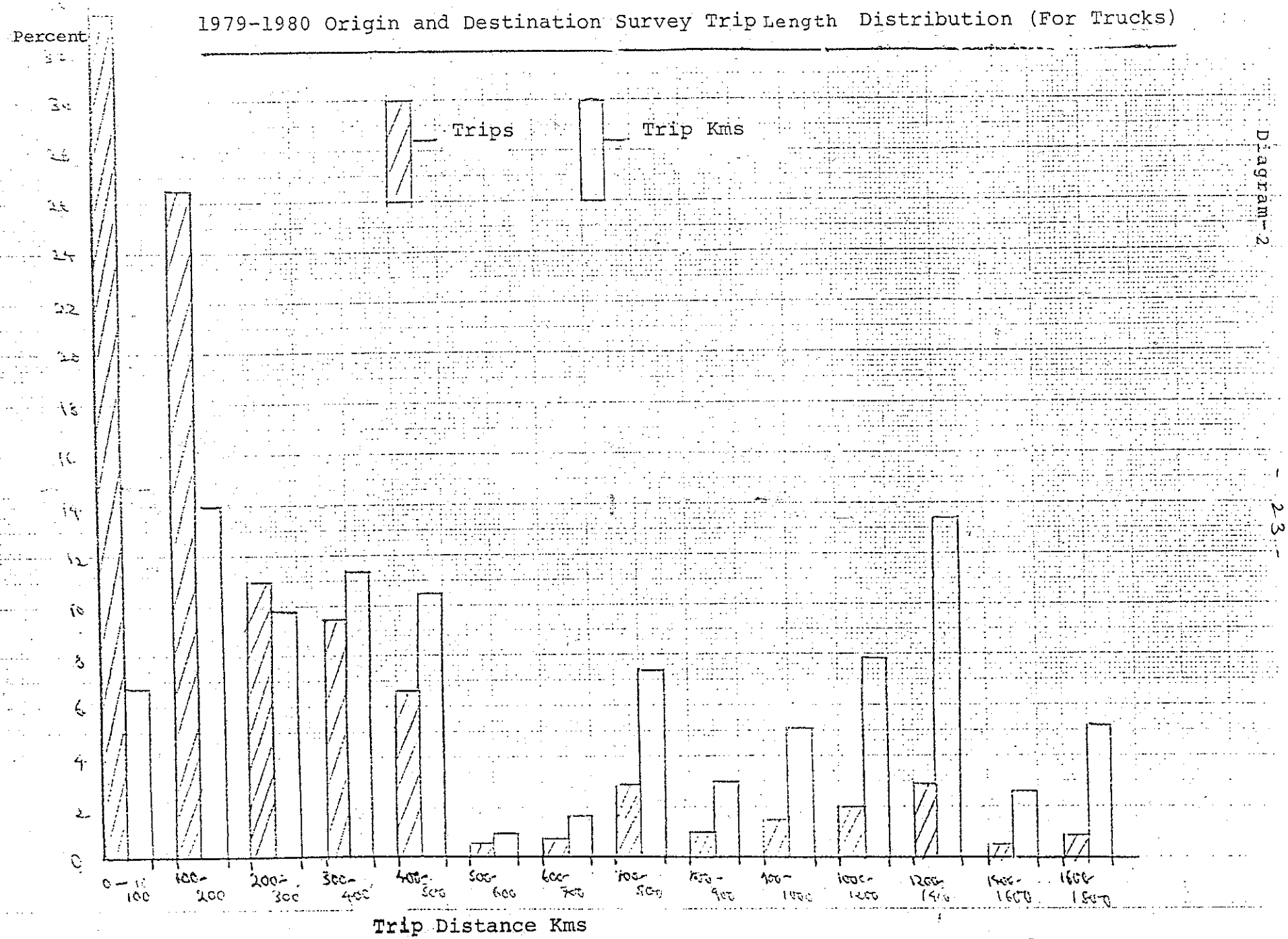
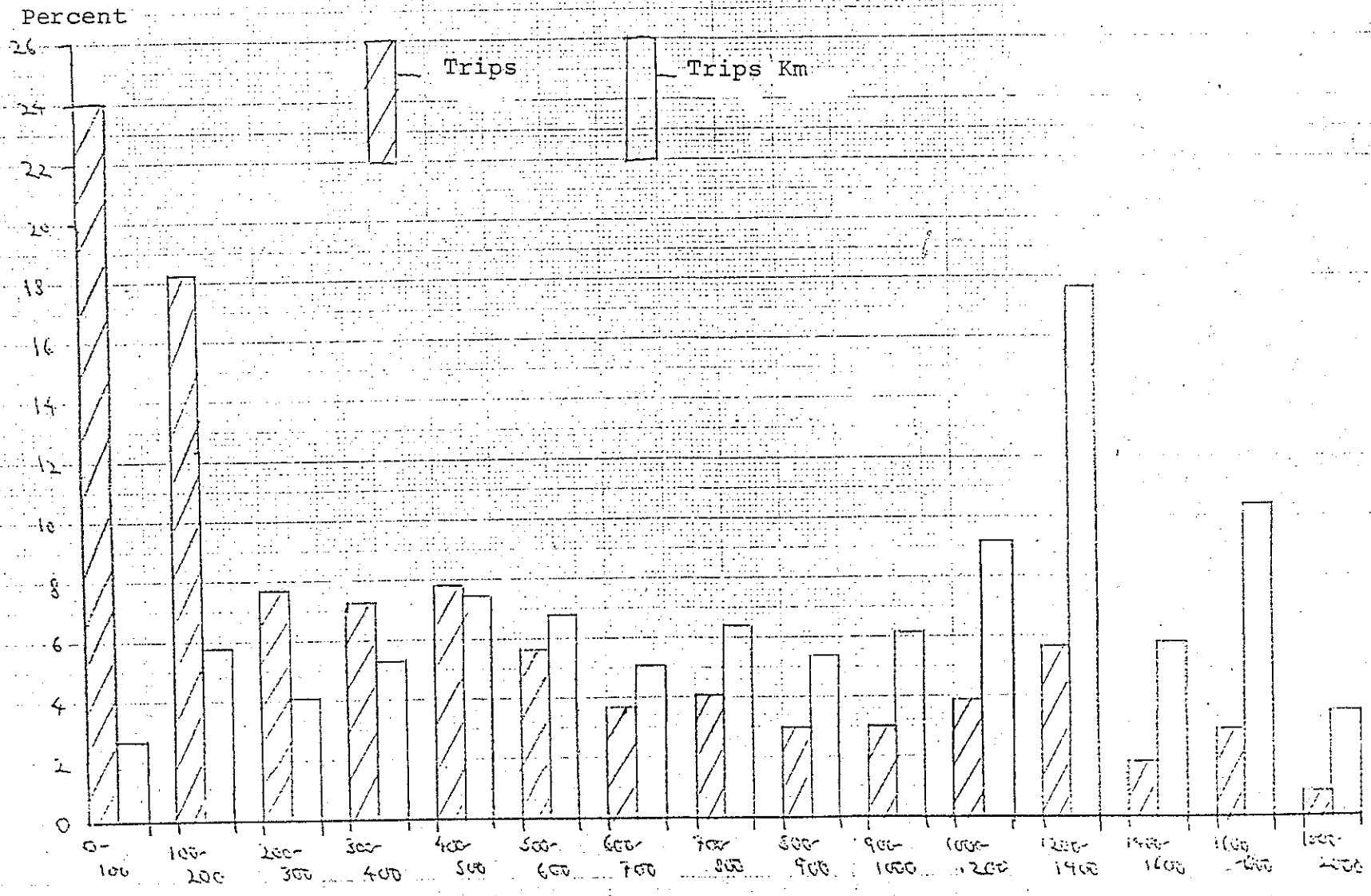


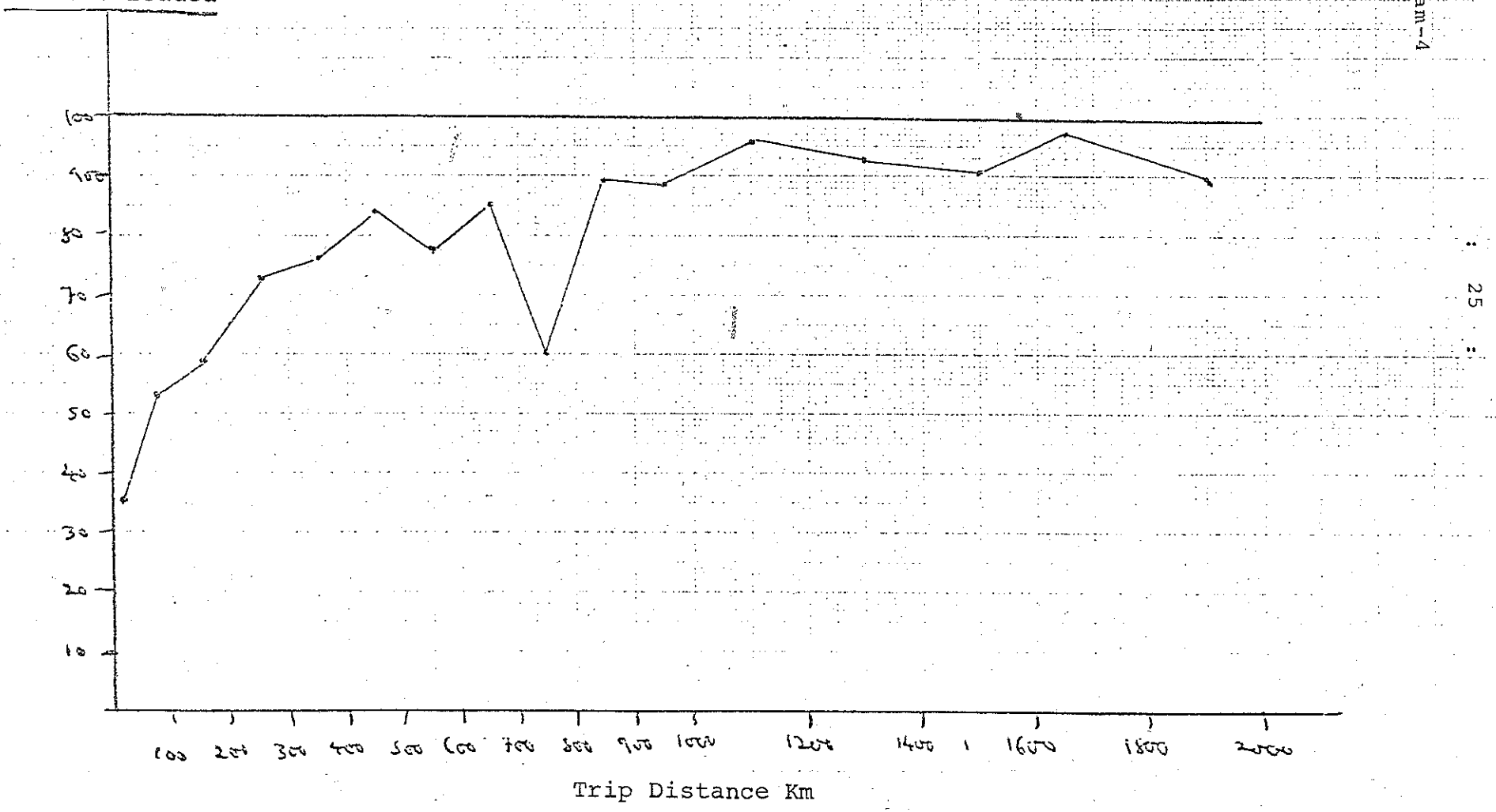
Diagram-3

Freight Survey (1986) Trip Length Distribution



Percent of Trips Loaded Against Trip Distance

Diagram-4



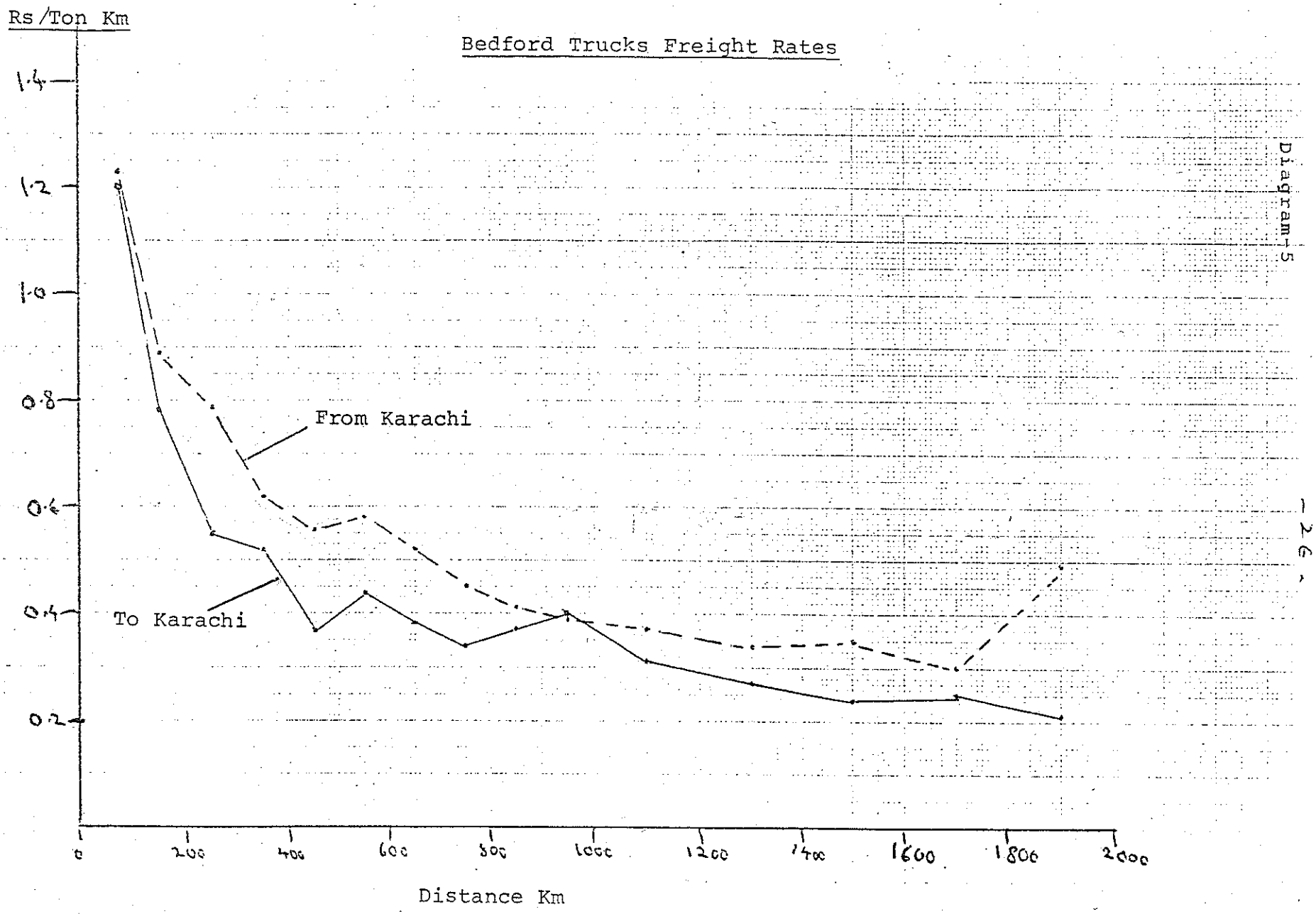
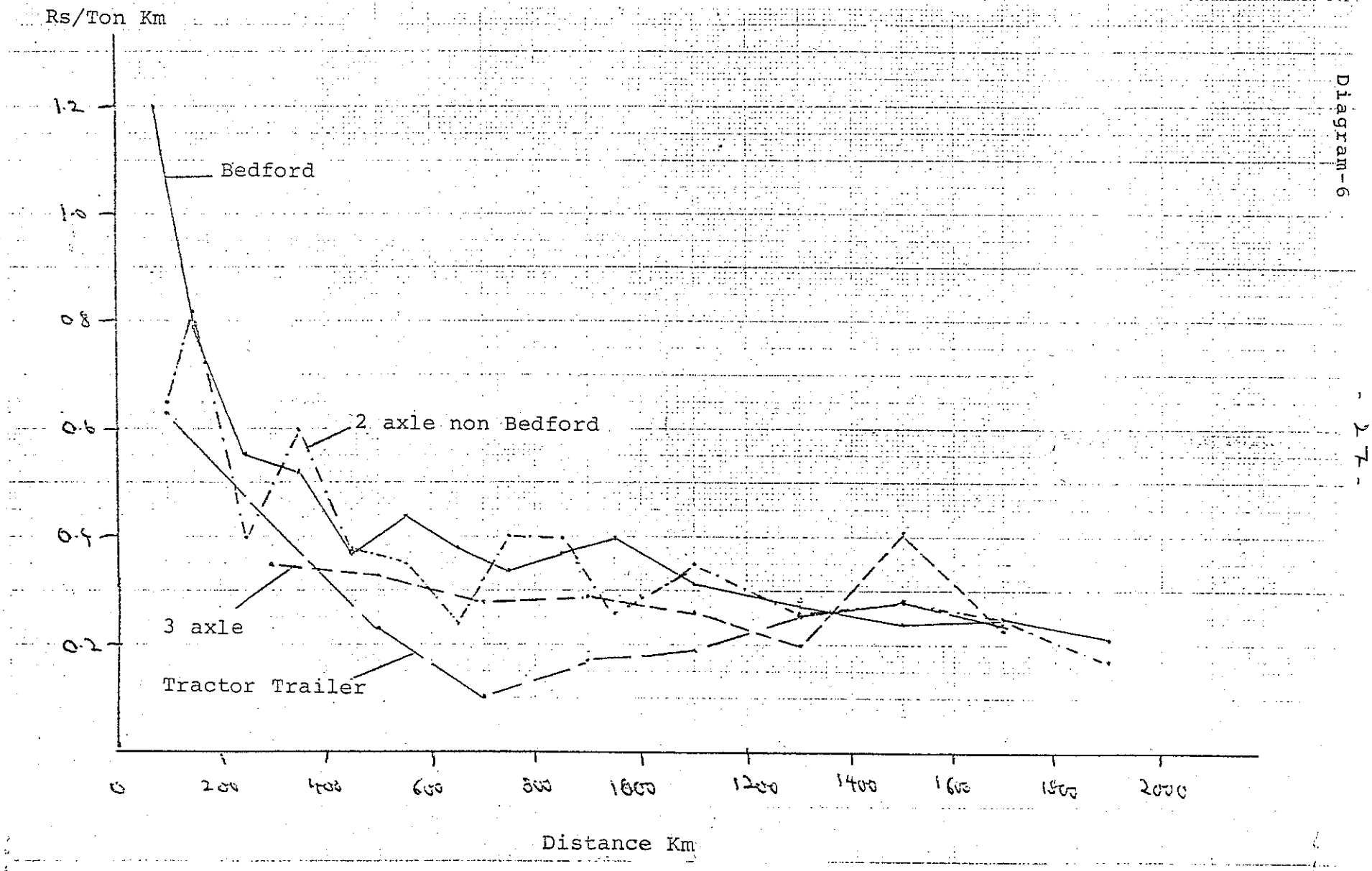

Rs/Ton Km
Bedford Trucks Freight Rates
1.4
1.2
1.0
0.8
0.6
0.4
0.2
From Karachi
To Karachi
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Distance Km

Diagram 5

Diagram-6

Freight Rates to Karachi



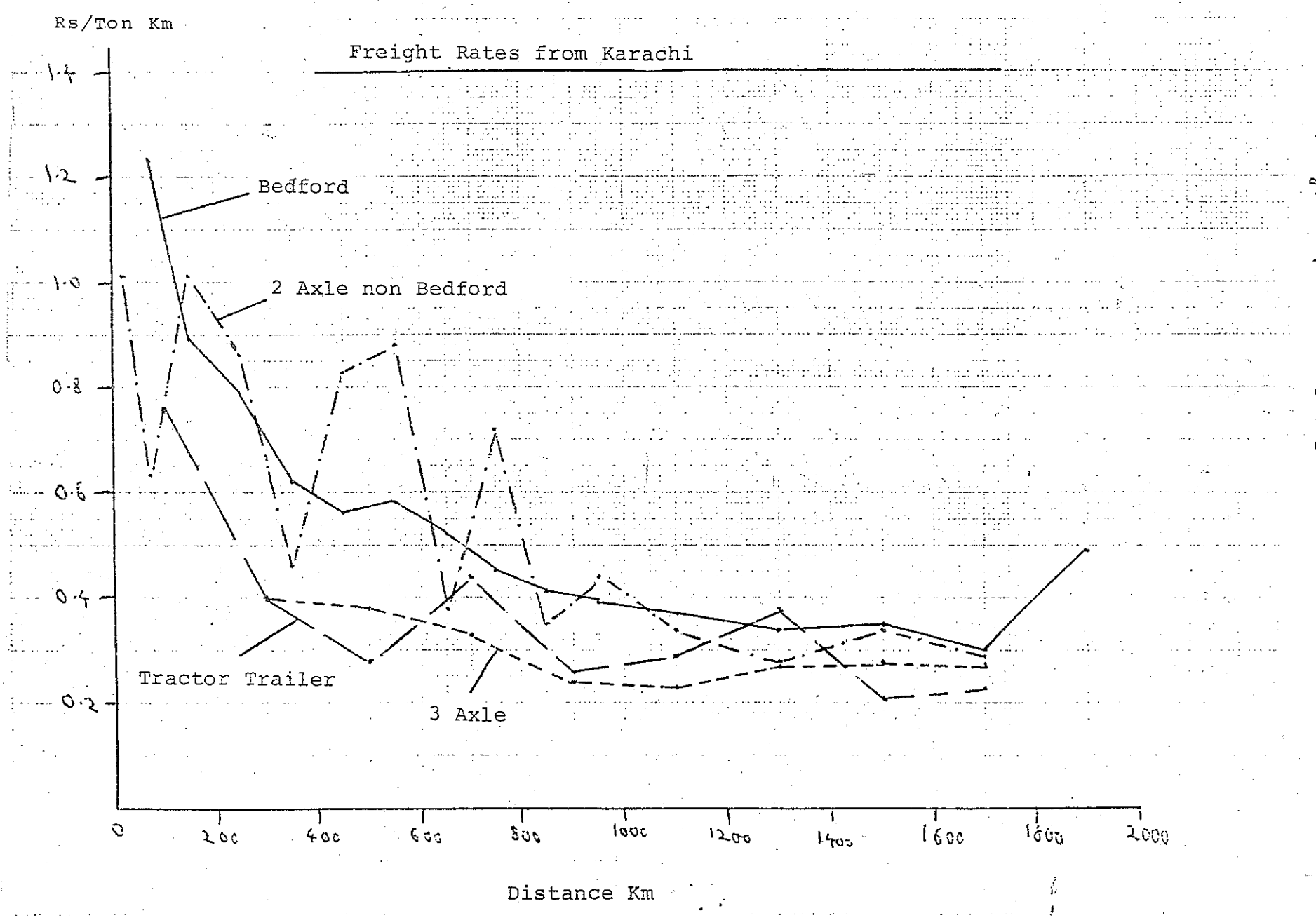

Rs/Ton Km
Freight Rates from Karachi
1·4
1·2
1·0
0·8
0·6
0·4
0·2
Bedford
2 Axle non Bedford
Tractor Trailer
3 Axle
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Distance Km

Diagram-4

Table-1 Roadside Truck Interview Survey

Place Code	Road Section	Province	Start Date	To Karachi		From Karachi		Total Inter-views
				Loaded	Empty	Loaded	Empty	
1.	Rawalpindi - Murree	Punjab	10.01.86	12	25	26	6	69
2.	Taxila - Hasan Abdal	Punjab	12.01.86	30	16	34	23	103
3.	Abbottabad - Mansehra	N.W.F.P	14.01.86	21	37	30	10	98
4.	Batgram - Besham	N.W.F.P	16.01.86	15	11	37	5	68
5.	Attock Bridge	Punjab	18.01.86	44	48	44	3	139
6.	Mardan - Malakand	N.W.F.P	20.01.86	15	16	68	10	109
7.	Peshawar - Nowshera	N.W.F.P	22.01.86	21	32	31	12	96
8.	Peshawar - Kohat	N.W.F.P	24.01.86	14	27	40	17	98
9.	Bannu - D.I. Khan	N.W.F.P	26.01.86	15	41	41	1	98
10.	D.I. Khan - D.G. Khan	N.W.F.P	28.01.86	9	18	27	1	55
11.	Rawalpindi - Mandra	Punjab	10.02.86	21	6	15	1	43
12.	Jhelum Bridge	Punjab	12.02.86	14	12	60	9	95
13.	Gujranwala - Lahore	Punjab	14.02.86	46	8	34	6	94
14.	Faisalabad - Sheikhupura	Punjab	16.02.86	51	23	54	6	134
15.	Sargodha - Faisalabad	Punjab	18.02.86	55	4	19	25	103
16.	Okara - Sahiwal	Punjab	20.02.86	23	22	55	0	100
17.	Multan - Bahawalpur	Punjab	22.02.86	53	10	42	4	109
18.	Muzaffargarh - Fatehpur	Punjab	24.02.86	54	11	42	3	110
19.	D.G. Khan - Rakhi	Punjab	26.02.86	44	1	20	40	105
20.	D.I. Khan - Darya Khan	Punjab	28.02.86	18	25	52	4	99
21.	Pano Aqil - Mirpur Mathelo	Sind	18.03.86	31	16	32	0	79
22.	Jacobabad - Dera Murad Jamali	Sind	20.03.86	23	15	60	4	102
23.	Larkana - Ghari Yasin	Sind	22.03.86	18	15	8	9	50
24.	Hyderabad - Sakrand	Sind	24.03.86	51	11	58	12	132
25.	Hyderabad - Mirpur Khas	Sind	26.03.86	38	10	41	19	108
26.	Kotri - Dadu	Sind	28.03.86	61	8	17	34	120
27.	Hyderabad - Karachi	Sind	30.03.86	43	23	60	7	133
28.	Karachi - Thatta	Sind	01.04.86	46	4	11	60	121
29.	Karachi - Uthal	Baluchistan	03.04.86	52	13	15	19	99
30.	Sibbi - Dadhar	Baluchistan	10.04.86	48	12	47	5	112
31.	Nushki - Quetta	Baluchistan	12.04.86	4	9	19	10	42
32.	Quetta - Bostan	Baluchistan	14.04.86	19	19	42	19	99
33.	Muslimbagh to Zhob & Loralai	Baluchistan	16.04.86	21	21	36	3	81
34.	Khuzdar - Kalat	Baluchistan	19.04.86	21	54	33	7	115
35.	Besima - Surab	Baluchistan	21.04.86	0	7	6	0	13
36.	Besima - Panjgur	Baluchistan	23.04.86	0	11	7	0	18
37.	Panjgur - Turbat	Baluchistan	25.04.86	1	3	6	0	10
38.	Turbat - Gawadar	Baluchistan	27.04.86	5	6	5	13	29
39.	Turbat - Awaran	Baluchistan	25.04.86	6	16	42	1	65
	Total:			1,063	666	1,316	408	3,453

Common Trucks In Pakistan

Table-2

Vehicle Make	Model	Type	Axle	GVW	GCW	HP	Price Sept 86
Bedford	CPJ	Rigid	2	10,920		98	275,000
Bedford	TM2500	Tractor Unit	2		25,000	171	
Hino	FF 170	Rigid	2				412,000
Isuzu	JCR/FTR	Rigid	2	12,000		160	398,000
Isuzu	TDJ/DVR	Rigid	2	15,000	27,000	220	515,000
Mitsubishi	FP415ER	Tractor Unit	2	15,400	39,000	310	730,000
Nissan	TK20GT	Tractor Unit	2	14,175	26,000	190	570,000
Nissan	TK20	Rigid	2	16,500	26,000	190	475,000
Nissan	TD10	Rigid	3	23,200		160	480,000
Nissan	U780E	Rigid	2	12,000		140	342,000

TRUCK SURVEYED: BY INTERVIEW PROVINCE, MAKE AND TYPE

Table-3

Make		Province				
		NWFP	Punjab	Sind	Baluchistan	Total
Bedford	2 axle	524	1111	613	386	2634
	3 axle		3	1		3
Tractor Trailer				1		1
BMC/Leland	2 axle		12	2	2	16
Ford	2 axle		2	1	1	4
Hino	2 axle	23	35	45	106	209
	3 axle	1	1	2	1	5
Tractor Trailer			1	3	1	5
Isuzu	2 axle	13	28	32	117	190
	3 axle		6	1		7
Tractor Trailer			5	6		11
International	2 axle	10	2			12
Man	2 axle	1				1
Tractor Trailer			3	1		4
Mazda	2 axle		1	3	2	6
Mercedes	2 axle	7	2		1	10
	3 axle	6	19	2	2	29
Tractor Trailer			4	3		7
Mitsubishi	2 axle	1				1
Tractor Trailer			1	5	1	7
Nissan	2 axle	19	14	12	41	86
	3 axle	16	29	43	10	98
Tractor Trailer			18	59	8	85
Saviem	2 axle		1	1		2
Toyota	2 axle					1
Others/Unspecified		1	8	9	2	20
Total		621	1303	846	683	3458

DISTRIBUTION OF VEHICLE BODY TYPES

Table-4

	2 axle Bedford	2 axle Hino	2 axle Isuzu	2 axle Nissan	3 axle Nissan	Nissan Tractor Trailer
Vehicle Body Type						
Flat	81	6	3	2	2	74
High Sided	2246	154	140	47	67	2
Low Sided	91	2	10	4	0	4
Box	0	1	0	0	0	0
Tanker	206	43	34	30	29	1
Tipper	0	0	0	1	0	0
Other/Unspecified	10	3	3	2	0	4
Total:	2634	209	190	86	98	85

LOCATION OF TRUCK BASE BY PROVINCE AND KEY DISTRICTS

Table-5

	2 Axle Bedford		2-3 Axle Japanese		Japanese Tractor Trailer	
	No.	%	No.	%	No.	%
NWFP + A.K Northern Areas	802	(30.4)	88	(14.7)	1	(1)
Abbottabad	81		1		1	
Bannu	84		20		1	
D.I. Khan	93		33			
Mardan	80					
Peshawar	295		22			
Punjab	851	(32.3)	99	(16.6)	36	(33)
Failsalabad	148		11		2	
Lahore	86		19		7	
Rahim Yar Khan	11		7		5	
Rawalpindi	212		12		2	
Sahiwal			1		18	
Sind	615	(23.3)	169	(28.3)	68	(63)
Hyderabad	182		19		1	
Karachi	311		140		67	
Baluchistan	366	(13.9)	242	(40.5)	3	(3)
Quetta	214		136		3	
Panjgur, Turbat	43		42			
T o t a l:	2634		598		108	

REGISTERED OWNER, ACTUAL OWNER AND RELATIONSHIP BETWEEN DRIVER AND TRUCK

Table-6

	2 axle Bedford	2 axle Japanese	3 axle Japanese	Tractor Trailer Japanese
REGISTERED OWNER OF TRUCK				
Driver	151	13	1	0
Other sole owner	724	98	22	45
Joint owner	64	2	2	0
Provides finance but not involved in operations	1,573	359	79	50
Previous owner	102	11	5	5
Hires out truck	0	0	0	0
Government + Public Corp.	6	1	0	0
Commercial company	7	2	0	7
Other	4	0	0	0
Total	2,631	486	109	107
ACTUAL OWNER OF TRUCK				
Private Individual	2,416	486	102	79
Family Partnership	146	15	6	12
Non Family Partnership	52	6	1	1
Commercial Company	11	2	0	14
Federal Government	2	0	0	0
Provincial Government	0	0	0	1
Public Corporation	3	1	0	1
Others	2	0	0	0
Total	2,632	492	109	108

	2 axle Bedford	2 axle Japanese	3 axle Japanese	Tractor Trailer Japanese
Table-6 (Contd)				
	RELATIONSHIP BETWEEN DRIVER AND TRUCK			
Hire purchase to driver alone	219	60	12	2
Hire purchase to driver and others	51	7	3	0
Driver is sole owner	239	43	2	0
Driver has part share	32	3	0	0
Driver is employee	2,074	371	90	106
Rented truck	5	1	1	0
Borrowed truck	2	0	0	0
Total	2,622	485	108	108

Table-7

TRUCK FLEETS

Is truck managed in common with other trucks?				
Yes	267	79	28	46
No	2,356	406	81	61
Mean Fleet Size (for those in common Management)	4.62	4.0	9.6	28.3

DISTRIBUTION OF TRUCK OWNERSHIP BY YEAR OF PURCHASE OF CURRENT OWNER

Table-8

	Year of Purchase	2 axle Bedford	2 axle Hino	2 axle Isuzu	2 axle Nissan	3 Axle Nissan	Nissan Tractor Trailer
Before	1970	30					
	1970	7					
	1971	17					
	1972	5					
	1973	7					
	1974	18					
	1975	14					
	1976	64		2			
	1977	26	3	-			
	1978	58	1	-			1
	1979	50	1	1	1	1	2
	1980	91	-	-	3	3	4
	1981	124	3	-	3	1	5
	1982	191	1	5	10	4	4
	1983	326	7	17	12	7	7
	1984	538	6	61	12	13	18
	1985	577	97	70	24	31	18
	1986	63	51	11	4	9	2
	Total	2206	170	167	69	69	61

AGE AND VALUE SPECTRUM FOR 2 AXLE BEDFORD TRUCKS

Table-9

Model Year	No.	%	Mean 1986 Value 000 Rs.	Mean Year of purchase by current owner	Purchase Time Value 000 Rs.
1957	2	-	48	1984	43
1959	2	-	60	1973	48
1960	3	-	65	1980	25
1961	2	-	70	1985	65
1962	8	(0.3)	83	1982	86
1963	10	(0.4)	60	1977	62
1964	72	(2.7)	98	1980	98
1965	60	(2.2)	93	1979	96
1966	81	(3.0)	95	1980	96
1967	56	(2.1)	104	1981	101
1968	51	(1.9)	111	1980	114
1969	108	(4.1)	106	1981	103
1970	57	(2.2)	127	1982	124
1971	63	(2.4)	114	1981	121
1972	100	(3.8)	114	1982	136
1973	115	(4.4)	123	1982	138
1974	211	(8.0)	128	1982	148
1975	185	(7.1)	133	1982	154
1976	168	(6.4)	131	1983	158
1977	86	(3.3)	143	1982	173
1978	120	(4.6)	146	1983	171
1979	232	(8.8)	166	1983	188
1980	167	(6.4)	172	1983	213
1981	102	(3.9)	186	1983	220
1982	191	(7.3)	197	1984	232
1983	178	(6.8)	223	1984	258
1984	139	(5.3)	266	1984	289
1985	54	(2.1)	290	1985	296
1986	2	-	325	1986	325
Total	2625	-	-	-	-
Mean	1976		155	82.4	181

AGE AND VALUE SPECTRUM OF 2 AXLE HINO TRUCKS

Table-10

Model Year	Number	%	Mean 1986 Value 000 Rs.	Mean year of purchase by current owner	Purchase time Value 000 Rs.
1973	1	.5	100	1983	150
1977	6	2.9	93	1978	145
1978	4	1.9	87	1981	87
1980	1	.5	150	1981	
1982	3	1.5	250	1983	200
1983	13	6.4	285	1984	301
1984	16	7.9	342	1985	357
1985	123	60.9	389	1985	393
1986	35	17.3	407	1986	400
Total	202	-	-	-	-
Mean 1984			365	85	373

AGE AND VALUE SPECTRUM OF 2 AXLE ISUZU TRUCKS

Table-11

Model Year	No.	%	Mean 1986 Value 000 Rs.	Mean Year of purchase by current owner	Purchase Time Value 000 Rs.
1972	3	1.6	100	1985	
1973	2	1.1	200	1986	200
1974	1	.5	70	1985	
1975	3	1.6	217	1982	
1976	3	1.6	240	1980	
1977	2	1.1	120	1985	150
1979	2	1.1	135	1984	200
1980	5	2.7	200	1982	200
1981	8	4.3	243	1983	283
1982	10	5.4	265	1984	309
1983	36	19.6	332	1984	336
1984	65	35.3	341	1984	376
1985	38	20.7	357	1985	387
1986	6	3.3	404	1986	390
Total	184	-	-	-	-
Mean 1983			319.00	1984	356.00

AGE AND VALUE SPECTRUM OF 2 AXLE NISSAN TRUCKS

Table-12

Model Year	No.	%	Mean 1986 Value 000 Rs.	Mean Year of purchase by current owner	Purchas Time Value 000 Rs.
1976	1	1.2	400	1984	300
1978	2	2.4	150	1981	175
1979	8	9.8	194	1983	231
1980	6	7.3	299	1982	333
1981	11	13.4	278	1983	318
1982	12	14.6	330	1983	381
1983	14	17.1	310	1984	359
1984	10	12.2	333	1984	399
1985	17	20.7	410	1985	426
1986	1	1.2	360	1986	360
Total	82	-	-	-	-
Mean 1982			317	83	353

AGE AND VALUE SPECTRUM OF 3 AXLE NISSAN TRUCKS

Table-13

Model Year	No.	%	Mean 1986 Value 000 Rs.	Mean Year of Purchase by current owner	Purchase Time value 000 Rs.
1974	1	1	-	1983	
1978	1	1	350	1983	250
1979	7	7.1	301	1979	300
1980	6	6.1	360	1983	432
1981	2	2.0	500	1983	600
1982	7	7.1	310	1982	480
1983	11	11.2	503	1983	510
1984	17	17.3	498	1984	565
1985	40	40.8	527	1985	528
1986	6	6.1	508	1986	508
Total	98	-	-	-	-
Mean 1983			483	84.2	519.00

AGE AND VALUE SPECTRUM OF NISSAN TRACTOR TRAILERS

Table-14

Model Year	No.	%	Mean 1986 Value 000 Rs.	Mean Year of purchase by current owner	Purchase time Value 000 Rs.
1976	3	3.6	438	1981	
1977	2	2.4	425	1978	380
1978	7	8.3	360	1982	
1979	6	7.1	484	1981	725
1980	5	5.9	413	1985	500
1981	6	7.1	486	1981	375
1982	7	8.3	504	1983	477
1983	13	15.5	580	1984	727
1984	19	22.6	573	1984	626
1985	15	17.9	634	1985	665
1986	1	1.2	700	1986	700
Total	84	-	-	-	-
Mean 1982			534.00	83.00	616.00

TRUCK PURCHASE

Table-15

	2 Axle Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Nissan Tractor Trailer
Truck purchased:						
a) by single payment	557	28	37	14	17	36
(%)	(24.6)	(14.5)	(14.5)	(26.4)	(21.8)	(48.6)
b) by several payments	1709	165	136	53	61	37
(%)	(75.4)	(85.5)	(78.6)	(73.6)	(78.2)	(51.4)
For Trucks purchased by single payment:						
Payment Made Rs.000	170	357	308	355	462	554
1986 Value Rs.000	140	333	274	314	424	507
Mean Year of Purchase	1981	1984	1983	1983	1983	1982
Mean Model Year	1974	1984	1981	1981	1982	1981
For Trucks purchased by several payment:						
Purchase Time Value Rs.000	181	370	354	351	519	616
1986 Value Rs.000	159	368	327	317	499	559
Mean Year of purchase	1983	1985	1984	1984	1985	1984
Mean Model Year	1977	1985	1984	1982	1984	1983
Initial Deposit Rs.000	59	107	113	104	130	137

TRUCK PURCHASED ON A REPAYMENT BASIS

Table-16

		2 Axle Bedford		2 Axle Hino		2 Axle Isuzu		2 Axle Nissan		) Axle Nissan		Nissan Tractor Trailer	
		No	%	No.	%	No.	%	No.	%	No.	%	No.	%
Outstanding Loan	No	307	(17.2)	5	(3)	9	(6.5)	11	(20.4)	2	(3.3)	4	(10.5)
	Yes	1474	(82.8)	160	(97)	130	(93.5)	43	(79.6)	58	(96.7)	34	(89.5)
Late Repayments	No	1003	(65)	136	(84)	99	(76.7)	28	(63.6)	46	(79.3)	32	(97.0)
	Yes	540	(35)	26	(16)	30	(23.3)	16	(36.4)	12	(20.7)	1	(3.0)
Repayments Easy to Meet?													
	Easy	266	(17.0)	42	(25.8)	20	(15.4)	6	(13.6)	16	(28.1)	11	(32.4)
	Difficult	699	(44.8)	67	(41.1)	51	(39.2)	17	(38.6)	20	(35.1)	15	(44.1)
	Very Difficult	595	(38.1)	54	(33.1)	59	(45.4)	21	(47.4)	21	(36.8)	8	(23.5)
	Impossible	1	-	0	-	0	-	0	-	0	-	0	-
Repayments to:													
	Bank	19	(1.0)	2	(1.1)	6	(4.1)	4	(6.6)	4	(5.9)	3	(6.4)
	Relative	23	(1.1)	1	(0.6)	1	(0.7)	3	(4.9)	0	-	0	-
	Friend	28	(1.4)	7	(4.0)	5	(3.4)	0	-	0	-	0	-
	Vehicle seller	1612	(81.1)	136	(77.3)	114	(77.0)	48	(78.7)	55	(80.9)	39	(83.0)
	Agent/Money Lender	306	(15.4)	30	(17.1)	22	(14.9)	6	(9.8)	9	(13.2)	5	(10.6)

THE EFFECTIVE RATES OF INTEREST PAID FOR TRUCK PURCHASE

Number of Cases in Each Category by Vehicle Class

Table-17

	2 Axle Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Nissan Tractor Trailer
Effective Interest Rate Paid:						
Below 1%	13	2	2	3	1	0
1% to 5%	28	2	0	2	2	3
6% to 10%	102	12	12	1	5	4
11% to 15%	180	22	23	10	7	7
16% to 20%	187	30	25	10	12	6
21% to 25%	147	32	14	5	9	2
26% to 30%	132	15	10	0	5	2
31% to 35%	112	9	9	2	4	1
36% to 40%	85	8	2	2	0	4
41% to 45%	58	4	5	3	0	1
46% to 50%	76	3	6	1	2	0
51% to 55%	34	2	0	1	0	0
56% to 60%	32	0	3	0	2	0
Above 60%	220	4	8	3	0	0
Total Cases Analysed.	1406	145	119	43	49	30
For Cases with Effective Interest Rate Between 1% and 60%.						
i) Average Rate(%)	26	23	23	23	22	20
ii) Average Rate weighted by borrowing(%)	22	21	21	21	21	17
iii) Average Borrowed Rs.000	137	267	245	249	391	467
iv) Average Monthly payment (Rs)	4230	9480	8670	8430	13,600	15,070
v) Average payment period Monthly	52	40	41	44	44	45

ORIGIN - DESTINATION AND FREIGHT SURVEY
TRIP LENGTH DISTRIBUTION

Percentage Breakdown by Trip Distance

Table-18

Distance Kms	1979 - 80* O-D Survey		Freight Survey (1986)	
	Trip %	Trip Kms %	Trip %	Trip Kms %
5 - 50	33.5	6.7	11.6	0.8
50 - 100			12.4	1.1
101 - 200	26.5	14.0	18.3	5.8
201 - 300	11.0	9.8	7.7	4.1
301 - 400	9.5	11.4	7.3	5.3
401 - 500	6.6	10.5	7.8	7.5
501 - 600	0.6	1.1	5.7	6.8
601 - 700	0.8	1.7	3.7	5.1
701 - 800	2.9	7.4	4.1	6.4
801 - 900	1.0	3.0	3.0	5.4
901 - 1000	1.5	5.1	3.0	6.2
1001 - 1200	2.0	7.9	3.9	9.2
1201 - 1400	2.9	13.4	5.7	15.7
1401 - 1600	0.5	2.6	1.8	5.8
1601 - 1800	0.9	5.2	2.9	10.4
1801 - 2000	-	0.1	0.8	3.5
Total Trips:	27,000		3,420	
Total Trips Kms		7,652,000		1,600,492

* Estimated from 1979-80 Origin-Destination Survey, Table 1 (Trucks) NTRC-67.

EMPTY AND LOADED VEHICLE TRIP LENGTH DISTRIBUTION

Table-19

Trip Length	From Karachi		To Karachi		Total Trucks	% Loaded
	Loaded	Empty	Loaded	Empty		
5 - 50	66	149	76	106	397	35.8
51 - 100	97	118	127	81	423	53.0
101 - 200	193	67	178	188	626	59.3
201 - 300	102	27	91	45	265	72.8
301 - 400	135	15	55	45	250	76.0
401 - 500	129	9	96	34	268	84.0
501 - 600	100	8	51	35	194	77.8
601 - 700	64	4	45	15	128	85.2
701 - 800	60	2	24	54	140	60.0
801 - 900	50	1	42	10	103	89.3
901 - 1000	57	2	35	10	104	88.5
1001 - 1200	70	0	59	6	135	95.6
1201 - 1400	94	1	88	13	196	92.9
1401 - 1600	33	0	24	6	63	90.5
1601 - 1800	45	0	51	3	99	97.0
1801 - 2000	12	1	14	2	29	89.7
Total	1307	404	1056	653	3420	

AVERAGE PERCENTAGE OF LOADED TRUCKS

	From Karachi %	To Karachi %	Total %
By Trips	76.4	61.8	69.1
By Vehicle Kms	93.3	74.3	83.9

OPERATING STATISTICS, TRIP DISTANCES, TIME AND REST PERIOD

Table-20

	2 Axle Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Nissan Tractor Trailers
Percent of Trips Loaded	68.5	75.7	66.8	67.1	75	74.1
Percent of Vehicle kms Loaded	85.4	87.5	73.7	76.6	86.1	87.6
Overall Mean Trip Distance	404	726	607	598	887	809
For Loaded Trucks						
Mean Trip Distance Km	503	839	665	666	1018	957
Mean Past Empty Distance Km	98	32$	235	205	273	318
Mean Trip Time Hrs	20	39	34	36	47	51
Mean Past Empty Time Hrs	26	40	31	32	46	35
For Empty Trucks						
Mean Trip Distance Km	187	373	487	448	495	387
Mean Period before:						
Returning to base, Days	6.7	7.9	10.2	8.8	11.8	9.0
Returning to family Days	17.1	16.3	21.1	17.3	27.1	37.8
Number of times rest is taken per month	2.5	2.1	2.4	2.1	1.7	1.6
Number of days rest is taken each time	1.7	1.7	1.7	1.8	2.8	3.3

EMPTY TRIP PURPOSE

Table-21

	2 Axle Bedfords	2-3 Axle Japanese	Nissan Tractor Trailer
Looking for a load	667	141	14
Return to depot	25	2	6
Settle Accounts	4	1	0
Visit home	97	9	1
Repairs	16	2	1
Recreation	1	1	0
Passenger Journey	2	1	0
For purchases	1	0	0
Other purposes	1	0	0
Total :	814	157	22

USE OF FREIGHT AGENTS

Table-22

	2 Axle Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Nissan Tractor Trailer
For Loaded Trucks						
Used Freight Agent for Current Trip						
Yes	1095	115	82	29	54	35
No	666	37	41	26	15	28
Percent Yes %	62.1	75.7	66.7	52.7	78.3	55.5
Mean Agents Charge Rs.	104	193	229	264	258	355
Mean Trip Revenue Rs.	1629	4023	3201	3815	6050	5845
Agent's Charge as percent of Trip Revenue %	6.4	4.8	7.2	6.9	4.3	6.1

REVENUE AND LOAD WEIGHT DATA FOR 2 AXLE BEDFORD

Truck Travelling To Karachi, Classified by Trip Distance

(Excluding tankers and trucks travelling to & from Mekran)

Table-23

Distance Kms	Sample No	Mean Wt. Tons	Mean Revenue Rs.	Mean Revenue per km	Mean Revenue per ton km.
5 - 50	45	8.0	371	11.3	1.77
51 - 100	77	8.1	492	6.9	1.20
101 - 200	115	7.4	705	4.9	0.79
201 - 300	50	7.9	961	4.0	0.55
301 - 400	42	8.7	1185	3.5	0.52
401 - 500	63	8.8	1335	3.0	0.37
501 - 600	27	8.2	1689	3.1	0.44
601 - 700	25	7.7	1692	2.7	0.38
701 - 800	12	8.5	1833	2.5	0.34
801 - 900	23	8.0	2339	2.8	0.37
901 - 1000	20	8.1	2510	2.6	0.40
1001 - 1200	34	8.5	2585	2.4	0.31
1201 - 1400	42	8.6	2771	2.2	0.27
1401 - 1600	18	8.3	2864	1.9	0.24
1601 - 1800	40	7.7	2915	1.7	0.25
1801 - 2000	9	7.9	2900	1.5	0.21
Total	641				
Mean (per trip)		8.1	1447	4.2	0.65

Mean Distance : 559 Kms

Total Revenue/Total Kms: 2.6 Rs. per km

(Total Revenue/Total Kms)/mean wt. : 0.32 Rs. per km.

REVENUE AND LOAD WEIGHT DATA FOR 2 AXLE BEDFORD

Trucks Travelling From Karachi, Classified by Trip Distance

(Excluding tankers and trucks travelling to and from Mekran)

Table-24

Distance Kms.	Sample No.	Mean Wt Tons	Mean Revenue Rs.	Mean Revenue per Km.	Mean Revenue per ton km
5 - 50	38	7.5	334	10.6	2.07
51 - 100	64	7.8	595	7.8	1.23
101 - 200	121	7.1	736	5.0	0.89
201 - 300	71	7.3	1122	4.5	0.79
301 - 400	76	8.1	1372	4.0	0.62
401 - 500	79	7.7	1636	3.6	0.56
501 - 600	53	8.0	2158	3.9	0.58
601 - 700	17	8.9	2759	4.4	0.52
701 - 800	23	9.2	2759	3.8	0.45
801 - 900	15	9.0	3050	3.6	0.41
901 - 1000	25	9.7	3545	3.7	0.39
1001 - 1200	34	9.0	3276	3.0	0.37
1201 - 1400	48	9.5	4095	3.2	0.34
1401 - 1600	22	9.7	4927	3.3	0.35
1601 - 1800	22	9.1	4522	2.7	0.30
1801 - 2000	10	8.5	5730	3.0	0.49
Total	718				
Mean (per Trip)		8.1	1929	4.7	0.73

Mean Distance : 536 Kms

Total Revenue/Total Kms: 3.6 Rs. per Km

(Total Revenue/Total Kms)mean wt. : 0.44 Rs. per ton Km.

REVENUE AND LOAD WEIGHT DATA FOR 2 AXLE NON BEDFORD

Trucks Travelling To Karachi, Classified by Trip Distance

(Excluding tankers and trucks travelling to and from Mekran)

Table-25

Distance Km.	Sample No.	Mean Wt Tons	Mean Revenue Rs.	Mean Revenue per km	Mean Revenue per Ton Km
5 - 50	1	3.2	200	6.3	1.90
51 - 100	11	9.8	450	6.2	0.65
101 - 200	7	10.0	1111	7.0	0.82
201 - 300	5	9.5	1040	3.8	0.40
301 - 400	3	11.0	1417	6.0	0.60
401 - 500	10	11.6	1940	4.4	0.38
501 - 600	4	12.2	2425	4.3	0.35
601 - 700	2	9.8	1425	2.3	0.24
701 - 800	5	11.0	3281	4.4	0.40
801 - 900	3	10.5	3733	4.6	0.40
901 - 1000	3	11.2	2433	2.6	0.26
1001 - 1200	14	13.8	5242	4.8	0.35
1201 - 1400	23	13.7	4309	3.4	0.26
1401 - 1600	3	15.0	6000	4.1	0.28
1601 - 1800	6	12.9	5433	3.3	0.25
1801 - 2000	4	12.5	4175	2.2	0.17
Total	104				
Mean		12.1	3178	4.4	0.41

Mean Distance : 847 Kms

Total Revenue/Total Kms : 3.7 Rs. per Km

(Total Revenue/Total Kms) mean wt: 0.31 Rs. per Km.

REVENUE AND LOAD WEIGHT DATA FOR 2 AXLE NON BEDFORD

Trucks travelling From Karachi, Classified by Trip Distance

(Excluding tankers and trucks travelling to and from Mekran)

Table-26

Distance Km.	Sample No.	Mean Wt Tons	Mean Revenue Rs.	Mean Revenue per km	Mean Revenue per ton km
5 - 50	4	8.4	313	7.0	1.09
51 - 100	4	12.1	544	7.8	0.63
101 - 200	14	8.9	1132	7.5	1.10
201 - 300	3	5.4	770	3.1	0.86
301 - 400	14	11.0	1501	4.5	0.46
401 - 500	9	10.0	1938	4.0	0.83
501 - 600	2	6.9	2300	4.1	0.88
601 - 700	4	11.5	2800	4.2	0.38
701 - 800	8	12.0	3109	4.3	0.72
801 - 900	13	12.7	3400	4.1	0.35
901 - 1000	21	13.9	5934	6.2	0.44
1001 - 1200	19	14.1	5386	4.9	0.34
1201 - 1400	11	14.9	5411	4.2	0.28
1401 - 1600	4	13.7	6325	4.4	0.34
1601 - 1800	9	12.8	6032	3.6	0.29
1801 - 2000	-	-	-	-	-
Total	139				
Mean (per trip)		12.1	3676	5.1	0.54

Mean Distance: 785 Kms

Total Revenue/Total Kms: 4.7 Rs. per Km.

(Total Revenue/Total Kms)/mean wt: 0.39 Rs. per ton Km.

REVENUE AND LOAD WEIGHT DATA FOR 3 AXLE TRUCKS

Travelling To Karachi, Classified by Trip Distance

(Excluding tanker and trucks travelling to & form Mekran)

Table-27

Distance Km.	Sample No.	Mean Wt Tons	Mean Revenue Rs.	Mean Revenue per km.	Mean Revenue per ton km
201 - 400	3	20.0	1733	6.9	0.35
401 - 600	6	19.4	3350	6.1	0.33
601 - 800	4	21.2	3700	5.9	0.28
801 - 1000	5	16.2	4060	4.2	0.29
1001 - 1200	2	19.1	5550	5.2	0.26
1201 - 1400	13	15.6	3692	2.9	0.20
1401 - 1600	1	7.1	4500	2.9	0.41
1601 - 1800	1	24.0	8900	5.4	0.23
Total	35				
Mean (per trip)		17.6	3797	4.6	0.27

Mean Distance: 946 Km.

Total Revenue/Total Kms: 4.0 Rs. per Km.

(Total Revenue/Total Kms) mean wt: 0.23 Rs. per ton Km.

REVENUE AND LOAD WEIGHT DATA FOR 3 AXLE TRUCKS

Travelling From Karachi, Classified by Trip Distance

(Excluding tankers and trucks travelling to and from Makran)

Table- 28

Distance Km	Sample No.	Mean Wt Tons	Mean Revenue Rs	Mean Revenue per km	Mean Revenue per ton km.
201 - 400	2	15	1950	6.1	0.40
401 - 600	5	20.4	3380	7.6	0.38
601 - 800	6	22.3	5225	7.3	0.33
801 - 1000	3	24.1	5000	5.6	0.24
1001 - 1200	4	30.3	7850	7.0	0.23
1201 - 1400	20	24.9	8415	6.5	0.27
1401 - 1600	1	24	9600	6.6	0.28
1601 - 1800	3	17.7	8200	5.2	0.28
Total	44				
Mean (per trip)		23.5	6842	6.2	0.29

Mean Distance: 1055 Km

Total Revenue/Total Kms: 6.5 Rs per Km

(Total Revenue/Total Kms)/mean wt: 0.28 Rs. per Km.

REVENUE AND LOAD WEIGHT DATA FOR TRACTOR TRAILERS

Travelling To Karachi, Classified by Trip Distance

Table-29

Distance Km.	Sample No.	Mean Wt Tons	Mean Revenue Rs.	Mean Revenue per Km	Mean Revenue per ton km
5 - 200	1	20.0	2000	12.5	0.63
201 - 400	0	-	-	-	-
401 - 600	9	27.4	3222	6.1	0.23
601 - 800	4	21.0	1488	2.2	0.10
801 - 1000	16	27.9	4306	4.8	0.17
1001 - 1200	4	23.7	4575	4.2	0.19
1201 - 1400	6	15.4	4967	3.8	0.26
1401 - 1600	1	15.0	6000	4.1	0.28
1601 - 1800	3	20.5	6700	4.0	0.24
Total	44				
Mean (per trip)		24.1	4092	4.76	0.22

Mean Distance: 922 Km

Total Revenue/Total Kms: 4.4 Rs. per Km.

(Total Revenue/Total Kms) mean wt: 0.22 Rs per ton Km.

REVENUE AND LOAD WEIGHT DATA FOR TRACTOR TRAILERS

Travelling From Karachi, Classified by Trip Distance

Table-30

Distance Km	Sample No.	Mean Wt Tons	Mean Revenue Rs	Mean Revenue per Km	Mean Revenue per ton Km
5 - 200	1	30.0	2000	22.7	0.76
201 - 400	4	35.6	4050	13.5	0.40
401 - 600	8	34.9	5116	9.7	0.28
601 - 800	7	20.9	5817	8.4	0.44
801 - 1000	2	34.5	8750	9.2	0.26
1001 - 1200	5	31.0	10,400	9.1	0.29
1201 - 1400	10	28.5	12,009	9.3	0.38
1401 - 1600	1	36.0	11,000	7.6	0.21
1601 - 1800	2	43.0	16,500	9.9	0.23
Total	40				
Mean (per trip)		30.7	8336	9.9	0.35

Mean Distance : 892 Km

Total Revenue/Total Kms: 9.3 Rs. per Km.

(Total Revenue/Total Kms.) mean wt: 0.30 Rs. per ton Km.

OVERALL SUMMARY OF TRIP REVENUES, DISTANCE & LOAD WEIGHTS

(EXCLUDING TANKERS AND TRUCKS TO AND FROM THE MEKRAN AREA)

Table-31

	2 Axle Bedfords	2 Axle Hinos	2 Axle Isuzus	2 Axle Nissans	3 Axle Nissans	Nissan Tractor Trailers
Mean Revenue Rs.	1702	3918	2901	3850	5682	5940
Mean Loaded Distance Km	547	921	724	850	1051	957
Mean Empty Distance Km	158	242	359	236	198	387
Percent Vehicle Kms. % Loaded	86.5	93.7	86.8	91.3	96.7	87.6
Mean Load Weight Tons	8.1	12.4	11.4	13.6	20.0	25.7
(Total Revenue/Total Loaded Kms)/Mean Load Weight: Rs./Tons Km.	0.38	0.34	0.35	0.33	0.26	0.24
Total Revenue/(Total Loaded+Empty Kms)Rs/Km.	2.7	4.0	3.5	4.1	5.2	5.4
Total Revenue/Total Loaded Kms. Rs./Km.	3.1	4.3	4.0	4.5	5.4	6.2

REVENUE AND DISTANCE DATA RELATING TO TANKERS

Table-32

		2 Axle Bedford	2 Axle Non-Bedfords	3 Axle Non-Bedfords
To Karachi, Loaded:				
	No.	33	10	2
Mean Distance	Kms.	251	322	925
Mean Revenue	Rs.	1017	2268	4000
Mean Revenue/Kms		5.6	7.8	5.3
To Karachi, Empty:				
	No.	78	49	15
Mean Distance	Kms.	426	633	835
From Karachi, Loaded:				
	No.	79	41	13
Mean Distance	Kms.	521	572	1212
Mean Revenue	Rs.	2715	4173	11310
Mean Revenue/Kms.		5.6	7.6	11.0
From Karachi, Empty:				
	No.	16	10	2
Mean Distance	Kms.	137	254	491
Estimated Percent of Trip Loaded.		57.4	48.7	49.2
Estimated Percent of Vehicle Kms. Loaded.		56.4	50.3	54.5

FOR TOTAL SURVEY;DISTRIBUTION BY MAKE OF TOTAL TON KMS PROVIDED

Table-33

	2 Axle Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Other 2-3 Axles	Tractor-Trailer	
							Nissan	Others
Percent	49.7	11.1	6.5	3.6	10.2	4.3	10.5	4.1

EXAMPLES OF MEAN REVENUES BETWEEN KEY O-D PAIRS

(For 2 Axle Bedford Truck)

No. of cases given in brackets

Rs.

Table-34

From \ To	Faisal-abad	Gilgit	Gujra-nwala	Hyder-abad	Karachi	Lahore	Mardan	Multan	Peshawar	Quetta	Rawalpindi	Turbat
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Faisalabad			950 (2)	1500 (1)	2175 (4)	643 (16)	1600 (2)		1800 (4)	1975 (2)	1331 (9)	
Gilgit						3600 (5)					1233 (4)	
Gujranwala	400 (1)			2000 (2)	3150 (3)	488 (4)		700 (1)	1183 (9)	3000 (1)	1180 (5)	
Hyderabad			3900 (2)		923 (29)	3694 (8)		2988 (4)	5017 (6)	2950 (7)	4840 (5)	
Karachi	4450 (4)		4067 (3)	699 (22)		4096 (12)	5000 (1)	3100 (3)	5122 (14)	4200 (4)	5312 (17)	4540 (10)
Lahore	433 (7)			1800 (1)	2564 (11)		1733 (3)	1200 (1)	1404 (13)	2500 (1)	1125 (7)	
Mardan	1083 (3)			1663 (4)	2200 (13)	1400 (2)		1300 (1)	400 (1)		1200 (2)	
Multan			1700 (2)	1200 (1)	1940 (5)	1200 (1)			3142 (7)	1474 (11)	2363 (4)	
Peshawar	992 (6)		1167 (3)	1950 (4)	2894 (18)	1295 (10)	433 (3)	1525 (6)		1750 (4)	669 (8)	
Quetta			3500 (4)		2500 (1)	3600 (9)		2267 (3)	4576 (5)		4200 (2)	
Rawalpindi	900 (3)	4363 (16)	933 (7)		3900 (3)	833 (10)	606 (4)		834 (10)			

OVERALL OPERATING PERFORMANCE: MEAN ESTIMATE OF ANNUAL REVENUES, VEHICLE KILOMETRES, AND DAYS UNDER REPAIR

Table-35

	2 Axle Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Nissan Tractor Trailers
Annual Revenue* 000 Rs.	283	406	376	412	500	611
Days under Repair Per Year	52	33	34	46	42	51
3 Estimates of Annual Vehicle Kilometres:						
i) Calculated from distance travelled per week adjusted for days under repair 000 Km.	117	159	147	132	143	136
ii) Calculated from Annual revenues* trip distances and trip revenues 000 Km.	109	116	104	95	112	129
iii) Calculated from Annual hours per year, empty and loaded trip times and trip distances 000 Km.	109	129	117	108	120	127

* Excludes data from Survey Station I-II covering NWFP and part of North Punjab.

VEHICLE OPERATING COST COMPONENTS: MEAN ESTIMATES

Table-36

	2 Axle/ Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Nissan Tractor Trailers
Diesel Litres/Km	0.283	0.303	0.32	0.339	0.403	0.488
Monthly Repairs (Excluding tyres) Rs.	3121	2586	2723	3109	4126	5554
Tyres Per Year	15.8	20.7	20.8	19.1	26.8	27.6
Labour Costs:						
Monthly Wages:						
Ist Driver Rs.	1090	1298	1253	1290	1494	1382
2nd Driver Rs.	1005	1200	1140	1111	1420	1476
Conductor Rs.	438	488	467	527	588	585
Daily Allowance:						
Ist Driver Rs.	32	37	36	34	34	36
2nd Driver Rs.	32	34	37	33	34	35
Conductor Rs.	23	24	25	24	25	25
Number of Drivers (Mean)	1.56	1.70	1.56	1.57	1.92	1.55
Number of Conductors (Mean)	0.99	0.99	0.99	0.98	1.01	1.01

VEHICLE INSURANCE

Table-37

	2 Axle Bedford	2 Axle Japanese	3 Axle Nissan	Nissan Tractor Trailer	Mean Insurance Premium
Insurance Type					
None	36	2	0	0	
Franchise Certificate	3	0	0	0	427
Third Party (Act)	2496	458	88	76	34
Third Party (Risk)	30	5	3	3	44
Third Party + additions	0	0	0	2	925
Comprehensive	1	1	1	3	2929

ACCIDENTS: BASIC STATISTICS

Table-38

	2 Axle Bedford	Other Trucks	Total
No. of driver reporting accidents in last year	253	46	299
Total No. of accidents	283	51	338
No. of accidents as percent of Total Trucks %	11	7	10
Percent with Truck damage %	95	80	
Mean Truck damage (Rs)	25,500	36,600	27,100
Percent with load damage %	20	21	
Mean load damage (Rs)	7,000	11,600	7,900
For Most Serious Accident Accident Type:			
Nose to tail	30	5	35
Side	45	2	47
Head on	54	11	65
Pedestrian	4	2	6
Animal	0	0	0
Obstacle	14	6	20
Roll over	97	16	113
Other	6	0	0
Personal Injury Type:			
Fatal	14	3	17
Hospitalised	8	0	8
Minor	25	11	36
No Injury	173	29	202

ACCIDENT TYPE CLASSIFIED BY PERSONAL INJURY

Table-39

	Fatal	Hospitalised	Minor	No Injury	Total
Accident type:					
Nose to tail	2	1	3	26	32
Side	2	0	3	34	39
Head on	5	4	10	43	62
Pedestrian	4	1	1	0	6
Obstacle	1	0	2	15	18
Roll over	1	2	17	75	95
Other/ unspecified	2	0	0	9	11

VEHICLE MODIFICATIONS

Table-40

		2 Axle Bedford	2 Axle Hino	2 Axle Isuzu	2 Axle Nissan	3 Axle Nissan	Nissan Tractor Trailer
Vehicle Strengthened ?							
	Yes	2369	171	171	77	89	75
	No	155	28	13	4	1	9
Chassis Strengthened ?							
	Yes	1556	62	81	49	78	50
	No	850	110	89	29	11	25
Engine Compartment Strenghened ?							
	Yes	2333	100	121	59	63	45
	No	95	72	49	19	26	29
Springs Strengthened ?							
	Yes	2331	168	168	74	85	63
	No	88	5	3	4	4	11
Extra Axle Added ?							
	Yes					39	
	No					50	
Truck Turned into Tractor Unit ?							
	Yes						2
	No						64

DRIVER'S MAIN PROBLEMS

Table-41

	2 Axle Bedfords		Japanese Trucks	
	No. of Answers	% of Drivers	No. of Answers	% of Drivers
Police	1716	66.3	436	67.6
Low Tariffs	47	1.8	29	4.5
Difficult to find Loads	164	6.3	55	8.5
Vehicle Breakdown	0	-	0	-
Poor Roads	853	33.0	363	56.3
High Fuel Costs & Expenses	522	20.2	23	3.6
Competition	49	1.9	3	0.5
Spare Parts	21	0.8	1	-
District Tax	222	8.5	37	5.7
Difficult to Pay Back Loan	0	-	0	-
Difficult to find finance	1	-	0	-
Driver's unemployment	1	-	0	-
Low salary for driver	55	2.1	13	2.0
Unnecessary Delays	1	-	0	-
Robbers	614	23.7	251	38.9
Other Problems	287	11.1	51	7.9
Total Number of Answers	4553		1262	
Number of drivers answering question	2588		645	