Responding to the transport crisis in Karachi

The Urban Resource Centre, Karachi
with Arif Hasan and Mansoor Raza

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About the authors

The Urban Resource Centre, Karachi is a Karachi-based NGO founded by teachers, professionals, students, activists and community organizations from low income settlements. It was set up in response to the recognition that the planning process for Karachi did not serve the interests of low- and lower-middle-income groups, small businesses and informal sector operators and was also creating adverse environmental and socioeconomic impacts. The Urban Resource Centre has sought to change this through creating an information base about Karachi's development on which everyone can draw; also through research and analysis of government plans (and their implications for Karachi's citizens), advocacy, mobilization of communities, and drawing key government staff into discussions. This has created a network of professionals and activists from civil society and government agencies who understand planning issues from the perspective of these communities and other less powerful interest groups. This network has successfully challenged many government plans that are ineffective, over-expensive and anti-poor and has promoted alternatives. It shows how the questioning of government plans in an informed manner by a large number of interest groups, community organizations, NGOs, academics, political parties and the media can force the government to listen and to make modifications to its plans, projects and investments. Comparable urban resource centres have also been set up in other cities in Pakistan and also in other nations.

Arif Hasan is an architect/planner in private practice in Karachi, dealing with urban planning and development issues in general and in Asia and Pakistan in particular. He has been involved with the Orangi Pilot Project (OPP) since 1981. He is also a founding member of the Urban Resource Centre (URC) in Karachi and has been its chair since its inception in 1989. He has written widely on housing and urban issues in Asia, including several books published by Oxford University Press and several papers published in Environment and Urbanization. He has been a consultant and advisor to many local and foreign community based organizations, national and international NGOs, and bilateral and multilateral donor agencies.
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The Human Settlements Group works to reduce poverty and improve health and housing conditions in the urban centres of Africa, Asia and Latin America. It seeks to combine this with promoting good governance and more ecologically sustainable patterns of urban development and rural-urban linkages.

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The questionnaire survey was supervised by Mansoor Raza and Humayoon Waqar (a freelance researcher). Survey participants were URC staff members, Zahid Farooq, Adnan Farooqui, Mukhtar Yousuf, Shakeel Gill, Rao Nasir Ali, Seema Liaquat, Muhammad, Jamil and Shazia Perween. Others who assisted in the survey were RanaSadiq and Shakeel (both community activists). The data feeding of the survey through SPSS was carried out by Rozina Imtiaz, and the analysis was carried out by Engr. Mansoor Raza, who also helped Arif Hasan in putting the document together. The URC Director, Younus Baloch, monitored the URC part of the work. Kanak Dixit provided an insightful and useful review.

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Transport-related problems in Karachi have increased considerably in recent decades. Traffic congestion contributes to increased air and noise pollution, leading to health problems, high accident rates, and environmental degradation. It has also meant declining living standards, as to avoid long commutes, people's livelihood choices have become more limited and this has determined where they live. This has resulted in a drop in income and a decrease in personal security, which has affected the most vulnerable, in particular women. This paper presents a historical perspective on the causes of the current crisis, and its repercussions on transporters, fuel suppliers, and the public; outlining current government plans and making recommendations.

Contents

Acronyms

BRT	Bus Rapid Transit
BOT	Build-Operate and Transfer
CAA	Civil Aviation Authority
CBD	Central Business District
CDGK	City District Government Karachi
CFMT	Citizens' Forum on Mass Transit
CNG	Compressed Natural Gas
DIG	Deputy Inspector General
JICA	Japan International Corporation Agency
KCR	Karachi Circular Railway
KCR-AAC	KCR Affectees' Action Committee
KDA	Karachi Development Authority
KMC	Karachi Metropolitan Corporation
KMTC	Karachi Mass Transit Cell
KPK	Khyber Pukhtoonkhwa
KPT	Karachi Port Trust
KPTS	Karachi Public Transport Society
KSDP	Karachi Strategic Development Plan
KTC	Karachi Transport Corporation
KTIP	Karachi Transportation Improvement Project
MPGO	Master Plan Group of Offices
MQM	Muttahida Qaumi Movement
O&M	Operation and Maintenance
PPP	Pakistan Peoples' Party
RTA	Regional Transport Authority
SBCA	Sindh Building Control Authority
SEPA	Sindh Environmental Protection Agency
SITE	Sindh Industrial Trading Estate
SRTC	Sindh Road Transport Corporation
TMP	Transport Master Plan
URC	Urban Resource Centre
UTS	Urban Transport Scheme
VEC	Vehicular Emission Control

Local terms

bhatta	Illegal gratification
hijab	Covering of the head by women in keeping with Islamic tradition
katchi abadis	Informal settlements
tanga	A six-seater carriage pulled by a horse

Executive summary

Transport-related problems in Karachi have increased considerably over the past few decades, resulting in a decline in productivity, and having an enormous impact on the lives of its citizens. Traffic congestion has contributed to increased air and noise pollution, leading to health problems, high accident rates, and environmental degradation. This has also meant a decline in living standards, as in order to avoid long commutes, people's livelihood choices have become more limited and this has determined where they live. This has often resulted in a drop in income and a decrease in personal security, which has affected the most vulnerable, in particular women.

Karachi is Pakistan's largest city, and one of the fastest growing cities in the world, with a population of over 20 million. It is also Pakistan's only port city, comprising much of the country's industrial base and is the location of several federal institutions. Sixty-nine percent of the land is privately owned, and there is little of no coordination between the different landowners.

In spite of Karachi's importance, its transport-related problems are increasing. A large number of private vehicles are added to its road every year, but the number of public transport registered buses has declined from 22,313 in 2011 to 12,399 in 2014, of which 9,527 are operative (Raza 2014). Different reasons for this decline are given by different interest groups and are discussed in this paper. Due to this decline, people are forced to travel on the roofs of buses, which is strictly speaking illegal, and they have to wait at bus stops for long periods to get a ride. A large number of buses have converted from diesel to compressed natural gas (CNG) as a result of a court order. However, due to a lack of supply, the sale of CNG is only permitted on four days of the week, and it is only on those days that CNG buses can function. This creates additional problems for the commuting public.

Traffic congestion means slow movement around the city for commuters and freight, which in turn leads to declining living standards and high economic costs. The effect of traffic congestion on the city and its inhabitants has been listed in a number of research studies and publications (KMTC 2006):

- Decreased mobility (typified by long commute times and reduced opportunity for work, education or social activities)
- High levels of toxic air as well as noise pollution
- Environmental degradation and destruction of the urban landscape
- Declining living standards
- High economic costs (wasted time, cost of freight)
- High cost of health problems/accidents/mortality
- Detrimental impact on bus transport as buses are stuck in traffic severely affecting fleet productivity.

Karachi is the capital of Singh province and it is a multi-ethnic city, due to continuous migration. In fact, a minority speaks the local Sindh language, with a large proportion of the population speaking Urdu. This ethnic composition plays into the politics of Karachi, with one party representing the Sindhi speaking population and another representing the Urdu speaking population. This has political ramifications, since there is non-consensus between the parties. This conflict has resulted in a weakening of the governance system and city planning institutions, which has led to delays in the implementation of development projects. The fundamental issue in dealing with the transport crisis is in fact related to governance.

Since governance structures have been in flux, transport programmes have suffered due to a lack of continuity. The transporters, government officials and the public all agree that Karachi needs large buses which alone can provide a comfortable means of commuting. However, the purchase and operation of these buses is costly, and the service cannot be made affordable to the public without the provision of government subsidies.

Despite past investment from government and experimentation with different financing models, subsidies have been promised but not provided. Maintenance issues have affected the performance of vehicles, and the private sector has been unwilling to invest in public transport. As well as institutional issues, the court order on CNG and rising fuel costs, there is police corruption, which means that drivers pay bribes to the police so they can violate traffic rules and regulations, causing more congestion and inconvenience to commuters.

This working paper explores the link between the nature of city governance, technology used for transport and affordability, housing, land use, access to livelihoods, health and well-being on the one hand; and quality transport on the other. It seeks to understand the reasons for the related crisis in the city. Through a literature review and semi-structured interviews with the various stakeholders, it looks at:

i) the history of the transport sector and the causes for its failures and successes;

ii) repercussions on transporters, the public at large, women and the CNG suppliers;

iii) present government plans.

The paper concludes that transport has to be seen as a part of a larger city planning exercise, and puts forward some recommendations.

1 Background

According to the 2011 pre-census house count, Karachi is the fastest growing mega city in the world. Its population has increased by more than 100 per cent from 11 million (the 1998 census figure) to 22 million when the 2011 house count was conducted (Cox 2012). As such, 10 per cent of the population of Pakistan and 22 per cent of its urban population live in Karachi.

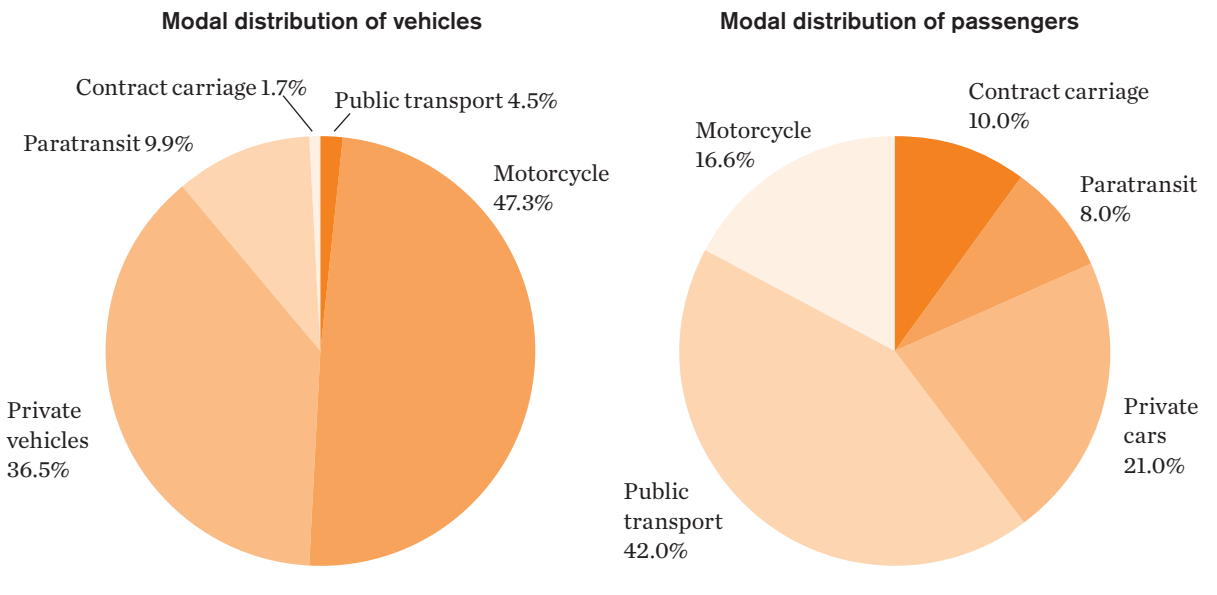
In addition to population, there are other reasons for Karachi's importance. It is Pakistan's only port city. It contains 32 per cent of the country's industrial base, generates 15 per cent of GDP, 25 per cent of federal revenues, and 62 per cent of income tax (MPGO 2006). It houses powerful federal institutions, such as the Karachi Port Trust (KPT), the Civil Aviation Authority (CAA), railways, customs and military cantonments. All these federal institutions own land, carry out developments on it (including residential and commercial real estate), and employ a large number of people. In addition to the provincial government (which also owns land), they all have a say in Karachi's development. The city government controls only 31 per cent of Karachi's land, mostly through ownership (MPGO 2006). Coordination between the different landowning agencies is almost non-existent.

Karachi is also the capital of Sindh province. It accommodates 62 per cent of Sindh's urban population and 30 per cent of its total population. This figure is interesting since the second largest city of Pakistan, Lahore, the capital of Punjab province, accommodates only 7 per cent of the population of the province (Government of Pakistan 1998). Karachi's large scale industrial sector employs 71.6 per cent of the total industrial labour force in Sindh; the city produces 74.8 per cent of the province's total industrial output and provides 78 per cent of its formal private sector jobs (MPGO 2006).

Due to migration from India after 1947 and continuous migration from other parts of Pakistan, Karachi is a multi-ethnic city. It is the capital of Sindh, but according to the 1998 census only 14 per cent of the population speak local languages as their mother tongue, whereas 48.25 per cent speak Urdu (Government of Pakistan 1998). The Urdu speakers are the post-1947 migrants to Karachi. As such, a predominantly Sindhi speaking province has an overwhelming majority of non-Sindhi speaking ethnic groups in its capital city.

The Pakistan Peoples' Party (PPP), representing the Sindhi speaking population of the province, can only control Karachi's enormous resources if there is a centralised province controlled system of governance for the city. The Urdu speaking population is represented by the Muttahida Qaumi Movement (MQM), which can only control Karachi's assets if there is a decentralised form of local governance. Since the two parties cannot arrive at a consensus, local governance and its related institutions have been in a flux for over a decade.

Figure 1. Modal distributions



Source: JICA travel demand forecast study

The seriousness of Karachi's traffic-related problems can be judged by the fact that in 2011, only 0.85 per cent of its vehicles were buses, and 4.04 per cent were three-seater motor rickshaws (three wheeler vehicles), whereas cars constituted 38.21 per cent and motorcycles constituted 49.59 per cent (for details see Figure 1). Statistics show that conditions have not improved since then, yet 60 per cent of the 24.2 million trips generated in Karachi every day are carried out using the existing public transport sector consisting of buses and motor rickshaws.[1] To overcome this crisis, the informal private sector has introduced about 50,000 QINGQIs[2] (motorcycles with six-seater carriages attached), many of which are not registered and as such function illegally. As Karachi expands spatially, the problem of commuting increases. At present, the lengths of commutes for the working class are in the range of 20 to 40 kilometres.

The situation has been summarised by the Karachi Metropolitan Corporation (KMC) as follows: i) internationally accepted ratio is of one 100-seater bus for a population of 1,500; ii) population of Karachi 20 million; iii), as such requirement of large buses is 13,333; iv) existing equivalent of large size buses in the form of 35-seater minibuses: 4,657; thus v), the shortfall (immediate requirement) for Karachi is 8,676 large buses.[3]

The situation described above exists despite the fact that since independence, both the federal and provincial governments (and more recently, the city government) have made large investments in the transport sector and have experimented with different models from owning and running (both federally and provincially managed), to supporting the private sector, to public-private partnership (both provincially and local government managed) and promotion of the build-operate-transfer model. The government in its various attempts has also developed at considerable cost transport related infrastructure such as depots, terminals, workshops and office spaces required for their management and operation, and invested heavily in the purchase of transport vehicles. Figure 1 gives the modal distribution of vehicles and passengers and the number of vehicles registered in Karachi in 2013 is given Table 1 below.

Different plans for mass transit light rail and Bus Rapid Transit (BRT) systems have been prepared following detailed studies since 1972. A circular railway was also established in 1964 but was closed down in 1998. Various attempts at its revival have been made but

[1] Transport and Communication Department, Karachi Metropolitan Corporation, February 2014.
[2] A QINGQI is a 70 cc motorcycle which has been converted to a vehicle carrying six persons. Recently, due to their popularity and demand, nine-seater QINGQIs have also been added to the transport sector in Karachi. Transport experts (Interview No. A-07) do not consider them to be reliable or durable.
[3] Transport and Communication Department, Karachi Metropolitan Corporation, February 2014.

Table 1: Mechanised road transport registered/on road 31 December 2013

SR. NO.	TYPE OF VEHICLE	TOTAL REGISTERED ON ROAD UP TO 31 DEC 2013	NEWLY REGISTERED DURING THE YEAR 2013				TOTAL REGISTERED ON ROAD 2013	TOTAL REGISTERED ON ROAD 31 DEC. 2013
			Jan.–March	April–June	July–Sept.	Oct.–Dec.		
01.	Mini Bus	16,087		68	230	109	407	16,494
02.	Buses	6,352		15	36		51	6,403
03.	Mini Truck	13,510	288	185	134	123	730	14,240
04.	Truck	16,146	264	162	155	102	683	16,829
05.	Van/Pick-Up	109,243	2,111	6,860	1,109	178	10,258	119,501
06.	Taxi	47,049						47,049
07.	Rickshaw	123,129	2,183	5,028	5,797	5,568	18,576	141,705
08.	Lifter	2,994	41	20	13	15	89	3,083
09.	Tractor	3,624	18	12	59	47	136	3,760
10.	Tanker	2,999	6	22	21	3	52	3,051
11.	Pvt. Vehicle	1,047,933	20,048	11,467	14,185	9,012	54,712	1,102,645
12.	Motorcycle	1,452,526	61,466	46,682	49,859	39,410	197,417	1,649,943
13.	Ambulance	2,029		90	49		139	2,168
14.	Coffin Carrier	72						72
15.	Disable Person	100	2	1	2		5	105
16.	Catholic Trust	107	1			1	2	109
17.	School Bus	238	4	4	11		19	257
18.	Church	48	1				1	49
	Total	**2,844,186**	**86,433**	**70,616**	**71,660**	**54,568**	**283,277**	**3,127,463**

Source: Transport and Communication Department, Karachi Municipal Corporation. QINGQIs are not included.

have not been successful. A list of important studies and proposals prepared since 1980 are given in Box 1 below.

Research methodology

The methodology of the research has consisted of; i) a literature review extending to press clipping compiled by the URC on transport over the last five years (for literature consulted, and press clippings selected, see Appendix 1); ii) open-ended interviews with transporters, transport-related government officials, women commuters and residents of low income settlements (for list of interviewees, see Appendix 2); and iii) questionnaires served to 150 men and women commuters[4] at different locations in Karachi (for questionnaires and their analysis, see Appendix 3). A list of the different stakeholders in the transport sector in Karachi is given (with both their new and old names) in Appendix 4. Information available at some of the stakeholders was accessed during visits to them. It can be observed in Appendix 4 that many institutions that previously carried the suffix 'Karachi', now carry the suffix 'Sindh'. This is because of a move by the provincial government (which is controlled by the PPP) to directly take control of Karachi's local level institutions. Transcripts of the full interviews are given in Appendix 5: Transcripts.

[4] 53 men and 27 women were interviewed at bus stops which serve low income areas. The remaining 70 interviews were carried out in factories and with college students.

BOX 1: LIST OF IMPORTANT STUDIES ON KARACHI'S TRANSPORT ISSUES

Report of the committee on Proposed Metropolitan Transport Authority by the Transport Commission Working Group which was looking into the shortages of transport and making recommendations included improved bus designs, prevention of road accidents, public transport discipline, mass transit fares and acts, rules and regulations relevant to them; 1982

Mass Transit Study 1990: Final Report on the Evaluation of Alternatives; prepared by the Karachi Development Authority and Maunsell Consultants Limited, London and Parsons Brinckerhoff International Incorporated, New York and Llyassons and Associates, Karachi; 1990

Karachi City Transport Shortages, Causes, Accidents and Suggestions; prepared by the Karachi Bus Owners' Association at the request of the Transport Minister, Government of Sindh; 1993

Karachi Development Authority; *Environmental Impact Assessment of Corridor-1*; Government of Sindh, 1994

Railcop; *Proposal for Upgradation of the Karachi Circular Railway*; Railway Constructions (Pakistan) Limited, Islamabad, 1996

JICA; *Feasibility Study on the Electrification of Karachi Suburban Railway and Preliminary Feasibility Study Report on Mass Transit System*; Government of Pakistan, March 1997

M. Sohail and the URC Karachi; *Urban Public Transport and Sustainable Livelihoods for the Poor: A Case Study of Karachi, Pakistan*; WEDC, Loughborough University, UK, 2000

Person Trip Study of Karachi City; prepared by Exponent Engineers / Japan International Corporation Agency (JICA) for the CDGK; December 2005

Report on the Transport Sector: Karachi Strategic Development Plan-2020; prepared by the Master Plan Group of Offices, City District Government Karachi (CDGK); February 2007

Revival of Karachi Circular Railway; prepared for the Karachi Urban Transport Corporation by Environmental Management Consultants; 2009

Source: Detailed study on a Private-Public Partnership based Environmental Friendly Public Transport System for Karachi; prepared by the Karachi Mass Transit Cell of the City Government for the Karachi Strategic Development Plan-2020, February 2006

2

Post-independence history of the transport sector in Karachi

At the time of independence in 1947, there were 20 to 50 large buses operating in Karachi.[5] They were owned by three private sector companies. However, most of the commuting public relied on the tramway. The tramway connected the port to various important locations in the city, such as the wholesale markets and the cantonment railway station. It was also within easy walking distance of the city railway station, which handled both passenger and port-related inter-city cargo. At any given place in the city, one was never more than three kilometres from the tramway (for the location of the tramway, see Figure 2). The importance of the tramway can be gauged from the fact that the number of tram cars increased from 37 in 1918, to 64 in 1954, and to 157 in 1955. However, the tramway was closed down in 1974. The reason for its closure was that it was blocking traffic on the main corridors of the city and resulting in accidents.[6] Another reason for its discontinuation was that the Karachi Master Plan 1975–85 had developed elaborate plans for a mass transit system, the main underground corridor of which was on the tramway's right of way. A history of the tramway is given in Box 2 below.

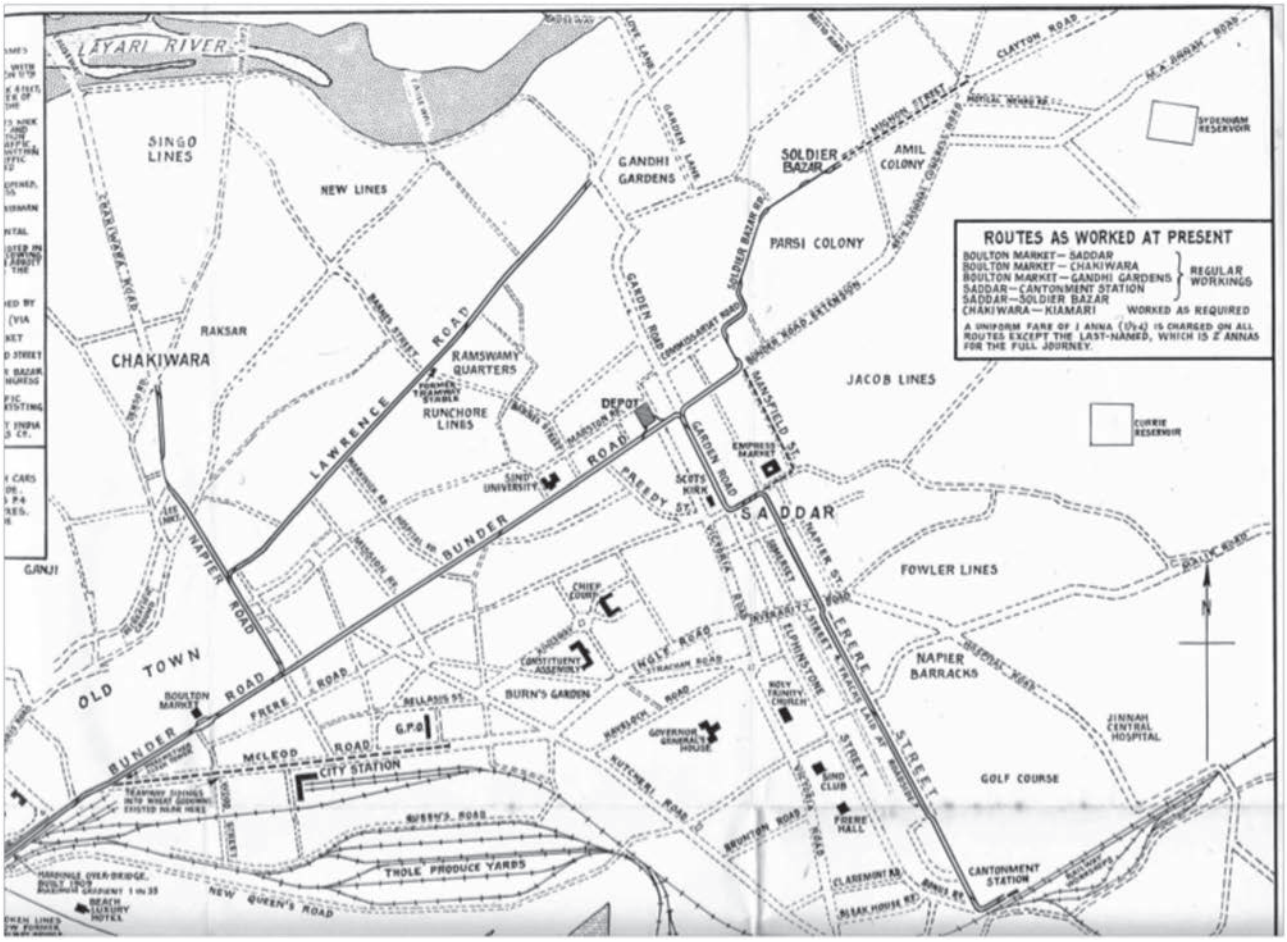
At the time of independence, Karachi had a population of 450,000 and its spatial spread was only 25 square kilometres as compared to 680 square kilometres in 2001 (CDGK 2007). As such, the buses and tramway were more than adequate for its needs. In addition, about 30 taxis[7] were also available and so were horse-drawn carriages for the richer sections of the population. Most of the cargo handling between the port and the rest of the country was by railway. Intra-city cargo from the port to the wholesale markets in the city and to the railway stations was by camel and donkey carts.

However, 600,000 refugees from India moved into the city in the last three months of 1947 and in the 1951 census, Karachi's population had increased to 1.37 million (Government of Pakistan 1941; 1951). This was in spite of the fact that over a 100,000 Hindus and Sikhs were forced to leave the city. The migration from India resulted in the densification of the city and the creation of settlements on its then immediate fringe. As a result, the transport issue became crucial.

The demands for transport increased considerably as a result of the 1959 Karachi Resettlement Plan. Under this

5 See Interview B-01 (Irshad Bukhari).
6 www.siasat.pk
7 See Interview B-01 (Irshad Bukhari).

Figure 2. Tramway routes



BOX 2: A HISTORY OF THE KARACHI TRAMWAY

- 1879: John Brunton, a railway engineer, devised a special rail of four feet gauge which was later used for the tramways in Karachi
- 1881: Plans for a tramway were made by the municipal secretary and engineer James Strachen
- 1881: Edward Mathews of London submitted the tender for construction of the tramway tracks
- 1883: Formalities for construction were finalised
- 1884: Works started in October
- 1885: Tramway inaugurated in April. The first track was from Napier Mole to Keamari. The trams were steam locomotives and also carried freight. Locomotives functioned every 15 minutes.
- 1886: The locomotives were replaced by horses because the locomotives were noisy and let out smoke. They disturbed the animals which were used in carts and for travel purposes. The tramway was managed by the East India Tramway Company.
- 1905: Petrol trams were inaugurated in March and by 1918 there were 37 trams which increased to 64 in 1954.
- 1911: Frere Road was added to the network in September and Soldier Bazaar in 1916.
- 1928: Kerb Side loading for freight was introduced at Boulton Market.
- 1945: New diesel operated cars were introduced.
- 1949: The East India Tramway Company was purchased by the Mohammad Ali Transport Company.
- 1955: Cars increased to 157.
- 1974: Tramway closes down.

Source: www.siasat.pk

plan, two satellite towns – New Karachi in the north and Landhi-Korangi in the southeast – were created about 20 kilometres from the then city centre. Industrial areas were an integral part of these plans, the concept being that the residents of these towns would work in the industrial areas and would not have to travel to the city. Health and education infrastructure was also provided. However, the industry did not materialise, and as such the working population of the towns had to commute long distances on bad roads to the work areas in the city's business district, port and adjacent industrial areas. The 1959 Karachi Resettlement Plan converted a dense city into a sprawl. In addition, it segregated rich and poor areas and since the vast majority of the population that were shifted to the satellite towns consisted of Urdu speaking refugees, it also created ethnic-based segregation (Hasan 2000).

The various initiatives of the government to tackle the transport issue between 1948 and 1977 are given in Box 3 below. Failure of these initiatives has been attributed to financial issues.

BOX 3: GOVERNMENT TRANSPORT-RELATED INITIATIVES 1948–1977

- 1948: The government began to provide transport to and from new settlements created as a result of mass migration from India. This was a federal government initiative. Karachi at that time was the capital of Pakistan.
- 1950: This initiative was handed over to the Karachi Improvement Trust (KIT) which was created to plan for the expansion and management of the city.
- 1957: The KIT initiative proved to be very inadequate and so in December the Karachi Transport Syndicate (KTS) was created with a fleet of 280 buses.
- 1958: The KTS failed for financial reasons. It was disbanded in December.
- 1959: As a result of the Greater Karachi Resettlement Plan, transport requirements increased substantially. To meet these demands, the Karachi Road Transport Corporation (KRTC) was established in January as a joint venture of the central government and the public who were invited by shares. 324 buses including 24 double-deckers started operating. Adequate depots and workshops were provided for these buses.
- 1964: The KRTC was wound up in February for reasons that are unclear. The government share was bought by the Gujrat Transport in February 1964 and the operations were taken over by a consortium of Commerce Bank and Valika Group under the name of Khalid Riffat Transport Company. Due to financial reasons, the organisation collapsed in December 1967.
- 1968: The preparation for the Karachi Master Plan 1975–85 with UN involvement was undertaken by the Karachi Master Plan Department.
- 1968: The government initiated the Karachi Omnibus Service which was a subsidiary of the West Pakistan Road Transport Corporation (PRTC). Over 600 buses were introduced and a sub-depot was established for them. This was in addition to the depots and workshops which had been developed earlier for the KRTC.
- 1973: West Pakistan was subdivided into provinces and so the PRTC was subdivided province-wise and as a result the Sindh Road Transport Corporation (SRTC) was established and 2,000 buses were introduced into the system. A number of depots and workshops were commissioned for these additions.
- 1977: The SRTC losses continued to grow and finally in 1977 February the SRTC was divided into the Karachi Transport Corporation (KTC) for the city and SRTC for the rest of the province under the provincial government.

Source: Ismail 2002

A major initiative taken by the government was in 1977 with the creation of the Karachi Transport Corporation (KTC). The corporation was owned by the federal and provincial governments and it inherited the Karachi-based assets of the Sindh Road Transport Corporation (SRTC), an earlier provincial level government initiative. These assets consisted of six depots, central stores, transport training institute and buses and a staff of over 5,000. Under the KTC, a number of initiatives were undertaken. Links with the recently nationalised automobile industry were created and they undertook to develop technology to build large buses. As a result, 550 large new buses were introduced. New premises for the transport institute, central workshop and stores were built along with a central bus terminal capable of handling 200,000 passengers daily. The head offices of the KTC were also established at the Civic Centre where the Karachi Development Authority (KDA) was located (Ismail 2002). This added to the importance of the KTC and it was integrated into the planning required for the implementation of the Karachi Master Plan 1975–85.

But the KTC ran into problems. By December 1996, it was running at a loss of Rs 10 million per month, and of its 303 buses only 100 were operational. In the political violence which gripped Karachi during 1994–96, 24 buses were destroyed and 184 were irreparably damaged. This damage was evaluated at Rs 55.5 million but the KTC received no compensation. As a result of the losses, the KTC's performance was evaluated and it was agreed between the Sindh government and the World Bank to privatise the KTC after 20 years of operation. The remaining KTC buses were dumped in its depots and 3,400 of its employees were given a golden handshake of Rs 1.1 billion while Rs 3.75 million were required to pay the benefits of those who had retired earlier (Ismail 2002).

Various reasons are given for the failure of the KTC. One view is that a leakage of fare revenue and the failure to maintain the buses properly were the real reasons for the problems that the KTC faced. The maintenance issue was a serious one since the technical staff was not properly trained and the spare parts used were of low quality. As a result, there was a sharp increase in the number of buses which could not be used. The rising cost of diesel, which without the government agreeing to a proportional increase in fares or the providing of subsidies, also had a negative effect on the functioning of the KTC.[8]

Today, the property of the KTC, which is worth billions of rupees, is lying unused. Some portions of it have been grabbed informally for commercial purposes. The government has also established police monitoring checkposts in some of the depots.[9] Attempts by the government to sell off these properties was stopped by a judgement of the Sindh Court on a petition made by an NGO who argued that these properties were amenities and as such their land use could not be changed.[10] The most important repercussion of the failure of the KTC was the change that took place in the thinking of government and transport-related professionals. They came to believe that only the private sector can manage transport.[11] This thinking suited the neo-liberal lobby that was increasingly dominating development philosophy in Pakistan.

The free transport policy and the emergence of the minibus

In 1971, the government introduced what is known as the 'free transport policy'. This policy was introduced because there was an increasing demand for transport from the various *katchi abadis* developing on the then periphery of Karachi, while government transport only functioned on the main corridor of the city. Under the free transport policy, any individual who could purchase a bus could apply for a route permit. A route permit was for a particular route identified by the Regional Transport Authority (RTA) of the government of Sindh. This process has created what is known in Karachi as the 'minibus'.

Individuals (sometimes more than one) acquire a bus. Since most of those who purchase a bus are not well-to-do, they go to a moneylender. The moneylender takes a down payment and then recovers the cost of the bus in monthly instalments. If the purchaser defaults, the bus is taken away from him and he loses his investment. The moneylender is officially the owner of the bus until the purchaser has made the full payment (KMTC/CDGK 2006). Most of the moneylenders are from the Khyber Pukhtoonkhwa (KPK) Province, so they prefer to lend to persons from their region or its adjoining areas. As such, the majority of minibus owners are Pathans or Hazarawalls. Motor rickshaws were also purchased through loans from moneylenders who were also from KPK and its adjoining areas. As such, most of the

[8] See Interview A-07(Shams-ud-Din Abro) / A-01 (Mohammad Athar).
[9] See Interview A-07 (Shams-ud-Din Abro).
[10] http://shehri.org/subpages/Shehri_Story.pdf
[11] See Interview A-01 (Mohammad Athar).

informally financed public transport vehicles are owned or operated by one ethnic group.[12]

The cost of a 35-seater minibus in 2000 was Rs one million. However, the purchaser had to pay twice this amount over a two to three-year period. Minibuses were purchased as opposed to large buses because the cost of a large 100-seater bus, at Rs 6 to 8 million, would be unaffordable to the purchaser and also the fare, as a result, would be unaffordable to the commuter.[13] Yet all the formal and informal players in the transport drama who were interviewed for this study agree that large buses are the proper solution to Karachi's problems. Large buses are comfortable, people can stand in them and so they can have a capacity of up to 82 persons, they are cheaper to run per passenger and occupy less road space per passenger. The minibus has a 32-person capacity, standing in it is very difficult because of the low ceiling height, and it is very difficult to get on to it as well, because of the height of the footrest from the ground.

The process of operating a minibus is as follows: i) purchase of the minibus; ii) register it as a commercial vehicle with the excise department; iii) acquire a fitness (roadworthy) certificate from the police; iv) get a route permit from the RTA; and v) operate the bus. In this process, over 20,000 minibuses have been registered in Karachi over the years.[14] To operate a bus, the bus owner or driver/conductor has to join one of the transporters organisations. The one that embraces all of them is the Transport Ittehad. This organisation protects the commercial interests of the transporters and through it they present their claims and guard their gains, and negotiate the rate of informal payments they have to make to a corrupt police force. Because of continuous conflict with the state on fare-related issues, and with the public on their 'poor service and unreasonable attitude', they are often referred to as the 'transport mafia'.

The system has many different arrangements between the various actors in the drama. One is the individual who has a route licence from the RTA who makes an arrangement with the bus owner to operate a route. Very often the owner of the vehicle operates it himself. He carries a high risk since he has to pay the route owner, the money-lender, *bhatta* payments to the police and all the running, maintenance and repair costs. To meet these requirements he has to work long hours, maximise profits and cut costs. This results in overloading and poor levels of vehicle maintenance (KMTC 2006).

There are some cases where bus owners have both a route permit and a number of buses. They acquire the services of a driver and conductor team to operate their buses. This is not formal employment as the driver conductor team are paid a percentage of the daily revenue they bring in. In this arrangement the owner, to save costs, hires uneducated and often illiterate, staff to operate his bus (KMTC 2006). This lowers the quality of service.

The method of operation of transport described above is legal. However, there is also an illegal system which the government agencies allow to operate. This illegal sector comprises of buses operating without a route permit. The origins of the illegal sector go back to 1985 when a speeding minibus crushed a university student to death under its wheels. The driver was a Pathan and the victim was an Urdu speaker. The accident resulted in ethnic riots between the two communities and a number of minibuses were burnt. As a result, the government decided not to register any more minibuses. However, the ban has to a large extent been overcome by slightly changing the design of the minibus and naming the new product as a 'coach'. It is estimated by bus owners that the number of illegal operators is less than 200 buses. It is also important to mention here that although there are 329 minibus routes in existence, only 111 are in operation.[15] The reason for the inoperative routes is that they are not considered lucrative by the transporters.

It is generally considered that the informally financed transport sector in Karachi is anarchic and disorganised. However, the drivers have a strict timetable, implementation regulations, fixed locations for parking their vehicles, and an organised regime which determines the relationship between the different actors in the transport drama and with the police (Maher 2014a).

[12] Authors' observation.
[13] See Interview B-01 (Irshad Bukhari), A-01 (Muhammad Athar), A-07 (Shams-ud-Din Abro).
[14] See Interview A-04 (Ghazanfar Ali Qadri).
[15] Regional Transport Authority, Government of Sindh, February 2014

The Karachi Circular Railway

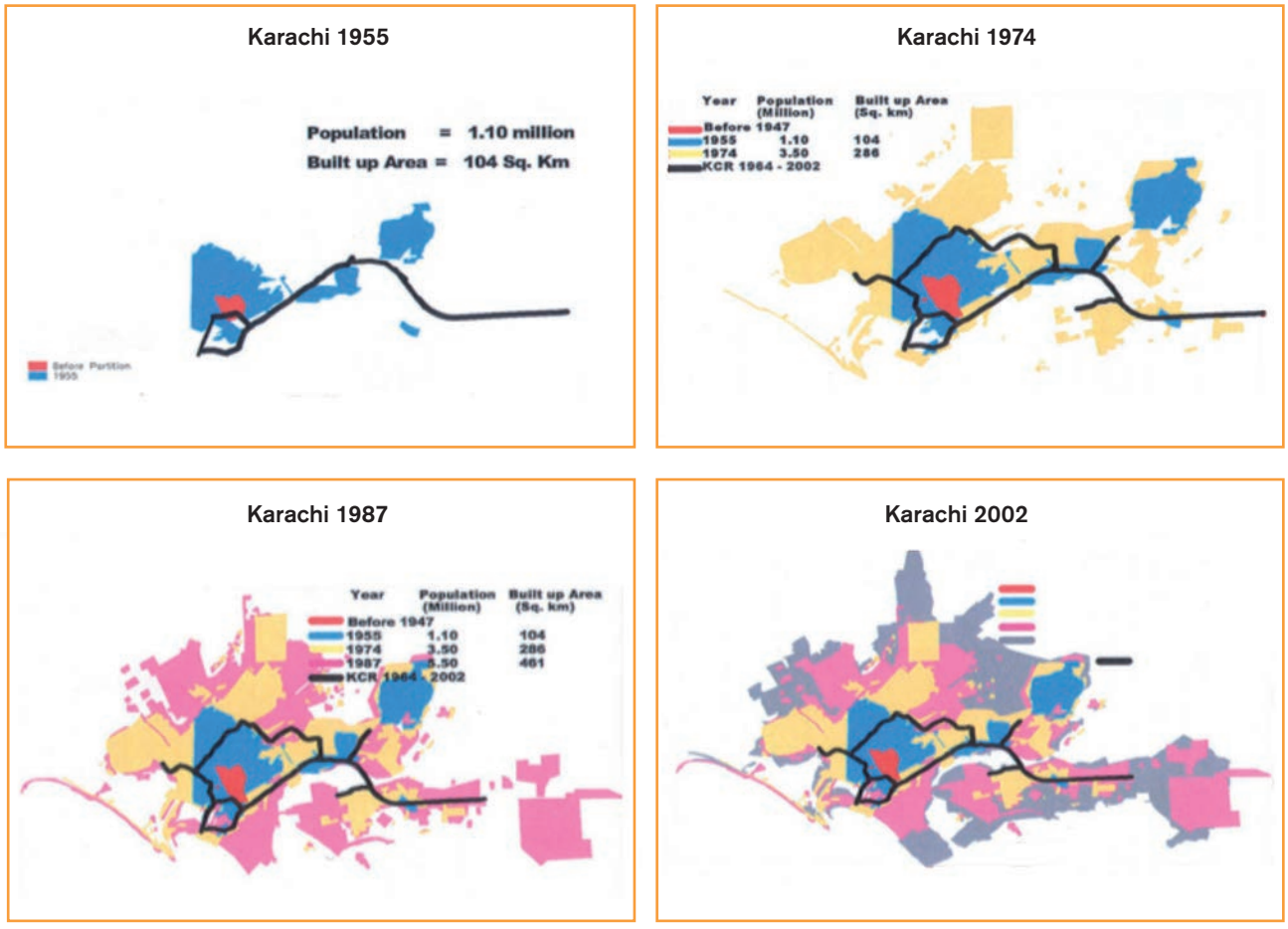
The Karachi Circular Railway (KCR) was made operative in 1964, mainly for the transportation of goods. It was extended to a full circle of 44 kilometres in 1970 to connect the four important industrial areas of the city (the port, the Sindh Industrial Trading Estate (SITE), the Central Business District (CBD) and the Landhi Industrial Area). As it also passed through a number of dense residential areas, it soon started to serve commuters as well. In the 1980s, it operated 24 trains per day for the full circle. The operation from the CBD to the Landhi Industrial Area consisted of 80 trips per day. Approximately six million passengers used this facility per year (EMC 2009).

In the mid-1980s, the service started to decline because of a lack of maintenance and replacement of rolling stock and a lack of maintenance of tracks and stations. By 1998, the KCR was making only 12 trips a day and was losing Rs 6 million annually. In December 1999, the operation was stopped. Attempts to restart it were made in March 2005. At present, one section from the CBD to the Landhi-Korangi Industrial Area still functions with two trips a day.

Apart from the reasons given above, there are other reasons for the failure of the KCR. One is that Karachi expanded well beyond the KCR (see Figure 3). As a result, a new network of minibuses and motor rickshaws started serving the commuters, and those living within reach of the KCR also started to use it. There are also allegations that the ' transport mafia' informally pressurised the government not to upgrade the KCR, and developed bus routes that were parallel to the KCR corridor to facilitate its demise. Also, no attempt was made to integrate the KCR into a larger transport plan for Karachi.

Although officialdom abandoned the KCR, civil society has constantly fought for its revival. Because of pressure both from outside and within government circles, a plan for its rehabilitation, financing and implementation has been developed and is discussed later.

Figure 3. Karachi's expansion and the circular railway



Source: ECIL

Karachi Public Transport Society

In 1997, the government invited the public sector to invest in transport. It promised the investors that it would provide vehicle depots and have the full support of the traffic police. This led to the creation of the Karachi Public Transport Society (KPTS), the chair of which was the transport secretary from the government of Sindh. The society has 27 members, 18 from the government, including the DIG traffic police. Nine members are from the public and are prominent citizens of the city.

An entrepreneur, Javed Chaudhry, who purchased 200 buses, was invited by the society on the following terms: i) Buses will operate on a route and will be available every five minutes at the stop; ii) no one will stand inside the bus; iii) the conductor will be in uniform and there will be no shouting by passengers; iv) there will be no races with other buses. The society negotiated security from the 'transport mafia' for these buses with the police, and rangers and supervised their operation. The fare was higher (Rs 7) than the minibus (Rs 5). Daily, monthly and seasonal tickets were available at a discount. The facility was hugely successful.

When Javed Chaudhry died, his wife, the sole inheritor, sold the business and the buses were taken to different cities and provinces. At present, some 150 buses are registered with the KPTS but only 100 are operative.[16] This example illustrates how difficult it is to maintain and replicate successes, which often depend on a set of negotiations and political compromises particular to the time, situation and actors involved.

Attempts at developing a mass transit system

The first serious attempt at developing a light rail mass transit system was made during the 1970s and in keeping with the proposals of the Karachi Master Plan 1975–85. It consisted of upgrading the Circular Railway and pushing it into the suburbs through a number of spurs. A partly underground (through the CBD and Old City), partly elevated and partly at-grade metro was to bisect the circle of the Circular Railway (Hassan 2000). By 1977, plans had been finalised, funds were available and rolling stock was being negotiated. It was a government project and was to be completed in stages in a five year period. However, the political conflict of 1977 led to the dismissal of the Bhutto government whose plan this was. The subsequent military government abandoned the scheme.[17]

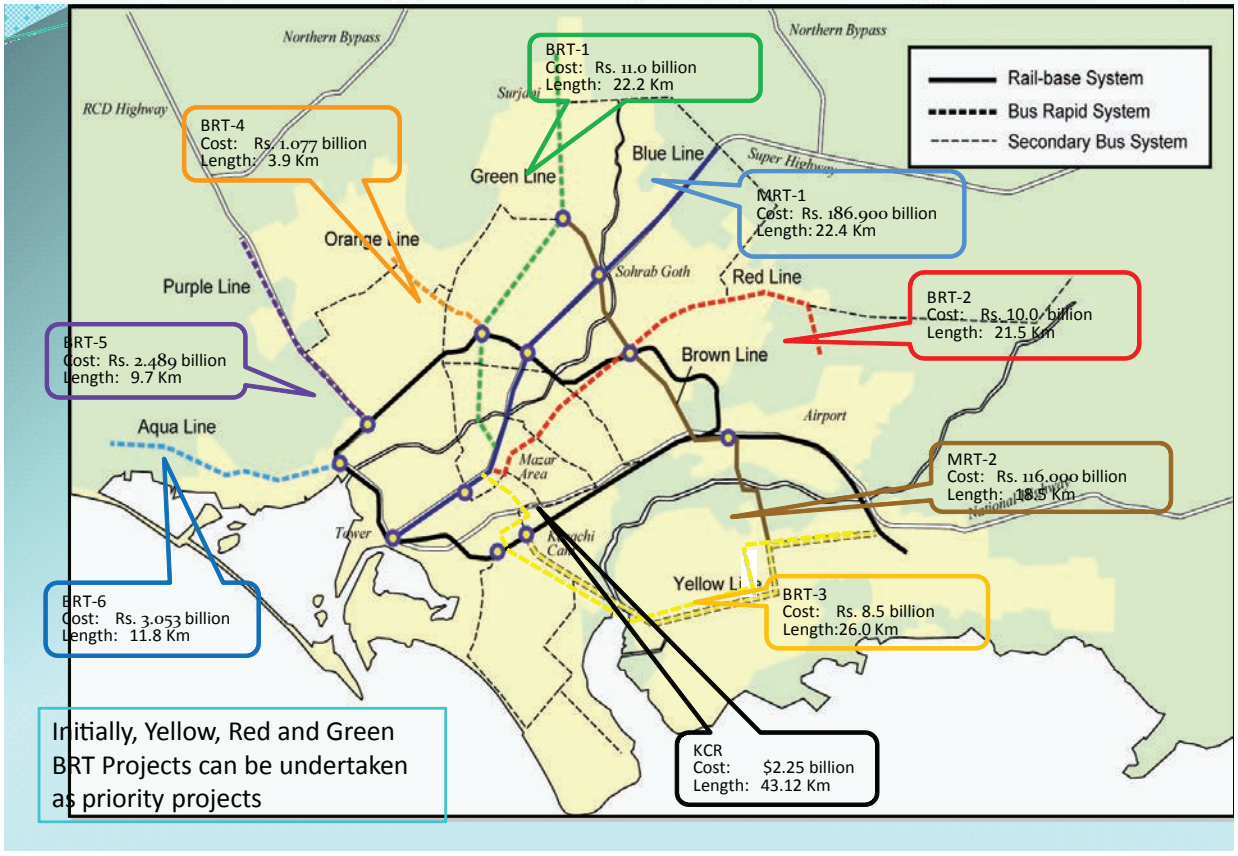
[16] See Interview No. A-07 (Shams-ud-Din Abro).
[17] Author's unpublished interview with Mohsin Rizvi, an engineer who was in charge of the project.

The next attempt was made in 1990 after a detailed study by the Karachi Mass Transit Programme with the help of World Bank consultants, as part of the Karachi Development Plan-2000. The study concluded that both for economic and technical reasons a light rail system was not feasible for Karachi and that buses would perform best and have the necessary capacity to meet Karachi's expanding needs. The study proposed six bus transit ways (a total of 87.4 kilometres) and identified priority Corridor-1 which was mainly elevated and passed through the Old City and the main artery on which Karachi's heritage buildings are located (KDA 1990). The project was to be built on a build-operate and transfer (BOT) basis.

Civil society and academic institutions, including trade unions, objected to the heritage-related environmental damage that the elevated expressway would cause (CFMT 1994). They created the Citizens' Forum on Mass Transit (CFMT), a large network of civil society organisations. Adjustments were made to accommodate some of the concerns of the CFMT. However, the project never took off because the politicians turned the busway option into a light rail project. It is said that because of this no investment was found and no contractor placed a bid for the project (KMTC 2006). It is important to note here that subsequent to the failure of the bidding process, a former chief engineer of the railways and a consultant to the Karachi Mass Transit Programme suggested the revitalisation of the KCR and related projects through rolling stock manufactured locally at the Pakistan Railways workshops in Mughalpura, Lahore (Rizvi 1995). According to his conversations with the author,[18] this would bring down costs to a level that the government of Pakistan could afford without taking out a loan. Another ex-chief engineer of the railways held similar views.[19]

In 2005, the city government undertook a number of studies with the help of the Japan International Corporation Agency (JICA). These studies led to further studies, which became a part of the Karachi Transportation Improvement Project (KTIP) 2010–12, and resulted in the preparation of the Transport Master Plan (TMP) which has a 2030 vision. The studies have proposed six BRT corridors and revival of the KCR including a rail corridor bifurcating the circle of the KCR and extending it to the Super Highway, the main exit of Karachi to the rest of the country. The JICA proposal is outlined in Figure 4. Detailed paper work for the revival

Figure 4. Mass transit program 2030, proposed by JICA study



[18] *Ibid.*
[19] Argued by Abul Kalam at a 2002 meeting at NED University of Engineering and Technology.

of the KCR has been completed. It is supposed to cater to 0.7 million people per day and considered to be cornerstone of the KTIP Plan. If the KCR is revived then it is estimated that the other corridors would be completed in 15 years. For the KCR project, JICA is to provide 93.5 per cent of the cost through a loan with a 0.2 per cent mark-up, payable over 40 years.[20]

However, the KCR revival project has been delayed for a number of reasons, the most important ones being the lack of political will and the absence of administrative and institutional ownership of the project because of an absence of a proper local government system and lack of clarity due to ever- changing institutional arrangements. In addition, there is also the failure to develop an acceptable resettlement policy for about 23,000 *katchi abadi* dwellers that are to be relocated from the KCR corridor. So far, they have been offered a relocation at a considerable distance from the city centre and their work areas, children's schools, health and recreational facilities, all of which are at an easy distance from their present homes. The KCR Affectees' Action Committee (KCR-AAC) has offered two alternatives. One, they have identified government-owned railway land for their relocation. This land is nearer to their places of work. Two, they are willing to move if they are paid the market price for the land they occupy and they will find their own alternative accommodation. The second alternative will raise the cost of the rehabilitation project from 1.6 per cent of the total project cost of the KCR rehabilitation to 2.5 per cent (Hasan 2014a). The office bearers of the KCR-AAC also point out that a majority of the households have legally acquired water and electricity connections and a larger number also have gas connections. Many of the houses have reinforced concrete roofs (Hasan *et al.* 2013).

As a result of the delays, the cost of the KCR Project has increased from Rs 147 billion in 2009 to Rs 246 billion in July 2012 (Ali 2012). In addition, without a subsidy, the service will not be affordable to the poorer sections of the commuting public (Hasan 2014a). Meanwhile, the government has decided to go through with the BRT-2 Corridor, which is now in the process of being implemented.

The CNG crisis

The introduction of CNG (compressed natural gas) as fuel for transport was initiated by the government of Pakistan in 1990. There were two reasons for this. One, CNG was available in Pakistan and if used would considerably reduce the import of petrol and diesel. This would reduce foreign exchange spending. And two, the use of CNG would reduce pollution. Today, Pakistan is the country that uses CNG most in proportion to its population. The use of CNG received a big boost when in 2005 the Supreme Court ordered all those vehicles running on diesel to convert to CNG. The transport sector complied immediately. An added benefit of converting to CNG (per unit cost Rs 6–7) is that it is much cheaper than diesel (per unit cost Rs 40) or electricity (per unit cost Rs 17). CNG is also used by domestic users; fertiliser and cement factories; and for power generation. In winter, the demand for gas increases by about 300 per cent.[21]

A crisis occurred in 2008–2010 when the price of oil rose substantially, and it was during those years that power outages increased in Pakistan. In Karachi, because of the outages, electricity was out for an average of more than six to seven hours a day. As a result of this, people, especially the elite, installed gas generators, as did industrialists and shopkeepers to run their industries and businesses. Since using gas generators was cheaper than getting electricity from the grid, a number of homes and industrial establishments have continued to use gas even though electricity is available. In December 2013, the Supreme Court passed a judgement in which it ordered that CNG used for the generation of electricity should be charged so that cost of producing electricity from gas should be made the same as acquiring it from the grid, except for those industries who used boilers or need gas for their processes.[22] This Supreme Court order has not been implemented because of weak government institutions and a refusal by CNG users to obey the court orders.

Pakistan has substantial CNG reserves. However, it opted for importing CNG from Central Asia and then from Iran since it was cheaper than developing new CNG extraction sites. The Central Asian Project did not take off due to the Afghan War and the Iran pipeline option fizzled out because of the UN-imposed sanctions on trade with Iran.[23]

[20] News report: *KCR Project to be Ready by 2017*; Daily Times, Karachi, 9 April 2012.
[21] See Interview B-02 (Shabbir Sulemanjee).
[22] *Ibid.*
[23] Newspaper reports.

As a result of the government initiative and the court order, 4.5 million private cars and public transport converted to CNG and CNG use for power generation also commenced. The cost of conversion from diesel to CNG varies between Rs 40,000 for a small car up to Rs 200,000 for a bus. Once converted from diesel to CNG, the vehicle cannot be converted back to diesel. The only option is to change its engine. Many school vans and university buses transporting students also converted to CNG.[24]

Because of the constrained supply and high demand, there is now an acute shortage of CNG in Pakistan. Karachi, being the industrial hub with a larger commuting public than any other location in the country, has suffered most. As mentioned earlier, the government response has been to permit CNG stations to function only four days a week in the city. Due to this, CNG buses, which account for 70 per cent of the registered buses[25], stay off the roads during the non-CNG days causing immense problems for the commuting public and losses for the transporters and the CNG stations. It is now common to see long queues of vehicles at CNG stations waiting for it to start functioning. People can wait for more than four to five hours to get their vehicles filled.[26]

Banning the use of CNG, as has been often been suggested in the media, is not desirable. Millions of vehicle engines would need to be replaced. Moreover, because CNG substitutes for 2.3 billion litres of petrol/diesel, if its use is stopped, Pakistan will have to import 2 billion litres for which foreign exchange in the neighbourhood of US$ 1 billion will have to be spent. In addition, the CNG sector employs more than 400,000 persons in the city.[27] They will become unemployed.

Evolving traffic-related issues and their repercussions

Apart from the lack of comfortable transport, Karachi's traffic is becoming unmanageable and its congestion and the air and noise pollution have become detrimental to the health of its commuting public. There are a number of reasons for this, the most important of which is the rapidly increasing number of vehicles. In 2013, Karachi registered 776 vehicles per day of which 71 per cent were motorbikes.[28] A lack of police officers is also given as a reason. There are a total of 3,200 police officers (half of them per shift) on traffic duty, whereas there is a need for an additional 5,000 to regulate traffic.[29] To help the police force control traffic, the elected city government (2001–2007) introduced 1,575 wardens. They were members and/or supporters of the MQM. Once the 2001 local body regime was dissolved, transferring power to the provincial government, it sent these wardens home. Apart from this, it is alleged that driving licences are often issued upon payment of a bribe without taking a proper test. Drivers are also known to drive without a licence and when confronted by a police officer they make an informal payment and get away (Tanoli 2012). Government departments often react to these malpractices by taking action against

[24] See Interview A-01 (Muhammad Athar).
[25] See Interview B-02 (Shabbir Sulemanjee).
[26] *Ibid.*
[27] *Ibid.*
[28] Source: Transport and Communication Department, KMC, February 2014.
[29] DIG Traffic, Khurram Gulzar in News Report; Express Tribune, Karachi, 1 November 2011.

individuals; but no reform in the police force has been implemented (although many have been proposed).

"We do not have CNG, we do not have petrol, we do not have diesel but vehicles from all over the world are being inducted in the city and are being registered on CNG. You do not invite 20 guests when you have food only for five." Mehmood Afridi, President Muslim Minibus and Coach Owner's Association

In theory, no public transport vehicle can operate without a roadworthy certificate from the Vehicular Emission Control (VEC) programme, which is a programme of the Sindh Environmental Protection Agency (SEPA). The Sindh chief secretary issued a notification ordering the police department to help the VEC programme to fulfill its duties. This notification was issued in October 2009, only after the Sindh High Court took *suo moto* notice of the environmental pollution caused by public vehicles. However, in the absence of any coordination between the VEC programme, SEPA and the Sindh police, this notification has yielded no results. The deputy inspector general (traffic) police responded by saying that, if the order is implemented, most of the public transport vehicles will be off the roads and the poor will suffer. So, buses without proper seats, with deformed bodywork, no window panes and emitting pollution, continue to operate in the city (Bhatti 2010). Due to noise and air pollution and travel in stressful conditions, environmental-related diseases have increased considerably. These diseases include asthma, angina, anxiety, emotional instability, sexual impotence, hysteria, and psychosis. All this can lead to social conflict and domestic violence.[30]

There are also infrastructure issues. There is an absence of proper terminals and depots for buses and for rickshaws and QINGQIs. So, road space and roundabouts serve this function, increasing congestion. Many of the roads are in bad condition and slow down traffic movement, increasing travel time for commuters and substantially increasing fuel costs for the transporters (KMTC 2006). In many locations, such as transport terminals or where transport picks up large volumes of passengers, hawkers occupy road space. This is because of a close economic interdependence between the poor, commuters and hawkers. This link has not been recognised and hence has not been catered to by politicians, professionals and city planners whose only solution is to evict the hawkers. This has never been done successfully because of the negotiating power of the hawkers which is backed by payments of *bhatta* to the concerned authorities and representatives of political parties (Hasan *et al.* 2008).

Another cause of congestion is double parking on the roads in all the commercial areas of the city. The government has provided multi-storey parking plazas but they are used to less than 10 per cent of their capacity. The double parking is managed by informal persons who charge a fee for identifying parking space for the vehicles and for shifting them around. In many locations, receipts in the form of slips are provided for the payments made. Many open spaces and pavements are also used in a similar manner for motorcycles. The local government and the cantonment board also collect parking fees from vehicle owners, but it is difficult to clearly identify whether it is local government or mafias backed by political parties who are collecting at any given location.[31]

Because of ethnic conflicts and since 9/11, the use of drones by the US Army against the militants in KPK in the northwest of Pakistan (resulting in fairly large 'co-lateral damage'), strikes and shut downs are common in Karachi. During such days, there is no public transport and people, especially day-wage labour, suffer considerable economic loss.[32] There is also a serious threat to the lives of important government functionaries and politicians from the 'Islamic' militants and criminal gangs and also from kidnappings for ransom. So, traffic is held up so as to facilitate 'VIP' movement. This causes large gridlocks which are resented by the Karachiites. During the monsoon season (which in Karachi is seldom more than three to five days), the city also floods and traffic comes to a halt. The flooding is the result of encroachments by elite housing on the outfalls of the natural drainage system to the sea and by encroachment on the natural storm drains by formal and informal housing.[33]

The government's response to traffic congestion has been to build signal-free roads and flyovers wherever traffic congestion takes place. Between 1993 and 1999, the government built only six flyovers. However, since decentralisation was instituted in 2001, the elected government and the present province control system have built 37 flyovers[34] and six signal-free roads. At non-rush hours, they have reduced travel time, but during rush hours exit points are clogged. Many government officials feel that this was not a solution to Karachi's traffic problems.[35]

[30] See Interview D-07 (Dr. Qazi Mujahid Ali).
[31] News Report; *Traffic Woes: Little being done to ease gridlock on Saddar Streets*; The Express Tribune, 28 May 2013.
[32] http://www.brecorder.com/top-stories/0/1251644/?tmpl=component&print=1&layout...
[33] Orangi Pilot Project-Research and Training Institute (OPP-RTI) website www.oppinstitutions.org
[34] News Report: *List of Flyovers in Karachi 1993–2013*; Express Tribune, Karachi, 02 December 2013.
[35] See Interview A-01 (Muhammad Ahtar) and A-03 (Fazal Karim Khattri).

Karachi's bus fares increased from Rs 6 to Rs 10 per trip in 2004 to Rs 15 to 20 per trip in 2014 (Das 2009). Meanwhile, the cost of diesel increased from Rs 22.78 per litre in January 2004 to Rs 120 in September 2014 (*Ibid.*). The incomes of low and lower middle income groups have not increased proportionally. In addition, travel time has increased due to congestion. As a result, it is becoming cheaper and more comfortable for the poor to rent within the city's low income settlements than to live on the periphery (Hasan 2014b). In this way, the transport problems are shaping the form of the city as well.

Due to the situation described above, the number of fatal road accidents in Karachi is very high. They were 1,719 in 2009, but have slowly dropped to 1,352 in 2013. Motorbikes were involved in the majority of these accidents. Most of them could have been avoided if the riders had been wearing a helmet, which is compulsory under law. However, the law cannot be implemented because of the corruption of the police officers and the lack of interest of police officials and politicians in having the law implemented. It is interesting to note that animal-drawn vehicles and push carts were involved only in 0.12 and 0.92 per cent of cases.[36]

A number of decisions taken by the Sindh government, which have now become law, will add to the traffic congestion in Karachi. One is the establishment of the Sindh High Density Board which can declare any area or even a single plot as high density and increase its FAR (Floor Area Ratio) by whatever it thinks is appropriate. Another law – The Sindh Special Development Board Act, 2014 – gives the board the right to bulldoze *katchi abadis* and turn them into multi-storey apartments (Maher 2014b). The decisions of both these boards (whose members consist of politicians and government officials with only two representatives out of 27 members from professional bodies on the Sindh development board) are ad hoc in nature, since they are being taken without carrying out a larger urban design exercise, in the absence of which thousands of vehicles will be added to the business and elite districts of the city (Hasan 2014c).

The Urban Transport Scheme

The Urban Transport Scheme (UTS) was initiated by the city government in 2001 and implemented in 2002. The government invited investors and offered facilities and subsidies which it did not ultimately provide. 364 large buses were introduced by 13 investors. The operation of eight companies having 221 buses failed due to losses and they shifted the vehicles to other locations in the country where fare structures were better. The fate of the other 143 is unclear although 12 are operating on one major route in Karachi.[37] The problems that led to the failure of the scheme surfaced within three years of the launch and are detailed in Box 4.

[36] http://roadsafety.pk/
[37] See Interview A-01 (Muhammad Athar).

BOX 4: REASONS FOR THE FAILURE OF THE UTS

The UTS failed for a number of reasons which have been documented in a stakeholder meeting report. These reasons are:

1. An increase in price of diesel by 100 per cent raising operational costs by 50 per cent;
2. The CDGK allowed increase in fares but this did not help the UTS operators as the minibuses did not increase their fare. So, the UTS operators could not compete with the minibuses;
3. The CDGK had promised preferential routes but instead they overlapped with many minibus routes. Even other UTS operators were allowed to compete against other UTS operators (legally and illegally) and the CDGK took no action;
4. The CDGK and provincial government committed to give all the routes of minibuses to the UTS as the old minibuses started operating without permits on the same routes;
5. According to contractual commitments, the CDGK had promised to acquire depots from the provincial government for the operators but this did not happen;
6. Partial compensation for the interest on the loans that the operator had taken from banks was promised as part of the agreement but never delivered;
7. There was also police harassment; strikes and demonstrations; frequent VVIP movements; hampering traffic; and related insecurity for the vehicles and their operators;
8. There were other issues as well, such as the buses used 58 per cent more fuel than the manufactures had promised, lack of skilled persons to conduct the business and lack of maintenance because of the use of low quality lubricants and spare parts so as to save costs; and
9. For many of the operators this was a wrong business option – they thought it would result in massive profits.

Operators concur that in spite of the increase in fuel costs they would have survived if illegal competition with the minibuses had been curbed and if the government had paid the subsidy as per the agreement.

Source: KMTC 2006

In 2007, the federal government approved a project of 4,000 CNG buses for Karachi. Eventually, the number was reduced to 2,000. The terms were similar to those of the UTS. The banks were instructed to extend loans to the operators. They refused because of the past experience of UTS of non-payment of instalments on time. Then, a 'pilot project' for the introduction of dedicated CNG buses was launched to demonstrate that such a model can work. Seventy-five CNG buses were put into operation in July 2009 by outsourcing contracts for two years to three operators. Contracts consisted of i) operation, management and maintenance of buses; ii) supply of CNG fuel; and iii) an e-ticketing system linked to a centralised computer system making it possible to make a choice of different types of tickets such as for a day, or a trip, or a week. The deficit between revenue and expenditure was to be met by the City District Government Karachi (CDGK). After the expiry of the contract on 30 June 2011, all three contracts were merged into one and the operator was made responsible for all O&M expenses. The e-ticketing system was discontinued to reduce operational costs so that the project could be self-financed. The operator faced serious difficulties due to the CNG crisis, an increase in CNG costs, and the Karachi law and order situation. The contract expired in April 2013 and no operator participated in the next bidding process, as a result of which 75 large buses stopped operating. Seventy-three of them are now lying at the depot and because of vandalism, would require extensive maintenance to become operable.[38]

The government is now considering bringing back these buses on the roads, after carrying out essential repairs and replacing their tyres and batteries and other necessary parts. Given the CNG crisis, it is also considering the conversion of these 73 large buses to diesel. The total cost of repair and maintenance is Rs 39.583 million, whereas the cost of conversion to diesel is Rs 265.388 million. This works out to Rs 304.971 million. The project planners understand that the project will need a subsidy to the tune of Rs 2.729 million per month (for each 25 bus package) to make it viable.[39]

[38] See Interview A-01 (Muhammad Athar).
[39] Source: Transport and Communication Department, KMC, February 2014.

CNG rickshaws

In 2004, the President's Rozgar (livelihood) scheme was introduced by a fund from the federal government. At that time the MQM was in power in Karachi. As part of the scheme, loans for CNG-fueled rickshaws were introduced in keeping with the supreme court decision to convert all public transport to CNG. The majority of the rickshaws went to MQM supporters. As such, for the first time a sizeable number of Urdu speakers entered the transport business (Urdu being the mother tongue of the Muhajirs, migrants from India at partition and their descendants, who form the core support of the party). The scheme still continues but as the MQM is not in power, other ethnicities are also accessing loans. There are now approximately 60,000 CNG rickshaws operating in the city (Farooq 2014).

In 2007, as a result of a Sindh high court ruling that government must curb pollution, the Sindh government decided to phase out the older two-stroke rickshaws in three years, by the owners either replacing them or converting them to four-stroke engine rickshaws (Aligi 2008). As a result of this, the price of the two-stroke rickshaws fell from Rs 150,000 to Rs 40,000.[40] For this reason the decision was resented by the Karachi Rickshaw, Taxi, Yellow and Black Cab Owner's Association which blocked Karachi streets in protest. Since most of the members were from KPK, the Awami National Party (ANP), representing the Pukhtoon population, supported the protest.[41] The conversion to four-stroke engines had not yet taken place and as such the Sindh high court decision had not been implemented.

[40] See Interview B-05 (Hafiz-ul-Haq Hassan Zai).
[41] http://www.thenews.com.pk/TodaysPrintDetail.aspx?ID=1190&Cat=13&dt=6/3/2006

3

Responses to the transport crisis

There have been different responses from different stakeholders to the transport crisis in Karachi. These responses have come from the market, from commuters themselves, from innovation by small workshops, and also from medium size engineering establishments.

The market response

"Previously in this city large Ford buses use to run, then Mazda minibuses were introduced and now it has come to rickshaws and QINGQIs". Irshad Bukhari, President Karachi Transport Association.

The most important market response has been the introduction of the QINGQI. QINGQI is a Chinese motorcycle manufactured in Pakistan to which a six-seater carriage is attached. It originated in the Punjab and substituted the *tanga* (a six-seater carriage pulled by a horse). It was introduced in Karachi in 2002. Today, there are 40,000 QINGQIs that are a part of the Karachi QINGQI Welfare Association. In addition, there are over 10,000 QINGQIs that are not registered with the association.

The association allocates the routes, determines the fares the QINGQI drivers receive, identifies the locations for their stands, and negotiates the informal payments that have to be made to the police and the political parties in whose areas the stands are located.

The association also keeps photographs and details of all the drivers and the owners.

A QINGQI owner has to apply to the association to get a route. The association has a special committee which manages the routes and sees that there is no 'overlapping'. The association agrees that there are a number of QINGQIs operating without being members of the association and they also agree that some of their members have hired underage children who are now driving the QINGQIs. The association also has a system, decentralised to the district level, of registering complaints against its members and drivers and of taking action against them if they violate traffic regulations or misbehave with the public, and of dealing with accidents and the police on the members' behalf.[42]

"We want to have proper regulations and laws for our system so that the revenue we generate can be put to proper use. The situation we are in is only due to the lack of proper laws and regulations in our city. Since we do not have anyone to look after this system (QINGQI related), the situation is going bad to worse." Akbar Khan, Finance Secretary, All Karachi QINGQI Welfare Association.

According to the association, it has provided the government with its proposals for regulating the QINGQI routes and developing rules and regulations for their operation. The association has also suggested

[42] See Interview B-04 (Akbar Khan).

a separate lane on the main roads for these vehicles and stated that if any of their members violate the lane, their vehicle can be confiscated. These proposals were made in 2010, but no meaningful negotiations with government departments have taken place so far. It seems that the government is not interested.[43]

Transport-related government officials agree that the QINGQIs have helped overcome the problems that some of the commuters face. However, they feel that the vehicles are unreliable and unsafe and should not be used on the main corridors of movements.[44] The traffic police are against them since it is not the QINGQI that is registered with the traffic police, but the motorcycle that pulls it. Also, the police believe that QINGQIs are one of the major causes of traffic jams in Karachi. Because of pressure from the police and from the transport lobby (who are anti-QINGQI since they take away business from the buses), the government banned the operation of QINGQIs in October 2013.[45] However, the Sindh High Court removed the ban and granted a stay to the association (Jamal 2013). The annual turnover of QINGQI activity is Rs 8.64 billion and as such it adds substantially to Karachi economy (*Ibid.*). In addition, commuters find them more comfortable and more easily available than the minibuses and also affordable (Arshad 2013).

Technical innovation

Sensing the demand for transport and reacting to court decisions, transporters and the workshops that manufacture rickshaws and QINGQIs (which although originally Chinese are now manufactured in Pakistan) have made a lot of innovations. Four-seater CNG rickshaws and six-seater QINGQIs have been converted into nine-seater vehicles and are on the roads. This is in spite of the fact that this is not permissible under law. To overcome the non-availability of CNG on certain days, the capacity of rickshaws for storing CNG has been increased from 2 kilos to 7–8 kilos. A recent trend is to change the shape of the old two-stroke rickshaw to look like a CNG rickshaw while the two-stroke engine remains unconverted. This is to prevent police harassment which the old two-stroke design rickshaws have to face. The workshops that carry out these innovations are for the most part small establishments and function on the roadside. The expertise that these workshops have can be judged from the fact that with the advice of the operators they were able to convert a two-stroke engine into a CNG rickshaw to show the government that it could be done (Farooq 2014).

[43] *Ibid.*
[44] See Interview A-07 (Shamsuddin Abro).
[45] News Report; *Off the roads: QINGQIs banned across the city*; Express Tribune, October 10, 2013

The motorbike option

In the absence of a reliable transport system, Karachiites have purchased motorbikes. The number increased from 450,000 in 1990 to 500,000 in 2004. At the end of 2013, there were 1.65 million. The motorbike owners say that apart from the capital cost, the bikes are cheaper and faster than public transport, they are flexible and with an enlarged seat, a family of four can travel easily and cheaply to places of entertainment and recreation and to family gatherings. The problem is that women do not ride motorbikes in Karachi. 70 per cent of males interviewed at Karachi bus stops said that they would like to buy a motorbike but they could not afford it. 53 per cent of women said that they would like to use a motorbike if permitted by their families and if women-friendly bikes could be introduced (Hasan and Raza 2009).

However, all motorbike users mentioned that they have to deal with high levels of air and noise pollution. They also complained of an absence of proper traffic control systems, bad road surfaces, police harassments and an absence of a physically segregated lane for motorbikes in addition to the absence of parking space (*Ibid.*). Meanwhile, the number of establishments dealing with providing motorbikes on hire purchase is increasing and the terms are becoming more attractive (Farooq 2014)

In addition, the manufacture and import of cheaper models, and those that are women-friendly, are also being studied by the suppliers and one such initiative has been launched.[46]

Arrangements commuters make

Although no figures are available, commuters and institutions in Karachi make arrangements to overcome transport problems. Many schools have transport vans that pick up and drop their students for a fee. Universities have what is known as a 'point'. The point picks up and drops students at given locations in the city. The corporate sector, and some government sectors, and other organisations also pick and drop their employees, especially women. Vehicle owning households arrange to pick and drop school children in turns. Motorbike owners arrange to carry neighbourhood members at a pre-arranged fee.[47] Women working as domestics in the elite areas of Karachi have to travel long distances daily which is unaffordable to them using convention transport modes. They make arrangements with truckers to transport them in groups (see Box 5).

[46] News Report; *Environmental-friendly e-bike comes to Pakistan.* Daily Dawn, 12 November 2014. www.dawn.com/news/1143984
[47] These arrangements are well-known to most Karachiites.

BOX 5: A BUS ROUTE FOR WOMEN DOMESTIC WORKERS

In March 2012, the URC social organiser noticed that groups of women at bus stops or crossroads stop vehicles to get a lift as a group. The vehicles they usually stop are trucks and/or vans carrying cargo. He observed this for some time, then gave a group of six women a lift in the URC Suzuki van. Discussions followed. After these initial discussions, further discussions with women at the crossroads were initiated. A number of findings emerged.

The women were domestic workers and consisted of various ethnicities. However, members of a group belonged to the same ethnicity and came from the same area. The URC focused on the group belonging to the Baloch community who live in Macha Goth, Yousuf Goth and Saeedabad, all in North Karachi. Contacts in these settlements led to the discovery that between 1,500 to 2,000 women move every day from these low income settlements in the north of the city to the middle and elite areas of the city in the south, to work as domestics. On their way from their homes to work (a 25-kilometre journey) they take public transport which costs them Rs 35 to Rs 40. For the journey they have to change buses. If they did not have to change buses, the cost would be Rs 16 to Rs 20 one-way.

To save costs they try and get a lift on the way back. Thus, they save about 8 to 10 per cent of their income. The journey from their home to their places of work can be anything between 90 to 120 minutes and they have to be punctual which is not required on their way back.

Discussions with the women showed that not only would their transport costs be halved if they did not have to change buses, but travel time would also be reduced. Understanding this, the URC approached the general secretary and coordinator of the Sindh Pakistan Peoples' Party (PPP) (which is the government in Sindh) in August 2013 and discussed what could be done to provide transport for these women. It was suggested that a new route be developed from the settlements to the areas where these women worked. The URC identified such a route and made it pass through locations that would be lucrative for the operators.

With the PPP coordinator, a visit was made to the RTA secretary's office and the decision to issue a route permit for the URC-identified route was agreed. On 10 February 2014, the route permit was issued in the name of the URC. Since then, URC has been trying to get the transporters to operate 10 buses (the minimum required under law) on this route. However, the transporters say that given the low fares, they are not willing to invest in this venture. The URC is currently looking for alternatives.

Source: Urban Resource Centre, Karachi

4

Transporters' issues

Transporters are of the opinion that they know best how to run transport and manage its various aspects, such as routes, timings, coordination with each other and operating economically viable solutions.[48] Government reports endorse these statements (KMTC 2006). The main complaint of the transporters is that, in spite of this knowledge, they are not meaningfully consulted by the government and except in a few cases in the 1990s, they have not been made part of government plans and policies.[49]

Transporters also put up a strong case about the transport sector no longer being economically viable for them given the low fares. They feel that if they are to invest in transport then the fares will have to be doubled. An important issue is the torching of buses during strikes and political conflicts around turf. Government compensation for torched buses, which cost between Rs 1.5 to Rs 1.8 million, is only Rs 200,000 and that too is given after long efforts and hesitation on the part of the government. No insurance company is willing to insure a private sector public transport vehicle, nor is any bank willing to provide a loan for the purchase of vehicles. As a result, only small buses can be purchased, which is not a solution to Karachi's transport problems or for better profits for the transporters. They claim that if loans from banks were available they would purchase large buses instead of ending up paying Rs 2 million in instalments for a small bus that costs less than Rs 1 million.[50]

Transporters also point out that fares in Karachi are low as compared to fares in the Punjab (Rs 28 per 20 kilometres as opposed to Rs 14 in Karachi) and KPK. This is because the government 'is afraid of the people of Karachi', who are anti-transporters. Not only has fuel increased but the cost of spare parts and tyres have also increased. The old bus manufacturing companies have wound up and the product of the new companies costs much more. Apart from the main corridors, the roads are in a terrible condition and reduce the life of the vehicle. To reduce operation costs, the bus owners' organisations had to do away with the ticketing system as a result of which it has become difficult for them to have an accurate calculation for their profit and losses.[51]

Ethnic issues also take a toll on the functioning of the system. Most of the minibus drivers are from the KPK and are reluctant to go into those areas which are strongholds of the MQM. Two years ago, a large number of KPK origin drivers were killed. The drivers do not care about following the law since they pay *bhatta* to the police of around Rs 2,000 to Rs 3,000 per month. In addition, they have the support of their organisations which provide them with protection.[52] The emergence of MQM supporters becoming owners of rickshaws and QINGQIs is resented by the people of KPK origin. Then there are other issues also. The city police are corrupt and Transporter Ittehad feels that this is because they are only paid a low salary of between Rs 15,000 to Rs 20,000 per month. They point out that the motorway police are not corrupt because they are paid Rs 40,000

[48] See Interview B-01 (Irshad Bukhari).
[49] *Ibid.*
[50] See Interview B-01 (Irshad Bukhari) and B-03 (Muhammad Afridi).
[51] *Ibid.*
[52] *Ibid.*

to Rs 50,000. Also, because of low profits, good drivers can no longer be afforded by the transporters, so the quality of service has declined.[53]

Due to the issues mentioned above, a lot of transport vehicles have shifted from Karachi to Hyderabad and a number of them have converted to cargo-carrying trucks and inter-city buses. Many of the bus owners have sold their businesses and moved to operate from Dubai, Saudi Arabia and South Africa (Farooq 2014).[54]

Currently, the main issue that concerns the transporters themselves is that they converted the majority of their buses to CNG at considerable expense. Converting them again to diesel means even more expense, which they will not be able to cover because of low fares, high costs of maintenance, city violence and an absence of credit from banks at normal rates. (As mentioned earlier if buses are burnt by angry mobs a very small compensation is paid by the government. Also, since no insurance company is willing to insure these buses the transporters have no security).

[53] See Interview B-01 (Irashad Bukhari).
[54] *Ibid.*

5

Commuters' points of view

As mentioned earlier, the questionnaire served to 150 commuters is given in Annex 3 along with an analysis and tables showing the different ways in which men and women view the transport issue in Karachi.

The combination of preference and availability of transport varies between normal and days that are perceived as unusual by the respondents. Unusual days are those when the city closes down because of strike calls or the blocking of roads because of demonstrations, by various political, religious and ethnic parties and groups. Days when there is CNG closure are also considered as unusual days. On normal days, a combination of bus and rickshaw is used while 48.7 per cent of commuters do not go to work on unusual days. In addition, the majority (86.7 per cent) find it difficult to get a bus on non-CNG days. On such days the dependence on rickshaws and QINGQIs increases. More than half the respondents consider a motorcycle as a cheaper, more flexible and faster means of commuting. In addition, the majority (60 per cent) consider the emergence of the QINGQI favourably since it is cheap, it can stop anywhere and does not have to limit itself to specific stops, and it offers zero waiting time. A majority of respondents claim that they cannot find transport at night easily which limits their after dark movements. The majority (82.7 per cent) also feel that it is not safe for women to travel at night.

The difficulties mentioned by the respondents range from excessive time spent in travelling and waiting for buses, travelling standing or on bus roof tops, suffering injuries, being forced to leave the bus before reaching the destination for one reason or another, harassment of women commuters, damage to attire, non-standardisation of bus fares, and the fear of the gas cylinder (which is placed inside the bus) exploding.

The largest number of commuters (35.3 per cent) spends between 41 to 60 minutes one way on the road each day while commuting, and 13.3 per cent spend 81 to 90 minutes commuting one way. Waiting time at bus stops is reasonable and varies from 5 to 20 minutes. It is often longer outside of rush hours, when drivers wait for a long time so that their buses can be filled up. Overcrowding is an issue as only 13.3 per cent of the respondents got a seat in buses while commuting. Six per cent claimed that they have travelled on bus roof tops. A small majority (54 per cent) said that there are often disputes over fares. The buses also sometimes fail to reach their destination or they change their routes because they run out of CNG, or because of mechanical faults in the bus, or because of the 'law and order' situation.

Getting on and off buses also causes injury, according to 47.3 per cent of the respondents, 60 per cent of whom blame this on the footrest from which one enters the bus and/or the damaged body of the minibus. The most serious issue identified by the questionnaire analysis is that persons are often robbed while travelling on a bus. 60 per cent claimed that they had been robbed once or more than once. CNG cylinders are placed within the bus, often adjacent to the women's compartment. 79.3 per cent of respondents consider this to be a safety hazard. In addition, 46 per cent of respondents are of the opinion that women face harassment while travelling. And finally, 82 per cent

believe that a better transport system would increase their options for job opportunities.

The respondents also made a number of recommendations. 86 per cent are of the opinion that there is a need to increase seating arrangements for women on the buses. 77 per cent are of the opinion that there should also be buses exclusively for women, although there was also an understanding that this would make it difficult for families to travel together. An overwhelming majority (92 per cent) think that senior citizens should be given a discount in fares.

From the questionnaire analysis, one can conclude that with a reported average monthly income of Rs 13,482, the respondents spend on average Rs 1,500 per month (Rs 18,000 per annum) and an approximately 2-hour daily round trip (624 hours per annum) while commuting, which is much higher than world average commuting hours. The time spent in commuting by the respondents in a year is equivalent to 78 working days (assuming eight working hours in a day). According to a study,[55] world average commuting time is 80 minutes a day. Thailand is considered to have the longest commuting in the world while Malawi has the shortest. A 2007 Gallup Survey (in the USA) indicated that on a typical day, workers' average round trip commute takes 46 minutes. Similarly, according to the UK Office of National Statistics (2011), 75 per cent of the workers take around one hour for a round trip from home to work.[56]

There is also a difference between men and women in the responses to certain questions. These differences are highlighted in the Gender Analysis Table in Annex 3. Women have more complaints against the system than men. Their complaints against the conditions of buses, non-availability of seats in the absence of which they are forced to stand while commuting; their objection to speeding; the failure of buses to stop at a bus stop; the absence of consideration to the elderly, women and children when disembarking; their disapproval of government plans for transport; their disapproval of the traffic police; are all much higher in percentage terms than those of men.

There is a difference on other issues as well. Fewer women (7 per cent) than men (38 per cent) have been robbed more than once while commuting. Also, 89 per cent of women as opposed to 78 per cent of men believe that a good transport system facilitates securing a better job. A larger percentage of women (68 per cent) as opposed to 57 per cent of men, believe that a motorbike is a better form of commuting. Although the margin is very small, a larger number of women than men are against the banning of music which is played by all drivers while commuting.

Despite all the difficulties of travelling, a majority of respondents travel by minibus, though they consider motorcycles and QINGQIs as better modes of conveyance. Besides all perceived misgivings on transport governance, the respondents' recommendations about scaling up the transport system reflect their pinned hopes on a viable mass transit system and/or on an increase in the number of buses.

Women-specific issues

In-depth open-ended interviews with 15 women were arranged by the Urban Resource Centre, Karachi for this paper. The interviewees were from various walks of life and all used public transport for commuting. They consist of domestic help workers; maids, cleaners and caretakers at schools and offices; white-collar workers at banks and other corporate sector entities; school teachers; students at high school and universities; and professionals. Their views on the transport system and how it affects their lives is given in the paragraphs below.[57]

The most important common thread in all the interviews is that the interviewees get tired (exhausted) and mentally stressed due to pollution, discomfort and long hours of travelling. Some also say that it is a physical and mental torture travelling by bus and on returning home they are in a bad mood and not capable of doing any other work.[58] During pregnancy (and by implication in various other more difficult circumstances), it is almost impossible to use the public transport buses.[59]

A number of women also claim that they walk long distances to save on bus fare. To save money, some prefer to take one crowded and uncomfortable bus trip rather than spend more money taking two buses which are not so crowded and involve shorter routes. For comfort they also get together to share a QINGQI. This makes the QINGQI as affordable as a bus. However, it is difficult to make such an arrangement since destinations and timings vary even though one may live in the same neighbourhood.[60] The highest earning interviewee claims her income is Rs 25,000 and she spends Rs 4,000 on commuting.[61] Due to the unreliability of transport, especially when there are demonstrations in the city and on non-CNG days, it is common to arrive late at work. In such cases, the

[55] www.paycheck.in/main/labour-law-india/compensation/travel-reimbursement/commuting-time-and-payment
[56] *Ibid.*
[57] The interviewer was Anadil Iftekhar.
[58] See Interview C-05 (Sanjeeda), C-07 (Sughra), C-08 (Tina), and C-11 (TR).
[59] See Interview C-04 (Shahnaz Anjum).
[60] See Interview C-02 (Bushra), C-07 (Sughra), C-13 (Zaib-un-Nisa), and C-14 (Fatima).
[61] See Interview C-11 (TR).

interviewees get scolded by their bosses and in some cases there are heavy deductions from their salaries.[62]

Transport issues also impact on where one works. Usually, one looks for a job in the neighbourhood even if it is relatively poorly paid. One of the interviewees also changed her profession and another turned down a good job offer because of transport-related discomfort.[63] However, many interviewees feel that (motorised) rickshaws and QINGQIs have made life easier and more comfortable provided you can afford them or share them with a group.[64] But, there are other problems also. Karachi's fast signal-free roads developed recently means that you cannot cross a road except by a pedestrian bridge but these bridges are not enough in number and are not appropriately located. As a result, where it used to take five minutes to cross a road, now locating and using a pedestrian bridge can take over 15 minutes. People have made alternative arrangements like cutting the barrier in the middle of the road so as to squeeze through or to jump over. Women find this difficult to do.[65]

Many of the interviewees feel insecure while travelling and face some form of sexual harassment. As such, they prefer to take a QINGQI which is open and visible, or a crowded and uncomfortable bus, rather than a taxi which has locked doors. However, when they travel in groups then the feeling of insecurity disappears.[66] Most interviewees also claim to have experienced some form of sex-related harassment. Men in cars and on motorbikes stop and offer them lifts while they are waiting at bus stops. Sometimes this turns into pestering. Men enter into the women's compartment of the bus and refuse to leave when asked to do so. Rickshaw drivers constantly stare at the women passengers while driving. This is made possible because of huge rear view mirrors in the rickshaw which focus more on the passenger than the oncoming traffic at the back. Here again, travelling in groups lowers the level of harassment considerably. It has also been noticed that if university men students are in a bus then the harassment disappears.[67] In one case, a woman took to veiling herself while travelling so as to feel more secure.[68] It is common for women to wear the *hijab* or cover their heads while travelling and to remove them once they are in their work place.[69] But then, there are women who claim that they have never been subjected to any harassment.[70]

Another common complaint is that the conductor of the bus often does not return the change of a Rs 20 note when the fare is Rs 17.[71] In one case, the interviewee has sleepless night thinking of the haggling she will have to do with the bus conductor the next morning so as to retrieve the extra money.[72] There are other issues also that surface in these interviews. One is the presence of pickpockets who very skilfully rob passengers of their belongings. The other relates to the gas cylinder which, as already noted, is normally placed behind the driver in the women's compartment. Women consider it to be a live bomb, waiting to explode. The government agencies are aware of this issue. They have taken note and issued orders to where and how the cylinders have to be placed, and those who do not place the cylinders as per the government's directions will have their bus routes taken away and in addition a heavy fine will be imposed on them. However, the cylinders stay put where they are.[73] Women also have issues related to over-speeding and unrequested stops.

[62] See Interview C-01 (Saima Ismail Shah) and C-07 (Sughra).
[63] See Interview C-06 (Christine), C-08 (Tina), C-09 (M.S.), and C-13 (Zaib-un-Nisa).
[64] See Interview C-02 (Bushra), C-06 (Christine), and C-11 (TR).
[65] See Interview C- 01 (Saima Ismail Shah) and C-11 (TR).
[66] See Interview C-04 (Shahnaz Anjum), C-10 (M.J.), C-12 (Xara), and C-13(Zaib-un-Nisa).
[67] See Interview C-01 (Saima Ismail Shah), C-02 (Bushra), C-04 (Shahnaz Anjum), C-08 (Tina), and C-14 (Fatima).
[68] See Interview C-11 (TR).
[69] Authors' observation.
[70] See Interview C-02 (Bushra) and C-07 (Sughra).
[71] See Interview C-06 (Christine), C-07 (Sughra) and C-13 (Zaib-un-Nisa).
[72] See Interview C-04(Shahnaz Anjum).
[73] See Interview A-04 (Ghazanfar Ali Qadri).

6

Government officials' comments and proposals

All government officials interviewed have either clearly stated or implied that Karachi's transport problems cannot be solved without the induction of large buses and some sort of a rail-based mass transit system.[74] They have also indicated that one of the major reasons for the non-induction of large buses is the absence of bank loans and subsidies, not only to the private sector but also the non-payment of subsidies agreed upon to the public transport sector as well.[75] It is also agreed that if public sector or public-private-partnership sector fare cost is related to the price of diesel then the public will not be able to afford the service.[76] It is pointed out that the UTS service was stopped because the contractors were not making enough money to pay the bank loans back so they abandoned their vehicles.[77] It is for these reasons that public transport has diminished, and where it has continued the quality of service has deteriorated. For example, to save costs the UTS contractors removed the e-ticketing system, in the absence of which they were overloading and experienced difficulty in controlling the entry point of the buses.[78]

There were other reasons given for the failure of the various private and public-private-partnership initiatives. It was stated that strikes, protests and demonstrations (both religious and political) not only disrupt traffic but force transporters to take alternative routes to the ones assigned to them, disturbing the entire system.[79] It is also felt that the government does not consider transport as a 'service' as it does education and health, which it subsidises heavily. It is also pointed out that the Karachiites have become very individualistic and have lost all civic sense. They burn buses if a bus is involved in a fatal accident instead of letting the police handle it.[80] It is also felt that without the involvement of the CDGK, there cannot be an appropriate transport system. It is also pointed out that as long as the elected mayor was there, subsidies were paid for the UTS scheme. Subsequently, the mayor had to appear in court, because in spite of everything being done transparently, the authorities believed that there had been an element of corruption. Rivalries between political parties have disrupted continuity in policies and have resulted in allegations and counter-allegations.[81]

[74] See Interview A-01 (Muhammad Athar).
[75] See Interview A-01 (Muhammad Athar) and A-04 (Ghazanfar Ali Qadri).
[76] See Interview A-06 (Iftekhar Hussain).
[77] See Interview A-07 (Shams-ud-Din Abro).
[78] See Interview A-01 (Muhammad Athar).
[70] See Interview A-04 (Ghazanfar Ali Qadri).
[80] See Interview A-04 (Ghazanfar Ali Qadri).
[81] See Interview A-06 (Iftekhar Hussain) and A-07 (Shams-ud-Din Abro).

The KCR is considered to an important element in developing a mass transit system. However, it is pointed out that it will require a system for the repayment of the loan required to build it. How this will be done is unclear. In addition, all projects where a loan is involved require sovereign guarantees to the contractors and/or the governments from where the loan is coming. The government of Pakistan is not in a position to give such guarantees because of the enormous cost of the project.[82]

Government officials also commented on the flyovers and signal-free roads, the emergence of the QINGQIs, the energy crisis and the conversion of Karachi buses into trucks and carriers. It is felt that flyovers and signal-free roads are not a solution and they have not solved the problems of traffic or transport.[83] On the question of QINGQIs opinions are divided. The traffic police is of the opinion that QINGQIs should be banned on the main roads. They should also be stopped from using roundabouts as terminals. Unless these actions are carried out, the problem of traffic (and hence of road transport) will not be solved. The problem is that if a court has granted a stay, action against the QINGQI cannot be taken.[84] Other officials feel that there is no solution at present, but there can be one if the existing systems are all integrated within a larger plan.[85] For this there is a need to talk to the existing private sector operators and develop a plan of which they are a part.[86] Regarding energy issues, there is a proposal that CNG should be provided for public transport seven days a week, while non-CNG days can apply for all other transport modes. Meanwhile, the commissioner of Karachi has placed a ban on the conversion of buses into carriers and trucks.[87]

Institutional arrangements were also discussed in the interviews. By describing the changes that constantly happen, officials have implied that the absence of continuity is an issue.[88] The problem of coordination between different agencies has also been raised. This is in spite of the fact that the transport and communication department, the KMC director, the secretary of RTA and the traffic police, along with their other staff, all sit in the same building. It is felt that there could be better coordination if all these were put together under 'a higher authority'.[89] Corruption has been considered as the 'worst enemy' which played an important part in the failure of the KTC, the SRTC, the KPTS and the UTS.[90] There is also a feeling that traffic jams will increase if the present system is allowed to continue.[91]

The officials place their hope on the JICA Karachi Transportation Improvement Project and are of the opinion that the BRTs now being implemented will ease the situation. It is also felt that the federal, provincial and city governments will arrange for the required subsidies.

An ex-official of the CDGK, not wishing to be named, says that Karachi's transport plans have not been executed because of an absence of political will and interference; an absence of a promoter for the Karachi plans at the federal level in Islamabad; conflicts between different ethnic groups in power in government; and a weakening of local and provincial government institutions due to constant changes in them and non-merit political appointments in the relevant agencies and departments. He also feels that the government's flyovers and signal-free roads will be a hindrance to the building of a light rail and/or a BRT.

[82] See Interview A-03 (Fazal Karim Khattri).
[83] See Interview A-01 and C-03 (Fazal Karim Khattri).
[84] See Interview A-02 (Arif Hanif).
[85] See Interview A-01 (Muhammad Athar).
[86] See Interview A-03 (Fazal Karim Khattri).
[87] See Interview A-04 (Ghazanfar Ali Qadri).
[88] See Interview A-03 (Fazal Karim Khattri).
[89] See Interview A-04 (Ghazanfar Ali Qadri).
[90] See Interview A-07 (Shams-ud-Din Abro).
[91] See Interview A-05 (Tahir Ahmad Khan).

7

Conclusions and recommendations

The most important conclusion that surfaces from the discussions in this paper is that, on the one hand, there is a link between the nature of city governance, technology used for transport and affordability, housing, land use, access to livelihoods (especially for women), health and family well-being; and quality transport on the other. In short, transport has to be seen as a part of a larger city planning exercise.

Institutional arrangements for government transport programmes for Karachi are related to the governance structure at the time at which the programme was proposed and implemented. Since governance structures have changed from time to time, transport programmes have suffered due to a lack of continuity. The transporters, government officials and the public all agree that Karachi needs large buses, which alone can provide a comfortable means of commuting. However, the purchase and operation of these buses is costly, and the service cannot be made affordable to the public without the provision of a subsidy.

Government programmes have failed in their objectives for a number of reasons. Without a subsidy, government programmes operated at a loss and were unsustainable. Even where government promised such subsidies, they were not provided. There were also maintenance issues such as the use of substandard spare parts replacement which adversely affected the performance of the vehicles. There were also a pilferage of funds and a loss of vehicles due to riots and political violence. So as to keep transport affordable to the public, the government did not permit the private sector to raise its fares in proportion to the rising cost of fuel. As a result, the formal and informally financed private sector was unwilling to invest in conventional transport modes such as minibuses. The result has been a decline in the number of buses and the quality of the service.

The courts have added to the transport crisis by ordering all public transport vehicles to convert to CNG. This order was issued without a proper understanding of the availability of CNG or of government plans regarding energy-related issues. The various governments in Pakistan (after the order was issued) did not challenge the courts' decision.

There are institutional issues also. The various government departments dealing with transport in the city are not coordinated. As is evident from the interviews, they also have serious differences of opinion. In addition, police corruption is rampant because and as a result public transport vehicles operate without roadworthy tests and certificates; unregistered (and as such illegal) public transport vehicles operate on the roads and drivers of vehicles who pay a monthly bribe to the police can violate traffic rules and regulations, causing traffic jams and inconvenience to commuters.

The free transport policy of the government was a step in the right direction given the problems the city faced at that time. However, the fact that the individuals or groups that wished to operate a vehicle had to purchase it on hire purchase at high rates of interest, led to the creation of a group of moneylenders controlling the informally financed transport system. The fact that these financers belong to a particular ethnic group and lent to their own ethnic group members, resulted in the introduction of ethnic politics in the transport sector in the city. If the government had financed these vehicles

through bank loans, the situation would have been very different, and what Karachiites refer to as the 'transport mafia' would have been very different in nature.

Government programmes have not been able to compete with the informally financed private sector for a number of reasons and have suffered as a result. The service provided by this sector has meant considerably cheaper minibuses, low paid and overworked drivers and conductors, and almost no administrative overheads or paperwork. However, this sector has an understanding of the city and its commuters, and the ability to identify lucrative routes, promote its own interests in dealing with the police, and through the power of its associations, negotiate effectively with government agencies. The sector has managed to provide cheap (though uncomfortable) transport, which the government has not.

This immense knowledge of the informally financed sector has not been made use of effectively in government plans. The sector is confident that it can operate large buses successfully if it is provided with loans from banks for the purchase of buses at normal rates of interest; its vehicles are provided with protection by insurance companies; and if police corruption can be contained. One of the reasons given by the transporters for police corruption is the low salaries that police officers receive.

The railway option, which has consisted of expanding the KCR and more recently of rehabilitating it, has not been successful. This is because the proposals have been far too expensive and the federal government has been unwilling to provide sovereign guarantees to the bidders or to loan-providing governments and agencies. There has also been an unresolved disagreement between the various state actors over whether to develop and expand the railway network or opt for a BRT system. It seems that with the recent JICA Plan this has been resolved. Proposals by the Pakistan railways and its ex-chief engineer for developing a comparatively far cheaper system built and operated by the railways, has never been seriously pursued by the various governments from 1989 to the present time. This can be attributed to the desire of politicians for grand projects that are considered 'modern'.

Karachi's traffic problems are increasing due to the large number of vehicles that are added to its roads every year. Congestion is also increasing due to the conversion of various roads from residential to high density commercial land use and encroachments by hawkers and informal businesses on corridors on which public transport plies. These encroachments serve the needs of the lower and lower-middle income commuting public. There is also poor traffic management because of the limited number of police officers on traffic related duty. Wardens were introduced by the city government to help the police in traffic management, and this seemed to be a good and effective idea. However, as explained earlier, they were removed as a result of Karachi's ethnicity-based politics and its turf-related conflicts.

The market response to the shrinking of buses has been extremely innovative. The emergence of the QINGQI; the cost-effectiveness of its design; the manner in which it operates complete with informally created terminals, stands, routes, timekeeping; and continuous modifications to its operations and design (on the basis of the changing context in the city), is a tribute to its entrepreneurship and an understanding of the politics of the transport sector. The emergence of motorbikes and their rapidly increasing numbers is also a market response that has brought immense relief to Karachi families who own them. However, both modes are considered unsafe and have led to congestion and poor traffic management in the city.

The impact of the transport crisis on people's lives is enormous. Travelling in environmentally degraded conditions for long hours results in physical and mental health problems. This affects family and social life and limits peoples' choice of livelihoods (especially for women), since they wish to work in areas that they can easily access through the existing transport system. Increasingly, transport availability and quality is also determining where they would like to live. The market has responded to this issue by informally densifying those *katchi abadis* that are nearer the city or its main work areas.

The fundamental issue in dealing with the transport crisis in Karachi is related to governance. It has been noticed that an elected local government (2001–2007) was more effective in accessing funds from the federal and provincial governments for development purposes than the earlier bureaucratic system which has now been reintroduced. Decentralisation, as practiced between 2001 and 2007, has problems because of Sindh's relationship to its capital city, which is predominantly Urdu-speaking, whereas the province as a whole is predominantly Sindhi-speaking. A system is required that empowers the city and at the same time protects the interests of the Sindhi speakers in accessing and controlling Karachi's enormous assets. Such an arrangement would also help the province deal more effectively with the federal government in Islamabad.

Recommendations

1. The current vision for the city on which basis planning is being carried out is that Karachi will be a 'world class city'. It is recommended that the vision should be changed to Karachi becoming a 'pedestrian and commuter friendly city'. This would help in promoting the interests of the majority (who are public transport uses) in Karachi.
2. CDGK's role in designing, implementing and managing the development of transport should be enhanced. Some form of elected system should be reintroduced that satisfies the needs of the city, and at the same time satisfies both the PPP and the MQM. This will establish the city's ownership of the transport sector and give the CDGK additional powers to negotiate at federal level.
3. At present there is a lack of coordination between the different traffic and transport-related agencies because of which some of their programmes are ineffective and court orders cannot be effectively implemented. A higher level organisation that brings these agencies together needs to be created along with a reform of the police; this has often been suggested, sometimes planned, but never implemented.
4. The ad hoc densification of the city is resulting in congestion and environmental degradation making the development of an effective and comfortable transport system difficult. It is suggested that the Master Plan Group of Offices (MPGO) be revived and strengthened so as to prepare a densification plan that takes transport (among other things) into consideration. For such an exercise to become possible, the Sindh Building Control Authority (SBCA) will have to be made subservient to the MPGO.
5. The JICA plan should be implemented incrementally as proposed. However, the following aspects will have to be taken into consideration:
   - The government will have to provide the required subsidies to bridge the gap between revenue generated and actual costs. These subsidies can be derived from a small transport tax on petroleum products, an increase in road tax on private vehicles of over 1300 cc, a sliding vehicle insurance surcharge (putting the burden on luxury vehicles).
   - Land at the intersections of the KCR and the major arteries of the city should be developed as low income housing. This will help in reducing travel time and costs and at the same time make the KCR and the proposed BRTs economically more feasible. In addition, it can also subsidise KCR development and operation and maintenance costs.
   - Maintenance processes should see to it that mistakes made in the past should not be repeated. It should be guaranteed that budgets for maintenance are available and that there is no compromise on the quality of spare parts that are used for the rehabilitation of vehicles.
   - Part of the JICA plan consists of BRTs on the major corridors of movement in Karachi. However, the majority of the city will remain unserved by the plan. The private sector (existing at present and planned for in the future) should be supported by developing routes that the JICA plan will not serve or those routes that link unserved areas to the BRT corridors. To make this possible, a comprehensive transport plan for the city is required which will need to be periodically modified/upgraded.
   - To support the private sector, bank loans for purchase and/or rehabilitation of buses should be provided and insurance companies should be encouraged to insure their vehicles. Proper locations for their depots and terminals should be a part of the above-mentioned larger plan.
6. QINGQIs should be regularised and with their associations, routes should be developed for them so that they can link unserved areas to the main corridors of the city. The possibility of improving their design should be studied by academic institutions and should be made available to the QINGQI manufacturers.
7. A decision should be taken as to whether the purchase of motorbikes should be promoted or restricted. If they are to be promoted then duties and taxes on them should be reduced or removed. If they are curtailed, taxes should be increased. However, it would be unfair to make them more expensive when Karachi has a badly functioning transport system. Motorbikes already need infrastructure such as dedicated lanes, proper parking facilities and safety measures; these have been proposed but never implemented.

Similarly, a reduction in the increase in the number of cars is necessary. It is recommended that the import of second-hand Japanese cars should be banned and extra tax on cars should be imposed as a deterrent to the purchase of cars. This would be difficult because of the political power of the automobile and the banking sectors that gives loans for car purchases and will oppose such a move. However, this move should be initiated.

8. Hawkers and informal businesses are an integral part of the commuting scene. Space should be provided for them at all bus stops, inter- and intra-city terminals, and railway stations. The locations where they are operating at present need to be replanned to accommodate them in a manner whereby they do not adversely affect the existing and proposed transport systems. A number of studies of certain locations have been made with a view to accommodating the hawkers.
9. A media campaign which promotes a culture of respect for traffic rules and regulations, especially related to the issue of double car parking, should be launched. This should also be made a part of the primary and secondary school curriculum. However, this can only be successful if car parking space is guaranteed. Here again, the role of a revived and powerful MPGO is required.

The recommendations above cannot be implemented in one go. It is proposed that this transformation takes place over a 15-year period. The process and timeline can only be successfully managed if the existing private sector, consisting of minibuses, rickshaws and QINGQIs, is made an integral part of the planning and implementation process.

8

Transport Study: Postscript 28 May 2015

On March 20, 2015, the government of Sindh unveiled its strategy for its Karachi Mass Transit Programme and announced the creation of the Sindh Mass Transit Authority that would oversee and guide it. This was done at a meeting in the Pearl Continental Hotel in Karachi. The meeting was attended by Sindh government officials, consultants to the various mass transit proposals, the media and some civil society invitees. The meeting was also attended by Enrique Penalosa who has been appointed as a consultant to one of the corridors (Blue Line) which is being built by the largest real estate development company in Pakistan. A synopsis of the proposal is given in the Map-1 (Source: Asian Development Bank; Karachi BRT Conceptual Plan and Design; Institute for Transportation and Development Policy, March 2015) and table (Source: Transport and Mass Transit Department, Government of Sindh, March 2015) below.

The proposal that was considered as the most appropriate in economic and technical terms was that of the Red Line which has been proposed by the Asian Development Bank consultants. The Red Line BRT is all at-grade including the stations and as such is far more economic and environmentally friendly. As per the proposal, twenty-three existing bus routes have been planned to feed into the BRT Corridor thus increasing ridership considerably. The proposal also consists of upgrading the physical environment of the roads through which the BRT passes including those that will link up with the BRT Corridor. The ADB proposal also includes public transport reform and parking and non-motorised transport improvement as shown in Map-2. Source: Asian Development Bank; Karachi BRT Conceptual Plan and Design; Institute for Transportation and Development Policy, March 2015

On 21 March, a meeting was held at the NED University between Enrique Penalosa, local consultants of the Blue Line BRT and transport related university professors and a representative of the Urban Resource Centre, Karachi. It was decided that for heritage and environmental reasons, the Blue Line would be at-grade through the city centre.

The media response has been sceptical and has pointed out that how can four different entities build four different routes. Consultants of the ADB also had similar views and pointed to the fact that there was a need for integration of the different routes and the necessity of similar vehicles, signage and ticketing. (Source: Mahim Maher; Public Transport: Race to build Karachi's BRT gets too many green signals; Express Tribune, March 20, 2015 and Bhagwan Das; Sindh government to fund Red Line after ADB backs out of the Project; Daily Dawn, 21 March 2015)

Map – 1: Karachi Mass Transit Master Plan 2030

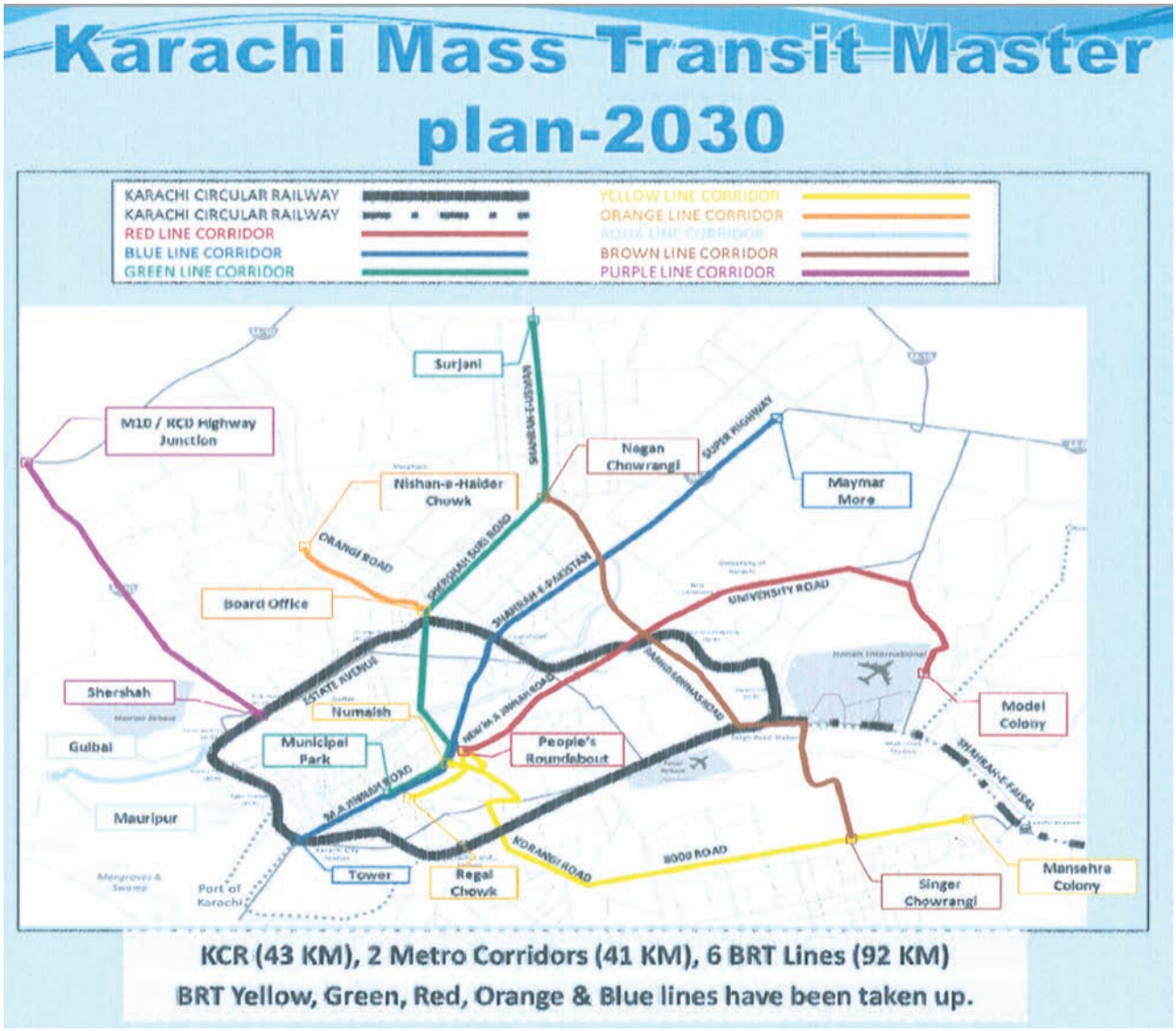
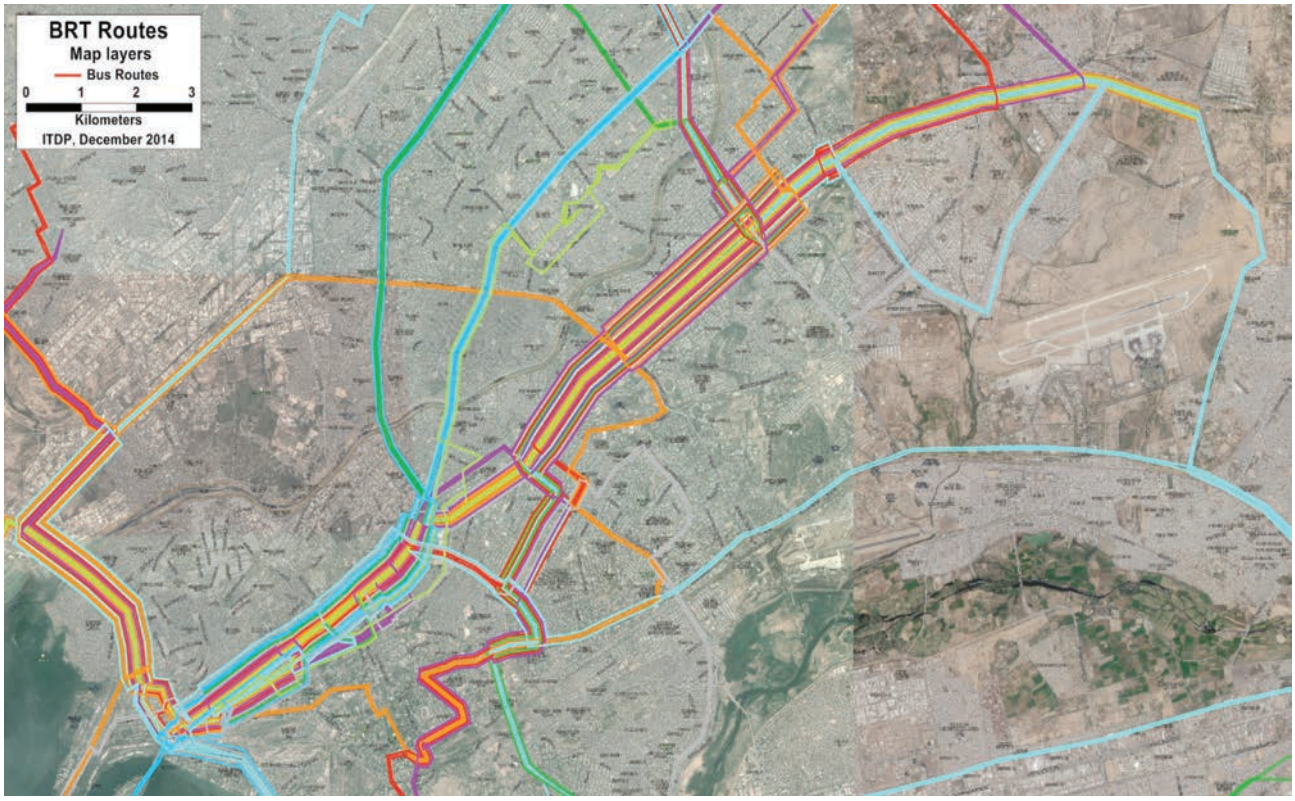


Table. Karachi BRT Corridors: Status

Line	Financing	Length in Km	Cost in Pak Rs	Ridership Daily	Status
Yellow	Public-Private-Partnership	26	12–14 bn	150,000	Bidding completed
Orange	Bidding in process	4.7	2.364 bn	50,000	Bidding process for engineering consultants
Green	Govt. of Pakistan funding	21	27 bn	400,000	Bidding process for engineering consultants
Red	Govt. of Sindh	21.5	12–15 bn	350,000	Feasibility study completed by ADB
Blue	Private developer	41.7	187 bn	450,000	Feasibility study completed
Circular Railway	JICA loan and Govt. of Pakistan + Govt. of Sindh funding	43.24	265 bn	600,000	JICA funded. JICA conditionalities completed by Govt. of Sindh

Map-2: Red Line BRT with existing routes feeding into it



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Related reading

Land contestation in Karachi and the impact on housing and urban development, article by Arif Hasan in *Environment and Urbanization* 27:1. http://eau.sagepub.com/content/27/1/217.abstract

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Appendices

All Appendices are available ***online only*** at

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Appendix 1: Literature consulted

Acts
Selected important press clippings (2007–2013)

Appendix 2: List of interviewees

A. Interviews with government officials:
B. Interviews with transporters
D. Interviews with the public

Appendix 3: Questionnaires and analysis

Analysis of Questionnaires for Transport Research (March 2014)
Gender analysis – Transport Study, 2014

Appendix 4: Stakeholders in the transport sector in Karachi

1. Government institutions
2. Transporter's associations
3. The commuting public

Appendix 5: Transcripts of full interviews

A. Interviews with government officials
B. Interviews with transporters
C. Interviews with women
D. Interviews with the public

Transport-related problems in Karachi have increased considerably in recent decades. Traffic congestion contributes to increased air and noise pollution, leading to health problems, high accident rates, and environmental degradation. It has also meant declining living standards, as to avoid long commutes, people's livelihood choices have become more limited and this has determined where they live. This has resulted in a drop in income and a decrease in personal security, which has affected the most vulnerable, in particular women. This paper presents a historical perspective on the causes of the current crisis, and its repercussions on transporters, fuel suppliers, and the public; outlining current government plans and making recommendations.

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