Scenario 185

METRO BUS SERVICE IN PAKISTAN

LAHORE METRO-BUS PROJECT:

No doubt, it was a ***remarkable decision by the Supreme Court of Pakistan*** to take notice of the irregularities done in the Rental Power Projects. It was basically a *suo-moto* notice of the SC though, later, Makhdoom Faisal Saleh Hayat and Kh Asif had also presented them as parties of the said case to help the court. It was an uncontested failure of the PPP government, there were no two opinions.

The opponents of the PML[N] government were keen but wondered that **why CJP Iftikhar M Chaudhry had not taken notice of another alleged Mega Scam happened in Lahore**, the 27-kilometre long Rapid Bus Transport [Metro Bus Service] track, from Gajjumata to Shahdara in metropolis, commonly known as *'Jangla Bus Project'* while most side work was still under completion.

> **[*In a way it was good, given the Court-Kutchehry System in Pakistan – because no one was able to get stay order for the Metro Bus project at least.*
>
> *In Pakistan, the stay orders are issued by the courts with utter malafide intentions which can easily be stretched for a decade or so.*]**

Consider the following facts for a while:

The **Lahore Metro-Bus Service [MBS]** was a bus rapid transit [BRT] system in Lahore, which consisted of a 27km long route and 29 bus stations. It was opened by Turkey's Deputy Prime Minister Bekir Bozdağ and Punjab Chief Minister Shahbaz Sharif **on 11th February 2013.**

The route covered dozens of residential and commercial localities along the city's main artery — Ferozepur road, linking together Lytton road, Jain Mandar, MAO College, Lower Mall, Civil Secretariat, Aiwan-i-Adal, District

Courts, Shrine of Hazrat Data Ganj Bakhsh, Ravi Road, and Shahdra town; an 8-kilometer section of the route is elevated.

The system used e-ticketing and Intelligent Transportation System [ITS]; managed by the Punjab Metrobus Authority [PMBA] with the IT part being carried out in coordination with Punjab IT Board.

Lahore Transport Company [LTC] was established in 1984 to ease the traffic conditions of Lahore and improve bus services. LTC got all the transport responsibilities of travelling in Lahore in December 2009. A BRTS fleet of 650 Buses was introduced and given name "Trans-Lahore". However, the BRTS did not have dedicated lanes and had to share roads with regular traffic with no right of way privileges.

Lahore Metro had first been proposed in 1991 but was abandoned in favour of a bus transit system, inspired by the successful Istanbul Metro-bus system. Plans were developed in the last quarter of 2011 by both local and Turkish experts.

Construction of the project was divided into different packages and was awarded to different contractors. Zahir Khan & Brothers [ZKB] in Joint venture with Reliable Engineering Services Limited [RESL] constructed the major part of the Flyover including two elevated rotaries for BRTS. Habib Construction Services constructed the down ramp to *Taxali Gate* of flyover. Construction started in March 2012 and the buses entered service **on 11th February 2013**.

The system was constructed by the Traffic Engineering and Planning Agency [TEPA], a subsidiary of the Lahore Development Authority [LDA] at a cost Rs:29.8 billion. The system was built on the build–operate–transfer [BOT] basis via the collaboration between the Punjab and the Turkish government; the federation was not involved in between.

The Mayor of Istanbul, Kadir Topbas, also announced a gift of 100 buses as it was Pakistan's first bus rapid transit system.

Lahore MBS started with a single 28.7 km long *Ferozepur Road* corridor with two other corridors planned and having an average speed of 26 km/h. Following the initiation ceremony, use of the system was free during the first month. However, following a week of chaos and overcrowding, a fare of Rs:20 [US$0.2] was imposed irrespective of the destination.

According to the LTC, the daily ridership of the MBS exceeded 180,000 just within first year with the peak hourly ridership being 10,000 passengers per hour per direction. Studies conducted by the transport company claimed that this figure would increase by 222% to 20,000 in 2021. To keep the cost affordable for everyone Punjab Government continued paying Rs:40 as subsidy on each Rs:20 ticket.

The Lahore MBS has barrier-controlled, automated off-board fare collection, a service interval of less than 2 minutes during peak hours, stations with well-designed signage and information systems and a precision bus docking system. The terminal approach was given through escalators and underground, subway-styled approach tubes; stations were provided parking spaces for motorbikes and cycles while the two terminals provided car-parking facilities as well.

Besides the self-service Ticket Vending Machines [TVM], the MBS also issued Metro-bus Cards to be utilized for multiple journeys. These RFID-based cards were made credit-card sized and could be obtained for a refundable amount of Rs:130 [US$1.33]. These cards could be recharged to a maximum balance of Rs:1000 [US$10] at the TVMs. The Metro-bus cards removed the hassle of standing in a queue for a token and card-holders were able to proceed directly to the terminal.

In April 2015, the Punjab Government approved the expansion of Lahore Metro-bus; 15 km track was planned to be added on the current route. On Northern end it was to be extended 10 km from *Shahdara to Kala Shah Kaku* and on Southern end it was to be expanded 5 km from Gajjumata to LDA City near *Kahna*.

During late May 2013, the Metro buses started to develop an over-heating problem as the temperatures in the city crossed 45°C. The air-conditioners gave away and the engines started blowing fumes.

The authorities told the media that when the buses were imported the manufacturers, Sweden-based Volvo and China-based Sunwin, were told to provide buses that could remain operational in temperatures approaching 51 °C. When the operation error came to surface, the suppliers were fined and further import of buses from them was halted. To counter the problem, new air-conditioning units were fitted in the buses in late June 2013.

The Punjab Government, in the development program of 2013-14, proposed similar Metro-bus projects for Faisalabad and Multan also. Metrobus in Islamabad and Rawalpindi was inaugurated **on 4th June 2015** by the Prime Minister Nawaz Sharif; while Multan MBS was under construc-

tion. Karachi Metrobus and Faisalabad Metrobus were also planned and their construction was at hand.

The political opponents of Sharifs, especially the Pakistan Peoples Party [PPP], flooded a new gate of criticism in the name of 'Losses & Subsidy' – forgetting that their party PPP could not add even a single inch in the national highway structure or motorways in the country during their complete five years tenure.

No doubt, Lahore MBS caused a daily loss of Rs:5 million – but in the whole world the mass transit systems are subsidized by the sitting governments. While a passenger was paying Rs:20 for one-way travel, the government paid a subsidy of Rs:40 but the MBS was planned for the poor and white collared people not for the car owners.

On the positive side of the things, the MBS daily facilitates almost 140,000 commuters from *Gajjumatta to Shahdrah* area during the 5-day week. There were around 50 routes in Lahore with many even without any public transport facility. Millions of commuters used to travel in the City daily at Chingchi rickshaws, worn out vans and outdated buses and pay from Rs:15 to Rs:35 fare even at routes much smaller than that of metro bus.

Had passengers travelied on private bus or van from Gajjumatta to Shahdrah, they were to pay around Rs:60. The Punjab government generated Rs:2.8 million in revenue [2013-14] from fare collection as compared with per day expenditure of around Rs:8 million. The Punjab government in budget 2013-14 allocated Rs:2 billion for Metro Bus subsidy after clear refusal of Punjab CM Shahbaz Sharif to increase the fare.

The government had outsourced the all operational, maintenance, security and other expenditures to around 12 companies after start of the service. Critics questioned spending so much money on travellers of one particular route at the expense of the rest of the population of province. And the same argument was presented against the launch of similar projects in Rawalpindi, Multan and else where.

Lahore MBS started its service with 45 metro buses, with a capacity three times that of ordinary buses, run along 27km track; 19 buses added in September 2013. The buses used to stop at 27 stations that covered the entire route. When the service was launched, it was claimed that even those with personal cars would prefer to avail this facility and it suited some who had their jobs along the route.

Metro Bus Service [MBS] project was built at a cost of Rs:30 billion in record time of only eleven months. Due to metro bus service, the 27-kilometer long journey from *Gajjumata to Shahdara*, which normally used to cosume two hours, was aimed to be covered in 55 minutes and with more comfort and less cost of travel for the people.

RWP – ISL METRO-BUS SERVICE:

It remains a fact that previously, all governments had miserably failed to provide a 'respectable' public transport to the residents of twin cities of Rawalpindi and Islamabad. Commuters of all age groups used to run after wagons, pickups and taxicabs to reach their destinations every day, particularly during office and school timings.

There was no organised inter-city public transport system in place, and wagons, pickups and auto-rickshaws run by private transporters were relied upon to fill the gap in this regard. The commuters particularly travelling between Rawalpindi and Islamabad used to face worst kind of humiliation every day.

The locals repeatedly complained about the highhandedness of transporters, particularly those plying vehicles on all routs regarding overloading and overcharging. A survey of 2012 revealed that as many as 21 passengers were normally cramped into one wagon that was originally meant and designed for 14 persons. Particularly for female passengers, the agony was all the more severe.

Meanwhile, in the absence of a suitable mode of public transport, people were felt helpless and forced to purchase their own vehicles – an increasing traffic burden on the road infrastructure of Rawalpindi and Islamabad. Statistics from the two Excise Offices had shown that during 2012, everyday 13 new private cars, 15 motorcycles and nine commercial vehicles were registered with the concerned departments.

On 4th June 2015; the second project of metro bus Service was inaugurated by Prime Minister Nawaz Sharif, aimed to provide better transportation to the residents of twin cities of Rawalpindi and Islamabad. The hierarchy of Rawalpindi administration was directed to ensure their presence at the Jinnah Convention Centre for the opening ceremony.

It was Rawalpindi-Islamabad Metro-bus, a 22.5 km BRT system aimed to serve the twin city metropolitan area in Pakistan; using dedicated bus lanes for its entire route covering 24 bus stations for transporting 150,000 people daily. The system used e-ticketing and Intelligent Transportation System; managed by the Punjab Metro-bus Authority [PMBA] with the IT part being carried out in coordination with Punjab IT Board.

> **[Rawalpindi** *is the fourth largest and one of the fastest growing cities in the country; is the headquarters for the Armed Forces of Pakistan and with its amalgamation with Islamabad, the population of Rawalpindi increased rapidly over the past few decades.*
>
> **Islamabad**'s *population has grown from 100,000 in 1951 to 1.30 million in 2012 and continues to be the fastest growing large city of Pakistan. Since its foundation, Islamabad has attracted people from all over Pakistan, making it one of the most cosmopolitan and urbanized cities of Pakistan and centre of economic and service activities in diversified fields.*
>
> *Rawalpindi / Islamabad Metropolitan Area is the third largest urban amalgamation in Pakistan with an estimated population of 4.5 million inhabitants. With present growth trends it is expected that the population would increase to 7.0 million in twenty years' time.*]

Murree Road in Rawalpindi has been one of the busiest and most preferred link between the twin cities due to its shorter length and direct approach. On this route, private transport, vans and small Suzuki carriers, have been the only means of mobility between two cities and the level of service offered by those minibuses was far below any acceptable standard.

Traffic volumes of over 210,000 vehicles used to ply on three major corridors connecting both the cities carrying around 525,000 passengers; an estimated public transport demand of around 153,000 passengers constantly remained there. Based on studies conducted by the Government of Punjab and Capital Development Authority [CDA] Islamabad, the Federal & Provincial governments both joined hands to launch a Metro Bus project to connect the twin cities and alleviate the traffic congestion on this corridor spreading in two cities.

On 19 January 2014; PM Nawaz Sharif and the CM Punjab decided that the project should be funded on 50:50 sharing basis by the Federal Government & Government of the Punjab and also that the Punjab Government would execute this project through Rawalpindi Development Authority [RDA], in coordination with the CDA, as the single executing agency for

both parts of the project. Punjab Metrobus Authority [PMA] was to control the operation & maintenance of the project after its completion.

On 28 February 2014; construction of the RWP-ISL Metro-bus began and was completed by June 2015, with 60 buses initially plying on the route; the project was completed with a cost of Rs:44.31 billion, shared by both the Federal and the government of Punjab.

The initial date of inauguration was 28th February 2015, which was delayed because of lack of planning for drainage of rainwater and slow rate of work leading to inevitable delays in the construction. Even after the launch of the metro bus service, the issues regarding the drainage of rainwater still remained unfinished resulting in the flooding of the underground bus stations during monsoon rains but eventually the project worked successfully.

The entire length of 8.6 km of Metro Bus corridor in Rawalpindi area is elevated structure whereas about 14 km in Islamabad is at ground level but made signal-free by constructing grade separations at various intersections. Ten halt stations in the Rawalpindi Part and fourteen in the Islamabad Part were provided along the corridor.

Functional elements at the stations comprised of ticketing booths, concourse level passenger transfer, escalators, platform screen, toilets, doors turnstiles for automatic fare collection and other amenities. A Central Information Technology System [ITS] control room was also included in the project to control the whole operation of Metro Bus system.

Initially the provision of a 10 lane Underpass, 2 Lanes for Metro Bus and 8 Lanes for mix traffic, along the 9th Avenue was proposed at Peshawar Mor intersection. Later on, in view of the traffic issues at Peshawar Mor intersection, ongoing Widening of Kashmir Highway & its link with new Islamabad Airport, it was decided to merge the Metro Bus corridor in the interchange already designed by CDA at the cost of Rs:6.75 Billion. The same was simultaneously executed with Metro Bus Project.

Initially, one line was made serviceable with future extension planned. This line connected the twin cities of Islamabad and Rawalpindi to Gandhara International Airport; a plan to build two more lines in future was in hand. The project was started with a fleet of 68 buses on route.

The Metro Bus Project was contracted to several companies over an initial budget of about Rs:44.5 billion [around $500 million], and was divided into three main categories; the major chunks were given to ZKB, National Logistics Centre and Lemak Reliable Joint Venture; whereas Procurement, Oper-

ations and Maintenance of Buses was awarded to a Turkish company named Albayrak Holding.

On 18th April 2016; a media report appeared that the federal government continued heavily favouring Punjab during negotiations on the RWP-ISL metro bus. After absorbing a larger share of construction cost and accepting a smaller share of total revenue, it again agreed to pay a disproportionately large share of the subsidy of the service; apparently based on track length in the respective jurisdictions. This was despite the fact that construction costs were shared equally, even though the elevated track in Rawalpindi cost significantly much more.

Meanwhile, though revenue sharing was based on ridership in the respective limits, the subsidy per rider appeared disproportionate under the subsidy sharing formula. A ten-month dispute over subsidy sharing brought an additional cost of around Rs:2.5 billion annually under subsidy head.

In a meeting held at the Finance Ministry on 31st March 2016, Finance Minister Ishaq Dar was joined by the Punjab's finance minister, CDA Chairperson, and officials of the PMBA, where it was agreed that the total subsidy for the financial year 2015-16, would be shared on the basis of track length — Punjab's demand — rather than an even split, as was suggested by the federal government. CDA had to contribute Rs:1.52 billion for the said financial year.

The Rs:44.8 billion spent on the project was shared equally by both the governments, but a Rs:5 billion interchange at Peshawar Mor in Islamabad — required for the project — was completely financed by the federal government as it was curiously excluded from the original agreement.

An official rider-ship report for the first three-months indicated that an average of 100,558 passengers used the service every day, with average rider-ship in Rawalpindi at 58,559, and Islamabad at 41,999. Revenues earned through ticket sales were split on the basis of rider-ship, leaving Punjab with around 59pc of revenue.

However, as per analysis appeared in the **'Dawn'** dated **24th March 2016;** while citing a report from 1st July 2015 to 29th Feb 2016, the ridership was below the National Engineering Services Pakistan [NESPAK]'s estimated figure. NESPAK had estimated that there would be over 135,000 metro bus passengers per day but approximately 110,252 passengers commuted via the metro bus daily.

The metro bus authority compiled a daily report of service users based on the board of passengers from all 24 bus stations in the twin cities. A total of 26.46 million people used the facility during the said eight months. The authority collected Rs:529 million in revenue through ticket purchases. The total cost of operations was much higher than the collected revenue.

The report stated that Saddar Bus Terminal in Rawalpindi, which is the first station, remained the busiest throughout the eight months, with a total of 3,534,852 passengers boarding from there. Faizabad followed, with 2,530,793 passengers, and 1,558,041 passengers boarded the buses from Committee Chowk.

In Islamabad, the PIMS station was the busiest – with 1,277,424 boarding passengers, followed by Pak Secretariat Station with 1,172,817 passengers. As many as 969,027 people boarded at Stock Exchange Station.

[***The fact remains that though actual ridership figures were lower than the estimated one but it was all success because in the whole world the projects take start like this.***

The MBS project was not built for a year or two but it is for decades to come. In that sense, the overall response of commuters was very high.]

The MBS Chief of the RWP-ISL authority told media that:

"Out of the total 68 buses we had been running 35. Recently, after seeing the response of the people, we have added 18 more buses for two hours every day. With the addition of these buses, the upcoming report will show improvement.

The non-availability of feeder buses was another main

reason why the NESPAK estimate was not achieved. Once feeder buses start functioning we will easily exceed the estimate of the daily ride as people love to travel in metro buses."

The introduction of feeder route network in the twin cities had faced delays. In November 2015, PMBA, after receiving higher bids than the reserve rate, scrapped the entire tendering process for the purchase and operation of 78 feeder buses on various routes in Rawalpindi. The CDA, which announced its plan to ply 22 feeder buses in Islamabad in ending 2015, had

also failed to take any practical steps. According to the initial plan four routes were selected for this purpose;

- *The first route commenced at Bhara Kahu up to Marghzar Zoo – covering Dhokri, Aabpara, Polyclinic and F-6.*
- *The second route from Rawat to Faisal Mosque.*
- *The third route will commence at Tarnol, up to F-9 Park and would cover G-13 and the areas between the G and F sectors, including Karachi Company.*
- *The fourth route will operate up to IJ Principal Road, and will commence at the Railway Carriage Factory.*

On 5th April 2016; an agitation by some political parties in Rawalpindi and Islamabad inflicted a loss of nearly Rs:30 million on the Punjab Mass-transit Authority [PMA]. The mob had attacked three metro bus stations; one of these was '**completely destroyed**'. They damaged steel fences in the corridor and some electrical and mechanical equipment; the authority had to suspend bus operations for four days to avoid further losses.

Nearly 120,000 people used to travel by RWP-ISL Metro Bus everyday. The suspension caused great inconvenience to the commuters as around 4,000 to 5,000 passengers board from every station daily.

In May 2016; some people approached the media offices with complaints against the MBS that despite an investment of Rs:44.8 billion and getting subsidy of Rs:2.5 billion per annum, it wasn't able to maintain itself even for one year, with its downfall starting after just 11 months of its inauguration on 4th June 2015. Despite the subsidy, there was little evidence of maintenance work being done for the Metro service.

> [*Most Pakistanis do not understand that public transportation is subsidized all over the world, including in developed countries. It is a basic social measure giving working class and poorer people access to reliable transit while those with money and means will continue to drive in their own cars.*
>
> *Unfortunately, most people have no real diversion in life other than to take a bus; so such ill-informed criticism shouldn't detract any government from providing low cost transport for poors.*]

Most Metro stations were facing technical issues. Many of the elevators, ticket machines, automatic gates and vocal alerts in buses were out of order. The roofs failed to provide relief from the rain and were in need of repair. The MBS employees were not satisfied; the amount of the salaries

they were getting and the irregular intervals between their salaries remained the major issues for months at least.

The 24-kilometre long RWP-ISL MBS, no doubt, was providing top class commuting services to the people of the twin cities but the absence of pedestrian bridges on metro tracks had created pronounced difficulties for walkers resulting in the loss of precious human lives. Hundreds of people cross the road in various areas for business activities but the hurtling traffic did not allow any pedestrian to cross the road unless there was a traffic signal, underpass or overhead pedestrian bridge to help them.

Pedestrian bridges were an absolute necessity at the busy roads in the twin cities. Due to the construction of metro terminals and the widening of roads, crossing the road went much hazardous.

Now see a traveller's account:

> *"I am a frequent traveller of the metro bus and it has made my life a lot easier since i do not need to go through the tortuous vans or expensive cabs. As for the 2600 per trip claim, i am not so sure that 130 people travel on it from end to end. i am guessing that any given time, 80-100 people are on the bus and on major stops around a dozen people get on and get off, so the number is certainly off by 50-100 passengers.*
>
> *It is also questionable as to how the trip costs Rs.9100? The trip one way is about 23-24 kms. The [critic] is suggesting that each kilometer is costing about RS:380. These are big buses no doubt but i am not so sure if that is an accurate idea. Even when taking into account the indirect expenses like staff pays at the stations and general maintenance.*
>
> *Lastly, public transport like this is often subsidized. Though i wouldn't be expecting Rs:50 per person, some subsidy is to be expected."*
>
> [The **'Express Tribune'** dated **29th June 2015** is referred]

THE CRITICS' ARGUMENTS:

A key question:

Whether the Lahore [and RWP-ISL] Metro-bus project(s) were EFFECTIVE?

To assess the project efficacy, the critics of the MBS compared the Metro-bus's rider-ship with overall vehicular trips in Lahore. With over 350,000 cars and 850,000 motorcycles on the city's roads, congestion, pollution and safety remained the key issues, the stated purpose of the MBS was to in-crease the share of public transport in Lahore, and accordingly to provide safe, reliable transport in a city of then nearly 7 million population.

A successfully designed public transport program should aim for at least 20 percent rider-ship, whilst the actual daily rider-ship for the Lahore MBS was 3.3 percent initially; the impact was therefore insufficient in reducing con-gestion in the city.

The main objections raised were:

- No overtaking provisions at stations eliminating the possibility to use multiple services on the same route, limiting the number of buses per direction.

- Bus stops are not big enough to accommodate several buses within the same stop.

- Insufficient investment in the bus fleet.

- Insufficient city-wide coverage to attract passengers, it is not a network but only one line.

- No provision of a feeder bus system to ferry passengers not living near the route.

- No linkages with the city's other modes of transport – bus, rail, air were provided.

- No provisions for transfer stations linking with future lines, as some stations are elevated.

- The Metro-bus should be an integral part of the overall city transport network and should inform the future development of the city, future public transport corridors should be part of the master plan for all new developments, including DHA, etc.

According to the American Public Transport Association BRT infrastructure should cost US $2-18 million/km, the Lahore Metro-bus infrastructure capi-

tal cost was more expensive as compared to international benchmarks. As per published figures, the infrastructure costs per km (*all costs escalated to 2014*) for BRT for various cities were:

Infrastructure cost per km	
Xiamen	**4.89 billion yuan per km** 2008 value. Baidu Baike. ~35km elevated (十二月-15)
Kuala Lumpur	**111 million MYR** 2015 value. US$26 million (十一月-15)
Brisbane	**AU$27.6 million** 2001 value. SE Busway - later corridors higher cost (value shown: 24) (八月-15)
Islamabad	**US$20 million** 2015 value (十二月-15)
Cali	**US$14.44 million** 2012 value. Source: IADB 2015 (七月-13)
Los Angeles	**US$14.3 million** 2005 value. **$35.8m** for Chatsworth extension in 2012 (七月-13)
Amsterdam	**US$11m** Source: bic.asn.au (七月-11)
Lima	**$9.67 million** 2010 value. US$262m for first corridor (七月-11)
Bogota	**US$5.3m (phase 1), $13.3m (phase 2)** US$5.3m (phase 1), $13.3m (phase 2) (七月-13)
Nantes	**7.58m euros** 2006 value. **50m euros** for the 6.6km (七月-11)
Istanbul	**US$8.8 million** 2007 value. Includes infrastructure & equipment (Source: IETT) (七月-12)
Paris	**6.43m euros** Based on cost of 7km Marché international de Rungis to La Croix de Berny stations in 2005 (45m euros) (二月-16)
Lanzhou	**595m yuan for 12.3km** 2012 value (十月-15)
Yichang	**44.8m yuan** 2014 value. Not including some land acquisition
Beijing	**40m yuan** 1st corridor only. **US$4.8m** at Jul-04 rate (六月-15)
Guangzhou	**30m yuan** **US$4.4m**, Jul-09 rate (九月-14)
Changzhou	**30m yuan** 1st corridor only **US$4m** at Jul-07 rate (十一月-15)
Yinchuan	**420m yuan for 21km** 2012 value. Total cost source: Baidu Baike (十一月-15)
Dalian	**19.5m yuan** US$2.6m, Jul-07 rate (三月-14)
Pune	**13 crore INR** 2015 value (十二月-15)
Zhongshan	**110 m yuan for 12.9km** 2014 value (七月-15)
Jakarta	**US$1 million** 2004 value (三月-13)
Leon	**US$1m** Source: bic.asn.au (六月-13)

[**Source:** *www.worldbrt.net & www.Chinabrt.org*]

In another analysis, given exact comparison of facts and figures from our neighbouring country, the position came up as:

Amritsar [India] Metro [2013]	**Lahore Metro [2013]**
31 km long	27 km long
12 km Bridges included	8 km Bridges included
78 Buses Fleet	64 Buses Fleet
Cement Rate PRs:480 per bag	Cement Rate PRs:450 per bag
Steel Rate PRs:69,000 per Ton	Steel Rate PRs:67,000 per Ton
Cost Rs:290 m per km	**Cost Rs:1110 m per km**
Cost Rs:9 bn for 31 kms	**Cost Rs:30 bn for 27 kms**

Given lower labour costs in Pakistan and averaging the above figures, a fair estimate for infrastructure costs should have been $5-7m/km approximately. Therefore, at $11m/km for the Lahore Metro-bus and $20m/km for RWP-ISL metro-bus, the costs were substantially higher than the benchmark.

According to the Punjab government's own statistics:

- ***Rs:30 billion were spent on the project – NO TENDERS CALLED EVER.***
-
- ***Initially no development budget was allocated to this project; which was completed through enormous cuts in other departmental allocations including Health & Education.***
-
- ***The project was never discussed in the provincial cabinet meeting nor brought over the assembly's floor to gain general consensus or at least a debate.***

The entire budget allocated for Punjab's infrastructure development was Rs:63 billion for that financial year; meaning thereby that 50% of the development budget of Punjab was spent on one project only. That excluded the cost of the numerous underpasses and overhead bridges that were built in Lahore through PWD's own allocations.

Comparing that Rs:30 billion to the Rs:16.5 billion allocated to the Health sector for the entire province of Punjab. Education was given even less than that. A state of the art hospital like the recently developed RWP Institute of Cardiology was built in Rs:2.8 billion, taking that as a benchmark,

Punjab could have built 10 such hospitals more with that money – however, the mass transit system was also badly needed for the poor Lahoriites.

The 'on ground' situation was quite confused till the end of government's tenure in March 2013. Out of the 45 Chinese buses — each being 18 metres long and having the capacity to carry 150 passengers — only 20 were set for the run in the beginning. The total cost of the buses was Rs:1.26 billion; a modern ticketing system on the 27-station route was later installed like other developed countries.

Initially, wardens of the City Traffic Police were scheduled to escort the bus service at different points in order to ensure a smooth flow of traffic moving along the metro buses or crossing intersections on the way. Work on the installation of elevators as well as the construction of bus stations on 8.6km long overhead bridge from *Ichhra* to *Taxali Gate* was built for that and that was the real state of the art planning work.

The project was an imitation of the existing BRT operations in Turkey and it had a Turkish consultancy contributed for completing its technical feasibility. Saeed Akhtar, Chief Engineer, TEPA [Traffic Engineering and Transport Planning Agency] Lahore told that:

> *"We are trying to make the project as public friendly as possible. There will be eight to 10 points [or mini stations] on the route.*
>
> *We intend to remove the steel bars and install traffic signals to give access for U-turns, the kind you see on the Naseerabad crossing on Ferozpur Road and the crowded Yadgar Chowk.*
>
> *At some places, underpasses are being built, like the one at Kalma Chowk."*

Lahore Development Authority [LDA], TEPA and six other contractors — namely, National Logistics Cell [NLC], Makksons, Sarwar & Company and two joint ventures of SKB & Al-Bayrek and ZKB were scheduled to complete the project in time, but of course with no tendering process because of haste – but the PML[N] urged that it was to avoid the red-tapism in the government departments.

MBS boasted in the buses separate compartments for men and women, a timetable was framed in such a way that the new bus would be available at a given station every three minutes. The buses were expected to carry

8,000 passengers over an hour's time and, hence, were able to transport at least 100,000 persons in 14 working hours a day.

Overall, the project aimed at the construction of 32 overhead bridges, every one kilometre of the main carriageway for the pedestrians. The bridges were furnished with automatic staircases to facilitate the old-aged passengers, women and children also.

As many as eleven parking places were added to the MBS corridor to facilitate the parking of the public vehicles of the passengers who opt to reach the MBS station on their own vehicles. An additional two corridors for the MBS were scheduled on Multan Road and Canal Road.

The Punjab government's Planning & Development [P&D] department approved funds worth Rs:151.526 billion for development projects from July to Dec 2012, against the total annual development programme of Rs:210 billion which included Rs:84 billion for roads and transport development projects in some other areas of the CM's interest.

Referring to the ***daily 'Jang' dated 13th February 2013***, the Punjab government issued a notification that no construction work would be done within 150 sq kms of the Sharif Complex Raiwind because of security threats. No permission would be granted to any private or state housing around 'village *Jati Omra*'; why so. The political opponents roared that it was a planned move to snatch the lands within those 150 km around to widen the Sharif Complex's boundaries.

Rs:5 billion was spent on giving away laptops; a political stunt only under pick & choose policy mostly confined to five cities. Although the goodwill gesture behind the act remained, pragmatism was in severe dearth. Unfortunately, most schools in Pakistan lack basic infrastructure, sanitation and clean drinking water – laptops was a far off dream.

In the surroundings of bad performance of the PPP government, Punjab's PML[N] was apparently doing much better. The province's annual average growth rate remained 2.5% between 2007 and 2011 [*Lahore-based* ***Institute of Public Policy*** *(IPP) is referred*], of course, despite acute shortage of gas and power.

But why Punjab had not installed its own power generation units to meet the short fall; it could have been the most valued priority for PML[N].

On 4th January 2016; The government decided to extend the metro bus route from Shahdara to Rachna Town; the CM Punjab Shahbaz Sharif held that the extension of Metro Bus route by five kilometres would benefit a large number of people. He further directed that the project should be completed within stipulated period.

Frontier Works Organisation [FWO]'s Director General [DG] Maj Gen Muhammad Afzal, the Planning and Development Board Chairman, the Finance Secretary and the Lahore Development Authority [LDA]'s DG attended the meeting in which the above mini project was announced.

Referring to **'the Express Tribune'** dated **18th October 2016**; the Lahore MBS added 200 new buses which eased some of Lahore's transport woes; otherwise it reflected the public approval at large.

Since its launch, the metro bus system has been much criticised, and often very rightfully so, for its high expenditure and cost ineffective transport system, but the need for a mass transit system was, of course, undeniable. The metro bus offered not only an affordable and comfortable journey, but also a dignified one. The way in which people were forced to commute in Pakistan, hanging out from bus exits and sitting atop the roof was not only dangerous, gender-discriminatory and extremely inconvenient, but also causing with a major health cost.

The public transport crisis in Pakistan should have been addressed more seriously. The Punjab government needed to expand its focus from Lahore to other parts of Punjab. Other provincial governments, especially of Sindh, needed to provide an efficient transport system to Karachi's nearly 22 million residents. In fact, Karachi's bus network had been on the decline since decades. There were only 9,527 operational minibuses left in Karachi in mid 2016, as compared to the 22,313 it had in 2011.

In the past decade, the country's urban centres had seen rapid investments in road and bridge constructions. All this had been for those who could afford private motorised transport and even then, the traffic situation was not improved. In Lahore, despite huge investments, grave traffic problems remained; more vigorous planning needed.

For **RWP-ISL Project**, an analysis appeared in the **'Dawn'** dated **27th September March 2014** is worth consideration here.

The Rawalpindi Development Authority [RDA] started revising budget of the Metro Bus Project [MBS] as the estimated cost was ***'likely to go up'*** from Rs:44.21 billion to Rs:50 billion.

Some anomalies at the very beginning stage of the project were reported. To cite few of them; for land acquisition, Rs:1.2 billion were originally allocated, but within six months the cost increased to Rs:2 billion. The opposition's leadership argued that it was because one PML[N]'s Hanif Abbassi from Rawalpindi was made in-charge of the project to compensate his defeat in 2013's elections.

The government desk simply placed the onus on Imran Khan's *dharna* in Islamabad during August-December 2014 which didn't appeal the general populace whatsoever. The Commissioner Rawalpindi and Project Director MBS Zahid Saeed told the media that work was slow because of political unrest in Islamabad.

Moreover, a shrine on Murree Road was not falling on the route of the bus service but later that area was also included due to which the government had to acquire more land and compensate the custodian of the shrine.

A total of 27 kanals [*kanal is a unit of land measuring in Indo-Pakistan – equivalent to about 600 sq meters*], including 19 kanals of private land, was acquired for the construction of bus stations on Murree Road.

Work on IJ Principal Road and 9th Avenue remained at slow pace due to relocation of graveyard and acquisition of land for metro bus depot. Someone had approached the Islamabad High Court to stay relocation of the graveyard.

> [*Globally 80 percent of commuters use trains, both over ground and underground, as the preferred means of travel; trains regularly reach speeds of 100 kph and carry up to 800 passengers per train, unlike buses that travel at 25 kph and carry 100 passengers.]*

At current growth rates, by 2035 Pindi-Islamabad would have a combined population of nearly five million, given that most of whom would not be able to afford living in Islamabad, and that the extended city would stretch from Hasanabdal, Fatehjang to Mandra, the transportation master plan could have taken cognizance of that fact in its design intent.

Going by costs, as stated above, the cost of the Pindi Metrobus should have been approximately $6m/Km as compared to the actual estimated cost of Rs:50 billion for 24.5 km or $20 million/km. It indicated the most glared example of massive corruption in Pakistan by the political and bureaucratic heads of the said project.

Based on surveys in early 2014, about 200,000 vehicles / day travel from Rawalpindi to Islamabad or 550,000 (persons) trips take place daily be-

tween the two cities. Assuming at 50 percent capture for public transport then, the designed capacity of the Metro-bus should have been at least 300,000 trips / day as opposed to the designed stated capacity of 150,000.

The project would go disrupted after 10 years when the passengers would be at least ten times more – the project was not capable of handling the needs till ending the PML[N] government tenure in early 2018; what a foresightedness of project designers and the political elites at the helm of affairs; one could consider the factors involved.

No one would be able to find evidence of corruption in Pakistan as per prevailing practices ***but it was the most expensive metro-bus project in the whole world.***

In *'**the News'*** dated ***9th August 2015,*** however, the government's spokesman tried to dispel the above impression by saying that:

> *"In the execution of the Metro-bus System [MBS], the contracts were awarded after due tendering process strictly in accordance with PPRA rules. The said signal-free corridor for which 13 vehicular underpasses and two flyovers have been constructed, was approved at a total cost of Rs:44,840 million but was completed with Rs:42,810 million resulting in savings of over Rs:2 million."*

The government also mentioned that in BRTs worldwide, the adjusted cost of infrastructure based on average annual inflation rates for respective countries, extracted from the website of the World Bank, were as under:

- The Ahmedabad Janmarg [India] BRT system was commissioned in 2009 at $2.4 million per kilometre. The average annual inflation rate since the time of commission was 6.84pc, ending in the adjusted cost becoming $3.57 million per km.

- In China's Changzhou [commissioned in 2008; costing $4 million per km], with average inflation at 4.01pc, the adjusted cost was $5.27 million per km.
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- China's Beijing system [commissioned in 2004; cost: $4.8 million per km], with average inflation at 1.38pc the adjusted cost was $8.03 million per km.
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- Paris' First Line system [commissioned in 2005; cost: $7 million per km], with average inflation at 4.01pc the adjusted cost was $5.27 million per km.

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- Istanbul's system [commissioned in 2007; cost: $8.8 million per km], with average inflation at 7.43pc the adjusted cost was $15.61 million per km.
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- The Lahore MBS was commissioned in 2013 and cost $11 million per km; with average inflation at 8pc the adjusted cost was $12.83 million per km.

Then why the RWP-ISL Metro commissioned in 2015, its cost: $20 million per kilometre; with average inflation at 8pc.

The PML[N] spokesman justified that the per km cost of RWP-ISL system was launched with major roadway improvements including a cloverleaf interchange at Peshawar Morr [Rs:4,940 million], new bridge on Nala Lai [Rs:352 million], rehabilitation of the existing road network and other additional works [Rs:2,705 million].

But even if the above expenditures are accepted without scrutiny [though the critics speak high about kick-backs gone in the coffers of PML[N]'s former local MNA], the cost appeared up to $16.360 million per km – no cogent explanation given by the PML[N] government except that there were certain additional facilities with RWP-ISL Metro. The comparison appeared interesting:

> *"The Ahmedabad system has no escalators, elevators and generators or passing lanes. It does have PSDs. In Changzhou China there are elevators and escalators but no generators and passing lanes. Beijing China has no such facilities. Paris' First Line system also has no such facilities, while in the Istanbul system too there are no escalators, elevators are less than 20 percent and no PSDs or passing lanes exist.*
>
> *The RWP-ISL MBS, on the other hand, has escalators, PSDs, generators and passing lanes costing Rs:2,935 million."*

The PML[N] government held that one-on-one comparison of cost was not justifiable due to differences in geometric design [elevated, at-grade and trench sections] and various other BRT features provisioned for facilitation of passengers. For example, in the RWP-ISL Metro, 8.6 km was elevated and 4km was trench section which had a significant impact on cost whereas other BRTs were predominantly designed as at-grade facilities.

[*The Ahmedabad system has no elevation or trench, its at-grade is 39km and that was all. Changzhou too has no elevation or trench and its total is 54km. Beijing shows a similar situation (some trench sections present but insignificant) and its total length is 79km. Paris' First Line too has some trench section but insignificant, no elevation and its total is 19km. Istanbul has no elevation, no trench and a total of 51.7km.*

The Lahore MBS has elevation of 8.3km, at-grade of 18.7km, no trench section and a total of 27km. The RWP-ISl MBS has elevation of 8.6, at-grade of 9.8, trench 4 and total of 22.4km.]

Had the RWP-ISL MBS planned as an at-grade facility, its per kilometre cost could be worked out at $10.780 million per km. This MBS was designed for a peak capacity of 24,480 passengers per hour per direction [pphpd] whereas the capacities of quoted BRT examples were far less, except the Istanbul Metro-bus. [**Source:** *BRT Planning Guide 2007*]

Parallel to this assertion, the Boston BRT, built at a price of $53 million per km holds the record of being the most costly BRT in the world; followed by Nagoya with $47 million per km; Pittsburgh West Busway at $31.5 million per km and Brisbane – $24 million per km.

MULTAN METRO-BUS SERVICE:

On 5th June 2014; Punjab Chief Minister Shahbaz Sharif declared that the work on Multan Metro Bus project would begin in new financial year [2014-15 and Rs:32 billion was earmarked for 32-km long route. The project was to be accomplished within one year. The CM visited the route personally and approved it. Orders were issued for constitution of a four-member committee comprising two MPAs and as many MNAs for finalizing different proposals on the project.

The CM assured that the transparency and quality would be ensured in Metro Bus project. As per blue print of design, the Metro Bus route was to run on two routes connecting different areas of the city like *Bahauddin Zakariya* University, *Chowk Kumharanwala* and BCG Chowk [square]. The first route covered a distance of 19km and the citizens could be able to travel between Bahauddin Zakariya University and Gaddafi Chowk via *Gulgasht, Chungi No-6, Chungi No-9 and Khanewal Road*.

The other route was to run between Chungi No-9 and BCG Chowk covering another 9km in other direction. Over 20 modern stations were to be constructed for passengers on these two routes.

The Construction of the Multan MBS started in early May 2015 and was scheduled to be completed by December 2016 but a considerable development could be seen well ahead of May 2016, a re-settled deadline. About forty per cent [40%] work on the project was completed in three months; completed 85 percent of the pile work, 61 percent piers cap, 25 percent transoms, and 53 percent work on girders.

The Chief Engineer of the project Mr Sadozai hoped that they would be able to complete most of the remaining work ahead of the given deadline. The hurdle remained because only Rs:4 billion were released initially. Escalators and elevators used in the Metro Bus Project Stations were made in a European country while the stations were being built in view of weather conditions in Multan locally.

Isolated panels were to be used to make roofs of the stations leak proof; the decision had been taking following the unpleasant experience of metro bus stations in Rawalpindi and Islamabad. ***"... there will be no compromise on quality,"*** the Chief Engr Sadozai held.

On 24th January 2017; Prime Minister Nawaz Sharif inaugurated Multan Metro Bus project.

The project was completed at a cost of over Rs:28.88 billion. The route of metro bus service was from Bahauddin Zakariya University to *Chowk Kumharanwala*. There were 21 stations and one under pass on the route of bus service. Even the critics hailed the efficiency and transparency of the Project Director Sabir Sadozai because Multan Metro Bus project was better than Lahore and RWP-ISL projects.

Ninety seven thousand commuters were likely to avail the facility daily and it kicked off with 35 buses. The project included 21 bus stations spread over an 18.5km route. The government claimed that the project was technically faultless and as many as 2,600 jobs would be created over time due to the project.

The project had been divided into nine phases, and that Rs:356 million had been paid to various departments for the shifting of various services on the route. *"The project's life is 50 years, but if it is properly repaired and cared for, it can be useful for 100,"* the engineers claimed.

FAISALABAD METRO BUS;

On 1st February 2014; Punjab Cabinet formally approved the mass transit scheme in the city of Faisalabad; Pakistan's third largest city was selected to see the modern transport system within next two years positively. Chief Minister Punjab Shahbaz Sharif chaired the cabinet meeting held in CM's office at 7 Club Road Lahore.

On 28th February 2014; Punjab's Minister for Local Government and Law, Rana Sanaullah Khan told that the work had been started for the preparation of feasibility report with regard to launching of metro bus services in various cities including Faisalabad.

Earlier, MD Punjab Metro Bus Authority [PMBA], Sibtain Fazl-e-Haleem informed the participants of the meeting that work on data collection with regard to metro bus in Faisalabad was in hand to evolve final and viable model of metro bus service.

The MD PMBA had then vowed that metro bus project Faisalabad would be completed within ten months – but till ending 2016 there was nothing seen on ground.