

BOOSTING EMPLOYMENT AND ACCESSIBILITY

INVESTING IN INDIA'S PUBLIC TRANSPORT SECTOR

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INTRODUCTION

Public transport is an essential part of Indian cities as it provides affordable access to mobility for two-thirds of Indian households which don't own a personal car or a two-wheeler¹. The sector also employs as many as 10 million people and hence is one of the largest creators of local jobs across the country². The coronavirus pandemic has severely impacted the public transport sector due to a prolonged shut down of operations during the lockdowns and the gradual resumption of services, starting only recently with many service providers yet to reach pre-Covid service levels³. Even as the services resume with adequate cleaning and sanitisation protocols, the ridership levels are yet to reach pre-Covid levels due to the combined effect of subdued economic activity, increased preference to conduct work and educational activities from home and users' perceived risk of contracting the virus. Given the large public transport-dependant population, Indian cities need to resume pre-pandemic levels of service and take up confidence-building measures to reassure users.

The public transport sector needs financial assistance from national, state and city-level governments to address the losses incurred due to Covid-19, to be able to continue providing the services needed to meet users' requirements. Cities around the world are implementing various measures such as financial aid and contractual rearrangements to support public transport systems in their financial recovery⁴. However, the financial support to Indian public transport systems has been limited so far. In this context, this Policy Brief evaluates the impact of alternative transport sector investments being made by governments in India to make the case for increased investments in public transport, given their additional benefits.



¹ Bhattacharya, 2016. [One in three households in India owns a two-wheeler.](#)

² Business Standard, 2020. [Covid-19 has led to 2 million job losses in bus, taxi sector: BO-CI.](#)

³ UITP, 2020. [Impact of Covid-19 on Indian bus operators. Statistics Brief.](#)

⁴ Burroughs, 2020. [Berlin Senate approves €19bn, 15 year contract with BVG.](#) International Rail Journal; Rubiano & Darido, 2020. [Protecting public transport from the coronavirus...and from financial collapse;](#) Transport for London, 2020. [Government support package to help deal with financial impact of Covid-19.](#)

AN ECONOMIC BOOST IN THE WAKE OF COVID-19

India's gross domestic product (GDP) has fallen sharply by 23.9% in the first quarter of financial year (FY) 2020-21 due to the Covid-19 pandemic, the lockdowns and limited economic activity even beyond the lockdowns⁵. This has already led to the loss of more than 130 million jobs and the trend is likely to continue over the next year⁶. The Economic Advisory Council (EAC) of Prime Minister Narendra Modi has recommended spending big on infrastructure to stimulate the economic activity and create jobs⁷. The EAC proposed to use the INR 100 lakh Cr (\$1,333bn) National Infrastructure Pipeline (NIP) created by the NITI Aayog as the reference document to guide the economic stimulus⁸. The transport section of the NIP focuses solely on improving road infrastructure and doesn't have budgetary provision for other modes of transport. Simultaneously, the Society of Indian Automobile Manufacturers (SIAM) is advocating for a stimulus to support the auto industry, citing that they're among the largest employers in the country⁹. The Government of India has also indicated the development of a scrappage policy to incentivise older vehicles with newer, more environmentally friendly ones, which also helps increase vehicle sales and boosts the auto industry¹⁰.

While the popular discourse focuses on investments in road building and supporting the auto industry, there's limited public discourse on the support needed for the public transport sector. At the same time, the various areas of economic stimulus mentioned above are currently being discussed independently with limited analysis on their relative benefits. Given the resource-constrained environment in which central and state governments are operating currently, it is important to prioritise investments to the sectors with the maximum impact. To support such prioritisation in the transport sector, we present a comparative evaluation of the short-term benefits likely to be accrued from government investments among the following options:

1. Investment in road infrastructure development
2. Investments to support the auto industry
3. Investment in bus service improvements

ANALYSING THE BENEFITS OF ALTERNATIVE INVESTMENT CHOICES

UITP has already assessed the long-term impacts of alternative investments in the transport sector and established that **public transport investments yield up to twice the social, economic and environmental benefits and jobs delivered by a highway improvement project**¹¹. Available literature on short-term investments like stimulus packages also point to similar results: The International Labour Organisation's (ILO) recent report, *Jobs in green and healthy transport*, concludes that **public transport investments create two to three times more local jobs in the transport sector compared to the auto-manufacturing sector**¹². Similarly, assessments of transportation funding under the American Recovery and Reinvestment Act (ARRA) in 2009 showed that **public transport created 31% more jobs compared to road infrastructure development projects**¹³. However, we couldn't find a similar assessment for the Indian transportation scenario.



To address gaps in the available literature, we used a wide range of secondary data sources to compare the benefits accumulated from government investments in the three transport sub-sectors listed above using FY 2016-17 as the reference year. The number of mandays of jobs created and the number of people with increased access to mobility were derived and compared to evaluate the return on investments. The supplementary annexe explains the data sources and methodology adopted to derive the results presented below in further detail.

5 Government of India Press Information Bureau, 2020. *Estimates of gross domestic product for the first quarter (April-June) of 2020-21*. Ministry of Statistics & Programme Implementation.

6 India Today, 2020. *India to lose 130 million jobs due to Covid-19 pandemic: Report*. • 7 Surojit & Sidhartha, 2020. *Spend big on infra for revival: Advisers to PM*. The Times of India.

8 Department of Economic Affairs, 2020. *National Infrastructure Pipeline: Volume I*. Ministry of Finance, Government of India.

9 PTI, 2020. *SIAM says automobile sector left out in economic package*. The Economic Times.

10 Chakravarty, 2020. *India all set to bring in vehicle scrappage policy: What it means*. Hindustan Times.

11 UITP, 2020. *Cities for people: Public transport for better lives*. Policy Brief; UITP, 2018. *Public transport: Moving Europe forward*. Report.

12 ILO, 2020. *Greening the transport sector in the post COVID-19 recovery could create up to 15 million jobs worldwide*.

13 Smart Growth America, 2011. *Recent lessons from the stimulus: Transportation Funding and Job Creation*; Nelson et al., 2009. *The best stimulus for the money*. Smart Growth America.

EVALUATING EMPLOYMENT GENERATION AND ACCESSIBILITY BENEFITS OF ALTERNATIVE INVESTMENTS

The table below one summarises the employment generation and access to mobility benefits likely to be derived through a government stimulus of INR 10,000 Cr (\$1.33bn) for the three transport sub-sectors evaluated, based on results from investments made in FY 2016-17.

Type of investment for a budget of INR 10,000 Cr (\$1.33bn)	Mandays of employment generated (million)	Access to mobility (billion passenger-trips)
Investments in road Infrastructure development	3.2	2.8
Stimulus to automobile industry	41.8	0.4
Stimulus to improve public bus services	110.4	10.6

As shown, the bus sector provides more employment opportunities than the auto industry. Public bus services generate 110.4 million (11.04 Crore) mandays of employment for INR 10,000 Cr (\$1.33b) of investment while the auto industry and road-infra development create 41.8 million (4.18 crore) mandays and 3.2 million (0.32 crore) mandays of employment respectively. **Therefore, buses generate 2.6 times the mandays of jobs generated per unit investment in the auto industry and 34.5 times the mandays of jobs generated per unit investment in road infrastructure development.**

In addition, the bus sector can provide better access to mobility. Public bus services are likely to cater to 10.6 billion passenger trips for the proposed investment while auto industry and road-infra development investments are likely to cater to 0.4 billion and 2.8 billion passenger trips respectively. **Buses provide access to mobility to 3.8 times more people compared to investments in roads and 26.5 times more people compared to investments in the auto industry.** As a result, investments in road infrastructure development generate the least number of jobs and investments in the automobile industry provides the least access to mobility.

The results clearly establish that investments in public bus services yield the best return on investments in terms of both employment generation and access to mobility. **It is recommended that the government stimulus to the transport sector is focused on improving public bus services to ensure maximum returns on investment.**



GAPS IN THE CURRENT DISCOURSE ON INVESTMENTS IN INDIA'S TRANSPORT SECTOR

While our analysis establishes public transport as the investment with the best returns, the popular discourse on the transport sector investments is focused more on road-infrastructure developments and stimulus to the auto sector in the form of a vehicle scrappage programme. We'd like to highlight the following gaps in the arguments presented.

GAPS IN THE NATIONAL INFRASTRUCTURE PIPELINE

The NIP by NITI Aayog takes the global competitiveness index (GCI) of the World Economic Forum as the basis for reforms in India and recommends road development as the key objective. This is despite India's higher score on road connectivity than quality of available roads, train connectivity and services. While improved global competitiveness is desirable in the long run, we believe that the government's stimulus package should target shorter-term objectives like benefitting the maximum people through employment and accessibility benefits. India already has the second highest road density in the world, after France¹⁴. Even in 2019, the Government of India identified that the investments made in new highways aren't financially viable, as the travel demand isn't adequate to generate the toll revenues needed to break even¹⁵.

14 MORTH, 2018. *Basic Road Statistics of India*.

15 Gupta, 2019. *Should NHAI stop road construction? PMO asks Gadkari's ministry to respond*. The Print.

Given the already high road network connectivity and the poor financial outlook for upcoming highways, it is recommended that national and state investments re-allocate some of their road infrastructure development expenditure and instead focus on public transport improvements to deliver better employment and accessibility benefits.

OVERESTIMATION OF THE AUTO INDUSTRY'S CONTRIBUTION TO JOB CREATION

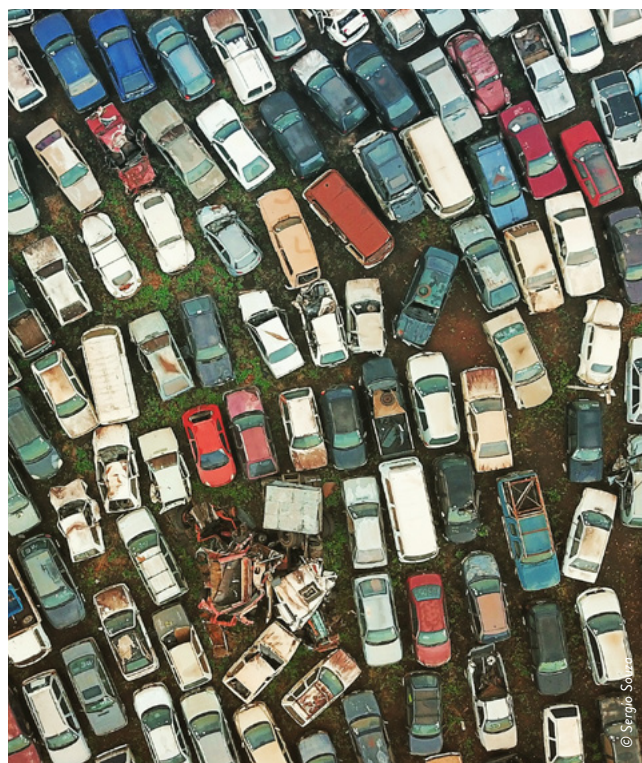
It is commonly quoted in the media that the auto industry employs 37 million people and this statistic is commonly leveraged to call them as a key job creator and hence the need for government investments to support the sector. However, data from the Periodic labour force survey from the organised sector and the national sample survey (73rd Round) for the informal sector analysed by the Research Unit for Political Economy (RUPE) establishes that this is an overestimate¹⁶. **Direct jobs in the auto sector, including formal and informal employment in manufacturing, sales, repair and servicing form only 5.2 million out of the 37 million claimed by the industry¹⁷.** An additional 5 million jobs are estimated to be created by the auto-component manufacturing industry, which is predominantly under the micro, small and medium enterprises (MSME) category which has already received significant stimulus from the government¹⁸. The remaining 26.8 million are indirect jobs such as vehicle drivers, insurance agents and so on which are hard to verify¹⁹. The 5.2 million direct jobs in the auto sector are about half of the 10 million direct employment in the bus and taxi sector and is still lower than the 5.6 million jobs created just by the owners and operators of the 5.6 million registered three-wheelers²⁰.



In summary, **passenger transport services in the form of bus, taxi and three-wheelers currently provide direct employment to about three times the number of people compared to the number of people employed in the auto sector.** Hence, investments in passenger transport services are likely to have a more direct impact on the livelihoods of people and will create local jobs across the country, compared to concentrated jobs in the auto-manufacturing clusters.

PITFALLS OF THE PROPOSED VEHICLE SCRAPPAGE POLICY

The Government of India has also expressed its intent to launch a vehicle scrappage policy that recommends providing financial incentives to users in a bid to scrap old and polluting vehicles from Indian roads and to stimulate demand for the auto industry.



Vehicular pollution is a combination of the emission standard of vehicles used and their level of usage (km travelled). Analysis of urban passenger vehicles in cities and intercity freight vehicles show that the most used and hence the most polluting vehicles in Indian cities are already young, with about 90% of the vehicles being less than 10 years old and unlikely to be qualifying for the scrappage programme²¹.

16 RUPE India, 2019. *Is the Auto Industry Really 49% of India's Manufacturing Sector? Does it Employ 37 million?*

17 MOSPI, 2018. *Periodic Labour Force Surveys*; MOSPI, 2018. *ASI Summary results*. • 18 Rebello, 2020. *MSME stimulus paves way for more credit flow*. The Economic Times.

19 DHI 2006. *Automotive Mission Plan (AMP) 2006-2016*. Ministry of Heavy Industries and Public Enterprises, Government of India.

20 MORTH, 2017. *Road Transport Year Book*. Ministry of Road Transport and Highways, Government of India.

21 Malik & Tiwari, 2017. *Assessment of interstate freight vehicle characteristics and impact of future emission and fuel economy standards on their emissions in India*. Energy Policy; UNEP, 2014. *Assessment of Motor Vehicle Use Characteristics in Three Indian Cities*.

Furthermore, the daily-km travelled by vehicles older than 10 years is at least 80% lesser compared to new vehicles. The lower share of the older fleet and their lower usage pattern together results in them having a lesser share of overall transport emissions. Learnings from international vehicle scrappage programmes such as Cash for Clunkers in the USA show that the programme resulted in increased sales of SUVs and diesel cars to replace old and smaller cars. This further accelerated oil demand and air pollution²². Hence, a scrappage policy needs to be tied to ambitious fuel economy regulations to trigger innovation and accelerate the electric vehicle industry. It can also be linked to specific geographies with high air pollution, like the Ultra-Low Emission Zone (ULEZ) initiatives being pursued in Europe to reduce congestion and enhance air quality.



CONCLUSIONS

Public transport is an essential service for about two-thirds of Indian households which don't own a personal vehicle. Therefore public transport services need to be sustained through the Coronavirus pandemic to ensure universal access to jobs, schools and other services and in the process, support India's economic recovery.

However, many transit operators are witnessing up to 90% drop in their revenues due to a sharp decline demand caused by a combination of limited economic activity during and post-lockdown, and users' perceived risk of virus transmission while using public transport. Urgent measures to improve the service levels and to attract users back to public transport are needed. However, the financial stress caused to public transport service providers has severely impacted their chances of sustainability through the pandemic and beyond.

The Government of India and the states are faced with alternative pathways to provide an economic stimulus to the transport sector such as improving road infrastructure, supporting the auto industry and investing in better public transport. This Policy Brief sought to understand the relative benefits of investments in these alternatives by providing a comparative assessment. More details can be found in the Annex.

The analysis establishes that the direct employment and accessibility benefits of investment on buses significantly outweigh investments in road infrastructure development and a stimulus to the auto industry. Bus investments generate 2.6 times more employment compared to an equivalent investment in the auto industry and provide access to mobility to 3.7 times more people compared to investments on roads.

In this context, we recommend that the Government of India and states prioritise public transport investments as they plan for investments to stimulate economic activity, thereby ensuring the sustainability of the transit agencies and at the same time maximising benefits derived from the investments, such as access to mobility and employment.



RECOMMENDATIONS

- National, state and city governments need to improve public transport service levels and build confidence among their users to help accelerate economic recovery in Indian cities.
- Financial support from the government is essential to support service providers in recovering from the losses made during the lockdowns and the lower ridership and revenue observed post service resumption.

- Investments being planned on road infrastructure improvements and the vehicle scrappage programme should be realigned to generate the immediate financial support necessary for public transport agencies to face the financial crisis posed by Covid-19.
- In the long-term, government investments in the transport sector need to prioritise public transport given its relative advantages in providing accessibility, employment and other societal benefits such as affordability, space, energy and emissions efficiency.

This is an official Policy Brief of UITP, the International Association of Public Transport. UITP has more than 1,800 member companies in 100 countries throughout the world and represents the interests of key players in this sector. Its membership includes transport authorities, operators, both private and public, in all modes of collective passenger transport, and the industry. UITP addresses the economic, technical, organisation and management aspects of passenger transport, as well as the development of policy for mobility and public transport worldwide.

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