

# **Financing Strategies: Improving Public Expenditure Efficiency**

## **National Workshop on Infrastructure Financing Strategies for Sustainable Development**

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### **Organized by**

The United Nations ESCAP and National Planning Commission, Government of Nepal

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# Agenda

1 Brief assessment of infrastructure funding

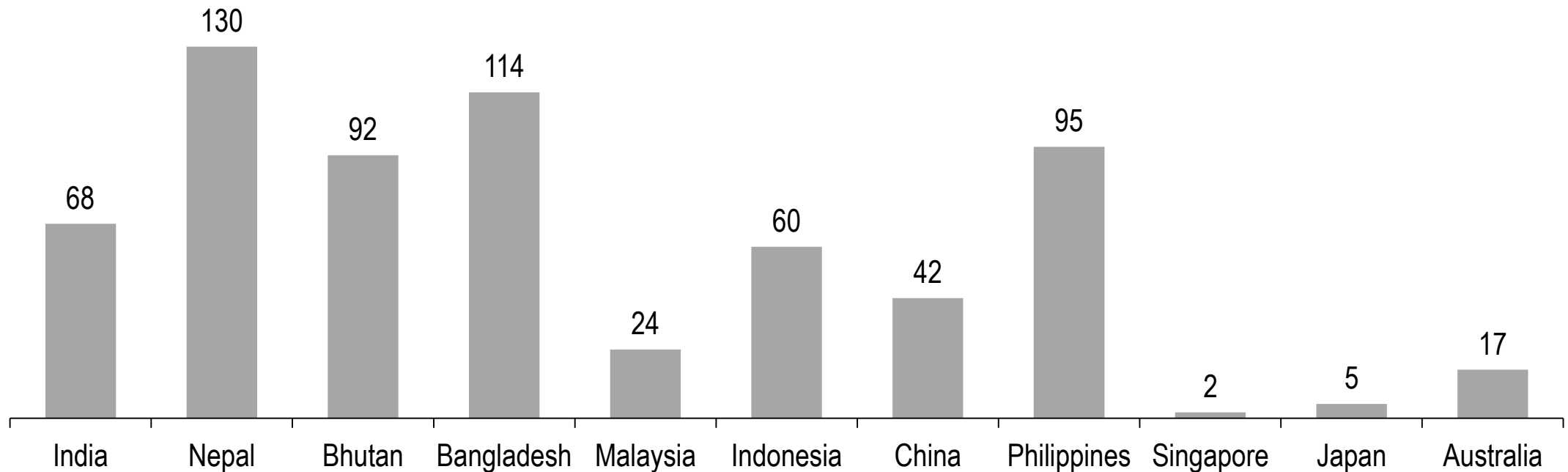
2 Measures to improve public sector spending

3 Concluding Remarks

# Brief Assessment of Infrastructure Funding

## Asia-Pacific region lags behind in infrastructure development when compared to developed countries across globe...

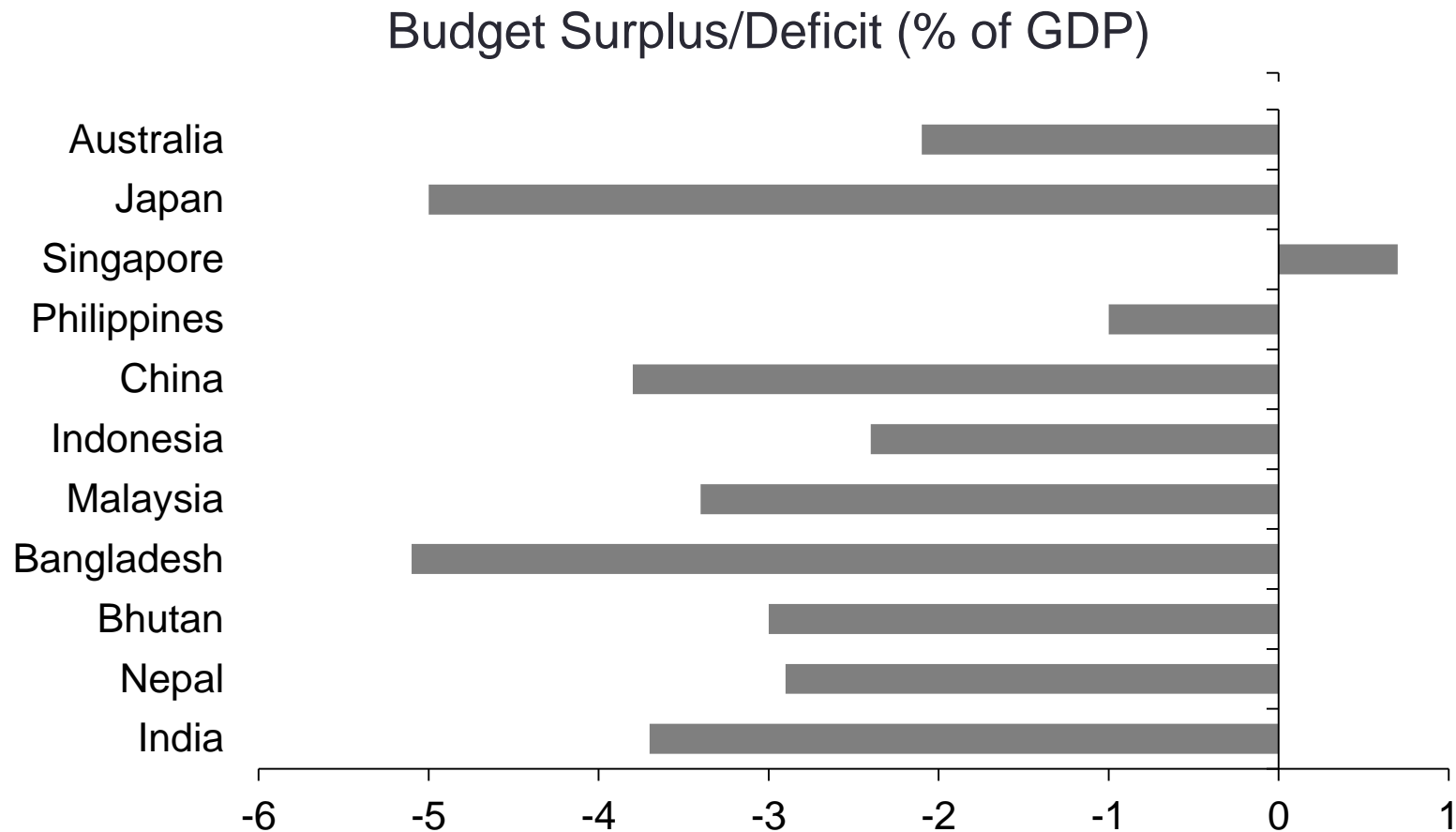
Infrastructure Ranking/ Gap



Source: *The Global Competitiveness Report 2016–2017*, published by the World Economic Forum

Very few countries in top 10 infrastructure ranking (Singapore and Japan); Huge infrastructure gap in most of the countries of Asia-Pacific region

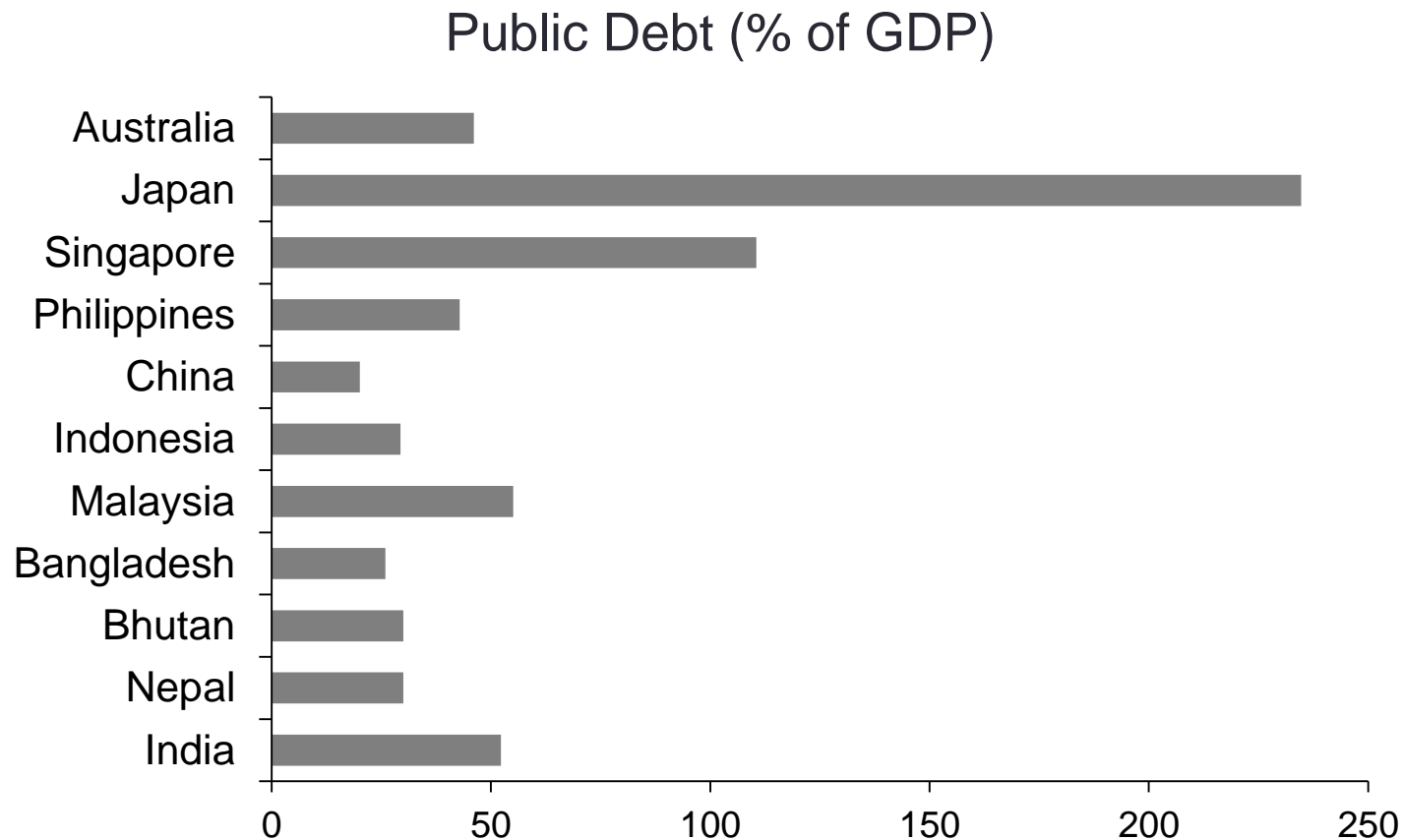
## Public sector spending alone wouldn't suffice the investment requirement...1/2



Source: [www.cia.gov](http://www.cia.gov)

Huge budget deficit has put substantial constraints on scarce public resources

## Public sector spending alone wouldn't suffice the investment requirement...2/2



Source: [www.cia.gov](http://www.cia.gov)

Hence, there is a need to enhance the size of public spending in infrastructure sector and improve the efficiency of spending

# Measures to improve public sector spending

## Issues and challenges of public spending in infrastructure sector...

- ▶ Scarce public resource impacts public spending on infrastructure sector
- ▶ Huge time and cost overrun plague almost every infrastructure project – Lack of proper planning and efficient project management major cause
- ▶ Selecting the right sector for public spending – Economic vs Social sectors; Financially feasible vs Unviable opportunities; Short term vs Long terms gains
- ▶ Lack of due diligence on balancing the act of infrastructure creation and infrastructure maintenance & management
- ▶ Lack of capacity at department levels and lack of coordination between implementation wing and nodal/funding agency
- ▶ Absence of post implementation assessment for infrastructure projects to assess envisaged benefits of the project



## How to strengthen public sector spending efficiency...

- ▶ Selecting right sectors and projects for public spending – ***More funds available for social sector projects*** that have direct and indirect impacts on large population
- ▶ Striking a balance between infrastructure creation and maintenance – ***Reduction in life cycle costs of overall infrastructure assets***
- ▶ Improved project planning and monitoring mechanisms and instruments – ***Reduction in project cost and duration would save money*** for further investments
- ▶ Improving inter-departmental coordination – ***Reduction in budget lapses means more expenditure in infrastructure sector***
- ▶ Post implementation project assessment – ***Help in planning and executing future projects***
- ▶ Revenue enhancement activities (advertisements, land monetization, other non-fare revenue sources) – ***Additional funding would add to the scarce public fund*** available for infrastructure spending

## A. Selecting right sectors and projects for public spending in infrastructure sector...1/4

- ▶ Governments needs to adopt a pragmatic and evaluative approach for projects selection and prioritization
- ▶ Commercial viability shouldn't alone be the criteria for project selection – Otherwise, social sector projects would get less priority
- ▶ Methodology such as VfM, Social Cost Benefit Analysis, EIRR should be explored to make a decision on the project
- ▶ It is recommended that the decision making authorities not only use multi-criteria tool for project selection but also incorporate sustainability criteria in their project evaluation matrix

## A. Selecting right sectors and projects for public spending in infrastructure sector...2/4

- In countries like Indonesia and Australia, government authorities utilizes multi criteria tools to identify and prioritize projects

**Indonesia**, through its committee, KPPIP, adopts a similar multi-criteria tool that places **huge weightages on socio-economic impact (30%)** and environmental impact (15%) to prioritize infrastructure project.

In **Australia**, projects are prioritized through profiling and appraisal processes. Profiling is done to determine the **strategic fit of a project with government priorities**. Project which addresses identified evidence-based problems and opportunities of national significance are through to the next level of assessment where the project is assessed on strength of business case, **delivery of economic, social and environmental values** and on potential inherent risks and mitigations measures adopted.

## A. Selecting right sectors and projects for public spending in infrastructure sector...3/4

- World Bank has recently developed a framework to incorporate sustainability factors in projects prioritization

***The World Bank*** has recently developed a ***framework*** that adopts a quantitative multi-criteria prioritization approach to synthesize project level financial, economic, social, and environmental indicators into two indices, namely ***social-environment index (SEI)*** and ***financial-economic index (FEI)***, and ***compares these with the budgetary constraints*** in a particular sector.

## A. Selecting right sectors and projects for public spending in infrastructure sector...4/4

- ▶ Governments may explore leveraged PPP model with capacity and performance payments to developer for creation of healthcare or education infrastructure
- ▶ Projects of national or regional importance and having long term benefits potential should be given priority in public spending – Detailed cost benefit analysis required
- ▶ PPPs should be promoted through financial support from the government in terms of capital/operational grant, viability gap funding or capacity and/or service payments

In ***Waste-to-Energy Project in Singapore***, the Authority bears the demand risks and makes payment to the SPC in terms of ***Capacity payment, Service payment and Electricity generation payment***. Capacity based payment is meant to recover fixed capital and fixed O&M costs whereas Service payment is meant to recover variable costs and is output-based payment.

In ***Nagpur Citywide Water Supply PPP Project in India***, NMC (the Authority) is responsible for bringing ***70% of the capital investment requirement through grants from central and state governments*** in order to make the project viable

## B. Striking a balance between infrastructure creation and infrastructure maintenance and/or management...1/2

- Infrastructure maintenance and management are often ignored by the governments as infrastructure creation are political priority – resulting in fast deterioration of created assets and increase in life cycle costs

As per an estimate, **USA would need \$45.2 bn rather than the \$16.5 bn currently spent** on maintenance per year to keep the nation's roads in good repair

- There is a need to shift focus from creation of infrastructure to maintenance and management of created assets
- Inventory database should be prepared and maintained; Planning and scheduling of maintenance activities should also be desired – Outsourcing may be explored

Government of South Africa has approved the **National Infrastructure Maintenance Strategy** and prepared a **Infrastructure Maintenance Budgeting Guideline** with multi-throng objectives to – a) strengthen the regulatory framework governing planning and budgeting for infrastructure maintenance; b) assist institutions with non-financial resources; and c) develop the maintenance industry.

## B. Striking a balance between infrastructure creation and infrastructure maintenance and/or management...2/2

- Establishment of sector wise dedicated fund for maintenance and management of infrastructure assets is thus required

The ***Swiss and Austrian road funds*** provide reliable sources of funding that are ***decoupled from the annual public budget***.

- Annual maintenance for next few years should be made part of the contract agreement in traditional procurement

## C. Strong emphasis on project planning and project management in infrastructure projects...1/2

- ▶ Efficient project planning and project management can reduce time and cost overruns to large extent
- ▶ Detailed design documents and adoption of modern project management techniques (cost, schedule and quality control) would reduce time and cost overruns
- ▶ Design-Build or Design-Build-Maintain mode of implementation may be explored to transfer design and construction risks to the developer

As per a survey by **USDOT - Federal Highway Administration** in 2006, **Design-Build projects** resulted in average **reduction of 14% in project duration and average reduction of 3% in project costs** when compared to other projects.



## C. Strong emphasis on project planning and project management in infrastructure projects...2/2

- Performance based contracts such as OPRC model may be undertaken as alternative PPP implementation model
- Like Independent Engineer in a PPP project, Third Party monitoring should be made mandatory for EPC contracts

### **Application of Output and Performance based Road Contracts (OPRC) in Chad**

Chad explored the OPRC model for pilot application in rehabilitation and maintenance of 440 km of unpaved roads for 4 years duration. USD 11.9 million contract was awarded to DTP (Bouygues Group, France) in April 2001. 10% of the Contract value was reserved for Emergency Works. **US\$ 5.74 per year/km was paid to the Contractor for Rehabilitation, Management & Maintenance.** Contractor was required to comply with **service level requirements on four parameters – usability of road, average traffic speed, road user comfort and durability of the road.**

## D. Improving inter-departmental coordination among agencies to streamline the flow of fund...

- ▶ Delayed flow of fund from nodal/funding agency to implementation department may result in time and cost overruns
- ▶ Timely disbursements of grant, VGF, capacity payments would also enhance private sector confidence in bidding for the project
- ▶ Budget lapses can be reduced by proper budgetary planning and timely allocation of budget under respective heads
- ▶ Business process streamlining may be explored to expedite the process of fund disbursements

As per a study, in 2013-14, **unspent funding totalled \$9.3 billion in Canada** corresponding to **lower-than-budgeted spending** on programs such as veterans' benefits, national defence and **capital infrastructure projects**.

In **India**, the Government has decided to **advance the presentation of the union budget by about a month** in order to ensure speedier implementation of projects and schemes.

## E. Post implementation review would be critical in efficient planning for future infrastructure projects...1/2

- ▶ Post implementation review would be crucial in short term by identification of ways:
  - ▶ To Improve functional value of the created asset
  - ▶ To Remove the operational bottlenecks
- ▶ In long term, such reviews would help the authorities in:
  - ▶ Better conceptualization of infrastructure project
  - ▶ Development of more precise design criteria
  - ▶ Improvement in decision making process
- ▶ Governments should develop guidelines to review project on parameters such as:
  - ▶ Economic review
  - ▶ Compliance review
  - ▶ Procurement / delivery process review
  - ▶ Asset performance review
  - ▶ Technical review

## E. Post implementation review would be critical in efficient planning for future infrastructure projects...1/2

In **Australia**, New South Wales Treasury Department has published *the **Post Implementation Review Guideline*** to assess different projects post completion. The Guideline assists the authorities in selecting appropriate strategy for review, data collection techniques, and PIR (post implementation review) outcomes. It also provides checklists and reporting format to be used by the authorities. It is anticipated that this process will be **funded out of the project budget**. The indicative criteria for selecting which projects go through PIR may include the following:

- all Tier 1 projects
- where a new delivery model has been utilised
- where a new financing strategy has been utilised
- all Alliance, Managing Contractor or PPP projects
- high risk profile projects

## F. Increasing the volume of public spending through generation of additional revenues...1/3

- Increasing fare box recovery ratio in public transport system – Introduction of fare determination mechanism, keeping in mind affordability and project's viability

***Metro systems of Santiago de Chile and Hong Kong*** have fare box recovery ratio of ***more than 100%***.

In ***Singapore***, ***Fare adjustment mechanism*** is based on Consumer Price Index (0.5x), Wage Index (0.4x) and Energy Index (0.2x), thereby also incorporating affordability factor.

- Exploring non-fare revenue options like advertisements, land monetization, leasing rights etc.

***Indian Railways*** has recently constituted a ***Non Fare Revenue Directorate*** and brought ***NFR policy*** to increase the share of non fare box revenue.

***Land value capturing in Copenhagen, Denmark*** in which ***45% of construction cost of metro*** was met by selling the real estate around the metro site.

## F. Increasing the volume of public spending through generation of additional revenues...2/3

- Rationalization of property tax and user charges by urban local bodies
- Expanding the coverage of property tax assessment in urban areas

### Bruhat Bangalore Mahanagara Palike (BBMP), India

In April 2000, the BBMP introduced an optional scheme of ***self-assessment of property tax***. The Unit Area-based Method (UAM) increased revenues significantly. In its first year, after the launch of the reform, Bangalore's property ***tax collection increased by 33 per cent***. The BBMP adopted the ***GIS supported method of taxation*** in March 2009, which helped it to ***assess 100 per cent of the properties***.

- Rationalization of fossil fuel subsidy (phased reduction in subsidy)

***Developing Asian countries*** accounted for close to a third of global subsidies ***~2.5% of combined GDP***. In 2009, ***G20 and APEC leaders agreed to phase out inefficient fossil fuel subsidies in the medium term***. India has taken proactive steps through diesel price decontrol and fixation of LPG subsidy in 2014.

## F. Increasing the volume of public spending through generation of additional revenues...3/3

- Levy taxes/charges from users such as parking fees, land value tax, congestion charges, vehicle taxation and fuel surcharges

A betterment tax has been levied by **increasing the business property tax** in **Greater London** to add a new line to the **Cross Rail 1 project**. It is projected to create a **fresh revenue stream of £4.1bn** of a total of £16bn for the new line.

Fuel surcharges in Bogota and other Columbian cities.

In **Sibiu, Romania, Parking Management** enables to manage traffic demand by using differential pricing system.

Few examples of congestion pricing:

- Electronic road pricing in Singapore;
- Congestion Charges in London;
- Road Pricing in Seoul, South Korea

# Thank You



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