Mobilizing public resources for infrastructure financing
Broad contours of the presentation

- The essential role of public finance for infrastructure
- Enhancing tax revenues in South Asia
- Cities and subnational public finance
- Leveraging public assets for infrastructure financing
- Exploring semi-public resources
- Questions for discussion
The essential role of public resources for infrastructure financing

Public resources remain the backbone for infrastructure financing
• In most Asia-Pacific developing countries, private infrastructure investment is less than 1% of GDP, far below the normal infrastructure spending needs of 5-10% per year;
• South Asian countries outperform their peers in leveraging private capital, yet public sector still shoulder the bulk of the burden.

The backing from public sector is also important for PPPs
• Public sector remains the final payer for private services in many PPP projects;
• Strong public credit can lower the borrowing cost for PPP projects;
• Public sector also contribute important seed investment, guarantees, and grants for the financial viability of PPPs;
Enhancing tax revenues in South Asia – an urgent task

South Asian countries have the lowest tax-to-GDP ratios in Asia-Pacific

• Afghanistan, Bangladesh, Pakistan, Iran and Sri Lanka collect less than or barely 10% of GDP as tax revenue, which is less than half of the OECD average of 25%;

• Only Maldives collect more than Asia-Pacific regional average from taxes.

Tax revenues as % of GDP (2014)
Relatively low VAT rates and decreasing collection efficiency of VAT have led to VAT revenue stagnation in Asia-Pacific.

- Asia-Pacific has the world’s lowest standard VAT rates, which partly reflects the intense competition for investment and export market;

- Although average VAT rate in Asia-Pacific has gradually increased from around 9% to 11% since the early 1990s, the continuing deterioration in collection efficiency almost wiped out any revenue gain.
Enhancing tax revenues – make VAT perform

Low collection efficiency is the main problem for VAT in A-P developing countries

• Broad-base and streamlined VAT reform is viewed as an effective way to enhance GST revenue while reducing economic distortions;

• However, the introduction of VAT itself doesn’t automatically deliver on revenue promises;

• Effective VAT administration proved to be a significant institutional and capacity challenge in many cases
  ✓ Collection of business data and institutional/procedural reforms to support the VAT system
  ✓ Excessive exemptions to basic consumption goods, agriculture and export sectors
  ✓ The presence of large informal sector
  ✓ Fake VAT vouchers and export invoices

• VAT implementation is often shaped by the underlying capacity, institutional, legal and political economic factors.

<table>
<thead>
<tr>
<th></th>
<th>Standard rate</th>
<th>Revenue/GDP</th>
<th>C - Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan (1990s)</td>
<td>15</td>
<td></td>
<td>0.39</td>
</tr>
<tr>
<td>Pakistan (2005)</td>
<td>15</td>
<td>3.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Pakistan (2009)</td>
<td>16</td>
<td>3.1</td>
<td>0.27</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>15</td>
<td>6.7</td>
<td>0.47</td>
</tr>
<tr>
<td>Philippines</td>
<td>12</td>
<td>4.3</td>
<td>0.45</td>
</tr>
<tr>
<td>Turkey</td>
<td>18</td>
<td>7.1</td>
<td>0.48</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>10</td>
<td>6.9</td>
<td>0.72</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>10</td>
<td>6.7</td>
<td>0.67</td>
</tr>
<tr>
<td>Singapore</td>
<td>5</td>
<td>1.8</td>
<td>0.63</td>
</tr>
<tr>
<td>New Zealand</td>
<td>12.5</td>
<td>8.9</td>
<td>0.93</td>
</tr>
</tbody>
</table>
Enhancing tax revenues – explore the potentials of direct taxes

There is space for South Asian countries to enhance their direct taxes

Corporate income tax (CIT)
- CIT revenue is strong in Bhutan and Iran, but weak in Afghanistan, Bangladesh and Sri Lanka;
- CIT rates were on a declining trend in A-P in recent years;
- Rationalizing tax incentives and managing harmful regional/sub-regional tax competition would be important.

Personal income tax (PIT)
- PIT is around or less than 1% of GDP in South Asia, with exception of India (2%), far lower than A-P average of 2.6% and OECD average of 8.8%;
- However, PIT is very demanding on administrative and institutional capacities and on a favourable tax culture.
Enhancing tax revenues – explore the potentials of direct taxes

Direct to indirect tax ratio, change since 1990s

percentage points

Japan, Indonesia, Hong Kong, China, Kyrgyz Republic, Mongolia, Fiji, Singapore, Russian Federation, Australia, Tajikistan, New Zealand, China, Maldives, Samoa, Sri Lanka, Lao PDR, Cambodia, Nepal, Bangladesh, Armenia, Afghanistan, Papua New Guinea, Korea, Rep., Myanmar, Philippines, Thailand, Pakistan, Georgia, Kazakhstan, Azerbaijan, India, Bhutan, Iran, Islamic Rep., Malaysia
## Enhancing tax revenues – rethink tax incentives

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Countries Surveyed</th>
<th>Tax holiday/Tax exemption</th>
<th>Reduced Tax rate</th>
<th>Investment allowance/Tax credit</th>
<th>R&amp;D Tax Incentive</th>
<th>Super-deductions</th>
<th>SEZ/Free Zones/EPZ/Freeport</th>
<th>Discretionary process</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>12</td>
<td>92%</td>
<td>75%</td>
<td>67%</td>
<td>83%</td>
<td>33%</td>
<td>92%</td>
<td>83%</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>16</td>
<td>88%</td>
<td>38%</td>
<td>25%</td>
<td>31%</td>
<td>0%</td>
<td>100%</td>
<td>38%</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>25</td>
<td>88%</td>
<td>32%</td>
<td>52%</td>
<td>12%</td>
<td>4%</td>
<td>72%</td>
<td>40%</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>15</td>
<td>80%</td>
<td>40%</td>
<td>13%</td>
<td>0%</td>
<td>0%</td>
<td>80%</td>
<td>40%</td>
</tr>
<tr>
<td>OECD</td>
<td>33</td>
<td>21%</td>
<td>36%</td>
<td>64%</td>
<td>76%</td>
<td>21%</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>South Asia</td>
<td>7</td>
<td>100%</td>
<td>43%</td>
<td>71%</td>
<td>29%</td>
<td>71%</td>
<td>71%</td>
<td>43%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>45</td>
<td>78%</td>
<td>62%</td>
<td>78%</td>
<td>11%</td>
<td>18%</td>
<td>64%</td>
<td>82%</td>
</tr>
</tbody>
</table>
Public resource mobilization at subnational levels – the case of cities

Asia-Pacific cities shoulder a large proportion of the infrastructure investment responsibilities

- A-P is at the center of the world’s largest rural-urban transition in history;
- A-P is featured by megacities and city clusters, and the costs of provision of public transportation, ICT infrastructure, housing, urban environmental management are in the scale of trillions.

A-P subnational governments are often ill-equipped to meet this challenge

- The lack of fiscal autonomy and proper revenue tools often led to large vertical imbalances;
- Weak spending accountability and efficiency could be an obstacle for revenue enhancement efforts of local governments.

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of Total Public Expenditure</th>
<th>Share of Total Public revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subnational</td>
<td>Upper Tier</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>India</td>
<td>66</td>
<td>33</td>
</tr>
<tr>
<td>Indonesia</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td>Japan</td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>45</td>
<td>15</td>
</tr>
<tr>
<td>Pakistan</td>
<td>33</td>
<td>28</td>
</tr>
<tr>
<td>Philippines</td>
<td>25</td>
<td>11</td>
</tr>
<tr>
<td>China</td>
<td>70</td>
<td>20</td>
</tr>
<tr>
<td>Thailand</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>45</td>
<td>30</td>
</tr>
</tbody>
</table>
Public resource mobilization at subnational levels – property taxes

Property taxes are important for subnational governments, despite being minor revenue sources

• Property taxes currently contribute only an insignificant amount of revenue in South Asia;

• Property taxes in developing A-P are viewed more as a luxury consumption tax and a policy tool to adjust housing market rather than a main revenue source;

• While property taxes are attractive for subnational governments, securing public support and effective tax administration is very challenging.

<table>
<thead>
<tr>
<th>Subnational property tax as share of GDP, (%)</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD countries (number of countries)</td>
<td>1.24</td>
<td>1.31</td>
<td>1.44</td>
</tr>
<tr>
<td>Developing countries (number of countries)</td>
<td>0.42</td>
<td>0.36</td>
<td>0.42</td>
</tr>
<tr>
<td>Transition countries (number of countries)</td>
<td>0.34</td>
<td>0.59</td>
<td>0.54</td>
</tr>
<tr>
<td>All countries (number of countries)</td>
<td>0.77</td>
<td>0.73</td>
<td>0.75</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subnational property tax as share of subnational revenue, (%)</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD countries (number of countries)</td>
<td>17.4</td>
<td>17.0</td>
<td>17.9</td>
</tr>
<tr>
<td>Developing countries (number of countries)</td>
<td>27.6</td>
<td>24.3</td>
<td>19.1</td>
</tr>
<tr>
<td>Transition countries (number of countries)</td>
<td>6.7</td>
<td>8.51</td>
<td>8.8</td>
</tr>
<tr>
<td>All countries (number of countries)</td>
<td>22.8</td>
<td>20.4</td>
<td>15.6</td>
</tr>
</tbody>
</table>
Public resource mobilization at subnational levels – other revenue sources

Local business taxes
• Pros: easy to administer;
• Cons: “tax exporting” – for example, the burden of high business tax on locally registered businesses could be partially “exported” to partners and customers outside the jurisdiction; tax competition.

Local excise and sales taxes
• Pros: easy to administer; stable and significant revenues
• Cons: misallocation of resources and evasion in different subnational regions

Vehicle and transport taxes
• Pros: well-suited for subnational government given the strong link with the use of local infrastructure and services and with environmental benefits;
• Cons: opposition from automobile owners and producers; evasion in different subnational regions (owners will register where it is the cheapest)
Leveraging public assets – “land financing” in China

Revenues from public land sales has been a main revenue source for subnational infrastructure investments in China

• Total annual revenue from public land sales exceeded 6% of GDP in recent years, comparing to 8.5% of GDP annual infrastructure investment by the nation. The land revenues are largely allocated to subnational governments;

• More importantly, land revenues have played a critical role in financing green field infrastructure projects in China, when normal tax revenues are often incapable of handling the demands for significant additional investments;

• This arrangement also created strong incentives for subnational governments to prioritize infrastructure investment as infrastructure would boost land price, thus also future revenues.

Land revenues also fueled the expansion of local government borrowing

• It is a common practice for local government financing platforms to use future land revenues as collateral for borrowing from the financial market;

• As of 2013, local government debt totalled some 30.6% of GDP (including implicit guarantee responsibilities), a large proportion of which has been used to finance infrastructure investment.
Leveraging public assets – Hong Kong MTRC model

Different from mainland China, Hong Kong finances its urban metro projects through implicit injection of public land assets

• With necessary approval and negotiated terms, Hong Kong government sells property development rights to develop land around the future metro lines to the semi-public Mass Transit Railway Corporation (MTRC) for a “before metro” price;

• Without direct public subsidies, MTRC prepares a public tender for allocating these property development rights to private developers and recover its metro investment costs from the profit sharing agreements with these private developers;

• MTRC is making a profit despite investment and operation costs of the metro system, with a larger share of its revenue coming from property development activities;
Effective value capture is key for fast expansion of public financing for infrastructure

• Public infrastructure improvement has been a main driver behind the real estate booms in Asia-Pacific developing countries. Capturing a small proportion of such value addition might be the greatest opportunity and an appropriate means for public revenue enhancement;

• However, with the exception of property taxes, current tax tools are largely ineffective in value capture of real estate booms, and the natural revenue increase as the economy grows could be inadequate to sustain large-scale greenfield infrastructure investments;

• The mainland China and Hong Kong models, on the other hand, are not replicable as they heavily rely on broad public ownership of land assets;

• Finding out innovative solutions for value capture would be a major policy challenge for countries with great infrastructure ambitions.
Semi-public sources – national development banks

National development banks play a significant role in complementing direct public investment in infrastructure financing

• Mobilize long term financing when domestic financial system is underdeveloped

• Address market failures and finance projects with economic/social externalities

• Improve the efficiency and professional financial management of public financing

• Develop technical awareness and provide the know-how

The pyramid of national development banking activity
Semi-public sources – regional development banks and infrastructure funds

Significant expansions of regional infrastructure financing in the coming years

• The Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB) are expected to double the multilateral funding available for the A-P region

• The Asian Development Bank (ADB) also pledges to increase its financing capacity by 50% between 2015 and 2017

• New national initiatives like the $40 billion Silk Road Fund (SRF) will further boost regional financing for infrastructure

Strategic vision and the quality of planning, project preparation and implementation will determine the ability of a country to tap into these funds

Note: Asian Development Bank (ADB), Eurasian Development Bank (EDB), ASEAN Infrastructure Fund (AIF), SAARC Development Fund (SDF), Asian Infrastructure Investment Bank (AIIB), New Development Bank (NDB), Silk Road Fund (SRF)
Questions for discussion – performance pay for tax officials and corruption

• Governments from the Roman Empire to the 19th Century US have used “tax farmers” who kept part of the revenue as incentives;

• In more recent years, performance pay for tax officials has been experimented in developing countries as a means for revenue enhancement, as in the cases of China, Brazil, Pakistan and Peru.

A randomized evaluation of performance pay for tax officials: the case of Punjab, Pakistan

• Groups with performance pay added or reassessed 86% more properties than comparison groups over the two year period;

• Revenue growth for groups with performance pay was 46% (or 13 percentage points) higher than the comparison groups. A small number of newly added and reassessed high value properties contributed the bulk of the revenue growth, while large number of average/low value properties remain under-taxed;

• Evidence suggests that performance pay may have allowed tax officials to renegotiate for higher collusive payments (bribes) from most properties while collecting more revenue from the small number of reassessed properties.
Central Provident Fund and compulsory saving in Singapore

• The Central Provident Fund (CPF) was set up in 1955 as a compulsory national social security savings plan. The contribution rose to its peak of 50% of employee’s gross wage in 1985, and by 1988 the size of the fund was equivalent to 82% of Singapore’s GDP;

• The compulsory saving artificially increase the national savings rate, and mobilized significant amount of long-term capital under the control of the government;

• Yet the CPF is not without criticism as it crowds out private consumption and investment. The unusually high CPF contribution played some part in triggering the 1985 recessions when a further 4% contribution increase was put in place.

Gyeongbu (Seoul-Busan) expressway and the budget black hole for Korea

• The 43 billion won expressway was started in 1968 when total government revenue just surpassed 100 billion won in 1967. Over the three-year construction period, the project ate away roughly 10% of the total revenue;

• The project was not included in the 5-year plan for budget and was widely considered unaffordable. however the government pushed on. The then President Park Chung-hee allegedly said: ”If there is no money for it, cut the budget for each ministry by 5% no matter what.”

• The expressway was a symbolic project to remove development bottlenecks during Korea’s Development Decade in the 1960s. Yet it was the complete opposite of modern best practices.
Questions for discussion – the “can do” attitude

The impossible Korea in late 1960s and early 1970s

• Korea in the late 1960s was still in a dire situation: limited public revenue, highly dependent on foreign aid, heavy spending burden on defense, low savings rate of only 15%, no bond or capital market……

• However, it embarked on a series of mega infrastructure projects within a few years between late 1960s and early 1970s, including the Gyeongbu expressway, the Pohang Iron and Steel Company (POSCO) and related logistic and industrial infrastructure, and the heavy and chemical industries (HCIs) initiative;

• The World Bank and USAID also turned down the loans requests by Korea given the failed examples of heavy industry investments in other developing countries.

It all depends on who is doing it and how serious he is

• The government seriously prioritized economic development, and annual economic development related spending increased from 25.5% of total government expenditure in 1967 to 43.3% in 1971;

• It diverted all the Japanese reparation funds to the POSCO project, although the funds had been intended for rural areas. And unlike in other developing countries, POSCO proved to be highly profitable;

• The government ordered commercial banks to put 30% of their savings deposits into the National Investment Fund to finance HCIs;

• All these success was backed by sound planning and implementation to ensure that these investments would pay off rather than leading to deficits and chronic drain on public finance
Questions for discussion-
Gender-responsive infrastructure development

**Target 5.4:** Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies ...

- Infrastructure projects cannot be assumed to deliver benefits to men and women equally

**Gender mainstreaming in infrastructure (conscious approach / explicit)**

- Gender involvement and consultation
- Supporting women employment in the project
- Key performance indicators with regard to female benefits
- Monitor against gender impact
- Lack of sex-disaggregated data is an issue
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