SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACTS OF POLICY SCENARIOS IN NEPAL

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Building forward better: Securing inclusive, resilient and green development in Nepal
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POLICY SCENARIOS FOR NEPAL

- Joint research by Macroeconomic Policy and Analysis Section at ESCAP, UN country team for Nepal, National Planning Commission
- Applies ESCAP Macroeconomic Model, originally developed by ESCAP to support the design of economic recovery packages for countries in the Asia and Pacific region
- Model tailored to Nepal’s economy, including a model of tourism that captures interactions between investment in tourism infrastructure, tourism export revenue and the environmental pressures of tourist arrivals.
THE ESCAP MACROECONOMIC MODEL

· A complete global model:
  · 46 individual full country models for the Asia and Pacific region, including Nepal
  · Smaller models of 9 key trading partners and 4 major regions

· Founded on a standard macroeconomic framework, with additional channels to capture key social and environmental variables
  · Structural econometric model
  · Designed primarily for scenario analysis rather than forecasting
  · Each country model has about 100 equations

· Can be applied to a wide range of policy questions plus stress testing and debt sustainability analysis
KEY ACTORS AND FEATURES OF THE MODEL

**Households:**
- Consume
- Save
- Supply labour

**Firms:**
- Produce output
- Hire labour
- Invest

**Government:**
- Tax
- Spend
- Monetary policy

**Poverty:** Depends on income and post-tax inequality

**Emissions:** Depend on output, efficiency of production, the energy mix, tourist arrivals

**Global linkages:** Via trade, remittances, financial markets, emissions and energy markets
A scenario is developed relative to a baseline set of assumptions.

The scenario asks, “what if [some assumption] turns out different than assumed?”

For example, new government spending programmes, an unexpected rise in oil price, a drop in world trade, etc...

Results are generally viewed in terms of % difference from the baseline.
SCENARIOS INCLUDED IN THE STUDY

Broadening export capacities
1) Green and sustainable tourism
2) Tapping into demand for goods exports

Investing in productive capacity
1) ICT infrastructure
2) R&D
3) Education

Expanding energy supply
Tourist arrivals increase

- Export volumes and revenue rise
  - GDP, imports and tax revenue rise
  - Potential output and GDP decline

- CO2 emissions and pollution rises
  - Labour productivity declines

- Employment rises
  - Incomes and tax revenue rises
Without concerted efforts to develop green and sustainable tourism

- Net economic gains from a rapid rise in tourist arrivals would be negligible...
- ... while environmental costs would be high.
Investing about 6% of GDP per annum in green and sustainable tourism...

• ...would allow tourist arrivals to rise by 100,000 per annum

• ...without increasing CO₂ emissions.
SCEANRIO 1c: INVESTMENT PROGRAMMES MUST BE FISCALLY SUSTAINABLE

Figure 13. Transmission channel between fiscal deficit and risk premium

- Deficit deteriorates
- Debt servicing costs rise
- Debt rises
- Risk premium rises

Figure 14. Impact of investment programme that triggers a sharp rise in risk premia
SCEANRIO 1d: BROADENING TAX BASE COULD FINANCE NECESSARY INVESTMENT

Impact of Green and Sustainable Tourism investment on Key Indicators in Nepal (per cent)

- Impact on GDP
- Impact on Government debt as % GDP
- Impact on Household consumption
- Impact on Poverty headcount ratio ($5.50)
- Impact on CO2
- Impact on Pollution (PM2.5)
- Tourist arrivals rise by 1 million by 2032
- 10% reduction in trade costs
- Electricity share of energy consumption rises to 25% by 2050.
- Financed by broadening the tax base
Final Scenario Key Takeaways

- Investment programme would raise GDP by about 25% by 2050 relative to the baseline.
  - Equivalent to rise in the growth rate of 0.75 percentage points per annum.
- Driven by productivity enhancing investments in education, infrastructure and R&D; an expansion of international trade; a decline in inequality; health benefits from less pollution.
- Poverty rates would decline significantly, supported by a reduction in inequality.
- Risks from climate-related shocks would be expected to decline, and CO2 emissions would be about 20% lower than without the policy measures.
FINAL SCENARIO KEY TAKEAWAYS

- Nepal has capacity to deliver an ambitious investment programme through its own resources, for example by broadening the tax base.
- A rapid increase in tourism, without coordinated investment in green and sustainable tourism, would put undue pressure on the environment and available resources.
- Investment in transport infrastructure can both support a rise in tourism and facilitate a rise in goods exports.
- Investment that stimulates economic activity is also likely to increase GHG emissions, unless accompanied by appropriate environmental policies, such as a rise in the electricity share of energy consumption.
THANK YOU!
धन्यवाद!