An analysis of resource productivity and decoupling in Nepal and Bangladesh

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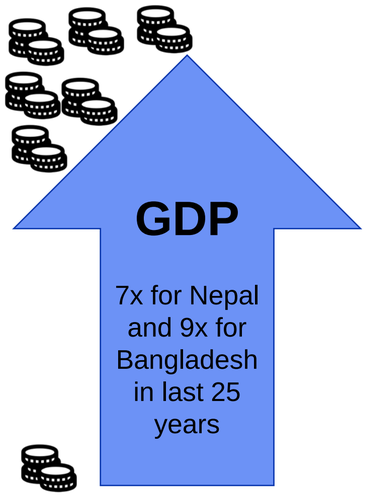
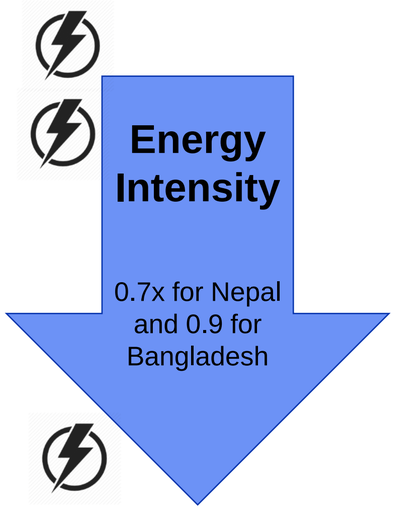
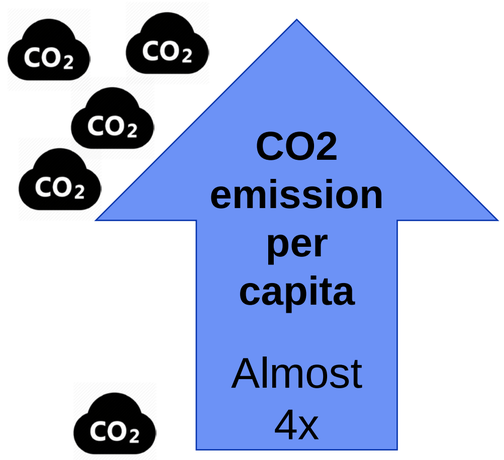
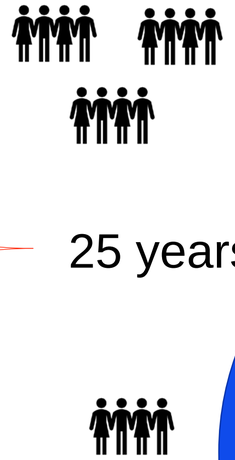
Context of the research

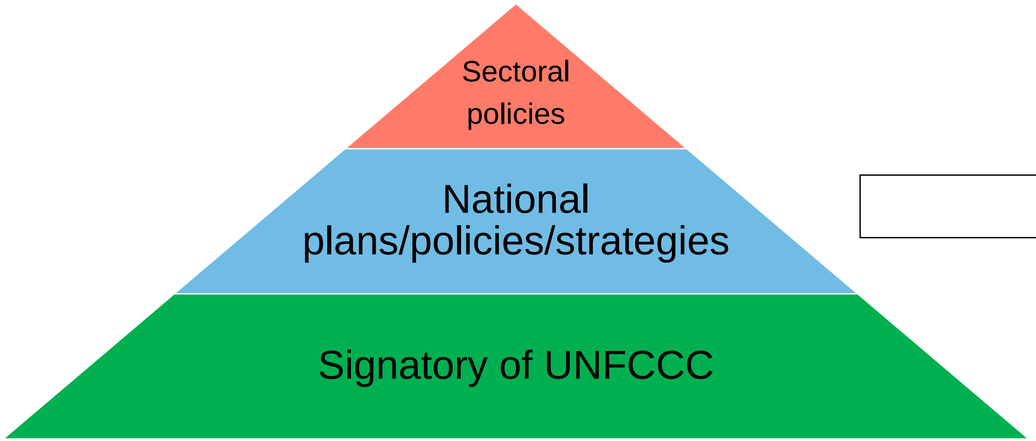








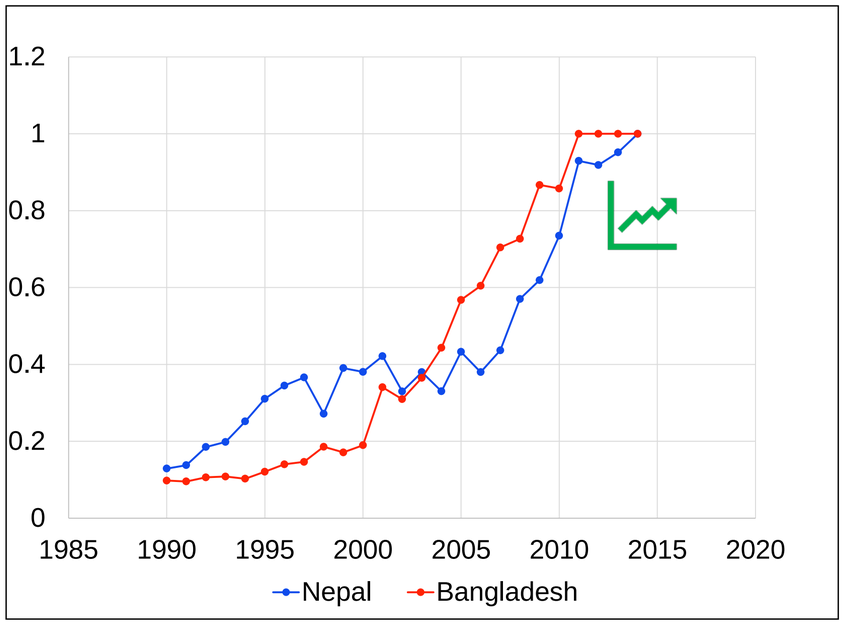
In 2015, the GDP growth rate of Bangladesh was 6.6% and that of Nepal was 2.7%, and 5.9% in 2014.



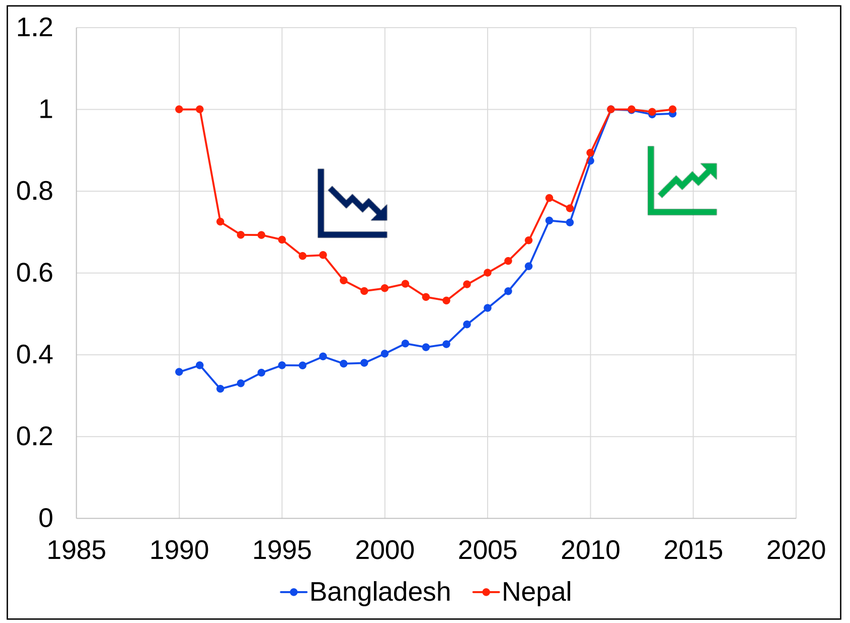
Socio-economic development and environmental sustainability

The main aim of the study is to see the dynamic relationship between environmental attributes (energy, material and emission intensity) from resource efficiency and policy standpoint.

Results and discussion



Environmental efficiency



Economic efficiency

Both economic and environmental efficiency scores are on rise in recent years which signifies enhanced resource productivity.

Higher the environmental efficiency score, higher is the GDP output and lesser is the energy and material inputs

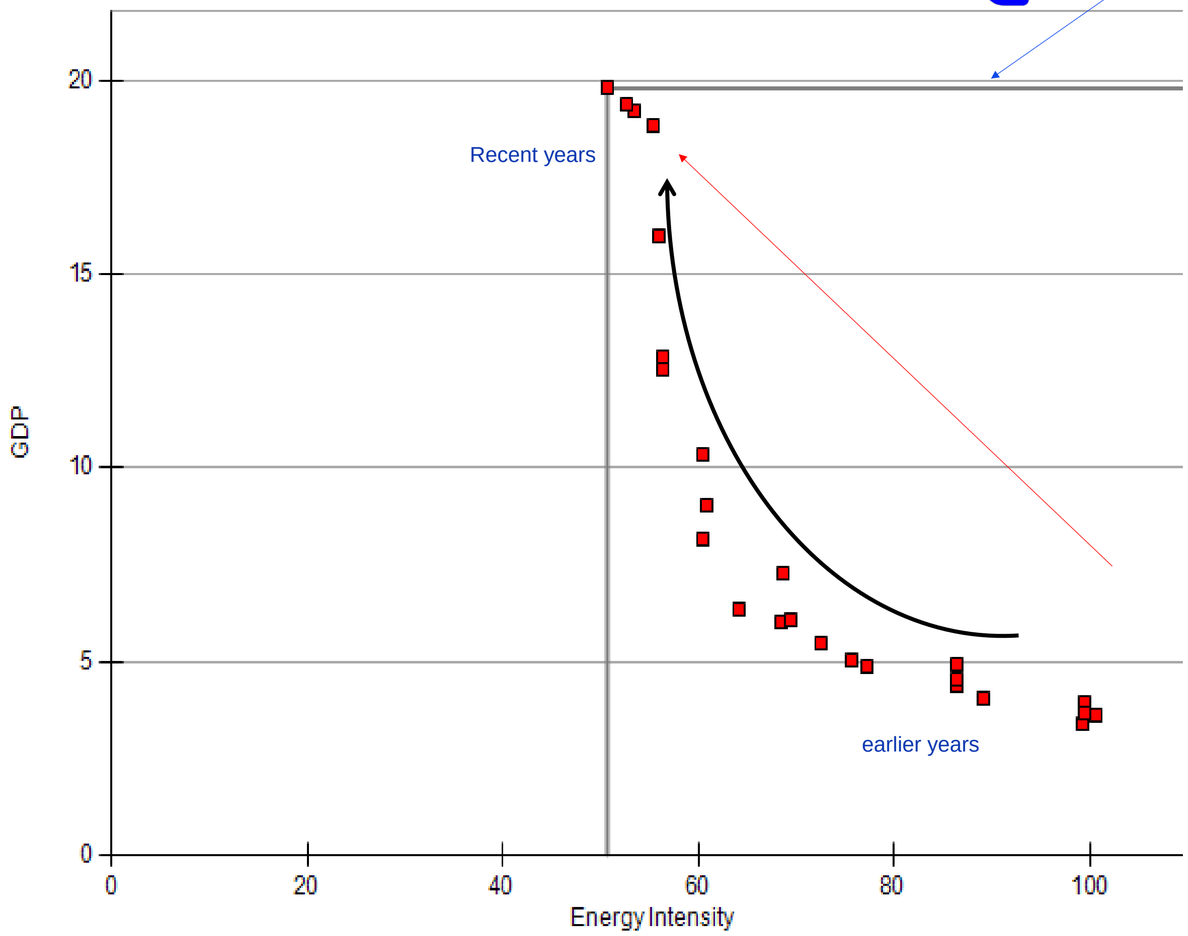
Higher the economic efficiency score, higher is the GDP output and lesser is the labour and capital inputs

Reduced productivity

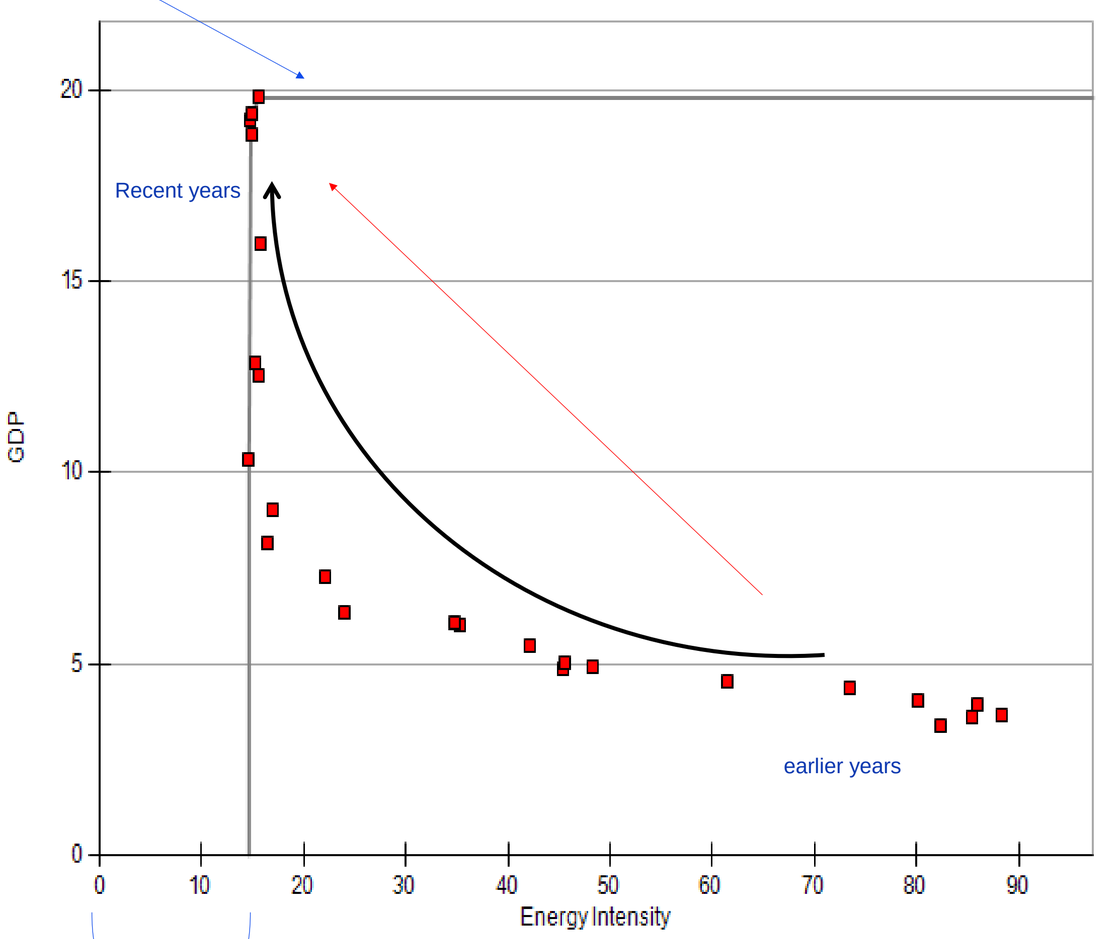
Improved productivity

Energy intensity vs GDP

Efficiency frontier – desired position of datasets for improved efficiency



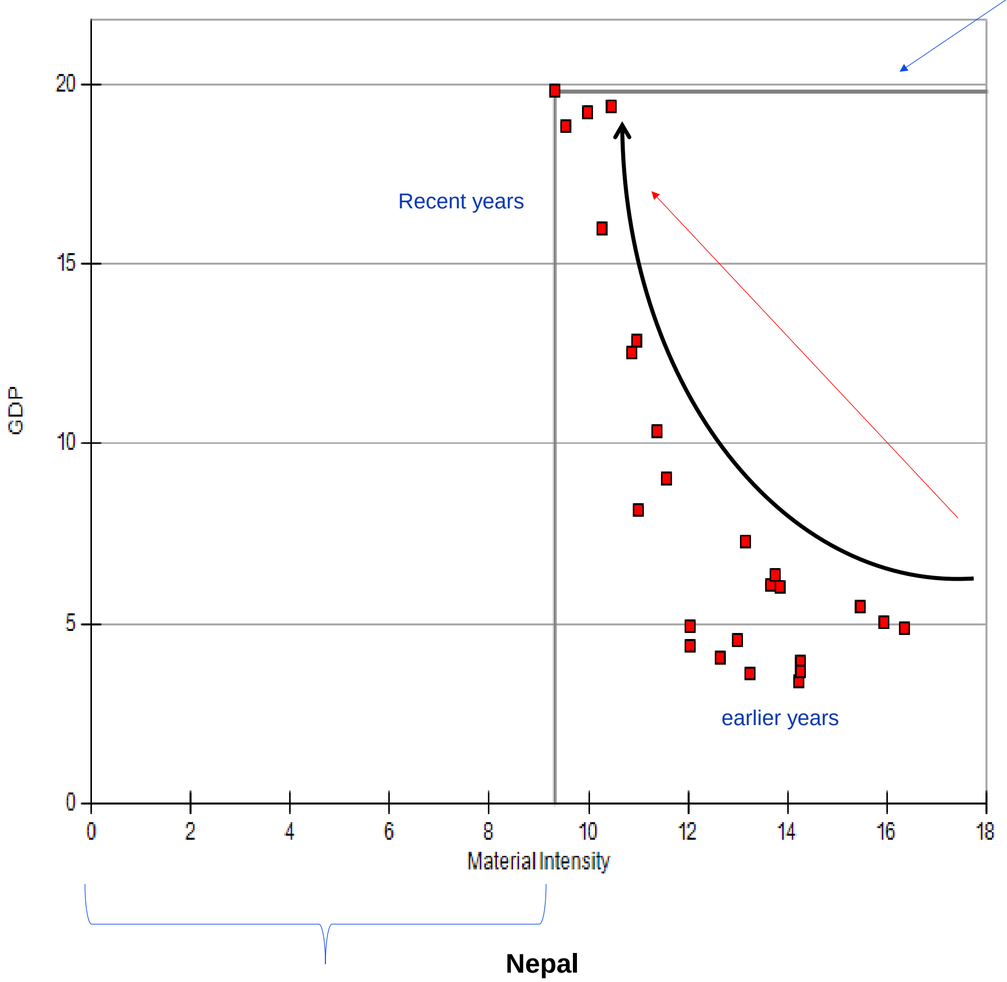
Nepal



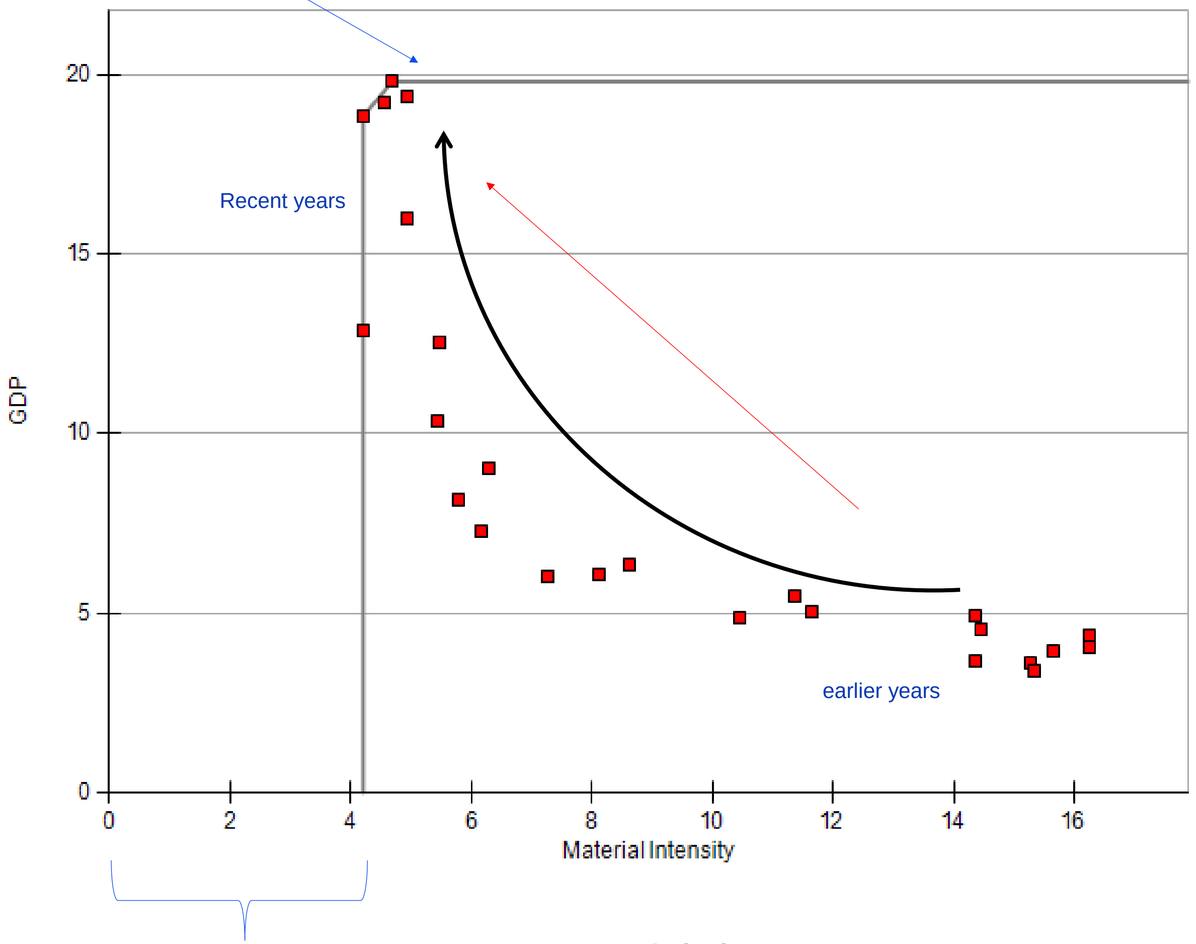
Bangladesh

Material intensity vs GDP

Efficiency frontier – desired position of datasets for improved efficiency

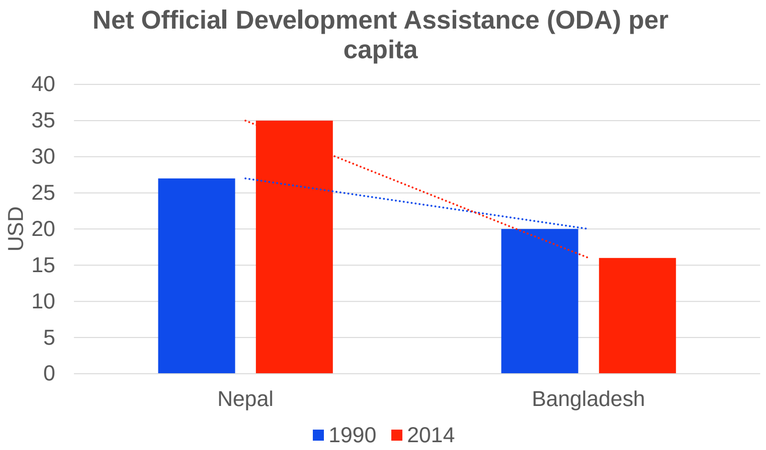


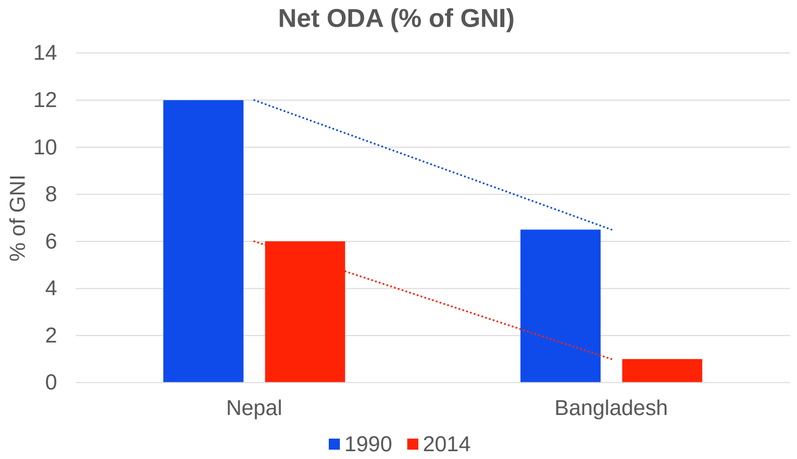
Nepal

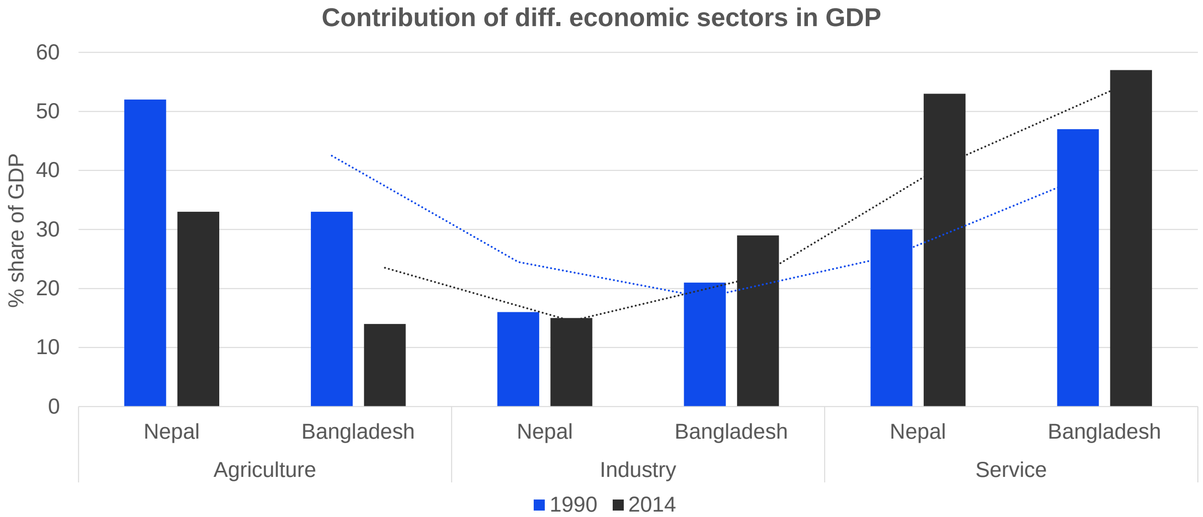


Bangladesh

Dynamics of economic sectors







In between, Nepal's productive sectors such as agriculture and primary industries were severely affected by internal political factors.

Bangladesh's productive sectors were also affected severely by foreign factors reducing export demand and consumption of resources.

Remittance is adding a lot to service sectors.

Data source: - World Bank

Conclusions

- Bangladesh has adopted a two-fold strategy – reduction of resources/emissions and climate resilience. Same for Nepal, but Bangladesh has more robust implementation and monitoring and evaluation framework than that of Nepal.
- In the resource use/emission reduction strategy, Bangladesh has a provision of conditional 15% reduction from BAU levels by 2030 mostly from power, transport and industry sector. However that for Nepal is non-existent and much emphasis has been given to the residential sector which is relatively less productive sector.
- Even with reduced foreign support and being ranked as highly vulnerable countries pertinent to climate change, both of these countries have managed to improve efficiency scores. This indicates country's ability and capability to achieve decoupling of growth and environmental attributes.
- Slack analysis at an economic sector level under BAU can give an indicative measure of potential to achieve resource efficiency, however other social factors such as population growth rate and human development index needs to be considered.

Slack analysis shows significant potential to further improve the resource productivities for both countries, but an economic sector level analysis is needed to identify key sectors that possess maximum potential.

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