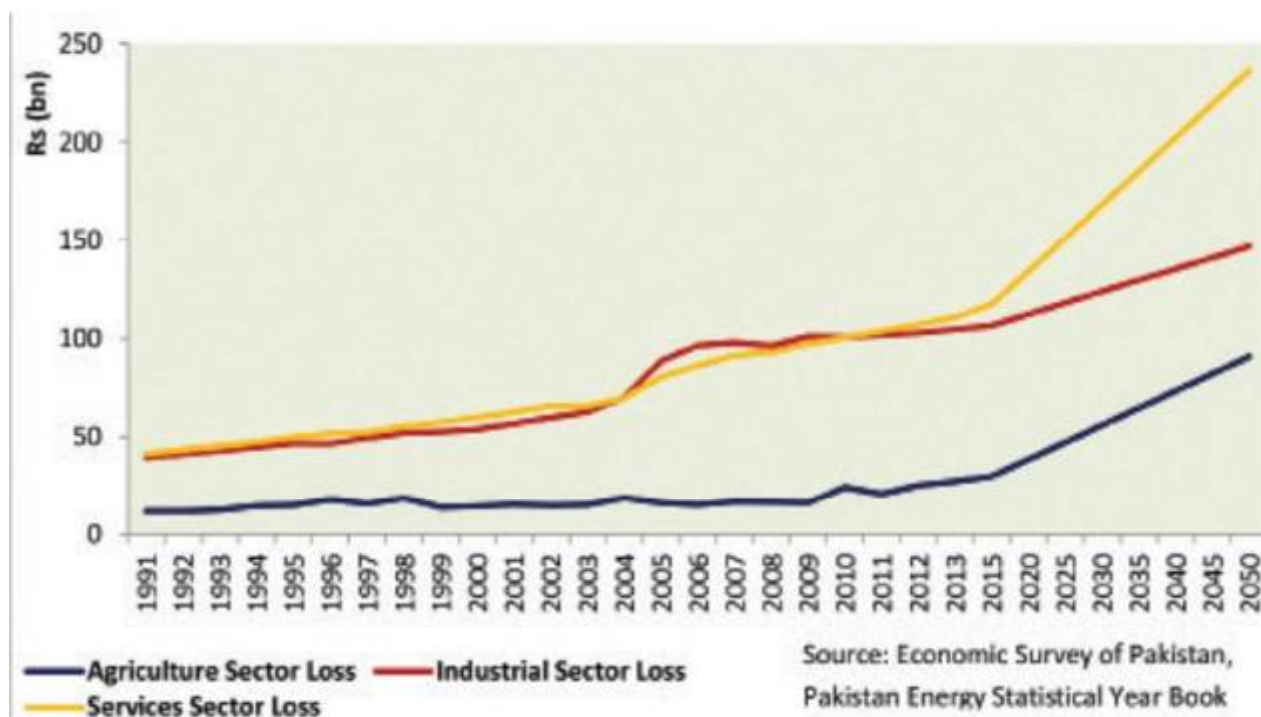


Costs of widening electricity gap



The persistent shortage of electricity has triggered social unrest, with the nation convulsed by energy riots and violent protests in the past. While all sectors have been severely hit by the power outage, total industrial output loss is estimated to be at around 12-37 per cent.

The current crisis started in 2006-07 with a gradual widening of demand and supply. Since then this gap has become more pronounced with electricity shortfalls reaching a peak of 6,250 megawatts in June 2018, more than 30pc of total national demand.

Besides this shortage, energy prices have been frequently increased in recent years. This caused inflation and decline in the contribution of the industrial sector to GDP.

In 2011-12, Pakistan faced a loss of Rs210 billion and \$1bn of export earnings owing to load-shedding in the industrial sector. These power outages also displaced more than 400,000 workers.

Estimates and projections show that (see Figure-1) over Rs253bn of GDP (agriculture, industry and services sector) was lost owing to electricity shortage in 2015 which continues to grow till the end of forecast period 2050.

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Research estimates suggest that a 1pc increase in electricity shortage can decrease agricultural output by 0.17pc, harm industrial output by 0.70pc and adversely impact services sector by 0.32pc.

The energy crisis has negatively affected the industrial sector of Pakistan and various textile mills have failed to run their exports operations. The massive power outage has also made it difficult for Pakistani exporters to maintain a “just-in-time” strategy. Thus, Pakistani manufacturers face difficulty covering their cost of production owing to high competition in the international market.

Energy crisis also adversely impacts total factor productivity. Total factor production is a mixture of technological advancements in production as well as efficiency and improvements in managerial skills.

Comparatively, India and China have been implementing a more advanced energy efficient technology to enhance domestic production. The power outage in Pakistan has not only affected trade performance but also lowered productivity in all sectors.

The correlation between inflation and electricity shortage is very strong. Shortage leads to higher consumer price and hence to overall inflation. For the last few years, Pakistan has been facing a double-digit inflation which is an indication of social and economic instability in the country.

The challenge stands for the current government and its first summer in office. Political stability can be a dream as one can see that the political situation of Pakistan can get worst due to the persistent power outages.

New power projects have been launched to reduce the supply-demand gap and hence to control electricity load-shedding. Successful completion of these projects may help Pakistan overcome this issue.

Otherwise, agriculture loss would increase to Rs90.75bn and industrial loss would jump to Rs146.90bn billion by 2050. Over the same period, the loss in services sector caused by electricity outage could reach Rs236.46bn.

Annual population growth in Pakistan is higher compared to its regional counterparts, including India, Bangladesh, Sri Lanka and Nepal. This higher population growth will further increase electricity demand.

Measuring the economic cost of energy crisis at the sectoral level enables policymakers to formulate a wide-ranging energy and economic (sectoral level) policies. To support sectoral growth, as well as aggregate GDP, the cheapest option to produce electricity should be utilised.

Hydel is the cheapest source of electricity production but it is a long term project. So, the government must build new but small dams on a priority basis to cover power outages. The cost of these dams can be covered by reducing unnecessary administrative expenditures.

Domestic finances can be generated by the implementation of equitable taxes and allocated finance via taxes to electricity generation projects. The financial and infrastructural incentives should be announced and provided to attract investment by local and foreign sources.

Furthermore, an energy efficient technology should be adopted and encouraged. Adoption of electricity saving devices and electricity saving responsiveness must be encouraged at household level via strong television campaign.

To control electricity prices, the government should not depend on rental power projects. Instead, new sources of energy should be explored as Pakistan is full of natural resources. For example, Pakistan is the 4th economy in the world which has the largest coal reserves.

The government should convert coal into natural gas by adopting apposite technology. Pakistan should implement Fischer-Tropsch Technology that can save a huge amount of foreign reserves spending on oil imports.

The need of the hour is a well-researched multi-pronged approach formulated in conjunction with federal and provincial governments, relevant ministries, national power generation and distribution companies and experts on traditional and alternative energy sources.

This kind of mechanism will ensure that capabilities and shortcomings of the existing system are fully comprehended and future endeavours are based on a long-term vision considering the country's growth requirements and technological developments in the energy sector.

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