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# BRIDGING SOCIO-ECONOMIC AND CULTURAL FISSURES: A CASE STUDY ON CRITICAL INFRASTRUCTURE IN RURAL KARNATAKA OF INDIA

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**ABSTRACT**

*Critical infrastructure entails assets essential for the survival of a society and economy[1]. In the rural context, the most commonly associated with the term are facilities for electricity generation, transmission and distribution; transport and distribution; drinking water supply and sewerage; agriculture, food production and distribution; public health; connectivity; financial services and social, cultural and traditional composure. This vision of critical infrastructure has impelled many a governments nationally as well as internationally to extend such facilities up to the grass-root level. With a view to support state governments, in this backdrop, Government of India, in FY1995, created the Rural Infrastructure Development Fund (RIDF) for completing incomplete rural projects in various sectors. It is anticipated that the financial support provided under this Fund would accelerate the rate of capital formation, as also, add steadily to the flow of output and employment opportunities in the rural areas of the country. At the time of launching of RIDF, the State Governments were experiencing a severe resource crunch over the years on the one hand and the banks, particularly the commercial banks, on the other, we're unable to comply with the priority sector lending norms stipulated by the Reserve Bank of India. It was therefore realized in FY1995 that the shortfall in the priority sector norms be pooled in the forms of deposits for raising the Fund to support the incomplete infrastructure projects of various state governments. The corpus towards the fund was to be initially contributed by scheduled commercial banks, excluding foreign banks, to the extent of their shortfall against the targets in agricultural lending, subject to a ceiling of 1.5 per cent. However, from fifteen series onwards, the allocation of Fund is being met out of shortfall from priority sector and /or agriculture and/or weaker section. Over the years, the corpus has increased from INR200 million in the first series to INR2000 million in eighteen series[2]. Rural connectivity and minor irrigation sectors had a major share of investment from the Fund at all-India level. Furthermore, rural connectivity in general and construction of bridges in rural area in particular do have socio-*

*economic implications, as also, environmental and ecological issues, in the daily life of the rural masses. This case study therefore invites the attention of all including the central governments in furthering the noble cause of developing the infrastructure for the rural masses.*

## Introduction

The state-wise allocation under the Fund is made in keeping the normative criteria fixed on account of geographical area, population, and inverse of infrastructure index, inverse of rural credit-deposit ratio and previous performance of the state governments in terms of utilization of the Fund. In Karnataka, 31707 projects sanctioned for different sectors under the seventeen series of the Fund covering all the thirty districts of the state as on March 31, 2012. The series-wise status is given in Appendix A. However, the term of the loan initially was fixed as two or three years, the tenures were generally extended because the limiting borrowing power of state was utilized for completion of projects sanctioned under the earlier series, which ensued to non-completion of projects sanctioned under the later series. In the state, share of social sector (including education) was as high as 51 per cent followed by rural connectivity at 27 per cent in terms of total sanctions to the state in the seventeen series of this Fund. Within rural connectivity, out of 7434 projects sanctioned in seventeen series, the share of constructing bridges was 14 per cent. Status of financing rural connectivity under this Fund in Karnataka is given in Appendix B, which shows that the state has given due priority to rural connectivity as also to the rural bridges by raising resources from the Fund.

In Karnataka, the construction of rural bridges financed under this Fund is generally undertaken by the Public Works Department of the State which comprises dedicated team of technically qualified engineers and adopts internationally recognized norms of India Road Congress. The Department follows transparent of inviting tenders, allocation of works, release of funds and online monitoring of works.

## Review of Literature

In his recent lecture, Ahluwalia (2012) elucidates the need for higher investment in rural roads having maximum definable links with rural productivity and rural income. Nevertheless, the rural bridges comprise a major part of the rural road as it is far more important to reduce

the distances to be covered by the rural masses while traveling to the markets, educational institutions, hospitals and other contact points of the district. Big Push Model of Economic Development envisages that the investment in infrastructure projects would help in breaking the constraints coming in the way of the sustainable capital formation. Furthermore, among the infrastructure items rural connectivity plays a distinct role in linking people and places. While the impact of rural connectivity is well acknowledged by the experts, studies evincing this through quantitative assessment are limited.

Shiddalinaswami (2011) indicates that the Mysore Division of Karnataka had higher per capita gross domestic product (GDP) in 1991 followed by Bangalore Division and far better than those of Gulbarga and Belgaum Divisions. However, in 2007, Bangalore Division was ahead of the Mysore Division while Belgaum Division had overtaken Gulbarga Division as shown in Appendix C. Further, district-wise analysis shows that Mandya district was a part of partially advanced group (Category III) in terms of share of GDP in 1991-2000 decade but deflated to underdeveloped group (Category IV) during 1998-2008 decade. Also, the medium growth rate observed in the district during the first decade was worsened to low group during the following decade.

Quantifying economic benefits (2003) on a rural bridge to the community is a ticklish issue as the benefits obtained, on the one hand, from such an investment are in fact non-marketable, the divergence of the beneficiaries hinders in such estimation, on the other hand, due to difficulty in finding out a common indicator even in money terms. It may be pointed out that economic evaluation of a bridge may involve estimating benefits in terms of communication, agriculture, employment generation and other business / service activities. For this purpose, market values, opportunity costs and substitute prizes are generally used for assessing direct and indirect benefits emanating from the constructed rural bridges.

Development of communication and rural connectivity provides specific utilities in terms of reducing the distance between various places leading to saving in vehicle operating cost, travel time, development of road network. It is generally expected that bridge would enable patients especially from interior areas to shift to the hospital / dispensary by a vehicle or ambulance and thus increasing survival rates due to timely and proper medical care. Also, the quality of animal population would enhance due to accessibility to veterinary hospitals. Nonetheless, it has been most often seen in rural areas that children, especially the girls, do not get proper education even when they are quite brilliant in studies and keen to continue education due to lack of connectivity to educational

institutions. Rural bridges play a vital role in connecting schools, colleges and other technical / non-technical institutions to such students. Above all, frequent meetings with the friends and relatives firm up social bonding amongst the rural masses as well as facilitate in preserving cultural heritage of the locality. All such benefits may not be measurable but are definitely long-term investments in building strong villages.

## Methodology

In view of the fact that Mysore Division had the highest share in the GDP in 2007-08 followed by Bangalore Division, as also their position was interred-swapped, it was decided to cover these two Divisions for the present study. In Bangalore Division, This aspect was very important to consider the district for field study. On the other hand, Ramanagara district was carved out only five years back, I. e., in 2007 due to the fact that the District, in spite of being quite near to the State Capital, remained backward. Hence, purposive sampling technique was adopted in the identification of districts and projects covering not so prosperous districts from two different but highly prosperous divisions of the state. In addition, the select districts were quite near to the state capital but representing different divisions. Regional disparities also indicated that the districts were significantly backward and any impact of financing rural connectivity in the districts would be quite visible which was essential for the present study. As a result, total fourteen completed schemes from the two districts were studied by undertaking field visits and personal interaction with the rural inhabitants concerned.

Based on the selection criteria for identification of district / projects and the methodology to conduct of the study as given earlier, two types of questionnaires were developed for (a) studying project-wise technical and financial aspects of the projects and (b) estimating economic and social benefits in the project areas. Data was collected by personal interviews with the groups of people from the project areas and bias in data was removed by moderating the large divergences in statements and information furnished by the respondents during the personal interactions with different respondents.

## Statement of Problem

This study, thus, (a) reviews the progress of the constructing rural bridges financed under this Fund in the state; (b) scrutinizes implementation aspects of the select rural bridge projects; and (c) examines socioeconomic

inferences, as also, strengthening of cultural and traditional values amongst the rural masses linked through construction of select bridges.

## Observations and Discussions

1. Review of progress indicates that the implementing agencies were quite efficient in completion of projects, as also, at times, saved significant amounts. But the amounts remained under-utilized as there was no provision of adjusting them for other projects or works where the actual expenditure and in return loan component was higher than the amounts sanctioned.
2. All civil structures were erected in accordance with technical approvals by the competent authority. Also, in-house quality control system and structured monitoring mechanism were in vogue during the construction period of the bridges.
3. Though most of the works were completed within the sanctioned cost, it was nevertheless important to note that the expenditures had significantly gone up in such cases where the approach roads were provided or these works were not undertaken in time due to paucity of funds. Even in the case of bridges constructed on PWD roads, the actual expenditure was much higher that the projected cost.
4. Maintenance of civil works and other cleaning operations essential for enhancing the longevity of the bridges were not being taken care of due to paucity of funds.
5. Analysis of investment in terms of number of villages and households benefited indicates that the average level of investment in both the districts was quite comparable and more or less the same.
6. Rural bridges in the selected districts, though supported the farming community and rural populace in connecting them to different markets, remained ineffective in demonstrating significant transmutation in the economic status of the inhabitants concerned. Adequate credit for farm operations and new non-farm activities remained devoid, to a great extent, the communication channels and rural connectivity could not augment benefits towards agriculture, business and employment generation in the rural areas.
7. Bridges were quite effective in extending social benefits to the inhabitants in the project areas as well as from the adjoining villages. Medical care to the human beings along with educational facilities

to the students especially the girls and the veterinary facilities for the animal population were long-term investments being taken up in the project areas are the motivational factors. Social gathering and cultural events were the encouraging outcomes necessary for social engineering in the rural areas.

## Recommendations

1. Project approach may not be a very effective tool in developing rural connectivity and critical infrastructure due to varying field level conditions and topographical situations. As the implementing agencies are quite effectively equipped with technical manpower and the financial support is provided as a loan which is secured by the sovereign guarantee, it will be better if the bulk lending approach is adopted followed by vigorous and robust monitoring mechanism so that the projects are implemented in time and funds are drawn optimally. Also, the possibilities may be explored for providing grant-cum-loan components for development of critical infrastructure in the state.
2. Delay in implementation of projects was observed due to legal litigation, acquisition of land and limiting borrowing power of the state. The state may ensure to avail financial support only where such hurdles are not foreseen and settled before seeking assistance from the lending institution so that the benefits are accrued in minimum possible time. Also, such facilities may be provided not free of cost so that the users can understand the importance of critical infrastructure as also the necessity of their maintenance.
3. Maintenance of the civil structures and development activities need adequate attention of the implementing agencies and if required heavy penalties be imposed for non-compliance.

## Conclusion

Critical infrastructure in the form of rural bridges especially in the far-flung areas of rural Karnataka needs reorientation of each and everyone involved in the process so that cultural bonding amongst the peoples is strengthened by the sustainable socioeconomic amelioration of the hitherto enriched ones. Bridges have proved to be the impetus in socioeconomic evolution of rural masses by mitigating cultural fissures attributable to better linkages and empowering women.

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## Notes

In its Union Budget of FY2011, the Government of India made a dedicated allocation of INR 200 million out of INR1800 million for seventeen series of the Fund, further enhanced to INR500 million out of INR2000 million in the next series for FY2012, for financing warehousing, as separate window by state governments for creating storage infrastructure by way of warehouses, silos, agri-logistic parks and cold chains like per-cooling units, cold storage units, reefer vans, bulk coolers, individually quick frozen (IQF) units, chilling infrastructure and storage infrastructure in market yards and food parks.

The Model emphasizes that the big investments are required to embark on the path of economic development from the present state of backwardness. Paul Rosentein-Rodan quotes that there is a minimum / critical level of resources to be devoted to any infrastructure program to make it a self-sustaining growth model required for capital formation in the respective sector.

## **Appendi**x 1

Series – wise Status of RIDF Projects in Karnataka
(Seventeen Series) as on March 31, 2012 (INR million)

| Series | Number of Projects | | | Project Outlay | Financial Support | Funds Released based on Performance (as on July 31, 2012) |
|---|---|---|---|---|---|---|
| | Sanctioned | Completed | Project Completion Reports submitted | | | |
| I | 87 | 87 | 87 | 2589 | 1757 | 1588 |
| II | 247 | 246 | 246 | 2907 | 1952 | 1801 |
| III | 486 | 486 | 485 | 1937 | 1713 | 1618 |
| IV | 511 | 511 | 503 | 1910 | 1723 | 1674 |
| V | 366 | 366 | 364 | 1927 | 1732 | 1646 |
| VI | 574 | 572 | 551 | 3214 | 2905 | 2734 |
| VII | 5070 | 4973 | 4697 | 2471 | 2231 | 2079 |
| VIII | 676 | 643 | 568 | 2442 | 2202 | 2020 |
| IX | 901 | 730 | 543 | 3380 | 2897 | 26244 |
| X | 3486 | 1818 | 1562 | 4812 | 4067 | 3722 |
| XI | 1756 | 1310 | 1156 | 5155 | 4499 | 4134 |
| XII | 3578 | 2178 | 2032 | 5947 | 4977 | 4390 |
| XIII | 5335 | 2355 | 2238 | 11338 | 9673 | 7450 |
| XIV | 2231 | 583 | 541 | 7825 | 6745 | 5260 |
| XV | 1995 | 252 | 225 | 7658 | 6566 | 4280 |
| XVI | 2493 | 40 | 38 | 10195 | 8613 | 2970 |
| XVII | 1915 | 0 | 0 | 8965 | 7571 | 218 |
| TOTAL | 31707 | 18436 | 15836 | 84677 | 71822 | 50206 |

Appendix 2

Financing for Rural Connectivity in Karnataka as on March 31, 2012
(INR million)

| Seventeen Series | Number of Projects | | | Project Outlay | Financial Support | Funds Released based on Performance (as on 31.07. 2012) |
|---|---|---|---|---|---|---|
| | Sanctioned | Completed | Project Completion Reports submitted | | | |
| Total in State | 31707 | 18436 | 15836 | 84677 | 71822 | 50206 |
| Rural Connectivity | 8655 | 5594 | 5240 | 44502 | 36820 | 27079 |
| Bridges | 1221 | 631 | 608 | 5144 | 4301 | 3088 |

Notes:

Share of rural connectivity (roads and bridges) in the state was 27 per cent of total projects sanctioned for Karnataka under seventeen series of Fund. While share of rural bridges was 14 per cent of total projects sanctioned for rural connectivity.

1. Share of completed projects for rural connectivity was 30 per cent total projects sanctioned for the activity as compared to 52 per cent share in case of construction of rural bridges.
2. Submission of project completion reports by the implementing department was as high as 94 per cent of the completed projects for rural connectivity, being higher in case of construction of rural bridges.
3. In financial terms, share of utilization for rural connectivity was 54 per cent as against that of total sanctions at 52 per cent.
4. In financial terms, the utilization was 72 per cent of total sanctions for construction of rural bridges, as against 54 per cent for rural connectivity.

## Appendix 3

### Division-wise Share of GDP, % Population, %Total Workers and Work Participation Rate, FY2007

| S.No | Division / Region | Share in GDP | % of Population | % of Total Workers | Work Participation Rate |
|---|---|---|---|---|---|
| 1 | Belgaum Division | 18.2 | 24.4 | 24.2 | 43.8 |
| 2 | Gulbarga Division | 11.9 | 18.5 | 17.5 | 43.2 |
| 3 | Bangalore Division | 50.4 | 35.6 | 35.0 | 45.9 |
| 4 | Mysore Division | 19.6 | 21.5 | 23.3 | 46.8 |
| **5** | **North Karnataka** | **30.0** | **42.9** | **41.7** | **43.6** |
| **6** | **South Karnataka** | **70.0** | **57.1** | **58.3** | **47.1** |
| **7** | **State** | | | | **44.5** |

Source: Various Issues of Karnataka at a Glance, Government of Karnataka and Shiddalinaswami, ibid.

## Teaching Note

## Bridging Socio-Economic and Cultural Fissures – Case Study on Critical Infrastructure in Rural Karnataka of India Learning Objectives

1. Understanding critical infrastructure, its role in the economy and its implications in the society as a whole;
2. Role of government, financial institutions and other implementing agencies in development of critical infrastructure in India
3. Economic and social-cultural impact of critical infrastructure in rural and thus far un-reached segments with special reference to Karnataka State of India
4. Policy implications of providing connectivity through bridges in rural India

### A Milieu

Critical infrastructure entails assets essential for the survival of a society and economy. In the rural context, the most commonly associated with the term are facilities for electricity generation, transmission and distribution; transport and distribution; drinking water supply and sewerage; agriculture, food production and distribution; public health; connectivity; financial services and social, cultural and traditional composure. This vision of critical infrastructure has impelled many a governments, nationally and internationally, to extend such facilities up to the grass-root level. With a view to support state governments, in this backdrop, Government of India, in 1995, christened a dedicated Fund for completing incomplete rural projects in various sectors. It is anticipated that the financial support provided under this Fund, designed as the Rural Infrastructure Development Fund, would accelerate the rate of capital formation as also, add steadily to the flow of output and employment opportunities in the rural areas of the country. At the time of launching of the Fund, the state governments had been experiencing the severe resource crunch over the years on the one hand and the banks, particularly the commercial banks, on the other, were unable to comply with the priority sector lending norms stipulated by the Reserve Bank of India. It was, therefore, realized that this shortfall be pooled in the forms of deposits for raising the Fund to support the incomplete infrastructure projects of various state governments. The corpus towards the fund was to be initially contributed by scheduled commercial banks, excluding

foreign banks, to the extent of their shortfall against the targets in agricultural lending, subject to a ceiling of 1.5 per cent. However, from fifteen series onwards, the allocation of Fund is being met out of shortfall from priority sector and /or agriculture and/or weaker section. Over the years, the corpus has increased from INR200 million in the first series, launched for FY1995, to INR2000 million[1] in eighteen series for FY2012. Rural connectivity followed by minor irrigation structures had a major share of investment from the Fund at all-India level. This study therefore invites the attention of one and all including the central governments in furthering the noble cause of developing the infrastructure for the rural masses.

## A Prologue

The state-wise allocation under the Fund is made based on the infrastructure development index of the respective state entailing parameters such as geographical area, population, inverse of infrastructure index, inverse of rural credit-deposit ratio and previous performance of the state governments in terms of utilization of the Fund. For Karnataka, 31707 projects had been sanctioned for different sectors under the seventeen series of the Fund covering all the thirty districts of the state as on March 31, 2012. The series-wise status is given in Appendix A. Though, the term of the loan initially was fixed as two or three years, the tenures were generally extended due to the fact that the limiting borrowing power of state was utilized for completion of projects sanctioned under the earlier series which ensued to non-completion of projects sanctioned under the later series. In the state, share of social sector (including education) was as high as 51 per cent followed by rural connectivity at 27 per cent in terms of total sanctions to the state in the seventeen series of this Fund. Within rural connectivity, 7434 projects sanctioned for construction of rural bridges in seventeen series of the Fund, comprising 14 per cent of rural connectivity projects sanctioned for the state. Status of financing rural connectivity under this Fund in the state is given in Appendix B, which shows that the state has given due priority to rural connectivity us also to the rural bridges by raising resources from the Fund. In Karnataka, the construction of rural bridges financed under this Fund is generally undertaken by the Public Works Department of the State which comprises dedicated technically qualified engineers and adopts internationally recognized norms of India Road Congress. The Department follows a transparent system of inviting tenders, allocation of works, release of funds and online monitoring of works.

## A Literary Note

In his recent lecture, Ahluwalia (2012)[2] elucidates the need for higher investment in rural roads having maximum definable links with rural productivity and rural income. Nevertheless, the rural bridges comprise a major part of the rural road as it is far more important to reduce the distances to be covered by the rural masses while traveling to the markets, educational institutions, hospitals and other contact points of the district. Big Push Model[3] of Economic Development envisages that the investment in infrastructure projects would help in breaking the constraints coming in the way of the sustainable capital formation. Furthermore, among the infrastructure items rural connectivity plays a distinct role in linking people and places. While the impact of rural connectivity is well acknowledged by the experts, studies evincing this through quantitative assessment are limited. Shiddalinaswami (2011)[4] indicates that the Mysore Division of Karnataka had higher per capita gross domestic product (GDP) in 1991 followed by Bangalore Division and far better than those of Gulbarga and Belgaum Divisions. However, in 2007, Bangalore Division was ahead of the Mysore Division while Belgaum Division had overtaken Gulbarga Division as shown in Appendix C. Further, district-wise analysis shows that Mandya district was a part of partially advanced group (Category III) in terms of share of GDP in 1991-2000 decade but deflated to underdeveloped group (Category IV) during 1998-2008 decade. Also, the medium growth rate observed in the district during THE first decade was worsened to low group during the following decade.

Quantifying economic benefits (2003) of a rural bridge to the community is a ticklish issue as the benefits obtained, on the one hand, from such an investment are in fact non-marketable, the divergence of the beneficiaries hinders in such estimation, on the other hand, due to difficulty in finding out a common indicator even in money terms. It may be pointed out that economic evaluation of a bridge may involve estimating benefits in terms of communication, agriculture, employment generation and other business / service activities. For this purpose, market values, opportunity costs and substitute prizes are generally used for assessing direct and indirect benefits emanating from the constructed rural bridges.

Development of communication and rural connectivity provides specific utilities in terms of reducing the distance between various places leading to saving in vehicle operating cost, travel time, development of road network. It is generally expected that bridge would enable patients especially from interior areas to shift to the hospital / dispensary by a

vehicle or ambulance and thus increasing survival rates due to timely and proper medical care. Also, the quality of animal population would enhance due to accessibility to veterinary hospitals. Nonetheless, it has been most often seen in rural areas that children, especially the girls, do not get proper education even when they are quite brilliant in studies and keen to continue education due to lack of connectivity to educational institutions. Rural bridges play a vital role in connecting schools, colleges and other technical / non-technical institutions to such students. Above all, frequent meetings with the friends and relatives firm up social bonding amongst the rural masses as well as facilitate in preserving cultural heritage of the locality. All such benefits may not be measurable but are definitely long-term investments in building strong villages.

## The Methodology

In view of the fact that Mysore Division had the highest share in the GDP in 2007-08 followed by Bangalore Division as also their position was interred-swapped, it was decided to cover these two Divisions for the present study. In Bangalore Division, This aspect was very important to consider the district for field study. On the other hand, Ramanagara district was carved out only five years back, I. e., in 2007 due to the fact that the District, in spite of being quite near to the State Capital, remained backward. Hence, purposive sampling technique was adopted in the identification of districts and projects covering not so prosperous districts from two different but highly prosperous divisions of the state. Also, the select districts were quite near to the state capital but representing different divisions. Regional disparities also indicated that the districts were significantly backward and any impact of financing rural connectivity in the districts would be quite visible which was essential for the present study. As a result, total fourteen completed schemes from the two districts were studied by undertaking field visits and personal interaction with the rural inhabitants concerned.

Based on the selection criteria for identification of district / projects and the methodology to conduct of the study, two types of questionnaires were developed for (a) studying project-wise technical and financial aspects of the projects and (b) estimating economic and social benefits in the project areas. Data was collected by personal interviews with the groups of people from the project areas and bias in data was removed by moderating the large divergences in statements and information furnished by the respondents during the personal interactions with different respondents.

**The Results And Observations**

1. Review of progress indicates that the implementing agencies were quite efficient in completion of projects, as also, at times, saved significant amounts. But the amounts remained under-utilized as there was no provision of adjusting them for other projects or works where the actual expenditure and in return loan component was higher than the amounts sanctioned.
2. All civil structures were erected in accordance with technical approvals by the competent authority. Also, in-house quality control system and structured monitoring mechanism were in vogue during the construction period of the bridges.
3. Though most of the works were completed within the sanctioned cost, it was nevertheless important to note that the expenditures had significantly gone up in such cases where the approach roads were provided or these works were not undertaken in time due to paucity of funds. Even in the case of bridges constructed on PWD roads the actual expenditure was much higher that the projected cost.
4. Maintenance of civil works and other cleaning operations essential for enhancing the longevity of the bridges were not being taken care of due to paucity of funds.
5. Analysis of investment in terms of number of villages and households benefited indicates that the average level of investment in both the districts was quite comparable and more or less the same.
6. Rural bridges in the selected districts, though supported the farming community and rural populace in connecting them to different markets, remained ineffective in demonstrating significant transmutation in the economic status of the inhabitants concerned. Adequate credit for farm operations and new non-farm activities remained devoid, to a great extent, the communication channels and rural connectivity could not augment benefits towards agriculture, business and employment generation in the rural areas.
7. Bridges were quite effective in extending social benefits to the inhabitants in the project areas as well as from the adjoining villages. Medical care of the human-beings along with educational facilities to the students especially the girls and the veterinary facilities for the animal population were long-term investments being taken up in the project areas are the motivational factors. Social gathering and cultural events were the encouraging outcomes necessary for social engineering in the rural areas.

## Discussion Questions

1. How you evaluate the critical infrastructure and its role in economy/ How you examine its implications in the society as a whole?
2. Discuss the role of government, financial institutions and other implementing agencies in development of critical infrastructure in India
3. Discuss the economic and social-cultural impact of critical infrastructure in rural and thus far un-reached segments with special reference to Karnataka State of India?
4. What are the Policy implications of providing connectivity through bridges in rural India

## The Rejoinder

1. **Understanding critical infrastructure, its role in the economy and its implications in the society as a whole**
   - Infrastructure is high-cost, long gestation and social investment, especially when it pertains to rural India. It is critical in the sense that it does not generate direct profits to the investing agencies as also a sequel of risks and uncertainties are involved in the process. Also, it is quite difficult to evolve private partnership into the system when it comes to the un-reached and far-flung areas of tribal and hilly regions are involved.
   - Critical infrastructure has always remained neglected since it does not emanate short-term visibilities, while our politicians, policy-makers and economists are mostly inclined to capture short-term mileage.
   - However, critical infrastructure has facilitated in improving standards of livings of the poor due to connectivity between households and markets, educational institutions, veterinary hospitals, health centers and other social organizations.
   - Critical infrastructure has remained devoid of significant investments, on the one hand, their maintenance, on the other, has been a cause of concern since no social organizations take such responsibility due to various political, economic and social-cultural factors.

2. **Role of government, financial institutions and other implementing agencies in development of critical infrastructure in India**

- Due to the issues discussed above, it is very important for the governments, financial institutions and other implementing agencies such as government departments, social and voluntary organizations, federations and media to effectively participate in the development of critical infrastructure across India.
- Governments at the Centre and the state level need to accept their responsibilities to provide critical infrastructure through effective means of policy framework, need-based rather than populist schemes and optimum utilization of resources acquired by way of loans and other grants.
- Financial institutions need to support such investments in relaxed terms but must ensure that the funds are not diverted towards populist schemes of the government or administrative / revenue expenditure. In view of this, the bulk lending approach followed by vigorous and robust monitoring mechanism may be adopted by the financial institutions which will ensure timely implementation of the projects and optimum utilization of borrowed funds. Also, all possibilities may be explored for providing grant-cum-loan components for development of critical infrastructure.
- Delay in implementation of projects was observed due to legal litigation, acquisition of land and limiting borrowing power of the state. Implementing agencies may ensure to avail financial support only where such hurdles are not foreseen and settled before seeking assistance from the lending institution so that the benefits are accrued in minimum possible time. Also, such facilities may be provided not free of cost so that the users can understand the importance of critical infrastructure as also the necessity of their maintenance.
- Maintenance of the civil structures and development activities need adequate attention of the implementing agencies and if required heavy penalties be imposed for non-compliance.

3. **Economic and social-cultural impact of critical infrastructure in rural and thus far un-reached segments with special reference to Karnataka State of India**

- Bridges support the farming community and rural populace in connecting them to markets but have not facilitated them in up-scaling their economic activities to a significant level.

- Communication channels emanated from rural connectivity remained ineffective in providing adequate credit for farm operations and secondary and service sectors. As a result, such investments did not augment benefits to agriculture, business and employment generation in the rural areas.
- Bridges were quite effective in extending social benefits to the inhabitants in the project areas as well as from the adjoining villages.

4. **Policy implications of providing connectivity through bridges in rural India**
   - A special policy framework is required to provide adequate importance to the critical infrastructure development in the rural, hilly, tribal and far-flung areas of the country.
   - Professional approach, rather than populist schemes may be useful for the optimal use of scarce resources available for development of critical infrastructure in the country.
   - Social organizations, peoples' participation and democratic approach may help in furthering investments in critical infrastructure development process.