

1. Executive summary

Background

Karnataka Rural Infrastructure Development Ltd (KRIDL) is a Public Sector Undertaking (PSU) fully owned by the state government of Karnataka. It has been in existence for 50 years and is presently incorporated as a company under the Companies Act, 1956. KRIDL reports to the Rural Development and Panchayat Raj Department of the state government. The company executes construction works in the infrastructure sector for a number of departments of the state government of Karnataka (Entrusting Agencies or EAs), under various developmental schemes. KRIDL has demonstrated robust financial performance over the last few years with growing revenue and profitability. However, at the same time the company is also facing several challenges, both in its internal and external environment. The most important contextual issues for KRIDL are as described below.

KRIDL was established with two key objectives: 1) undertake developmental works in rural areas which promote socio-economic development, and 2) create employment opportunities for unemployed and under-employed youth in rural areas by focusing on labor-intensive infrastructure works. However, almost 25-30% of KRIDL's works are executed for the Bruhat Bengaluru Mahanagara Palike (BBMP) in urban areas. There is also a perception that KRIDL subcontracts a significant portion of the works received from EAs – there could be a possibility of “middlemen” extracting some of the value which ideally should have been passed through as remunerative employment to the unemployed and under-employed rural youth.

The **second issue** is that of works not getting closed for long time (lingering). Works lingering could lead to socio-economic impacts not getting delivered to beneficiaries, dissatisfaction of the EAs and financial losses for KRIDL.

The **final issue** pertains to KRIDL's survival and long term sustainability. KRIDL has been granted exempted from competitive bidding and thus receives projects from EAs on a nomination basis; further the projects are awarded to KRIDL at prices which cover all execution related costs and also provide for a predetermined and assured profit markup. This puts into question the Company's ability to compete in the open market and its long term sustainability in the absence of such an exemption.

Thus, evaluation of KRIDL is necessary to examine the above mentioned issues and suggest recommendations. CRISIL Risk and Infrastructure Solutions Limited (CRIS) has undertaken this evaluation study for the Karnataka Evaluation Authority (KEA) by examining KRIDL's performance, its internal business processes and organizational capacity, evaluating the socio-economic impact of KRIDL's works, estimating the employment generated, assessing quality of works delivered, financial efficiency, adoption of modern technology and best practices, competitiveness of KRIDL's pricing structure and the company's long term sustainability. The period of evaluation is FY 2014-15 to FY 2019-20.

Methodology

This evaluation study is heavily evidence driven and has relied on both primary and secondary data. Data pertaining to KRIDL has been collected across its various offices, hierarchies of officials and types of works executed. Secondary data included the following:

- Basic details of all works executed by KRIDL during the 6-year evaluation period (66,657 works),
- Estimated employment generated (skilled and unskilled) for the evaluation period,
- Quality assessments of 3,608 works undertaken by the District Quality Monitoring (DQM) unit covering all 6 zones/ 31 districts,
- Available manpower (permanent and contractual), sanctioned manpower, grade-wise split, year-wise trends,
- Annual reports and financial statements of KRIDL,
- Audit report of the Comptroller and Auditor General of India (CAG) pertaining to companies and statutory corporations of the Government of Karnataka, for the period 2010-11,
- Benchmarking data for peer companies from public and private sectors, and
- Literature pertaining to success factors in construction sector and socio-economic impacts of social infrastructure creation.

Primary data included the following:

- In-depth interviews (IDIs) and focused group discussions (FGDs) with KRIDL officials across head office and field offices, spread throughout Karnataka, and
- Physical checks and opinion survey of users, administrators for a sample of 496 works (approximately 1% of total works executed during the evaluation period).

Once the data was collected, cleaned and processed, analysis and evaluation was carried out against each of the evaluation objectives of this study. The methodology employed against each objective is described below:

Impact on employment generated and livelihood creation

In the absence of specific data, the man-days of skilled and unskilled employment generated was quantified using project cost of works executed, share of labor cost, ratio of unskilled to skilled labor component and man-day rates for unskilled and skilled labor. Livelihood creation was qualitatively assessed through a description of the different business opportunities generated especially in rural areas for the local/ regional population.

Impact on eliminating middlemen

The methods and practices employed by KRIDL for procuring material, equipment, labor and sub-contractor services were studied and the extent of direct procurement from “end” suppliers/ sub-contractors was assessed. In the absence of work-wise specific data on payments made to vendors, reliance was placed on the CAG’s findings regarding procurements undertaken by KRIDL.

Socio-economic impacts created

This was assessed through opinion survey of users/ beneficiaries of the assets created through the 496 sampled works. Structured data was gathered on parameters related to quality of output delivered (e.g. drinking water), time savings, cost savings, asset usage experience, health & well-being, sanitation standards, children's education, etc. A separate analysis of the CSR works undertaken was also included. The data was aggregated across various categories of works surveyed in order to provide an overall assessment of socio-economic impacts created.

Lingering works

In the absence of specific data on work-wise execution timelines, reliance was placed on a review of the findings from CAG's audit in terms of work delays and closure/ completion of works. Factors responsible for delay were analyzed.

Quality of infrastructure created

Quality was assessed through on-site physical observations and checks of the 496 sampled works. Multiple quality parameters were checked for each work related to structural integrity, visual signs of damages, broken parts, etc. Quality perception of users/ beneficiaries was also gathered. The data was aggregated across various categories of works surveyed in order to provide an overall assessment of the quality of infrastructure created. The primary data so gathered was also correlated with secondary data in terms of quality findings of the DQM unit.

Project management, execution practices and technical capability

Project management and execution practices were evaluated through a descriptive assessment of the methods, processes, tools and techniques used to carry out works. Technical capability was evaluated through an assessment of the technical manpower and the extent of usage of modern technology.

Human resource effectiveness

This was evaluated through a trend analysis of the vacancy levels and attrition rates across the different cadre groups and proportion of contractual staff. The reasons for attrition and recruitment strategies were further assessed. Factors important for high performance culture like performance appraisal, motivational factors like training and development, employee welfare were also assessed.

Financial efficiency

For financial efficiency, a trend analysis of key financial parameters such as operating profit, net profit and inventory indicators was plotted and the driving factors were analyzed. These were further assessed in terms of ability of KRIDL to sustain the performance on a long term basis. A comparative analysis with financial performance of private and public sector peer entities was also carried out and the factors for difference in performance were analyzed.

Sustainability in absence of 4(g) exemption

The assessment included: analysis of the cost plus profit markup structure in KRIDL's prices, review of policies adopted in other states towards participation of public sector entities in competitive bids, literature comparing costs realized in public versus private sector procurements.

Future strategies

Vision of KRIDL for future growth and expansion, comparison of public sector peer corporations in other states in terms of diversification and expansion strategies.

Findings

Findings are presented against each of the evaluation objectives discussed above:

Impact on employment generated and livelihood creation

KRIDL's works are labor intensive given that 40% of the project cost constitutes labor component. During the evaluation period, it is estimated that on an annual basis, an average of 205 lakh man-days of unskilled and 33 lakh man-days of skilled employment was generated on account of KRIDL's works. Labor is extensively sourced at a local level and paid in accordance with the SR rates. Even labor working on urban projects have their origins from faraway rural areas ensuring economic transfer to rural areas.

Impact on eliminating middlemen

Larger material procurements are done directly from vendors using a transparent and competitive bidding process, through e-procurement channels. Labor is sourced by local offices through Group Leaders (GLs). As per the CAG audit for FY 2010-11, there were instances of GLs being paid in lumpsum and invoices not containing details of individual workers and the work performed, which was inconsistent with the stated norms – CRIS was unable to receive current data in this regard in order to corroborate the present day situation.

Socio-economic impacts created

Some of the salient socio-economic outcomes and impacts noted by users/ beneficiaries are as follows: improved water taste (drinking water/ RO water units), better access to schools and improvement in social status (hostels for backward category population), improved experience of daily commute and travel safety (roads), time savings (pathways), improved sanitation/ cleanliness standards of the area (drainage works), improved office infrastructure and training facilities (government buildings). Under its CSR initiative, KRIDL has been deploying 2% of gross profits for CSR activities which include setting up of RO based drinking water plants, construction of convention halls, tree guards, and COVID-19 related support (oxygen plants).

Lingering works

Delays are experienced due to multiple reasons – slow progress of work, delay in handing over of site by EAs, delay in release of funds by EAs and impact of COVID-19 induced disruptions. As per the CAG findings, 18% of the reviewed works were found to be facing delays – most of the delay cases ranged between 1 to 6 months, while slow progress of works was the major causative factor.

Quality of infrastructure created

The table below provides a snapshot of the recurring quality issues observed across the sampled works:

Table 1: Quality issues across the sampled works

Work type	% of data points with quality issues	Recurring quality issues observed
1. Road	19%	Potholes, cracks, sinking roads
2. Pathway	17%	Cracked and missing tiles, uneven surface, sinking path
3. Others	17%	Fitting issues, water seepage, non-functional equipment, broken tiles
4. Drinking water unit	14%	Damaged filter, broken pipes and taps
5. Sewerage	13%	Broken slab, cement chipping off
6. Office building	12%	Cracks, water seepage, vegetation growth
7. General building	7%	Peeling paint, water seepage, vegetation growth
8. Exterior work	7%	No major issues observed
9. Interior work	6%	No major issues observed
10. Residential building	3%	No major issues observed

Project management, execution practices and technical capability

An established process exists for planning and scheduling of projects given that KRIDL has a significant number of years of experience in executing works. Given the small size and significant number of works use of a robust project management tool is necessary, the presence of which was not observed. In case of delays, the company adopts practical measures to mitigate the impact. The company also regularly engages with and maintains good relations with EAs. KRIDL has a strong cadre of engineering staff available with adequate experience and expertise, thus its technical capacity is adequate. Quality checks are done through periodic site visits by KRIDL officials, EAs and through external entities.

Human resource effectiveness

There is dearth of adequate permanent manpower and 60% of KRIDL's total staff is outsourced. Most of the old manpower has been retiring but fresh recruitments are not happening – instead there is a drive towards hiring contractual staff. Roles and responsibilities, job descriptions are not written and formalized. A formal goal setting and performance appraisal process was not observed, which is essential to promote a high performance culture. In terms of HR welfare, KRIDL has taken a group medical insurance coverage for its employees and compensation settlement is done in any case of death of laborer. In terms of training, there is a scope for enhancement since currently only 10% of the staff undergoes training each year.

Financial efficiency

KRIDL's operating profit margin is 8% while that of peer organizations in public and private sector is in the range of 4% to 20%. KRIDL's net profit margin is 5% while that of peers is in the range of 1% to 12%. Thus, in terms of profit, KRIDL lies in the median range and hence there is a scope for increasing the profit. KRIDL's inventory turnover days (number of days required for inventory to be

converted into revenues) is very high at 971 days which indicates that KRIDL has significant extent of work in progress (funds locked) which is not getting converted into revenues - the same parameter for peer companies ranges between 2 days to 72 days.

Sustainability in absence of 4(g) exemption

There is evidence that awarding projects on nomination basis leads to cost escalations – one comparative assessment has shown that awarding projects on competitive basis leads to cost savings to the tune of 7% to 9%. There is example of Kerala state which has allowed competition amongst PSUs and prescribed for accreditation of PSUs in order to be eligible for government projects. In order to remain sustainable in the face of competition, KRIDL will need to improve its efficiency, expertise and internal controls.

Comparison with public sector peer organizations

Some of the state government owned in the construction sector (contractor in nature) are executing larger and more complex projects – Odisha Construction Corporation Ltd. (dams), Kerala Land Development Corporation Ltd. (irrigation and canal projects) and Bihar Rajya Pul Nirman Nigam Ltd. (bridges and flyovers). Some organizations have also diversified into consultancy services – Kerala State Construction Corporation Ltd., Kerala Land Development Corporation Ltd. and Odisha Construction Corporation Ltd.

Recommendations

Improving efficiency

- Financial efficiency can be improved by executing larger and more complex projects, which shall yield better profit margins. This will need a strengthening of the design wing within KRIDL through hiring of technical manpower and acquisition of design tools.
- Engineering consultancy is a possible option for upstream expansion. KRIDL can explore services such as design consultancy, lender's engineer, independent engineer, technical feasibility studies, preparation of detailed project reports, etc.
- KRIDL should obtain a Class 1 PWD contractor's license and also get accredited for international certifications & standards which will enable it to participate in bidding for larger projects.
- KRIDL needs to better utilize its significant cash reserves and fixed assets. Existing equipment/ machinery/ infrastructure should be upgraded and put to use. Old workshops should be revived so that material can be procured and their repairs can be done in house. Leasing/ renting arrangements for existing fixed assets such as land, buildings can be explored for earning regular income. Surplus cash can be invested in higher return earning instruments like reliable mutual funds, long term pension funds, etc.

Enhancing expertise

- To address the issue of lack of permanent manpower, a proper manpower study should be undertaken which will determine the human resources gaps at various levels and offices,

identify talent sources and define a time bound plan and activity roadmap for recruitment. Cadre at higher levels can be recruited through Karnataka Public Services Commission while those at lower levels can be recruited through Karnataka Examinations Authority.

- In order to promote a high performance culture, a performance management system should be put in place which should include defining key performance indicators (KPIs), goal setting at start of performance monitoring period, linking of compensation with achievement of targets on KPIs, undertaking quarterly and annual performance appraisal discussions and evaluations. Further, a rewards and recognition program should be instituted.
- A greater focus needs to be placed on learning and development of the staff. An annual training calendar should be prepared with designation wise training plans. KRIDL can tie-up with online learning platforms or government training institutes for this. Completion of certain hours of training can be included in the performance target of employees, in order to provide the desired push.

Strengthening monitoring and controls

- Implementing Enterprise Resource Planning (ERP) solution across key modules such as Engineering, Material management, Contract management, Financial accounts, Tender management, and MIS. This will help to provide a single, seamless and integrated data view across the company and improve accuracy and timeliness of business processes.
- Procure software-based project management solutions which can automate the tasks of planning, design, price and quantity estimation, resource management, demand scheduling, project management and governance.
- A software solution for work progress monitoring, work completion and closure, billing and payments, etc. It should help track job costs through work-in-progress reporting, labor analysis, projected costs, unit production, real time revenue, cost and profit margin, checking of budgeted v/s actual costs. This will ensure that allocated funds will be used in time for executing of the projects, with real time monitoring of funds and billings, inputs to financial monitoring system for follow-up on invoices, generation of completion certificate on work closure for final billing, etc.
- A field level monitoring and inspection solution for inspection and site-specific reporting. It will help in generating reports for monitoring of work progress, field activities compliance, etc. thus proactively ensure quality and reduce risks. Each of the data points can be linked with GPS enabled systems, for maintaining authenticity and real time monitoring.