

Influence of Supply Gaps of Utility Services on Livelihood Sustenance of Rural Sector: Lessons from the Case of Kalyanipura, Weli-Oya in Northern Sri Lanka

T. Lalithasiri Gunaruwan and M. H. S. Dilrukshi

Department of Economics, University of Colombo, Sri Lanka

Keywords: *Service Supply Gaps; Semi-structured Interviews;
Livelihood Sustenance*

Introduction

In the present day context, sustaining livelihood in rural village setting has become a challenge. Providing basic utility services such as water (both for drinking purposes and for farming), electricity and motorized mobility to remote villages is capital intensive. Non-availability of access to such services could make rural life uneasy and unattractive, and could lead to unsustainability of such villages.

Kalyanipura in Weli-Oya is such a deep rural enclave in the Mullaitivu District where the villagers face immense hardships in meeting their basic utility requirements. The village, formerly known as “Dollar Farm”, a Sinhala village which was brutally destroyed by the LTTE terrorists in 1984, was re-settled in the aftermath of the defeat of terrorism in 2009, together with six other villages. Over 200 families were given two acres of paddy land and another two-and-a-half acres of land for a house, under the supervision of Mahaweli Authority. Kalyanipura is one of the few Sinhala villages currently existing within the Northern Province.

The village has neither motorized transport access, nor has it got electricity grid connectivity. Though farming appears to be the intended main livelihood of the villagers (as reflected by the land provided when

re-settled), there is no irrigation system, and the farmers have to depend either on well water or on rain for irrigation purposes. Well is the only source of potable water, in close proximity to an area where Chronic Kidney Disease of unknown etiology (CKDu) is quite frequent. A significant utility service supply problem is therefore evident. No surprise that nearly three fourths of the number of families settled after 2009 have already left the village, and only 43 families continue to live there.

The paradigm of providing rural access to utility services is different to that in urban settings, and involves construction of utility infrastructure over longer distances. With regard to electricity, for instance, rural electrification calls for bringing electricity to distant villages Galindo (2014) and supplying through the grid might involve heavy energy losses on the one hand and inadequate economies of scale on the other. According to Brookshire and Wittington (2010) significant share of population in developing countries does not have access to satisfactory water supply; the problem is particularly acute in the rural areas. Inadequate quantity or quality of water supply can be a limiting factor in poverty alleviation and economic recovery, resulting in poor health and low productivity, food insecurity and constrained economic development Gbadegesin and Olorunfemim (2007). Even though the strategic importance of water resources management is now recognised because of increasing demands and rising costs, coupled with diminishing supplies Sharma *et. al.* (1996), the efforts of solving the problems faced by people, particularly those living in the rural areas, have not been successful. The planning process has routinely failed to lead to successful development projects. Often, the projects do not pass the simplest of benefit-cost analyses, and the institutional frameworks developed for the administration of such projects are found flawed.

Any weaker supply of utilities and their quality would make village life cumbersome and unpleasant, thus could push residents to abandon such villages, leading to lesser and lesser number of villagers remaining and causing further diseconomies of supply. This creates a negative cycle of

causes and effects, and becomes a development dilemma. Rural access to utilities thus deserves special reflection; the parameters may vary from one country to another and one locality to another, leading to different policy outcomes, and directly affecting design, implementation and evaluation parameters of utility supply programmes Galindo (2014).

Objectives

In the above context, the objectives of the research were to understand the extent to which the lack of electricity, water supply and transport services could have affected the village life at Kalyanipura, Welioya, and could have threatened its very sustenance, and also to throw light on possible and pragmatic course of action the authorities could develop and implement in view of sustaining the village by filling the service supply gaps. The focus of this paper is on electricity and water supply aspects of the study.

Methodology

Semi-structured set of interviews was conducted with the participation of the residents of Kalyanipura in order to understand the conjuncture, to perceive the living conditions and to identify welfare facility gaps. The survey was exhaustive in the sense that all households (29) present at the time of survey were subject to interviews based on a pre-defined questionnaire. Information gathered included those pertaining to basic social life conditions and service supply needs; the findings relevant to electricity and water supply aspects are discussed in this paper.

Results and Discussion

Kalyanipura is among those rural enclaves without electricity grid connection in a country where the grid coverage now exceeds 98 % (Ministry of Power and Energy, 2015). The survey revealed that the inability of the village households (for their poor income levels) to pay the initial connection charge has been the main cause (96.5%

respondents) behind this electricity poverty, which was reflected in their monthly income levels as well. However, the survey also revealed that there is a general reluctance to make this payment even when they could afford to, owing to (a) the perception among the villagers that this requirement for the initial payment would be waived by the Ceylon Electricity Board (CEB) at one stage or the other, as it has done with regard to many other similar settings, and (b) the feeling that the CEB was not ready with the necessary transformers and other equipment and thus, any initial payment would be futile.

The survey revealed that the water supply problem was even more critical with regard to the sustenance of the village. The villagers reported that they have to travel 1.5 km in average to fetch potable water from the tube well provided by the Mahaweli Authority, five to six times every day. Even if water from this tube well is assumed to be of acceptable quality in a region where chronic kidney disease is prevalent, this distance is too inconvenient for the villagers to carry water from, and thus, almost all (98 % of the houses) have dug their own surface wells for water supply. Two problems were found associated with this method of fetching potable water: (i) the suitability of water in these shallow wells for drinking purposes is not clear, and (ii) such wells tend to dry out during long dry spells. Water availability also appears to have affected agricultural activity. This is reflected by the fact that only 23% of the villagers have reported that their vocation was farming, in spite of the fact that each family had been given two acres of land for cultivation. The lack of a proper irrigation system appears to be the crux of the problem, which, according to information gathered from the villagers and officials, has been made further complicated by an inappropriate land allocation pattern in which low lying areas were supposedly given for housing while allocating higher lands for cultivation. This has resulted flooding of houses during rainy seasons, and drying up wells at residences and thus the inability of sourcing water for drinking and cultivation purposes during dry periods.

Conclusion and Recommendations

The research enabled inference that the Kalyanipura village might not be sustainable unless the two pressing problems of water (for drinking and agriculture purposes) and electricity supply are resolved. The fact that nearly 77 % of the families settled in 2009 have already abandoned the village indicates that solutions have to be provided urgently if the village is to be sustained.

Given the distances involved and associated economics, alternative energy sources to provide electricity to village households might be worth exploring. An overall economic feasibility might thus be warranted to examine whether an alternative micro scale power generation technology (such as solar or biogas power system) would not be more economical to both the producers and to the national economy. If grid connectivity is thought more appropriate, the Government might consider subsidising the households on their initial payment requirement to CEB, which might be less costly, in the national sense, than letting village being gradually abandoned.

Water supply for both drinking and cultivation purposes also might require examination of alternative solutions. Re-arrangement of settlement plan and agricultural land allocation through an appropriate intervention by the Mahaweli Authority also might be warranted to facilitate water resource availability and delivery, particularly if the observations brought to the notice of the research is correct regarding the claimed inappropriate land allocation. Rain-water harvesting also might be worth exploring, at least as a solution for drinking water supply during wet seasons. Irrespective of such medium term solutions, an urgent intervention to test the quality and to ensure the appropriateness of both shallow and deep well water for drinking purposes is necessary. If the quality is found unsuitable, provision of drinking water at least by a mobile water supply mechanism, administered by the local or central authorities, will be imperative to sustain the village life in the short run.

References

- Brookshire, D. S and D. Whittington. 2010. Water resources issues in developing countries, American Geophysical Union, New York. Online:<http://onlinelibrary.wiley.com/doi/10.1029/92WR02988/abstract>[Accessed on 1.8. 2016]
- Gbadegesin, N and F. Olorunfemi. 2007. Assessment of rural water supply management in selected rural areas of Oyo State, Nigeria, ATPS Working Paper Series No. 49, African Technology Policy Studies Network, Kenya.
- Sharma, N. P., T. Dambaug, E. Gilbert-Hunt. D. Grey, V. Okaru, and D. Robberg. 1996. African water resources: challenges and opportunities for sustainable development. The World Bank, Washington DC.
- Verma, N. and I. Dua. 2014, Scenario of rural electrification in India – challenges and impact, *International Journal of Engineering Research and Applications*, Vol.4(12).