THE POLITICAL ECONOMY OF ENERGY AND NATURAL RESOURCE USE

Political Economy of Access to Energy by the Rural Sector in Sri Lanka with specific reference to Rural Electrification

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Abstract

This Research study analyses the Political Economic mechanisms that exist with regards to access to energy by the rural sector in Sri Lanka. The study focuses on an in depth analysis of policy statement at national level and their implementation at grass root levels. There is specific importance laid on rural electrification and the political environment around those programs as Electrification is a crucial topic in this field. The budget allocations are looked upon to judge whether the policies are converted into actions, at the same time District wise analysis is done to understand the relationship between the political environment and development in energy related infrastructure. In order to carry out such analysis, electrification is used as the proxy.

Research Statement

This Research intends to analyse the political economic systems and the environment prevailing in Sri Lanka with regards to access to energy by the rural population. The nature and mechanisms of political economy will be looked at a national level through policy statement analysis and budgetary allocations. Thereafter the ground level implementation will be analysed through interviews with officials and villagers and also through analysis of District wise reports. Rural Electrification will be taken as a proxy to analyse access to efficient commercial sources of energy by the rural sector. The study finally concludes on the analysis of the political economic mechanisms in Sri Lanka with respect to access to rural energy and evaluates the impact on economy as a whole.

1) Background

a) Energy Sector

In Sri Lanka the energy sector is a combination of the four forms; energy resources, energy supply, energy demand and end use. The indigenous sources of energy available are Biomass, Hydro, Solar and wind, while imports include crude oil, coal and other petroleum products. Biomass is the largest energy supply source satisfying a greater proportion of cooking requirements while imported Petroleum is the second largest source of supply. The highest demand for energy is by the Household and commercial sector while Transport and Industry sectors take second and third places respectively. (Sri Lanka Sustainable Energy Authorirty, 2011) Electricity remains the main source of secondary source of energy, providing electrification to 94% of the households in 2012.

b) Rural Sector

In Sri Lanka the rural and urban sectors are categorized primarily based on the type of administrative boundaries of each area. Areas with a Municipal or an Urban Council is considered as an urban area where as all other areas are considered as rural. However this doesn't represent the actual categorization of the rural people who live in remote areas and who are marginalized in terms economic and social wellbeing. This research study's qualitative aspects are purely based on the latter description of the rural sector.

According to World Bank the rural population was 84.9% in 2010. In Sri Lanka the percentage of rural population has been around 80% for several decades. At present domestic production and provision of services are mainly concentrated in the urban cities, thus under utilizing the potential of the rural communities in terms of contribution to the Gross Domestic product. One of the major challenges faced by the rural sector economy is the limited access to efficient energy sources. There is greater potential for small and medium scale industries in the rural economy to contribute to economic growth; however these businesses are held beck due to many reasons and one major issue being access to energy. Rural households are also affected in terms of low level of standards of living. The health care sector, education and even household work get affected by the limited access to energy.

The main secondary source of energy that affects peoples' lives is electricity. Rural grid electrification has been recognized as one of the most important strategies in economic

development. However, still about 8% of the population in Sri Lanka are deprived of grid electrification.

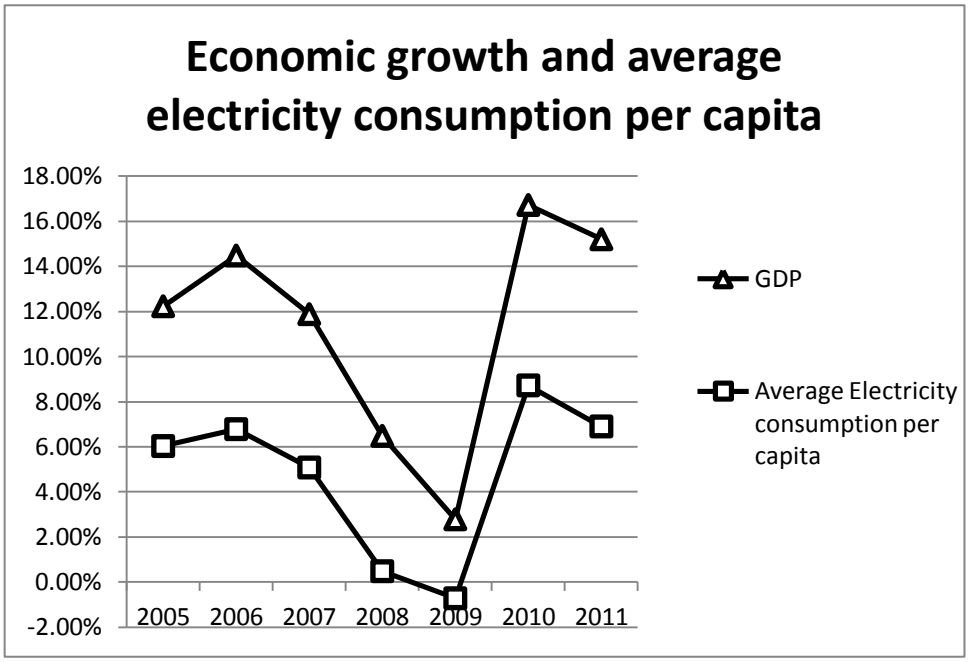
c) Political Environment and Economy

A representative, democratic system of government has existed in Sri Lanka since the termination of British rule in 1948. Elections are regularly held, and citizens over 18 years of age may vote. Fairly contested elections have resulted in several orderly changes of government since independence. As provided for by the constitution of 1978, the government is headed by an executive president elected directly by popular vote from a national electorate. The president selects a cabinet of ministers and other non cabinet ministers from the parliament. Sri Lanka's constitution provides for certain functions of government to be devolved to Provincial Councils (*palāth sabhā*). In addition, the country has a system of local government comprising Municipal Councils and Urban Councils.

The heads of the Provincial Councils and other local authorities have power to influence grass root level project implementation, thus access to energy by the rural population is greatly dependent on the motives of these politicians. Although these politicians are elected by the people themselves in the rural areas, people's interests does not get priority when the politicians come into power. The most common situation is that these politicians present major development projects to their people before elections to maximize their vote base, and once they are actually elected they don't keep their word.

Sri Lankan Economy is now in the path of economic growth and development, after a three decade of conflict in the country. The GDP growth rate even reached 8% and is now around 6%. Many development projects have been implemented and many more on the way. Especially infrastructure development projects and urban development projects are in the spot light of the Sri Lankan economy. Also there exists a direct positive relationship between per capita Electricity consumption and the economic growth rate as shown in the Graph-01 below.

Graph-01 Electricity Consumption per capita and GDP



Source: CEB Statistical Digests, Central Bank of Sri Lanka, RAM Ratings Lanka

2) Literature Review

a) Energy and the rural industries

A World Bank Report with an overview titled- "More and Better Jobs in South Asia" showed that electricity is the number one constraint for enterprises in Sri Lanka and is at least in the top five lit of constraints for all South Asian countries. This report has published results from country level Enterprise surveys and the results indicate the severity of electricity related issues for the commercial sector in Sri Lanka. Industrial firms in Sri Lanka especially in the rural sector are faced with three main bottlenecks with regards to electricity; accessibility, reliability and affordability. (World Bank, 2011)

b) Politics and Rural Development Programmes

As access to commercial and efficient sources of energy by the rural economy is closely associated with Rural Development Programmes it would be vital to look at literature on politics on such programmes. Kuldeep Mathur highlights that the reason for poor results of rural development programmes in India is, the political and administrative environment. In his article he has taken poverty alleviation programmes in the past to further prove his views. (Mathur, 1995) it was also emphasized that differences in policy implementation and performance arise due to varying regime characteristics prevailing in different states in India.

Also it was mentioned that leadership, ideology and organization influence the way such rural development programmes are run. Strategies of implementation at each state level are crucial to the success of these programmes and these strategies are formulated within the constitutional and administrative environment. Kohli, 1987 (as cited in Mathur, 1995) This description of how rural development programs are directed by poilitical will at state level in India can be used to look at the sytem by which rural elctrification programmes are implemented at Provincial level in Sri Lanka.

c) Energy Poverty

Limited access to efficient sources of energy is recognized as one of the major causes of poverty in Sri Lanka. According to Table -01 percentage contribution to Multidimensional poverty due to no electricity and no access to clean cooking fuel further proves that impact on access to energy on poverty.

Table-01 Contribution to (%) Multidimensional Poverty 2006- 2012

Contribution to MP(%) by dimension and indicator	**2012/13 (%)***	**2009/10(%)****	**2006/07*** (%)**
Living Standard	**58**	**55.1**	**57.6**
No electricity	*10.6*	*9.4*	*10.3*
No access to clean drinking water	6.8	5.1	6.8
No household exclusive water sealed toilet	9.6	10.1	9.9
No permanent house floor	8.4	7.9	8.1
No access to clean cooking fuel	*12.6*	*12.8*	*12.6*
No assets (car, van, jeep, Radio, TV, etc., at least one)	10	9.8	9.8
Education	**16.4**	**11.9**	**14**
Health	**25.7**	**33.1**	**28.4**

Source: Department Census & Statistics * First 3 months (July, August & September - 2012) data of all districts HIES preliminary 2012/13 ** Excluding Mannar, Mulativu & Killinochchi districts, *** Excluding entire Northern Province & Trincomallee District

In addition to that further Poverty analysis done by Department of Census and Statistics (DCS) in Sri Lanka has shown that by year 2007, poverty headcount ratio 1 of Sri Lanka is 15.2% where as Uva Province a relatively rural province, has shown the highest poverty headcount ratio of 27.0% while Western Province an urban Province has shown the lowest of 8.2% (DCS, 2008a). There is a strong correlation between the level of poverty and energy consumption. That relationship goes in both ways. Poor households demonstrate low energy consumption, lack of access to clean, commercial energy sources, electricity and efficient equipment. (IEA, 2002) Households tend to depend much on biomass. Whereas when a household moves out from poverty level, they access clean, efficient commercial energy sources with less domestic air pollution. (Tennakon, 2008) Researchers and policy makers have done many studies and policy implementation on both energy and poverty. They have studied the linkage between energy and poverty. They have analyzed how poverty influences in energy consumption and vice se versa.

3) Methodology

a) Analysing the country's energy policy

The country is following a vision of the president and the cabinet of ministers and the "Mahinda Chintana"- A vision for the future, has taken the lime light in terms of where the country is directed towards in the long run. Therefore it would be essential to analyse the major goals with respect to energy and rural development. Apart from that there is a separate energy policy for the country which was formulated in the year 2008, which include well categorized and descriptive policy objectives for the energy sector in the country. Furthermore there exists a separate rural electrification policy statement which will be directing the Ceylon Electricity Board and the local authorities as to the electrification of the rural sector.

b) Analysing the implementation of policy and Rural Electrification Projects

The implementation process and the effectiveness of the state policies with regards to rural energy have to be done on rather a primary data collection method. Therefore this research highlights feed -back taken from officials who were in charge of implementing the policy statements and also from the beneficiaries of these projects. The officials in charge of the Rural Electrification Schemes have been given more priority in this Research study as

Electricity stands out as vital amongst other sources of secondary energy. The political and economic influence is given more priority in their discussions and not the technical aspect.

c) Case study analysis of few villages

Few villages have been interviewed in order to get a clear view of access to energy by the rural population and also to analyse the political and economic impact. The villages have been chosen on the basis of un-electrified villages or villages who have gained access to electricity during recent times. This choice of sample villages was made mainly because electricity remains to be a very decisive and vital source of secondary energy for the rural population in Sri Lanka.

d) Data and other variables

There aren't much surveys conducted on electrification and energy consumption by the rural sector in specific, by the Census and Statistics Department. However some secondary data will be used in the research study to prove the economic importance of access to energy as a whole. Such data include the percentage of rural population, province wise rate of electrification, per capita electricity consumption compared with economic growth rates etc.

4) Results and discussions

Policy Statement Analysis

Sri Lanka follows the "Mahinda Chintana"- A vision for the future that has been compiled by the current President His Excellency Mahinda Rajapaksa. The statement which was for the 2010 election, he has stated that Sri Lanka can become an energy hub in Asia if the country can make use of the potential oil explorations in the ocean surrounding the country. Also the statement gave positive hope for new oil refineries within the country. Also the policy statement states that the governing parties wish to provide uninterrupted electricity facilities. In addition to that the "Mahinda Chintana", highlights that there will be locally produced oil which can be used as fuel for vehicles in Sri Lanka in the future.

It has been almost three years since the President came into power with the above mentioned vision in his mind. Therefore this would be an ideal time to review how this vision of "Energy Hub" has been reflected in the policy statements of the relevant ministries and to what extent implementation of the projects are taking place at ground level.

Then it would be important to analyse the main policy statement directing the country's energy sector; National Energy Policy and Strategies of Sri Lanka. Under the section of energy policy elements, point 2.1 addresses the vital aspect of provision of basic energy needs. It has been clearly identified that the primary social responsibility of providing basic energy needs of the population solely lies with the state. The policy elements stress on the importance of maintaining adequacy and continuity of energy supplies at the lowest costs to the economy for economic development. Furthermore, under the section of Implementing Strategies, point 3.2 highlights the priority that the state will be giving in improving access by rural areas to commercial energy forms such as electricity and Petroleum based fuels. Another sub point recognizes the need to provide subsidies to the deserving groups to ensure such groups have access to their basic energy needs at affordable prices.

At the same time there is general policy guidelines specifically set out on the Electricity Industry for the Public Utilities Commission of Sri Lanka (PUCSL). These policy guidelines have given high priority to rural electrification and PUCSL is supposed to recognize electricity as an essential requirement for rapid economic growth. The most striking fact is that PUCSL will accordingly perform the role of an economic, technical and safety regulator for the electricity industry. In doing so PUCSL has to ensure transparency, fairness and flexibility for the industry participants. Thus it can be understood that PUCSL has greater discretion as per the regulation and control of main institutions engaged in the energy sector, thereby creating a huge impact on the political environment. PUCSL's work and direction may be the driving force of the current mechanisms followed by the energy sector institutions. However as there may be officials with other political motives and self interest, the most efficient and effective decisions might not be made.

General Analysis of the political environment with respect to access to energy in Sri Lanka

The political economy and its mechanisms in the energy sector is mainly created and activated by a combination of few public and private organizations. These organizations especially the public ones are quite powerful and they are both economically as well as politically driven. Therefore the decisions and initiatives taken by these institutions may not be the optimal decisions at all instances. The negative impact of such decisions is mostly undergone by the rural sector. Apart from that the politically appointed officials as well as

some civilians in these areas contribute to the political economy's mechanisms in the rural sector.

The power sector and the petroleum sector are separately supervised by two main ministries. Two of the main secondary energy sources namely Electricity and Petroleum are under direct control of government ministries. Thus the private sector organizations have very little say in these two types of energy markets. Although very fair and effective policy making has taken place when it reaches the implementation stage the mechanisms get complex and diverts from the initial policy directives. This is mainly applicable to the rural sector. The implementation of all these energy expansion and distribution projects is carried out by local authorities at ground level. Implementation of rural energy projects will be almost impossible without the approval and support of these politically elected officials. The most common occurrence is that these politically elected officials would approve and support the villages that are most preferred by them or they would approve a project with an ulterior motive in mind such as coming into power through vote maximization and not purely based on the aim of providing services to the civilians. Therefore the decisions taken may not be the most economically justifiable decisions. However the victims of this whole political mechanism are the innocent villages in the rural sector who are struggling to build up their livelihoods.

These political institutions in the energy sector limit the access to energy by the rural sector in terms of two different ways. First, the access is limited directly by non provision of proper energy based infrastructure. Secondly due to unaffordable pre determined charges for energy the access is indirectly limited. The impact of such limits is quite damaging to the rural sector economy and it may have negative effects on the economy of the country.

Sources of energy consumed by the rural population

Households in the rural areas use different sources of energy to satisfy their daily energy requirements. The source of energy used, directly depends on the area that they live in and the accessibility to each source of energy in their respective areas. This can be further proved through the data in Table -02.

Table- 02 Average per capita per month consumption of energy for lighting and cooking

Province	Per Capita LPG (kg)	Per Capita Kerosene for cooking (ml)	Per Capita Kerosene for lighting (ml)	Per Capita Electricity units (kWh)	Per Capita Firewood (kg)
Western	2.49	722.27	2,438.82	27.06	26.54
Central	2.24	501	1,825.88	16.17	40.15
Southern	2.04	327.88	1,478.54	14.76	23.75
Northern	3.08	1,828.62	1,668.84	18.75	28.81
Eastern	2.84	865.64	1,642.54	17.01	33.51
North West	1.89	403.77	1,653.84	17.07	42.02
North Central	1.99	305.56	1,363.56	14.71	34.3
Uva	2.45	376.05	1,274.21	13.16	28.75
Sabaragamuwa	1.92	310.5	1,518.30	14.75	30.07
Total	2.36	569.28	1,629.37	18.84	31.94

Sources: CEPA and Central Bank Consumer Finances and Socio Economic Survey 2003/04

Western Province is an urbanized Province and Uva, Sabaragamuwa, and North Western provinces can be considered as relatively rural areas. In these rural areas people don't have access to high quality facilities and infrastructure thus they don't enjoy high standards of living as in urban areas. It has been reflected even through their energy consumption patterns. People living in these rural areas have limited access to efficient and clean energy sources. The per capita LPG consumption and Per capita Electricity consumption is low in these areas while other inefficient and unclean sources of energy usage is high.

For most of the rural households the next best alternative for electricity is Kerosene oil. However the kerosene oil is not as efficient as electricity thus there are many social consequences of using it. At the same time kerosene prices have increased gradually thus indirectly affecting accessibility by making it too costly to afford. It is noteworthy to mention that in 2012 Kerosene prices rose from Rs.71 to Rs.106. (Ministry of Finance and Planning, 2012) this mainly affected the rural population thus making them more and more vulnerable. High cost of Kerosene oil further increased the demand for access to electricity.

Biomass, which includes firewood is a major source of energy especially for cooking and majority of the rural population in Sri Lanka still depends on Biomass. Biomass is either collected from their surroundings or very rarely bought from shops by the rural population. However due to growth in population, urbanization, and usage of barren land for industrial purposes; rural population do not have Biomass in abundance as those days, thus limiting their access to freely available sources of energy. Sometimes due to pressure from political leaders or religious leaders rural population may have to give away their surrounding land for various purposes thus further limiting availability of firewood.

General Case study analysis- the voice of rural civilians highlighting the consequences of limited access to efficient sources of energy

In order to carry out a case study analysis on the impact on rural life few villagers were chosen from a village that has no electricity. The villagers are mainly engaged in all agricultural related livelihoods and their main source of income flows from agricultural produce. This is mostly the case with regards to most other rural population. Energy is mainly utilized for household and cultivation purposes.

The major challenges faced by these villagers are limited access to commercial sources of energy. As the village has not been provided with electricity people have to mainly substitute electricity with kerosene oil or fuel wood. There is a considerable cost benefit difference between using electricity and the other two sources of energy. The economic costs which include both explicit and implicit costs seems to be very high in the usage of kerosene oil, also the recent price hike of kerosene oil has further limited access to it.

If the uses of energy are to be analysed in depth, it can be identified that the most important in these areas is kerosene oil needed for the motor pumps which pump out water for cultivation and for other household purposes. So when access to kerosene is limited their crops get affected and thus their earnings also reduce. Basically their standard of living in terms of how they spend on the basic needs like food, shelter, education and health care is completely dependent upon the access to efficient and affordable sources of energy. Their economic stability and also the potential of high contributions to the Gross Domestic Product gets affected to a greater degree by the limitedness of access to basic commercial energy sources.

However what is more important on this study is how the political environment and the political economy's mechanisms affect the access to energy sources by the rural population. All local level energy projects are carried out with the approval and initiation of the provincial councils. Therefore there is always political influence and political motives involved in this process. The usual case is that when the provincial council or other local authority elections get closer these politicians visit the villages and present their enormous plans for future projects. This is mainly done with the intention of getting the votes of these villagers and ultimately being appointed to that governing authority. However after being elected their interests and enthusiasm in implementing these projects get withered.

The villagers' common complaint with regards to the delay in provision of electricity is that the politicians and the other officials only give unkept promises and they never implement their energy projects on time and sometimes they don't implement at all. Therefore people's livelihoods get more and more affected.

As Electricity is an ideal proxy to analyse the mechanisms surrounding the issue of the access to energy, here after an in depth analysis is carried out on rural electrification. Initially the actual distribution of electricity and expansion of the national grid is looked at and then the un-affordability side is looked.

Access to energy through Rural Electrification

Introduction

Although most of the power generation projects are functioning in the rural areas, majority of this power generated is consumed by the urban population. The rural consumers who have no access to national grid sometimes have to pay higher amounts to obtain electricity from off grid sources. Therefore it is vital to come up with specific rural electrification schemes for these rural populations, thereby providing them with greater access to efficient sources of energy. The process of selecting the exact villages or the GN (Grama Niladhari divisions) for these rural electrification schemes is most of the time politically driven. The locally appointed officials in the local and provincial councils often submit the proposals to the CEB and stronger the influence they exert, highly likely the project takes place. At the same time there may be NGOs or INGOS working in partnership with the CEB or on their own in implementing such donor funded projects.

Current situation in Sri Lanka

Sri Lankan government has formulated many policies and laid stress on rapid and effective implementation of the Rural Electrification projects. Presently the sole authority conducting and governing these Rural Electrification projects is the planning and distribution division of the Ceylon Electricity Board. The funds for Rural Electrification Schemes are brought in by the government as well as international and national development banks. Therefore the actual number of schemes available depends highly on availability of funds.

Budget allocation on rural electrification;

Analysis of the Budget allocations for several years in the past would be an ideal yardstick of policy implementation. Actual implementation of policies and impact will only take place through the budgetary allocations. The gradual increment in the proportion of budget allocation on rural electrification progarammes further ensure that more and more rural households have gained access and will continue to gain access to eltricity in the near future. That is well reflected in the annual elecrtfication rates mentioned in Table-03.

Table-03 Budget Allocations and National Electrificatin Rate

Budget allocation Rs.Mn

Year	**2002**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Rural Electrification Programme	1,604	2,367	1,872	1,865	3,278	3,855	8,691	9,295	10,719
Total Expenditure spent on Distribution Network Development Including Rural Electrification	-	-	-	2,752	4,455	5,530	9,470	10,063	11,424
Electricity Coverage	-	-	-	80%	83%	85%	88%	91%	94%

Source: Department of National Budget

The Public Investment Plan from 2013 to 2015 also reflects the allocation of investments towards 100% electrification target taht is mentioned in the National policy.

Table-04 Public Investement Plan (Tentative) 2013-2015

Major Thrust Area	Specific Area	2010-2012 Annual Average	2013	2014	2015	2013-2015 Total
Power & Energy	Achieving 100% electrification and reduction in transmission loss	10268	57512	35561	17610	110683
	Increase Installed Capacity to 4000MW by 2016	11839	12369	9862	8943	31174

Source: (Ministry of Finance and Planning, 2012)

The Public Investment plan depicts an increasing trend in investments on elctrification thus further prooving that the budgetary allocations will be in line with the National policy in the furture as well.

Number of Rural Electrfication Schemes (RES);

According to Table -05 below it can be identified that the number of Rural Electrification schemes have gardually increased from year 2006 to 2012. With the Government's target to meet 100% electrification, the CEB intesified and expedited implementation of these projects. Under other development projects the government officials made sure to include a component of Rural Electrification as well, so that there were simulataneous developments of infrastructure and enrgy. For instance under the Conflict Affected Area Reahabilaitaion Project 24 RESs were completed. In addition to that several distriution engancement projects were also in progress to improve the distribution network and thereby reduce the system loss.

Table-05 Rural Electrfication Schemes

Year	Number of Schemes
2006	422
2007	460
2008	346
2009	487
2010	526
2011	561
2012	694

Source:Statistical Digest 2012, Ceylon Electricity Board (CEB)

Apart from main Rural Electrfication projects the government has included rural electrification as sub projects under other Rural Development programmes. The best example is "Gama Neguma" a project which creates supporting Infrastructure to empower the villages. Investments have been made in many rural areas to promote the efficient linkages between mainstream development and supportive infrastructure, which includes electricity and related infrastructure. In addition to Gama Neguma Programme the government has implemented a Balanced Regional Development Programme which focuses on country wide infrastructure development including elcrtification. Specific Provincial projects under this main programme has been implemented with the aim of addressing the socio economic disparities in the region. (Ministry of Finance and Planning, 2012) However the effectiveness and the impact of programme development solely depends on the motives and the commitment of the politicians and other officials working at the ground level.

Electricity generation and consumer accounts nationwide

The actual impact of the policy statements and the budget allocations can be judged by looking at the Electricity generation and the change in number of domestic consumers of Electricity. According to Table-06 it can be seen that the GWh generated has gradually increased along with the number of consumers, which means more and more households have

been able to gain access to electricity, which is in line with the national policy. Although there is no statistics available on the categorization of rural and urban consumers, it can be judged that majority of the new consumers are from the rural areas, as the urban population has been having access to electricity for some time.

Table- 06 National Electricity capacity, units generated and number of consumers

Year	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Installed Capacity (MW)	2,309	2,411	2,434	2,444	2,645	2,683	2,823	3,146
Units Generated (GWh)	8,043	8,769	9,389	9,814	9,901	9,882	10,714	11,528
Number of Domestic Consumers	2,843,162	3,008,588	3,224,623	3,432,244	3,632,497	3,807,093	3,958,829	4,194,058
Number of Industrial Consumers	32,666	34,020	35,431	37,270	40,030	42,234	45,059	47529

Source: Department of Census and Statistics, Statistical Abstract 2010 and Sales and Generation Data Book 2011

Grapgh-02 Number of Domestic Consumers of Electricity

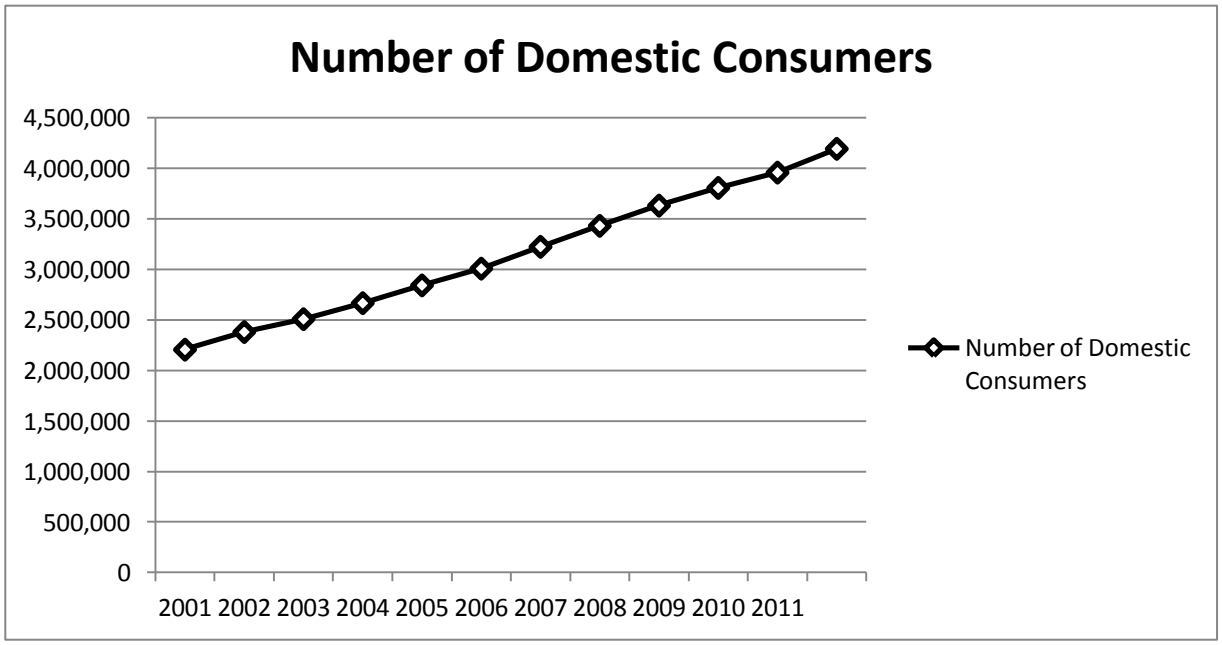


Table- 07 Percentage increase in consumers

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Percentage increase in consumers	7.90%	5.34%	6.32%	6.59%	5.82%	7.18%	6.44%	5.83%	4.81%	3.99%	5.94%

Source: Statistical Abstract 2010 and Sales and Generation Data Book 2011. (Department of Census and Statistics, 2010)

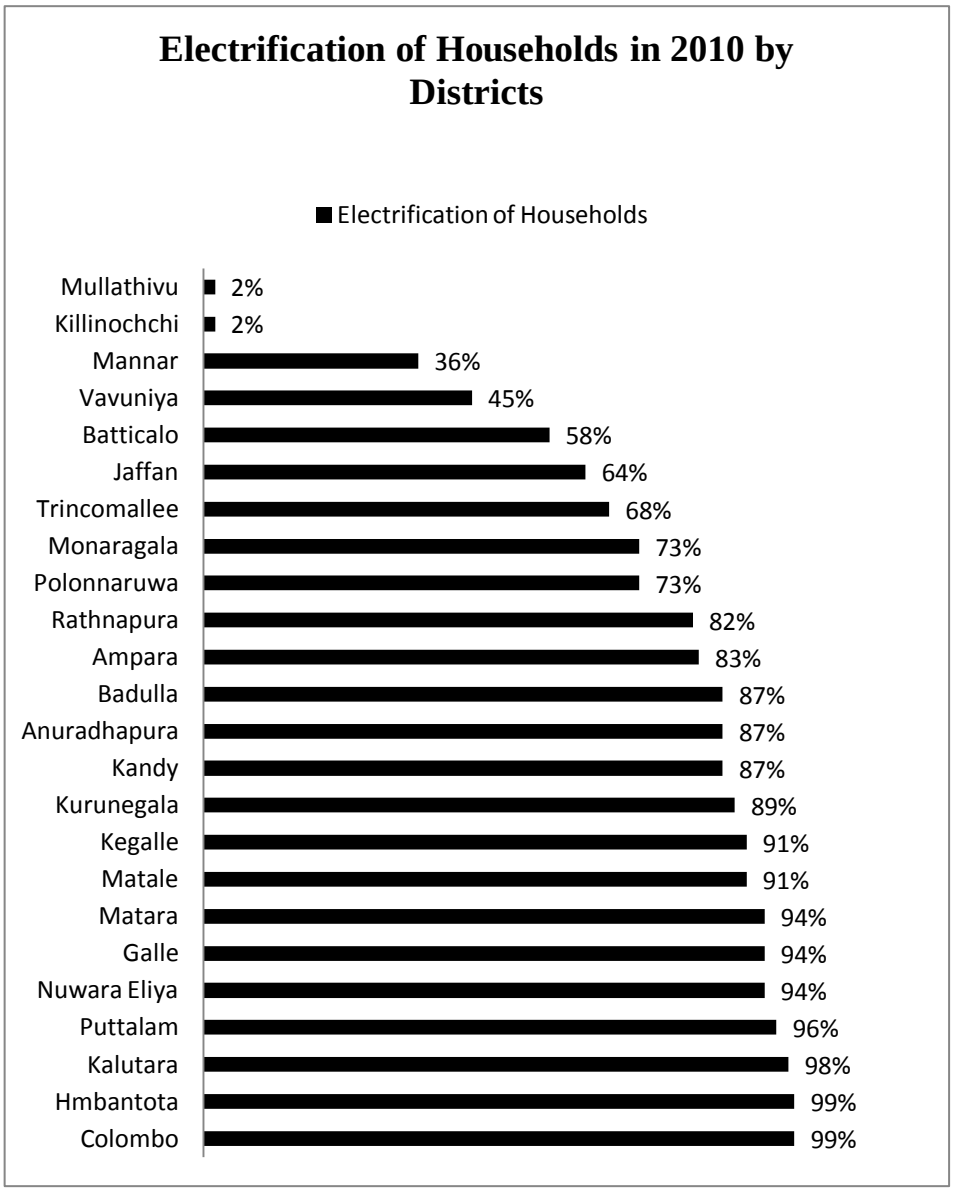
The percentage increase in the number of consumers of electricity has been 6% on average over the period of 2001 to 2011. This must be a great achievement by the Government of Sri Lanka.

Districl Level Elctrification and its relationship with Political environment in that District

According to Chart- 01 it can be analysed that more urban Districts such as Colombo and Hambantota have high elctrification rates whereas primarily rural Districts such as Monaragala and Polonnaruwa have relatively low rates. It can also be analysed that electrification rates were significantly low in Districts of Killinochchi and Mullathivu, that is mainly because those Districts were affected by the war for three decades and the war only eneded in 2009 and these data are from 2010. Therfore due to political instability in those areas the politicians and the government have not been able to contribute to infrastructure develpment in those areas, however the situtaion now is much different due to specific Conflict Affected Area Rehabilaitation Programmes.

The Colombo District which includes the capital city of the country has been subjected to many urban development projects as most of the welathy people as well the politicaians and government offficers are based in Colombo. The development of Hambantota District and its high rate of electrification has a clear significance of political influence as the current President's hometown is in that District. Since the current President came into power this District has been subject to rapid infrastructure development and urbanization, which is a positive sign for the people living in that area.It further depicts that leadership and political motives at different loaclities vary and thus the effectiveness of implementation of development programs in those areas.

Chart-01 Electrification of Household in each District



Source: (Ceylon Electricity Board, 2010)

Figure-01 Level of District Electrification on a map

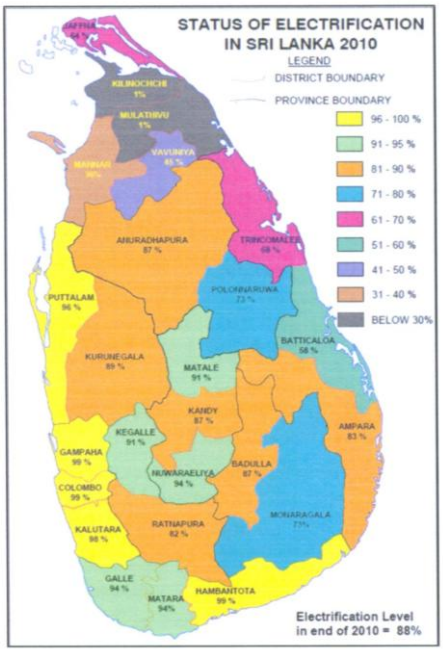


Figure 1.4 - Level of Electrification

The functioning of Rural Electrification Schemes

An interview with an engineer who had worked in the CEB for about 15 years under the Rural Electrification Schemes, revealed the following information. He initially explained the selection process of the areas for which the schemes will be based on. First and foremost the politicians in those areas bring forward the proposals for their respective areas. Amongst those proposals some will be chosen depending on the number of families, other institutions based in that area and the distance from the grid network. Then an in depth technical and economical study will be conducted by the technical officers so as to check for technical and economic viability of the projects, if implemented in these areas. Initially they will look at the number of household on three main categories small, medium and large. Then a survey will be done on whether there are any cottage industries. If there are many households and cottage industries especially industries using rotating equipment, then the CEB recognizes that area as a most suitable area for the scheme. This is because by providing electricity to un-electrified cottage industries, it is possible to electrify the whole industry thus increasing the contribution to GDP by a larger proportion. Economic Internal Rate of Return (EIRR) will be

calculated for each area and if the EIRR is higher than 8% the project will be considered as economically viable. The engineers will suggest the technical feasibility after considering many technical aspects. Then once the areas are selected the project will be implemented.

However it is very common that there will be political influence to some extent on the selection process. The engineers stated that sometimes even if it is not technically viable, if there is strong influence coming from the politicians' side then they have to go ahead with that project. Especially if there is political influence coming from the side of the President or Ministers then the project proposal will have to be accepted by the CEB officials. At the same time he mentioned that if the politicians elected in that area are from the governing party then there is greater influence exerted by them and CEB becomes helpless. On the other hand there is less influence exerted from elected politicians from the opposition side. So automatically villages and areas governed by the opposition party leaders are given less priority, thus making it unfair for the people in those areas.

When the actual implementation stage is reached the technical officers will have to select a place to base the transformers, they will either place it at a religious premises or a school premises or even near some common place of the civilians. This decision may also be influenced by the politicians and senior citizens of that area. Especially when the transformer cannot provide electricity to the whole village but only few houses and common places nearby, there will be a greater influence exerted from the civilians. Ultimately the stronger civilians who are in good terms with the politicians may reap the benefits of the project.

Limited Access due to un-affordability of service connections

Although certain villages are provided with electricity certain households cannot afford the high initial cost that have to be incurred to obtain electricity to their houses from the general connection. This is because the households themselves need to pay for the wiring charges as well as initial connection charges. When the household income is low and they can barely afford their basic expenses, it makes it impossible for them to spend on the electricity connection. So far the government or the provincial council officials have not taken any measures to provide loan schemes or subsidies for such households to obtain electricity.

Reverse political influence

The usual scenario is that there exists a top- down influence from the political leaders to the civilians. However in my studies and interviews officials revealed that there is influence exerted from the bottom layer to the top officials. Analysing further it was revealed that when civilians are deprived of basic energy needs such as electricity for a long term period, and especially when politicians don't live up to their promises, the civilians may retaliate. Civilians may get together and go on public demonstrations that bring the attention of the Media, Minister of Power and Energy and the general public to the prevailing issue. Then in Sri Lanka until the issue is resolved the media will not stop addressing it, thereby bringing in quick and effective solutions into these issues. There have been plenty of instances in which certain marginalized villages have received access to electricity by bringing the issue into the media and public's attention. However, it is to be noted that these civilians may be at a risk also, if they publicize names of the relevant politicians and there may be other political consequences.

5) Conclusions and recommendations

Conclusion

The results of this study highlights that Sri Lankan state has been clearly following the National policy of providing facilities to satisfy basic energy needs of the general public. It is more or less a success story of a country that had undergone political instability due to war in the past. Also the policies and actions taken by the government and its officials to provide commercial sources of energy such as electricity to the whole country has resulted in economic growth.

However at grass root levels there may be political influences that may sometimes result in politically driven decisions. But the country as a whole has achieved greater heights in terms of providing commercial energy sources to the rural sector, which will result in overall economic growth.

After conducting the direct interviews with the rural civilians and other officials in the Energy sector, it can be concluded that implementation of energy projects are highly dependent on the political agendas prevailing in those areas. It is a well known fact amongst the civilians that, if they live in an area that is governed by powerful and influential

politicians then they may reap the benefits of the rural development projects. Furthermore if the civilians support a particular politician at the elections by casting their votes, once that politician comes to power he might favour the people who voted for him.

At the same time it can be analysed that there may be instances in which the rural civilians may create calamity and bring attention to their energy issues, thereby obtaining better access to more efficient sources of energy.

It can also be emphasized that the Sri Lankan energy sector is dominated by few Public institutions that are highly influenced by the state policy and the interests of the present governing regime. Private organizations and the NGOs are not free to take decisions although they are more economically justifiable than the public sector decisions.

Recommendations

The country as a whole is on the right track in achieving rural development through Rural Electrification as one of the major energy sources. However I recommend that the country should further invest on renewable energy sources to provide energy to the rural community on a long term basis and a sustainable manner.

Apart from the, a good governance framework should be introduced to the administrative officials and the politicians who work on rural development projects. The governance framework should direct these officials to make the most economically viable decisions while considering the technical feasibility as well. As such decisions would save cost and reap the maximum economic returns. At the same time the governance framework should give importance for the reporting side of every project, as the funds invested might have been financed by the treasury with much difficulty be it a grant or a loan.

Apart from that there should be well integration of all the rural development projects, thereby limiting duplication of tasks and reducing extra costs. Sometimes when there are too many projects that are conducted independently in one area there could be dilemmas as well as confusions.

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