

Public Service Delivery Mechanism and Rural Poverty in Nepal

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Nepal is a least developed country with a per capita income of \$240. The population living below poverty line is 44.6%, in which the rural poverty is over and above the urban in percentage terms. In total, about 10 percent of the population live in the urban areas where the population living below the poverty line is 17.8 percent; in the remaining 90 percent residing in the rural areas, 46.6 percent of them are living below the poverty line. With regard to rural poverty, the delivery mechanism developed in rural and urban areas consists of Village Development Committee (VDC), Municipality, and District Development Committee (DDC). There is a division of work among the VDC, Municipality, DDC and the line ministries. The VDC is the lowest institution at the grass root level, which send development plan for necessary funding to DDC and the DDC to the Ministry of Local Development and to the National Planning Commission. This mechanism has been in operation for the last forty years. There has been some progress in development works such as in education, electricity, telephone, road and possession of radio. But the report and data show that the level of poverty has been increasing since FY 1976/77. To find out the impact of development activities on per capita income, a regression coefficient of each development activity has been estimated through the method of least squares. Through test statistics, it is demonstrated that there is a significant difference of the impact of independent variables (electricity, literacy, road, radio and telephone) on the dependent variable (per capita income).

I. INTRODUCTION

Nepal stands at the bottom range of even among the least developed countries of the world. At present, about half of its population live below the poverty line with basic items like food, clothing and shelter unfulfilled. The economic opportunities are not accessible to them because of low quality of skill and sub-standard education. With respect to human development index, the position of Nepal is lower than all its South Asian neighbors except Bangladesh. Besides, the quality of higher education is not satisfactory as compared to better education institutes of the South Asian countries.

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Concern over the poverty of the people had always been a priority in the development plans of the country. Its seriousness increased since the Ninth Plan (1997-2002), which adopted poverty alleviation as its sole objective. Based on this objective, the long-term and short-term goals were identified in different sectors with required target levels and accordingly plans and programs were developed. Poverty was classified in terms of "human poverty" (literacy, infant mortality, maternal mortality, and average life expectancy at birth) and "income poverty". Development through poverty alleviation was a theme of the development plan guided by the principle of sustained and broad-based growth. The detailed plan for the development of infrastructure, industry and agriculture as well as for the development of rural infrastructure and social priority sectors was prepared and implemented accordingly. Besides, the specific programs targeting the poor were formulated and involved NGOs and INGOs along with government and local institutions in the implementation process.

II. IMPLEMENTATION MECHANISM

For the reduction of poverty at the grass root level, simply improving planning and policy framework are not enough. Strong attention must also be provided towards the implementation aspect. Making good planning and developing policies is one aspect of development effort that remains incomplete in the absence of its proper implementation. In the least developed countries like Nepal, plans and policies are developed either from the technical assistance of the donor agencies or the local talents are used. As a result, the planning part of the development effort remains generally good as against implementation. Sound implementation is possible only by strengthening and capacity building of institutions involved and by laying down systematic processes and systems. Hence, proper attention is needed in the service delivery mechanism, generally an area of low priority in the country. Until service attention is paid in this respect, substantive changes at the grass roots level as would be felt by the people may not be brought about. The introduction of new operation systems requires a kind of change in work culture and operating climate, which is a most difficult job in Nepal. Holding a centralized authority means controlling the work rather than encouraging and making adjustments for smooth operation. Delaying delivery, that too is not transparent on one hand and duplicating work on the other hand, is one of the serious obstacles in the Nepalese delivery system. However, there are infrastructures developed up to the grass root level for the delivery of public goods. Thus, this paper attempts to analyze the existing service delivery mechanisms and impact thereof in development activities.

III. SERVICES AT THE LOWEST LEVEL

Nepal is divided, administratively, into 75 districts and 3915 VDCs, and 58 municipalities. VDCs and municipalities are the lower administrative units in the district. Each VDC is comprised of nine wards and wards in municipality range from

9 to 35 depending upon the size of population. At present, headquarters of the 66 districts are connected by the road network. Telephone facilities are available in 74 districts though the telephone lines per thousand people are inadequate in most of the districts. Because of the availability of potential rivers for hydroelectricity generation, electricity generation from small hydropower and its distribution is developed in some districts. In the rural area where there is no availability of electricity facility, radio is the only medium of receiving information. His Majesty's Government has used this medium for all types of information dissemination. For the development of education, there are 24,943 primary schools, 7,340 lower secondary schools, and 4,113 secondary schools extended throughout the country. Literacy programs generally feature as entry points of NGOs and INGOs before launching their development programs.

The NGO culture was introduced in Nepal in 1958 with the establishment of Family Planning Association of Nepal though earlier references are also available. However, its real growth took place after the emergence of the multiparty democratic system in 1990. The number of NGOs registered with the Ministry of Social Welfare, at present, comes to about 15,000. The Nepalese rural work culture is fully dependent on mutual cooperation of households. They do not have any institution to tie them together. Their common interest rests on agriculture production and selling of agriculture produce, which bring them together. Various activities like construction of a trail in the village, construction of a well for drinking water, and other village welfare activities bind the villagers together.

IV. INSTITUTIONAL ARRANGEMENT AND OPERATIONAL MECHANISM

Institutions working at the lowest level of administrative mechanism of the government are VDCs and municipalities. The educational institutions like primary and lower secondary schools, which are mostly available in each VDC, work as opinion leaders. The level of knowledge to the VDCs increases since the increment of the level of educational program. The NGOs are popular among educated people in villages and municipalities but these may not have become institutions of common interest of villagers. There is a provision of village working committee of each party at the village level in a multi party democratic system in Nepal. Nepalese Congress Party and United Marxist and Leninist Party are the two major parties having their respective village working committees in each VDC. Increasing the number of party members and active party members in the villages is the function of these committees.

The government mechanisms handling development activities have not been able to prove its efficiency in service delivery. Delay in progress is a common feature in most of the project works. Lower productivity of labor, higher per unit cost and sub-standard performance are some of the characteristics among others in development activities. However, the Ministry of Physical Planning and Works is responsible for the construction of highways, feeder roads, and roads in municipalities and towns. To strengthen the local self-governance system, the responsibility to construct roads

in municipalities and towns has now shifted to the Ministry of Local Development since 2004. The Electricity Authority, for power generation and distribution, and the Department of Irrigation for irrigation facility, which come under the Ministry of Water Resources, are the authorities conducting their functions through their network extended to different regions and districts. Financial assistance for small irrigation facility comes under the purview of the Ministry of Local Development. Telephone Corporation, a public enterprise, under the Ministry of Information and Communication, has its own network for telephone distribution in municipalities and towns. For the facility in rural area, it is left to the private sector. The Ministry of Education and Sports is the authority for higher education and school education in the country. Besides, the Ministry of Education is involved in adult education program in order to increase the literacy rate. Other organizations involved in increasing the literacy rate are the NGOs, INGOs and CBOs (community based organizations). In each of the socio-economic projects run by them in the rural areas, literacy development remains a major component. Radio possessing is an individual interest. It is a popular medium of communication in the rural area. Farmers' development program of the Ministry of Agriculture has been disseminated through radio.

At the lowest level of operational mechanism, VDC in the rural area and municipalities in the urban area are institutions acting on behalf of the government. Local self-governance is the policy adopted to run them. Under the local self-governance system, there is a maximum participation of the local people in bringing out social equality in mobilizing and allocating resources for the all-round development of their respective regions. The DDC is an institution at the district level. The Ministry of Local Development acts as a coordinator of the local level development activities, and in case of necessity, provides technical and financial support to them.

V. FUNCTIONS OF LOCAL INSTITUTIONS

The objective of self-governance is to make VDC and DDC effective in delivering their duties. Accordingly, a detailed workout of their nature of jobs was identified in different areas of concern and the respective authority and responsibility were delegated to them. The scope of VDC refers to the functions relating to agriculture, rural drinking water, works and transport, education and sports, irrigation and soil erosion and river control, infrastructure development and housing, health services, forest and environment, language and culture, tourism and cottage industry and others. The DDC is the highest body at the district level. For the people's representation, the DDC comes next to the VDC and the Parliament (house of representatives), which comes next to DDC, is the highest body. The scope and functions of the DDC is broader than the VDC and it covers the area that has not been touched in the VDC. It refers to the functions relating to agriculture, rural drinking water and habitation development, hydropower, works and transport, land reforms and land management, upliftment of women and helpless people, forest and

environment, education and sports, wages for labor, irrigation and soil erosion and river control, information and communications, language and culture, cottage industry, health service, tourism as well as functions relating to controlling these activities.

VI. LINKAGES BETWEEN VDC AND DDC

A District Council works as a parliament in the district. It is composed of a chairperson and a deputy-chairperson of each VDC in the district, mayor and deputy-mayor of each municipality in the district, members of the DDC, members of the House of Representatives and the National Assembly within the district, and six persons nominated by the District Council. The functions, duties and authority of the district council are as follows.

- To pass the budgets, plans and program submitted by the DDC.
- To evaluate the development programs in operation by the DDC
- To make discussion on the audit report of the DDC
- To approve the by-laws of the DDC
- To delegate some of the authorities conferred on it to the DDC.

Being members in a District Council, the chairperson and deputy chairperson of the VDC could acquire information relating to the development activities of the DDC on one hand and on the other, the development plan of the VDC would come to the knowledge of the Council members. It is a kind of a forum for effective interaction between the Council members. Figure 1 shows the linkages between VDC and DDC.

For the development of rural areas through local self-governance system, the roles of National Planning Commission, the Ministry of Local Development, and other ministries are supportive, corrective and coordinating in nature and they are grouped into the following perspectives:

- Taking policy initiatives,
- Coordinating at national level,
- Developing central level programs,
- Setting standards and goals,
- Availing basket fund to DDC for administration, recurrent and investment purpose,
- Providing budget to implement national priority programs and
- Authorizing DDC to approve their annual plan.

The department and regional offices and division offices of the ministries provide the following functions.

- To provide technical assistance to DDC,
- To implement the central level programs,
- To strengthen capacity of DDCs, municipalities and VDCs in the sectoral areas and
- To coordinate national programs.

TABLE 1. Institutions Involved in Rural Development Activities

Duties and Responsibilities	CG	DDC	MUN	VDC	CO	Pvt. Sector
<i>Road, Transport and Physical Planning</i>						
High ways, national roads, international roads and bridges	√					
Intra-district roads and bridges		√				
Urban roads			√			
Trail improvement/maintenance		√		√		
Suspension bridge construction	√					
Settlement plan, development			√	√		
Venders market development			√	√		
<i>Irrigation</i>						
Construction and rehabilitation of surface irrigation scheme	√				√	
Operation and management of surface irrigation scheme		√				
Construction and rehabilitation groundwater irrigation	√	√	√	√		
Operation and management of groundwater irrigation		√				
<i>Education</i>						
Pre and primary education	√					
Non-formal education	√					
Secondary education	√					
Higher secondary education						√
Technical and vocational education	√					
School building construction /infrastructure	√	√	√	√		
Higher education	√					
Higher technical education	√					
Special education	√					
<i>Water Resources and Electricity</i>						
Large hydropower plants	√					
Small and mini-hydro plants	√					
Micro-hydro plants		√	√	√		
Electricity line extension	√					
Electricity distribution	√					

TABLE 1 (continued)

Duties and Responsibilities	CG	DDC	MUN	VDC	CO	Pvt. Sector
<i>Agriculture, Livestock and Cooperatives</i>						
Research	√					
Agriculture and livestock extension	√					
Agro-fertilizers and pesticides	√					√
Agro-vet technical services	√					
Market collection centres, market information						√
Processing and post harvest services						√
Cooperative services						√
<i>Economic Activities</i>						
Industrial policy development	√					
Industrial development	√					√

Source: Ministry of Local Development.

In the aforesaid supply function, the central government has been playing a major role. It seems the local self-governance mechanism, in the absence of active cooperation from the central government and its effective network, cannot make effective its delivery mechanism. Table 1 shows a mechanism in which a person, responsible to make contact to the central government office repeatedly until the required work gets done, has to stay at the centre. This is because, out of 34 listed development activities in Table 1, the central government is directly responsible for 22 activities. Necessary consent needs to be taken for other activities that are difficult to state but is not overlooked. The DDC is involved in seven activities, and the municipality, VDC and private sector, each of them is assigned for six activities. The community organization is being involved in only one activity.

VIII. LOCAL INSTITUTIONS IN RETROSPECTIVE

The local institutions were working during the absolute monarchy system of Panchayat government for about 30 years before 1990. They were structured by the names of district panchayat, municipality and village panchayat. Their functions were more or less similar to the functions of the local institutions working at the present day. However, local institutions, nowadays, are made more development oriented. In the organization structure, a junior clerk as a representative of the Ministry of Local Development is deputed in a VDC. Likewise, an officer level staff is deputed in the municipality and a local development officer works as a member cum secretary in the DDC. This type of linkage was in practice under the Panchayat System of district, municipality and village administration.

IX. STATUS OF POVERTY POSITION

Poverty has become a national character, in spite of all Herculean efforts made to prepare a plan and program for poverty reduction and its implementation. The record shows it has been increasing rather than following a decreasing trend. Table 2 shows the status of poverty position from FY 1976/77 to FY 1995/96.

TABLE 2. Status of Poverty Position

Survey Year	Percent of Population below Poverty Line		
	Rural	Urban	Nepal
<i>1976/77 Survey</i> (Breakdown by ecological belt is not accessible)	33	22	33
<i>1984/85 Survey</i>			
Terai	35.4	24.1	34.5
Hills	52.7	14.5	50.0
Mountains	43.1	-	44.1
Total for Nepal	41.4	19.2	44.1
<i>1995/96 Survey</i>			
Terai	37.3	28.1	36.7
Hills	52.7	14.5	50.0
Mountains	62.4	-	62.4
Total for Nepal	46.6	17.8	44.6

Source: World Bank (1999).

Table 2 shows the changes in poverty percentage over the period of time in which the percentage of poverty is reducing in urban area from 22 percent in FY 1976/77 to 19 percent in FY 1984/85 and 17.8 percent in FY 1995/96. The rural poverty, on the other hand, has increased from 33 percent in FY 1976/77 to 43.1 percent in FY 1984/85 and 46.6 percent in FY 1995/96. By ecological belt, rural poverty is highest in Mountains followed by Hills and Terai in FY 1995/96 but in 1984/85, the percentage of poverty looks higher in Hills followed by Mountains and Terai. From this information, it is clear that the level of poverty is highest in rural parts of the Mountains and Hills and the people in the Mountains and Hills have less access to the economic opportunity as compared to Terai region. Further, the urban area of Hills possesses more economic opportunity than that of Terai.

X. EFFECT OF ECONOMIC OPPORTUNITY ON PER CAPITA INCOME

Jean Dreze and Amartya Sen in their book *Economic Development and Social Opportunity* explain that the economic opportunities are the function of a variety of factors such as the state of educational and health services, the nature and

availability of finance, the presence of markets, and the form and reach of bureaucratic control in general, among others. The presence of market is possible since there is a good network of road and communication facilities. The telephone is taken as a medium for two-way communication which is proved to be a most effective tool. And the radio and the television are the media for one-way communication used for mass communication.

Access to opportunity of an individual increases one's per capita income. The opportunity in this study is expressed in terms of access to education, electricity, telephone service, road facility, and radio service. If they are arranged in a vector form, each element of economic opportunity acts as an independent variable affecting the per capita income of an individual. So, the per capita income and economic opportunity at time t for a particular country can be represented by the vector:

$$Y_t = (x_1, x_2, x_3, x_4, x_5)_t. \quad (1)$$

where,

Y_t = per capita income; x_1 = electricity; x_2 = literacy rate (education);
 x_3 = roads; x_4 = radio facility; and x_5 = telephone.

Economic opportunity expressed in terms of electricity, literacy rate, roads, radio facilities and telephone service of the seventy-five districts has been ranked using the composite index (Central Bureau of Statistics, National Planning Commission). It addresses the smallest value of the indicator to 0 and the largest value to 1 and other values between 0 and 1. The smallest value 0 represents the worst condition of development and the largest value 1 represents the best condition of development. The formula used for the composite index is as follows:

Let, x_{ij} denote the value of the j^{th} indicator in i^{th} district; \max_j and \min_j denote the corresponding maximum and minimum values of the j^{th} indicator in all the 75 districts, then the composite index for the j^{th} indicator in the i^{th} district, say C_{ij} is computed by using the following expression:

$$C_{ij} = \frac{x_{ij} - \min_j}{\max_j - \min_j}$$

The relation $Y_t = (x_1, x_2, x_3, x_4, x_5)_t$ is expressed in the multiple regression form as:

$$Y_t = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + E_t \quad (2)$$

where Y_t = per capita income; β_0 = constant term; β_1 = regression coefficient with regard to x_1 ; β_2 = regression coefficient with regard to x_2 ; β_3 = regression coefficient with regard to x_3 ; β_4 = regression coefficient with regard to x_4 ; β_5 = regression coefficient with regard to x_5 ; and E_t = error term.

By applying the method of least squares, one can estimate all the regression coefficients. The estimated value of regression coefficient is given by

$$\hat{\beta} = (x^1 x)^{-1} x^1 Y$$

where $\hat{\beta} = (\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2, \hat{\beta}_3, \hat{\beta}_4, \hat{\beta}_5)^{-1}$

By using the econometric SPSS package, the following estimated values are arrived at:

$$Y = 11967.695 + 13937.718x_1 + 1951.394x_2 - 12275.238x_3 - 2214.831x_4 + 25073.044x_5 \quad (3)$$

(9.775) (4.417) (0.760) (-1.967) (-0.837) (3.877)

$$R^2 = 0.613 \quad \text{Adjusted } R^2 = 0.585 \quad \text{Std. Error of Estimate} = 4041.157$$

β values of the road facility and radio show that the negative impact on Y means that with the increase in the amount of Y no obvious relationship was exhibited between the road facility and possession of radio with the income level. In Nepal, even in the districts with no network of road connection, income has increased. The reason behind it is open for discussion. β_1 and β_5 are statistically significant at the 1% level and β_2 , β_3 and β_4 are not statistically significant at the 5% level. R^2 explains the regression equation affecting about 61.3 percent in total variation of per capita income. The remaining 38.7 percent is attributed to factors included in the error term.

The tabular value of F at 5% level of significant with (5, 69) degree of freedom is 2.37. The tabular value of F is less than the calculated value (21.84), which indicates that there is a significant difference on the impact of independent variables (electricity, literacy, road, radio, and telephone) on the dependent variable i.e. per capita income. It means that each of the independent variables has different degree of impact on the dependent variable.

XI. DISCUSSION OF THE RESULTS

Access to road facility in the district is naturally expected to raise the per capita income of the people as the economic activities of the district increase. The results, however, show a lower amount of per capita income of the individuals in the districts connected by the national road as compared to some of the districts not connected by the national road network. For example, the per capita income of the individuals in Manang and Mustang districts located in the Mountain region is Rs 37,153 and Rs 33,365 respectively while the per capita income of the people in Mahottari and Sarlahi districts located in Terai region is simply Rs 10,674 and Rs 10,850 respectively. Terai is a plain land taken as a paradise for agriculture production and is connected by the national highway and several feeder roads and is highly accessible from any perspective. Mahottari and Sarlahi districts, too, have national highway and several feeder roads. Furthermore, agricultural activities are severely limited in Mountain region such as Manang and Mustang districts. These two districts are neither connected by highway nor have any feeder road. It means that the development oriented thinking and commitment to hard work of the population in the district is the major guiding principle to increase the per capita income rather than connecting by road network only. As per the comparative

advantage of the district, the initiation of some economic activities in the districts to be connected by road can uplift the economic status of the people. There are different types of development programs focusing on agriculture farmers communicated through radio. These programs do not seem to have attracted enough listeners towards development programs though in rural Nepal, radio is a popular medium among villagers for entertainment and for all types of information seeking. For the improvement of literacy rate, all the programs run by the government and NGOs do not show significant impact on per capita income implying that the literacy programs may have less link with development activities. Past research has shown that the literacy knowledge of the people starts declining since that does not come to use in daily business matters. There is a need to gear the literacy programs to equip some form of necessary and usable skills and other productive activities. Only then will these programs have meaningful impact on economic development. It is true that the research conducted by the World Bank and numerous other researchers have proved a close linkage between the level of literacy and level of development. Lack of a significant relationship therein in Nepal may indicate that the focus may have been more on quantitative targets rather than qualitative improvement. The significant impacts of electricity supply and telephone facility on per capita income show a hope for Nepal for economic development by improving these means. It reemphasizes that improvement in basic infrastructure has a direct impact on economic improvement.

XII CONCLUSION

Developing better plans and policies is just a beginning for the reduction of poverty, which gets speeded up from its effective public service delivery mechanism. Delivery mechanism in Nepal lacks proper expertise and commitment on the one hand and coordination among local institution, line ministries, and the National Planning Commission on the other. As a result, the percentage of population living below poverty line in rural area is increasing continuously since FY 1976/77 to FY 1995/96. The development activities like electricity, literacy rate, road, radio, and telephone have different degree of impact on the per capita income. Some development activities like the road facility and the possession of radios by persons in rural area have no impact on increasing the per capita income. It signifies that transport linkage should be developed along with other economic packages simultaneously. Otherwise simply building roads or improving linkages will not help the people of the remote areas to improve trade and services as the very foundation may not exist. But infrastructure development is essential as it has varying degree of sound relationship with development. Literacy drives in the country needs to be substantially reoriented encompassing packages of skill and productivity drives.

APPENDIX 1. Economic Opportunity Using Composite Index

Districts	Y Per Capita Income (Rs)	x ₁ Electricity	x ₂ Literacy	x ₃ Road	x ₄ Radio Facility	x ₅ Telephone
Bhaktapur	25189	1	0.90636	0.73963	0.85855	0.30731
Kathmandu	46511	0.99182	0.95406	1	1	1
Lalitpur	27857	0.89366	0.88163	0.42551	1	0.72712
Manang	37153	0.81697	0.91166	0	0.7053	0.01198
Chitawan	23204	0.69734	0.92049	0.17448	0.34774	0.14499
Kaski	23088	0.6953	0.99823	0.10046	0.88998	0.25766
Kavre	21262	0.64622	0.82332	0.14317	0.77996	0.06298
Rupandehi	18373	0.62577	0.79329	0.10714	0.3556	0.14499
Makwanpur	24843	0.62065	0.79152	0.06591	0.49705	0.05504
Syanja	18037	0.54294	1	0.08786	0.8723	0.01245
Mustang	33365	0.53885	0.70495	0	0.47741	0.01977
Palpa	15792	0.5317	0.93286	0.10545	0.72495	0.02921
Nuwakot	16733	0.52352	0.58304	0.11909	0.57171	0.0203
Banke	18537	0.49591	0.59541	0.07931	0.37917	0.08113
Surkhet	14721	0.48671	0.76855	0.06562	0.79568	0.03928
Dhankuta	14904	0.46728	0.91343	0.10672	0.78193	0.04493
Parsa	19021	0.46319	0.30565	0.12084	0.11591	0.14499
Dolakha	13054	0.46217	0.61661	0.0534	0.69548	0.00984
Dhanusa	13448	0.45194	0.46466	0.28157	0.18664	0.06506
Bara	29163	0.44376	0.31802	0.13101	0.01572	0.03147
Tanahu	16071	0.43865	0.85866	0.12689	0.75246	0.023
Illam	16440	0.43456	0.9364	0.10742	0.53242	0.02279
Gorkha	16484	0.43047	0.78975	0.01829	0.52456	0.01131
Sunsari	18682	0.43047	0.72615	0.1821	0.36346	0.13988
Saptari	12703	0.41616	0.45053	0.11053	0.21218	0.02536
Nawalparasi	17719	0.41513	0.61837	0.05627	0.11591	0.01627
Baglung	15484	0.40286	0.87102	0.00712	0.68566	0.0094
Kanchanpur	18148	0.38446	0.70495	0.0707	0.44008	0.05011
Morang	21871	0.35992	0.69788	0.18029	0.36935	0.09707
Dang	14371	0.3364	0.70141	0.08729	0.59332	0.0418
Rasuwa	24379	0.32924	0.18551	0.03132	0.20236	0.0316
Jhapa	17617	0.32822	0.86572	0.18042	0.32809	0.06846
Udayapur	13196	0.32311	0.62014	0.04826	0.17289	0.00869
Siraha	11900	0.32209	0.30919	0.12269	0.06876	0.02206
Kailali	16020	0.31902	0.52473	0.06915	0.47151	0.04249
Lamjung	17369	0.31493	0.83922	0.03107	0.6778	0.01667
Doti	12779	0.3047	0.27562	0.04499	0.38703	0.022
Sankhuwasava	16999	0.30164	0.73322	0.00496	0.62083	0.01566
Sarlahi	10850	0.28937	0.20141	0.19715	0.08251	0.00929

APPENDIX I (continued)

Districts	Y Per Capita Income (Rs)	x ₁ Electricity	x ₂ Literacy	x ₃ Road	x ₄ Radio Facility	x ₅ Telephone
Sindhuli	14593	0.28834	0.53534	0.01867	0.45187	0.00397
Kapilbastu	15171	0.28425	0.28975	0.09408	0.06483	0.0215
Sindhupalchowk	16147	0.27505	0.39399	0.03982	0.56189	0.0032
Rautahat	11777	0.26176	0.12367	0.09777	0.12574	0.01133
Myagdi	16362	0.26074	0.80565	0.00423	0.52456	0.01232
Parbat	16504	0.2546	0.86572	0.05028	0.75835	0.00878
Mahottari	10674	0.25358	0.18905	0.22711	0.09627	0.00792
Bardia	13115	0.22597	0.40989	0.07296	0.34185	0.00973
Baitadi	12046	0.22188	0.56537	0.07835	0.43615	0.00519
Dadeldhura	17870	0.20859	0.5477	0.05532	0.389	0.01398
Jumla	14942	0.1953	0.0636	0	0.52456	0.01503
Dailekh	9192	0.16973	0.45583	0.05432	0.52849	0.00571
Pyuthan	10202	0.16564	0.5053	0.06831	0.35953	0.01079
Salyan	10694	0.15746	0.4841	0.0667	0.87819	0.00069
Gulmi	10279	0.14826	0.85159	0.07805	0.61493	0.00466
Dhading	14539	0.13701	0.5159	0.06381	0.55206	0.00716
Solukhumbu	19679	0.13088	0.58304	0	0.59136	0.02561
Terhathum	16861	0.12372	0.89399	0.03356	0.66994	0.01206
Humla	13724	0.11861	0	0	0	0.00004
Arghakhanchi	15281	0.091	0.77208	0.08713	0.69745	0.00675
Darchula	15901	0.07873	0.5477	0.0112	0.45383	0.01028
Taplejung	15814	0.07669	0.74205	0.00486	0.51081	0.01355
Rukum	13551	0.0726	0.30565	0.00671	0.63261	0.00043
Ramechhap	13646	0.06544	0.38693	0.0248	0.44794	0.0039
Okhaldunga	12876	0.05215	0.59894	0.01855	0.55403	0.01309
Achham	10421	0.05215	0.10777	0.02777	0.28094	0.00309
Mugu	14948	0.05215	0.00707	0	0.01768	0
Bhojpur	13556	0.04908	0.78445	0.00097	0.69548	0.00647
Bajura	12271	0.04806	0.18021	0.00244	0.23183	0.00681
Kalikot	10491	0.04703	0.13781	0	0.72102	0.00833
Bajhang	11167	0.04703	0.13428	0.00784	0.16306	0.0052
Panchathar	14504	0.04601	0.83746	0.06886	0.3831	0.00888
Khotang	12905	0.03476	0.67314	0	0.44401	0.00561
Rolpa	11861	0.03374	0.29682	0.01391	0.44204	0.00048
Jajarkot	11351	0.00102	0.24558	0.00479	0.6169	0.00017
Dolpa	17296	0	0.11307	0	0.40275	0.00027

Source: National Planning Commission.

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