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Impacts of Fiscal Decentralisation on Economic Development: A Study of Sindhuli District, Nepal

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Abstract

The meaning of decentralisation is the transformation of power from a central authority to the local level to make governance and development systems effective and efficient. Decentralisation has many forms, such as political decentralisation, administrative decentralisation, fiscal decentralisation and market decentralisation. Among the different types of decentralisation, fiscal decentralisation is a core component, because it has both economic and political effects which promote democratic institutions and expand the quantity and quality of a variety of public goods and services that help to meet the needs of local populations. Fiscal decentralisation in Nepal has been happening since 1999 after the formulation of the local self-governance act. This fiscal decentralisation increases the power of local government by granting autonomy to local self-government to mobilise financial resources available at the local level. Following the implementation of fiscal decentralisation through the local self-governance act, significant changes were found in terms of local economic development. Most of the indicators were changed dramatically because of the practice of fiscal decentralisation, but it was also found that all the local governments were depending on the central government's grants because none of the local bodies were able to manage the resources at the local level.

Keywords

decentralisation, governance, development, grants

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Introduction

Nepal has not had a long history of the proper implementation of fiscal decentralisation. However, it has been practising decentralisation for roughly six decades. For decades, decentralisation was understood as a strategy adopted by the central government to shift the workload of the officials of the central ministry or department to lower level staff within the organisation or to those working in the field offices. The process of involving and associating local people in the planning and development process at the local level began in the 1960s when the government established a country-wide network of local bodies (LBs) through the enactment of the necessary laws. Afterwards, a decentralisation programme was launched to formally decentralise powers and responsibilities to the LBs from the government (Dhungel et al., 2011).

During the Panchayat regime (1962–1990) several conceptual innovations were made towards decentralising resources and authority. The Decentralisation Plan 1965, the District Administration Plan 1975, the Integrated Panchayat Development Plan 1978, the Decentralisation Act 1982, and the Decentralisation Working Procedure Rules 1984 had formulated an extensive framework for the enhancement of decentralisation in Nepal. Further, Panchayat had played a crucial role at the local level for the establishment of LG institutions whereby the country was divided into four tiers: National, Zonal, District and Village. In that sense, decentralisation under Panchayat appears to be the hybridisation of de-concentration and delegation of administrative power and authority rather than a true devolution. The District Administration Plan (DAP) was introduced, aimed at consolidating the model of a unified district administrative system. After the implementation of this plan, all district level offices were kept under the branch of the District Administrative Office (Pandey, 2008).

After the historic people's movement of 1990, The Constitution of the Kingdom of Nepal, 1990 was promulgated. In this constitution, decentralisation is mentioned as a directive principle and policy of the state. To improve local governance through the meaningful implementation of fiscal decentralisation at the local level, the government of the day passed a new act. The new act is the Local Self-Governance Act (LSGA), 1999, which is supposed to be a new base for effecting actual fiscal decentralisation in Nepal. The LSGA has fundamentally transferred comprehensive central decision-making power and resources to the local level through the process of devolution. Neither before nor after the act, were there any laws formed like the LSGA, 1999. Likewise, the Interim Constitution of Nepal, 2007 also made a provision for local self-governance to set up local bodies on the basis of the principle of decentralisation and devolution of power. Moreover, it was assumed that Nepal would be a federal state after the restructuring of its unitary form. However, the process of fiscal decentralisation in Nepal is still ongoing in accordance with the LSGA, 1999.

Over time, efficiency gains will lead to faster local as well as national economic growth. In addition, Oates focused attention on the potential trade-off between the internalisation of spillovers when the central government provides the public goods and the tailoring of public goods to the heterogeneous local preferences through decentralisation. As long as the principle of correspondence of public spending and taxation decisions is respected, the decentralisation theorem predicts that the size of government should be smaller with a more decentralised public sector. Further, he suggested that local governments are better positioned than the national government to deliver public services and to match local preferences and needs. Therefore, fiscal decentralisation should increase economic efficiency. Davoodi and Zou (1998) provided two essential and complementary assumptions for this conclusion. The first assumption is that local governments are better positioned than a central government to provide public services, because local governments have information advantages. The second assumption is that population mobility and competition among local governments ensure the matching of the provision of local public services to local communities' needs.

Without fiscal decentralisation to the sub-national governments, political, market and administrative decentralisations do not work very well. The proper fiscal balance between central and sub-national governments is more important in both developing and transition countries in order to maintain balanced development (Oates, 2006). In an analysis of economic growth in Spain, Carrion-i-Silvestre et al. (2008) found that decentralisation has a negative effect at the aggregated, economy-wide level but a positive relationship for communities with a high degree of fiscal autonomy. Finally, Bodman et al. (2009) analysed the impact of fiscal decentralisation on Australian macroeconomic conditions and economic growth and found no straightforward impact. Such a range of results highlights the lack of consensus in the literature on the relationship between fiscal decentralisation and economic growth. With respect to Nepal, in the course of time, fiscal decentralisation has been a fundamental aspect of its transition to a market economy; and the country has worked hard to break down its highly centralised fiscal management system.

It is supposed that fiscal decentralisation is a pre-requisite to making democracy strong in the country. Moreover, there is a positive relationship between fiscal decentralisation, democracy, political stability, economic growth, and sustainable economic development. It means that fiscal decentralisation is required for the prosperity of the nation. In the case of Nepal, fiscal decentralisation has been exercised for a long time, but the expected results of fiscal decentralisation could not be observed at the local level due to the slackness of proper implementation.

Legal Provision of Fiscal Decentralisation in Nepal

The Government of Nepal Act, 1948, mentions the bicameral central legislature—Rastha Sabha and the Bhardari Sabha, the latter consisting of the elected members of village (Gram) Panchayats, Town (Nagar) Panchayats and District (Zilla) Panchayats. In the post 1950 days, the concept was encouraged in different forms. The Nepal Municipality Act, 1952 (Nepal Nagalpalika Ain, 2009) came into force in 1953. In 1956 (2013 BS), the Village (Gaun) Panchayat was declared for the first time, which was intended to institutionalise village Panchayats at the local level and played a crucial role in institutionalising local democracy at the village level (Dahal, 2009). In 1960, king Mahendra took power into his own hands and declared the non-party panchayati constitution in 1962, which recognised decentralisation as one of the important components. In order to implement decentralisation in Nepal, the then panchayati governments made a Village Panchayat Act, 1961 (2018), Nagar Panchayat Act, 1961 (2018) and District Panchayat Act, 1961 (2018). Besides this, several other acts such as the Decentralisation Plan 1965, the Decentralisation Act 1982 and the Decentralisation Bylaw 1984, were initiated to empower the village, town, district, zonal and regional administrations.

After the restoration of multi-party democracy in 1990, the Constitution of the Kingdom of Nepal 1990 was formally promulgated in Nepal. Unlike the constitution of 1962, this constitution did not mention decentralisation in the preamble, but did mention it in the Directive Principles and Policies of the State as one of the state policies. After restoration of the multi-party system, it was decided to maintain the existing two-tier local authorities with a name change, Village Development Committee (VDC) and municipality and District Development Committee (DDC), and separate acts governing the VDC, municipality and DDC were promulgated. However, in late 1995, a High Level Decentralisation Coordination Committee (HLDCC) chaired by then Prime Minister Sher Bahadur Deuba was constituted to unify all the prevailing DDC, VDC and municipality acts and to prepare a comprehensive framework for local self-governance. Based on recommendations from the HLDCC, the LSGA, 1999 and Local Self Governance Regulation (LSGR), 1999 were promulgated in Nepal in 1999, which is considered a milestone in promoting decentralisation in Nepalese history. Owing to the enactment of the LSGA, all the existing laws regarding the Local Government the Village Development Committee Act 1991, the Municipality Act 1991, the District Development Act 1991 and the Decentralisation Act 1982 were repealed. The LSGA and its regulations are the laws that offer basic policy on decentralisation and regulate the structure and functioning of LBs (Dhungel et al., 2011).

Similarly, the Interim Constitution of Nepal, 2007, has made a clear provision for decentralisation in article 139 of part 17 for the exercise of people's sovereignty and people's participation in the country's governance. However, no newly separate act, rules and regulations have been formed for the further effective implementation of fiscal decentralisation in Nepal.

Study Area and Method

Sindhuli is one of the hill districts selected by the Government of Nepal for the purpose of practicing fiscal decentralisation in the first round. Among one municipality and 53 VDCS, five VDCs named Arunthakur, Ambote, Mahadevdanda, Ladavir and Sirthauli VDCs were selected on the basis of simple random sampling. A total of 180 respondents, i.e. 36 persons from each of the VDCs including 4 persons from each ward of the VDCs, were interviewed using a systematic random sampling method.

This study adopted both descriptive and exploratory methods for analysis. The study basically focused on primary data but secondary data was also used. Regarding the primary data collection, the focus group discussion was conducted for the relevancy of the issues to the area of study. Five FDGs in each VDC were conducted comprising 20 people in each group, keeping in mind that at least 50 per cent of participants are female to make participation gender-inclusive. An interview was also conducted with 48 key informants. The key informants were experts, ex-head and vice of DDCs and VDCs, ministry of local development officials, lecturers, LDOs, VDC secretaries and consultants to those who were working in the field of local governance. Finally a set of semi-structured questionnaires was prepared to elicit the required information. The questionnaire was pretested in a community with a similar background outside the study area. The final survey was conducted using face-to face-interviews with sampled HH using trained enumerators.

Model Specification

The procedure followed in the course of studying the impact of fiscal decentralisation (autonomy of local bodies over local resources) on economic development (in terms of local development expenditure/ revenue for areal development activities), involved the use of the following multiple regression model empirical analysis;

$$LDF_i = \beta_0 + \beta_1 FD + \beta_2 X + \varepsilon_i \qquad [1]$$

Where, LDF is local development finance, FD represents fiscal decentralisation [includes central grant (CG) and revenue collected at local level (IR)], X is the vector of control variable, β_i's are coefficients, ε is an error term and finally, i stands for the number of VDCs. The control variable encompasses local level contribution (PC), level of population (POP), education (EDU), central grants (CG), internal revenue (IR) and inflation (INF) in the VDCs of study.

On the basis of the information given above we can represent the above model (1) as

$$LDF_i = \beta_0 + \beta_1 CG_i + \beta_2 IR_i + \beta_3 POP_i + \beta_4 EDU_i + \beta_5 INF_i + \beta_6 PC + \varepsilon_i \qquad [2]$$

Where, β_is are parameters to be estimated.

An empirical investigation has been undertaken in order to test the validity of the existence of any positive relationship between fiscal decentralisation on economic development and other regressors. "E-views7" is a statistical software package that was applied for calculation of the variable coefficients. As the data contains both cross-sectional units and time-series components, the present investigation applied the panel-data model for our analytical purpose.

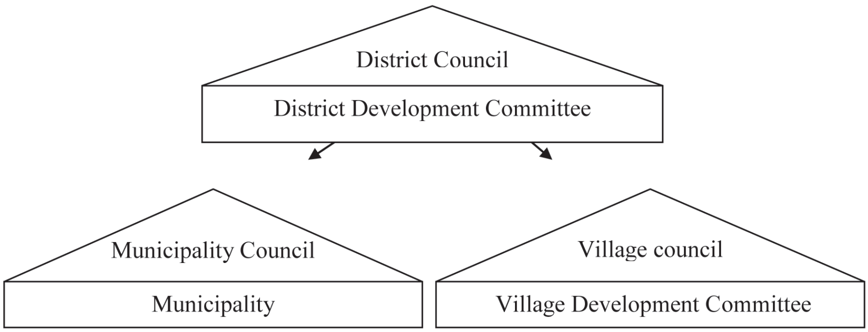
According to Hill et al. (2008), a panel of data consists of a group of cross-sectional units that are observed over time. By pooling the various strata together, enough observations become available to create sufficient degrees of freedom, and to allow more complex testing to be done. The advantage of using a panel-data model is the ability to analyse a large sample of data to estimate econometric models that describe the behaviour of the individual cross-sectional units over time. Such data would allow for the control of individual differences (heterogeneity), and to study dynamic adjustment, in addition to measuring the effects of policy changes (Hill et al., 2008). It is assumed that there is no need to check heteroskedasticity and multicollinearity in the panel data model, but other tests, like autocorrelation and normality, need to be tested with appropriate methods. If the tests reveal that the model is correctly specified, the independent variables are not correlated with each other, and the assumption of constant variance also holds true, then the panel-data model can be constructed in order to construct a more in-depth analysis.

Structure of Local Governments in Nepal

Nepal has two tiers of local government, i.e. District Development Committee (DDC) and Municipality at the urban level and Village Development Committee at the rural area level. Currently, there are 75 District Development Committees, 58 Municipalities including one Metropolitan and three Sub- Metropolitan, and 3,915 Village Development Committees as a local government at local level. DDC is extended upto 13 areas. Municipality is consisted of 9 to 18 wards. But the VDC is divided into 9 wards. The structure of the local government is presented in the figure below.

To measure the economic development owing to fiscal decentralisation, at VDC level, the data collected through primary as well secondary ways is presented in detail below.

Figure 1. Structure of the Local Government



Source: Adopted from LSGA, 1999.

Results and Discussion

In order to enable the people to enjoy the fruits of democracy, one of the main guiding principles of the Constitution of the Kingdom of Nepal (1990) and its succeeding Constitution (Interim Constitution, 2007) envisages providing opportunities to the people for their maximum participation in governance through decentralisation. Local bodies are supposed to be the tool for the successful implementation of decentralised government. People's perception about the local governments is given below in detail.

Table 1. People's Knowledge about Village Development Committee

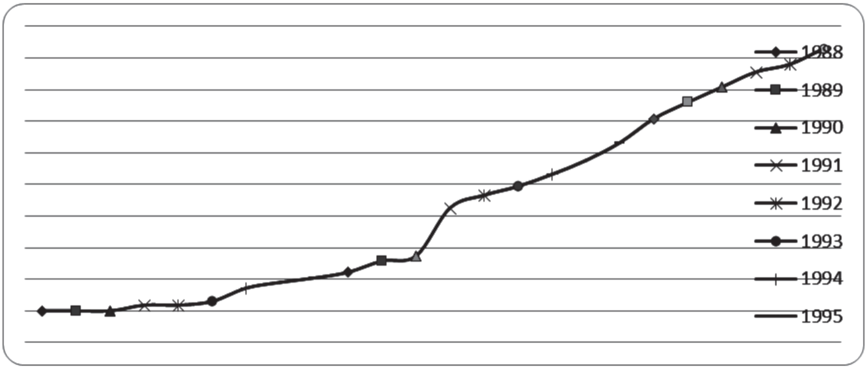
Particulars	*Yes (%)*	*No (%)*	*Can't say (%)*	*Total*
Knowledge about VDC/DDC / Municipality	173 (96)	7 (4)	0 (0)	180
Knowledge about Service delivering Institution at the VDC	102 (57)	75 (42)	3 (1)	180
Ever elected/nominated in VDC	23 (13)	157 (87)	0 (0)	180
Membership in any organisation	140 (78)	34 (19)	6 (3)	180
Selection process of VDC's representatives	174 (97)	6 (3)	0 (0)	180
Numbers of representative in VDC	135 (75)	40 (22)	5 (3)	180
Knowledge about income and expenditure of VDC	40 (22)	126 (70)	14 (14)	180
Ideas about present structure of local governments	34 (19)	140 (78)	6 (3)	180

Source: Field Survey 2013 (percentage in parenthesis).

Table 1 reveals that out of the total population, 96 per cent of people clearly expressed their knowledge about the VDC/DDC/Municipality and 4 per cent of people did not say anything about VDC/DDC/ Municipality. Likewise, 57 per cent of people were knowledgeable about service-delivering institutions at the VDC and 42 per cent of people were unable to say anything about VDC and 1 per cent of people were unable to say anything about VDC/DDC/MuAN. Similarly, 13 per cent of people were elected in VDC and 87 per cent of people were not elected yet. It also indicates that 78 per cent of people were members of institutions and 34 per cent of people were not related to any institution and 3 per cent of people cannot say anything about membership in any organisation. In the same context, 96 per cent of people know about the selection process of VDC representatives and 3 per cent of people did not know about this process.

Similarly, 75 per cent of people know about the number of representatives in VDC and 22 per cent did not know about the number of VDC representatives and 3 per cent of people cannot say anything about this. In the same context, 22 per cent people know about the income and expenditure of the VDC, 70 per cent of people do not know about this and 8 per cent of people cannot say anything about this process. Finally, 19 per cent of people know about the ideas behind the present structure of local government, and 78 per cent did not have any ideas about this and 3 per cent of people cannot say anything about this process.

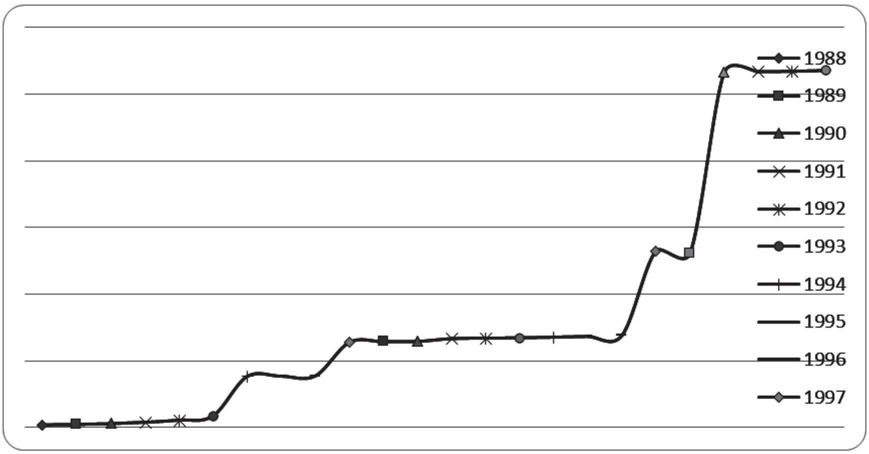
Figure 2. Internal Revenue Trend of Village Development Committees



Source: Annual Plan Book of VDC, 2013

The above figure shows that the internal revenue of the study area from fiscal year 1988/89 to 1990/91 was nominal. Likewise, it shows an increasing ratio from FY 1991/92 to 1999/00. However, after FY 2000/01, it looks very high in comparison to previous years.

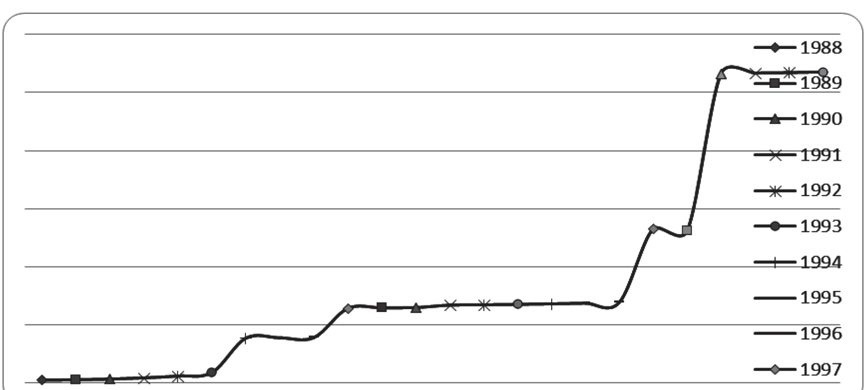
Figure 3. Revenue Trend of Sample Village Development Committees



Source: Annual Plan Book of VDC, 2013

The above figure shows the total revenue of the study area from FY 1988/89 to 2011/12. From FY 1988/89 to 1993/94 it seemed in name only. Similarly, from the FY 1994/95 to 2005/06, it was slightly increasing. But after the FY 2006/07 to 2011/12, it increased up to 23,000.

Figure 4. Expenditure Trend of Village Development Committees



Source: Annual Review Book of VDCs, 2012

The above figure indicates that from the FY 1988/89 to 1993/94, the expenditure trend was very slightly positive but from FY 1994/95 to 2005/06, it seemed to increase a bit. In the same context, from FY 2006/07 to 2011/12, it increases at a high rate in comparison to past years.

From the analysis of income and expenditure of sampled VDCs shown above, it was found that local bodies are totally dependent on the central government's grants, owing to the significantly smaller internal income, which indicates that the local bodies are unable to meet the expectations of local people through the mobilisation of local resources. However, the internal revenue of the local bodies is increasing gradually. Further, it can be claimed that there has not been a proper implementation of the policies of fiscal decentralisation.

Table 2. Situation of Development of VDCs before and after Fiscal Decentralisation

Sector wise Indicator	*Unit*	*Arunthakur*		*Aambote*		*Mahadevdanda*		*Ladavir*		*Sirthauli*	
		BFD	*AFD*	*BFD*	*AFD*	*BFD*	*AFD*	*BFD*	*AFD*	*BFD*	*AFD*
1. Infrastructure											
Black Top	km	0	0	0	0	0	0	0	0	0	0
Gravel	km	0	0	0	5	0	0	0	11	0	12
Earthen	km	0	27	0	23	0	11	0	14	5	9
Bridge	qty	4	7	5	8	4	6	2	4	1	3
Telephone	hh	0	160	0	136	0	115	0	375	1	412
Mobile phone/ E-mail Internet	pr	0	506	0	574	0	660	0	1145	0	1010
Public Buildings	qty	1	3	2	4	1	3	1	2	3	5
Electricity (Solar Energy, Bio-Gas, Peltry Set etc.)	hh	0	505	0	560	0	357	19	888	47	1204
Irrigation Canal	qty	9	13	11	14	6	11	4	10	5	7
2. Economic											
Income Generation	pr	46	470	79	254	170	460	240	536	315	710
Entrepreneurship	pr	135	368	122	314	138	245	190	358	102	366
Local Market	qty	0	1	1	3	0	2	0	2	2	5
Tourism Site	qty	0	0	0	0	0	1	0	0	0	1
Parks	qty	0	0	0	2	0	1	0	0	0	1
3. Social Sector											
School/ Colleges	qty	5	10	4	7	5	9	4	8	4	6
Sports Grounds	qty	0	1	0	4	0	3	1	4	2	5
Drinking Water	hh	234	787	169	521	145	457	548	1385	640	1375
Public Toilets	hh	0	1	1	3	0	2	1	3	1	4
Health Institution	qty	1	1	1	1	1	1	1	1	1	1
Target Group	pr	0	340	0	220	26	388	15	477	65	560
Safety Nets	pr	98	212	102	313	139	317	139	490	165	520
4. Forest and Soil Erosion											
Community Forestry	qty	0	9	0	6	0	9	0	6	0	7
Nursery	qty	1	1	0	1	0	1	0	0	0	0
Soil Erosion Control	mt	0	0	0	2550	500	1780	0	1430	0	1550
Flood Control	mt	0	358	0	520	0	355	2200	4500	1470	2532
5. Institutional Development											
Office of VDC	qty	0	1	1	-	0	1	1	-	1	-

Training to Users' Committee	pr	0	32	0	45	0	24	0	55	0	44
Training for Empowerment	pr	0	22	0	46	0	65	0	90	0	120
Training to VDC Staffs	pr	0	3	0	2	0	2	0	2	0	2

Source: Annual Review Report of Arunthaku, Aambote, Maahadevdanda, Ladavir and Sirthali VDCs, 2013 Note: hh = household, qty = quantity, mt = metre, pr = person

Table 2 shows that under the infrastructure sectors in Arunthakur VDC, there was no construction of black-top or gravel roads both before and after fiscal decentralisation, but earthen roads were constructed after FD, with 27 km being built. Also, the number of bridges was 4 before FD and 7 after FD. It also shows that there was not any use of household mobile phones/telephones before FD, but after FD 160 households used these. After FD 506 persons were using mobile phones. In the case of public building, electricity and irrigation canals there was one public building and 9 irrigation canals before FD, but after FD there were 3 public buildings, 13 irrigation canals, and 505 households have access to infrastructure. Under the economic sector, there were 4 people for income generation and 135 people were in entrepreneurship before FD. In contrast, after FD there were 470 people in income generation, 368 people in entrepreneurship, and one is a local market. However, there is no tourism site or park either before or after FD. In the area of the social sector, there were 5 schools/colleges, 234 households that had drinking water, and one health institution before FD, but there was no public toilets or sport grounds. However, after FD there were 10 schools/colleges, one sports ground, 787 people having drinking water, one public toilet, one health post, 340 target people and 212 safety nets. Under forest and soil erosion, there was only one nursery before FD and there was a lack of community forest, flood control, and soil erosion control. By contrast, after FD there were 9 community forests, one nursery and 358 flood control activities. There is still no soil erosion control activity. In the area of institutional development, there was no office of VDC, no training provided to the users committee, training for empowerment and training of VDC staffs before FD. After FD, there is one VDC office, 32 trainings provided to users committee, 22 trainings for empowerment and 3 training VDC staffs.

Similarly, under the infrastructure sectors in Aambote VDC, there was not any constructed black top road before and after FD, but gravel and earthen roads were constructed after FD, with 5 km and 23 km respectively. The quantity of bridges was 5 before FD and 8 after FD. It also shows that there was not any household-used mobile phone/telephone before FD but after FD, 136 households use the telephone and 507 people are using mobile phones. In the case of public buildings, electricity and irrigation canals there were 2 public buildings and 11 irrigation canals but there was no electricity facility before FD. After FD there are 4 public buildings, 14 irrigation canals and 560 households have access to electricity. Similarly, in the economic sector, there were 79 people working in income generation, 122 were in entrepreneurship, there was one local market, while tourism sites and parks were not there before fiscal decentralisation. By contrast, after FD, 254 people are in income generation 314 people in entrepreneurship, 3 local markets and 2 parks. But there is still no tourism site after FD. In the social sector, there were 4 colleges, 169 household had drinking water and there was one public toilet, one health institution and 102 safety nets, but there were no sports grounds, and no programmes targeted people before FD. After FD, there are 7 colleges, 4 sport grounds, 521 households have drinking water, there are 3 public toilets, one health institution, 220 targeted people and 313 safety nets. In the area of forest and soil erosion, there were no community forest, soil erosion control or flood control activities before FD. However, after FD, there are 6 community forests, one nursery, 2,550 meters of soil erosion control and 520 meters of flood control. In the area of institutional development, there was one VDC office and there was no training to users committee, no training for empowerment, and no training to VDC staffs before FD. After FD, there are 45 people for the training to users committee, 46 people are training for empowerment, and 2 are training VDC staff.

Likewise, in the infrastructure sector in the Mahadevdanda VDC, there was not any black top, gravel or earthen road before FD. After FD, there are only 11 kms. of earthen road. There were 4 bridges and one public building before FD but there was no household that had a telephone, mobile phone or electricity. After FD, there are 6 bridges, 115 households have telephones, 660 people with access to mobile phones and e-mail, 3 public buildings and 357 households with electricity. There were 6 irrigation canals before FD and 11 canals after FD. Similarly, in the economic sector, 170 people were in economic generation and 138 were in entrepreneurship, but there was no local market, no tourism facilities and no park before FD. After FD, there are 460 people that have access to income generation, 245 people in entrepreneurship, 2 local markets, one tourism site, and one park. In the social sector, there were 5 colleges, 145 households with access to drinking water, one health institution, 26 target people and 139 safety nets, but there was no sports ground or public toilet before FD. By contrast, after FD there are 9 colleges, 3 sports grounds, 457 households with access to drinking water, 2 public toilets, one health institution, 388 target people and 317 safety nets. Under forest and soil erosion, there were 500 meters of soil erosion control but there was no community forest, nursery, or flood control before FD. After FD there are 9 community forests, one nursery, 1,780 meters of soil erosion control and 355 meters of flood control. In the area of institutional development, there was no VDC office, no training to user committee, no training for empowerment of people and no training for VDC staff before FD. After FD, there is one VDC office, 24 people training to user committee, 65 people training for empowerment and 2 people training VDC staff.

Similarly, in the infrastructure sectors in Ladavir VDC, there was no black-top, gravel or earthen road before FD, while after FD, there are 11 kms. of gravel and 14 kms. of earthen road, but there is still no black-top road. There were 2 bridges, one public building, 19 households with access to electricity and 4 irrigation canals, and no households had telephones and mobile phones before FD. In contrast, after FD, there is one bridge, 357 households have telephone access and mobile email, there are 2 public buildings and 888 households have access to electricity. In the economic sector, there were 240 people in income generation, and 190 were in entrepreneurship, but there was no local market, no tourism site and no parks before FD. After FD, there are 536 people in income generation, 358 in entrepreneurship and there are 2 local markets but tourism sites and parks are still not there. Similarly, in the social sector, there were 8 schools/colleges, 4 sports grounds, 548 households with access to drinking water, one public toilet, one health institution, 15 target people and 139 safety nets. After FD, there are 8 schools/colleges, 4 sports grounds, 1,385 households with access to drinking water, 3 public buildings, one health institution, while 65 people are target people and 165 people are safety nets. In the forest and soil erosion sector, there were only 2,200 meters of flood control and there was no nursery, community forest or soil erosion control before FD. After FD, there are 6 community forests, 1,430 meters of soil erosion control and 4,500 meters of flood control, but there is still no nursery. Similarly, in the area of institutional development, there was one VDC office before FD. After FD, there are 55 people are in training to users committee, 90 people in training for empowerment and 2 people in training to VDC staff.

Likewise, in the infrastructure sector in Sirthauli VDC, there were 5 kms. of earthen road, one bridge, one household with access to telephone, 3 public buildings, 47 households with access to electricity and 5 irrigation canals, but there was no black-top road, gravel road, and no mobile phones for people before FD. After FD, there are 12 kms. of gravel road, 9 kms. of earthen road, 3 bridges, 412 households with access to telephones, 1,110 people with access to mobile phones and email, 5 public buildings and 1,204 households with access to electricity but there is still no black-top road. There were 5 irrigation canals before FD and 7 canals after FD. Similarly, in the economic sector there were 315 people with access to income generation, 102 people with access to entrepreneurship and 2 local markets, but there was no tourism site or parks before FD. After FD, there are 710 people with access to income generation, 366 people with access to entrepreneurship. Also, 5 local markets, one tourism site and one park were established. Similarly, in the social sector in the same VDC, there were 4 colleges/schools, 2 sports grounds, 640 households with access to drinking water, one public toilet, one health institution, 65 people benefitting from the target group programme and 165 people with safety nets before FD. After FD, there are 6 schools/colleges, 5 sports grounds, 1,375 households with drinking water, 4 public toilets, one health institution, 560 people benefitting from the target group programme and 520 people with safety nets. In the area of forest and soil erosion, there were 1,470 meters of flood control but there was no community forest, nursery or soil erosion control before FD. By contrast, after FD there are 7 community forests, 1,550 meters of soil erosion control have been constructed, 2,532 meters of flood control have been constructed, but there is no nursery. Similarly, in the area of institutional development, there was only one VDC office and there was no training to user committee, training for empowerment or training to VDC staff before FD. However, after fiscal decentralisation, 44 people received training for users' committee, 120 persons received training for empowerment, and 2 persons on the VDC staff received training for capacity development.

Access to Basic Socio-Economic Services in the Study Area

Access to basic socio-economic services is also a major indicator of economic development. The areas of basic socio-economic services are access to educational institutions, health post-hospital, market facilities, land line telephones/cellphones, electricity, financial and community institutions, drinking water, toilet/garbage management, non-formal education and training centers, and religious places. The dependence of people on their access to basic socio-economic services is clear. Thus there is a high correlation between economic development and people's access to socio-economic services. The government sector, NGOs/INGOs and the private sector have all been investing a great deal of money in socio-economic activities. The prime information about the access to basic socio-economic services of people in the study area is given below.

Table 3. Level of Access to Basic Socio-Economic Services

Name of Basic services	*Distance less than half hour*	*Access before FD*				*Total*	*Access after FD*				*Total*
		Yes	*%*	*No*	*%*		*Yes*	*%*	*No*	*%*	
Educational institution	√	34	19	146	81	180	159	88	21	12	180
Drinking water/sanitation	√	90	50	90	50	180	160	89	20	11	180
Health post/hospital	√	45	25	135	75	180	123	68	57	32	180
Electricity/Solar energy and bio gas		15	8	165	92	180	111	62	69	38	180
Telecom service/E-mail	√	0	0	180	100	180	99	55	81	45	180
Road/Transportation	√	6	3	174	97	180	81	45	99	55	180
Irrigation facilities		78	43	102	57	180	97	54	83	46	180
Financial institution	√	5	3	175	97	180	46	26	134	74	180
Market	√	9	5	171	95	180	70	39	110	61	180
Community Forest	√	100	56	80	44	180	66	37	114	63	180
Community organisation	√	14	8	166	92	180	96	53	84	47	180
Non-formal education and training centre	√	0	0	180	100	180	21	12	159	88	180
Maternal child welfare organisation	√	0	0	180	180	180	28	16	152	84	180
Recreational place	√	44	24	136	76	180	52	29	128	71	180
Religions place	√	29	16	151	84	180	43	27	132	73	180

Source: Field Survey, 2013

Table 3 reveals that out of 180 people, 19 per cent had access to educational institutions and 81 per cent had no access to educational institutions before fiscal decentralisation. However, after fiscal decentralisation, 88 per cent had full access to education and the remaining 12 per cent had no access to such institutions. Likewise, before fiscal decentralisation 50 per cent of the people said 'yes' to the question of whether they have access to drinking water sanitation, and 50 per cent said 'no', they did not have any access to such facilities. But after fiscal decentralisation, 89 per cent of the people had access to drinking water/sanitation and the remaining 11 per cent have no access to such facilities. Similarly, 25 per cent said they have access to health post/hospital and 75 per cent people said 'no' they did not have any access before fiscal decentralisation. After FD, 68 per cent people have access and 32 per cent have no access to health post/hospital. In the same context, 8 per cent of people had access and 92 per cent had no access to electricity, solar energy or bio-gas before fiscal decentralisation. But after fiscal decentralisation, 62 per cent of people had access and the remaining 38 per cent have no access in electricity/solar energy or bio gas. Similarly, 100 per cent of people had no access to telecom service/email before FD, but 55 per cent of people have access and 45 per cent have no access to telecom service after FD. Likewise, in the area of road/transportation 3 per cent of the people had access and 97 per cent of people had no access before FD. After FD 45 per cent of the people had access and 55 per cent had no access to road/transportation. Likewise, before FD, 43 per cent of the people had access and 57 per cent of the people had no access to irrigation facilities. By contrast, 54 per cent of the people had access and 66 per cent of the people have no access to irrigation facilities after fiscal decentralisation. Similarly, 3 per cent of the people had access and 97 per cent of the people had no access to financial institutions before FD. After FD, 26 per cent of the people had access and the remaining 84 per cent of the people had no access to financial institutions. It also indicates that 5 per cent have access and 95 per cent have no access to a market before FD. However, after fiscal decentralisation, 39 per cent of the people had access and 79 per cent had no access to a market. Similarly, 56 per cent of the people had access and 44 per cent have no access to community forests before FD. After FD, 37 per cent of the people had access and 63 per cent had no access to a community forest. In the same context, 8 per cent of the people had access to community organisations and 92 per cent had no access before FD. By contrast, after fiscal decentralisation 53 per cent had access and 77 per cent had no access to such organisations. Similarly, 100 per cent of people had no access to non-formal education and training centres before FD. However, after FD, 12 per cent of the people had access and 88 per cent of the people had no access to non-formal education. Likewise, 100 per cent of the people had no access to maternal child welfare organisations before FD, while after FD, 16 per cent of the people had access and 84 per cent of the people had no access to such organisations. In the same area, 24 per cent of the people had access and 76 per cent had no access to recreational places before FD, but after FD, 29 per cent people have access and the remaining 71 per cent of the people have no access to recreational centres. In the same area, 16 per cent of the people had access and 84 per cent of the people had no access to a religious place before FD. After FD, 27 per cent of the people had access and the remaining 73 per cent had no access to a religious place.

Econometric Analysis of Fiscal Decentralisation

The series of information obtained were modeled in an econometric framework in order to investigate the dynamics among the chosen variables. Since the data being used here are cross-time series, to measure the real impact of the variables on local development finance it is necessary to make the series free from time variation. For this purpose, a panel stationarity test was performed.

Panel-Unit Root Test for Stationarity

A time series is called stationary if its mean and variance are constant over time, and the covariance between two values from the series depends on the length of time separating the two values, and not on the actual times at which the variables are observed. A panel-unit root test is performed to determine whether a series is stationary or not, as the more powerful panel-unit root test is preferable, instead of performing an individual unit root test for each cross-section (Baltagi, 2008). The Levin, Lin and Chu test (LLC) is the formal test used for this purpose. It tests the null hypothesis that each individual time series contains a unit root.

Table 4 . Panel Unit Root Test (Section = 5 Obs. 110)

Variable	*Statistics*	*Probability*
LNLDF	-3.73894	0.0001
LNCG	-2.24686	0.0123
LNIR -4.57733	0.0000	
LNINF	-2.75727	0.0029
LNPOP	-3.49467	0.0002
LNEDU	-3.49462	0.0002

Test is performed in Eviews7 (LN represent natural Logarithm)

The information in Table 4 shows that all the variables are stationary in logarithmic form and this allows the computation of the parameters of a regression model in local development finance in level logarithm form.

Autocorrelation

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	9.9499	Prob. F(2,113)	0.0001
Obs*R-squared	17.9683	Prob. Chi-Square(2)	0.0001

The test indicates that the null hypothesis has been accepted and there is no autocorrelation problem in the model.

Normality Test

Here the computed Jarque-Bera statistic is equal to 266.7729 with probability (0.0000). Thus it can be concluded that the residuals of the regression are not normal.

Analysis of Pooled Regression

Table 5. Dependent Variable: LNLDF

Method	*Variables*	*Coefficient*	*p-value*	*R-Square*	*F-statistic*
Panel least Square	C	-86.6542	0.0000	0.8911	235.3347 (0.0000)
	LNCG	87.4331	0.0000		
	LNIR	8.10193	0.0000		
	LNINF	-0.52011	0.0000		
	LNPOP	0.158846	0.0418		
	LNEDU	0.185648	0.0327		

Note: Computation are performed in E-views 7

Regression results show that the F-statistic is very high, with zero probability, indicating that the model can be used for simulation. R-squared is very high, i.e. 89.11 per cent of total variation is explained by variables included in the model. All coefficients and the probability show the significant relation with LDF and are contributing to LDF as expected. Due to high multicollinearity between LNEDU and other independent variables, here LNEDU is dropped for the rest of the analysis.

Hausman Specification Test

For the selection between fixed effect and random effect the model Hausman specification test is performed as follow.

Table 6. Hausman Test for Selection of the Model

H_0: Random effect model is appropriate for analysis of this model

Test Summary	*Chi-Square test statistic*	*Chi-Square d.f.*	*Probability*
Cross Section Random	0.0000	4	1.0000

Source: Annual Programme Budget of VDCs, 1987-2011

From the calculation, it is found that at the chi-square value is 0.00 and probability value is 1.00, clearly indicating that a null hypothesis cannot be rejected; that is that a random effect model is appropriate for analysis. For further analysis the random effect model will be adopted hereafter.

Analysis of the Model

The main purpose of this study is to test the effects of chosen significant variables in fiscal decentralisation on economic development in Nepal. As per the Hausman Specification test, output of the random effect model is presented in table 7.

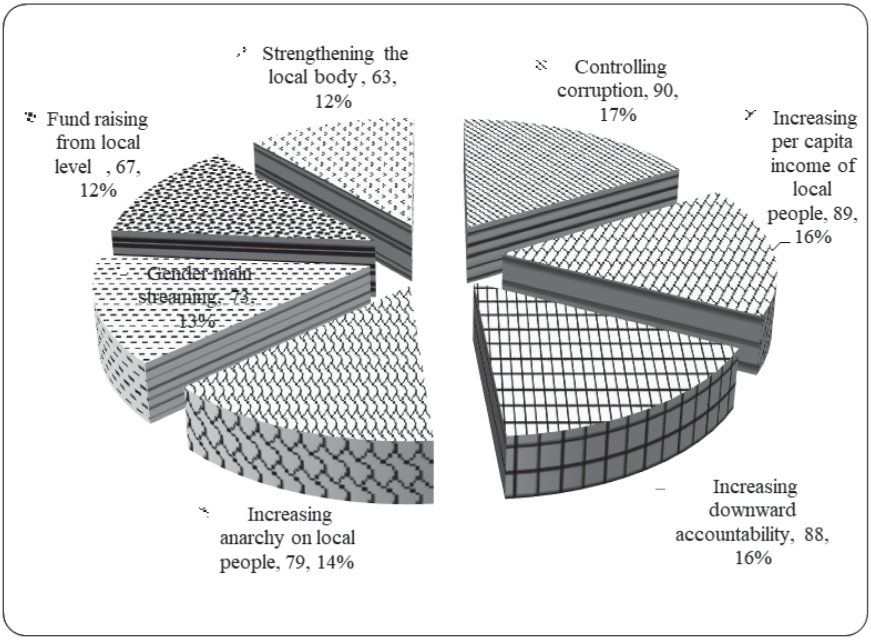
Table 7. Random Effect Output and Probability (Dependent Variable: LNLDF)

Method	*Variables*	*Coefficient*	*p-value*	*R-Square*	*F-stat.*
Panel least Square	C	-87.63597	0.0000	0.7585	90.29876 (0.0000)
	LNCG	88.60803	0.0000		
	LNIR	7.45274	0.0000		
	LNINF	-0.40599	0.0051		
	LNPOP	0.19457	0.0187		

Source: Annual Programme Budget of VDCs, 1987–2011.

The F-Stat shows that the model is significant and the R-square value (0.7585) suggests that approximately 76 per cent of the variation in local development finance is explained by the variables included in the model. The F-statistics and probability indicate that the model is adequate for predicting and estimating the local development finance using the proposed independent variables. CG, IR and population have a positive relation with local development finance and their contribution to the local development finance is significant. In our model it was assumed that inflation has a negative impact on local development finance and here the result is significant, with the expected sign.

Figure 5. Challenges of Fiscal Decentralisation



Source: Field Survey, 2013

The above figure reveals that 17 per cent of people said that controlling corruption is the challenge for successful implementation of fiscal decentralisation. Likewise, 16 per cent said that increasing per capita income of local people is the challenge of fiscal decentralisation. In the same context, 14 per cent of people said that they saw the effect of increasing anarchy on local people, 16 per cent said increasing downward accountability, 13 per cent viewed gender main-streaming, 12 per cent spoke of fund raising from the local level and, finally, 12 per cent viewed that strengthening the local body is the challenge of fiscal decentralisation.

Conclusion

The main objective of the study was to discover the impacts of fiscal decentralisation on economic development at the local level. To complete the study, both primary and secondary data was used. Under the purposive sampling, the Sindhuli district was selected, and from this district five VDCs named Arunthakur, Aambote, Mahadevdanda, Ladavir and Sirthauli VDC's were selected by using simple random sampling without the replacement method. Likewise, a total of 180 respondents were selected by using the same sampling procedure by imposing inclusive and equal participation from each of the VDCs. Similarly, 5 focus-group discussions were held with the attendance of 20 people at each VDC and interviews were conducted with 48 key informants as well.

Before fiscal decentralisation, the share of the central grant is 97 per cent on an average and the share of internal revenue is only 3 per cent which is very low in comparison to the central grant. But after fiscal decentralisation, the share of the central grant is 95 per cent and internal revenue is about 5 per cent which indicates that internal revenue is less than the central grant. However, the share of internal revenue is increasing in comparison to the share of central grants. Most of the socio-economic indicators have changed after fiscal decentralisation in comparison to the situation before fiscal decentralisation, which increases the access of local people to basic socio-economic services.

The central grant and internal revenue have positive relations to economic development activities at the local level, which proves that there is a positive relation between fiscal decentralisation and economic development from both the qualitative and quantitative analysis of the study. However, the quantitative analysis does not deny the influence of inflation, population and education on fiscal decentralisation. This indicates that there are possibilities to meet the expectation of local people through mobilisation of local resources. From the overall analysis, it was found that only the central grant is playing a pivotal role for local development which indicated that the local bodies are totally dependent on the central grant rather than on internal revenue, so that the purpose of fiscal decentralisation could not be achieved and it is still far from achieving its mission. Furthermore, it can be claimed that there is not proper implementation of the policies of fiscal decentralisation to meet the expectations of local people through the mobilisation of local resources.

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