

The Effect of Political, Social and Economic Factors on Human Development in Nepal

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Abstract:- The study aims to examine the relationship between population uniformity, political competition, and citizen participation with the Human Development Index (HDI). The political competition and citizen participation of both national and district-level elections as a political dimension, population uniformity as a social dimension and average per capita district expenditure as an economic dimension has been used as predictor variables to explain HDI. Three ecological belts, i.e., Mountain, Hill and Terai, and seven Provinces have been generated as dummy variables. The average per capita district expenditure and population uniformity was found to be statistically significant at 99 percent to predict HDI. Still, there was a negative relationship between population uniformity and HDI. The competition index of the first past the post and proportional election of the Constituent Assembly (CA) was not found to be significant to explain HDI. There is the highest contribution of Province One to HDI among the seven Provinces.

Keywords:- Human Development Index (HDI), Citizen Participation, Political Competition, Ethnic Uniformity, and Government Expenditure.

I. INTRODUCTION

The new Constitution of Nepal had officially declared Nepal as the Federal Democratic Republic in 2015. The constitutional powers have been exercised by the Federation, State and Local levels according to this Constitution and law (Government of Nepal, 2015). There are seven provincial and 753 Local Governments including 460 rural municipalities, 276 municipalities, 11 sub-metropolises, and six metropolises (Central Bureau of Statistics, 2017). Administratively, Nepal is divided into 77 districts, and geographically, Nepal has three ecological belts, namely mountain, hill, and Terai (plain land). Before the promulgation of the new Constitution of Nepal in 2015, there were 75 District Development Committees (DDCs), 3915 Village Development Committees (VDCs), and 58 municipalities during the second local election in 1998 (Ministry of Finance, 2015). Due to the political instability in the country, no periodic local election was held after 2002 till 2017. Therefore, the political competition and participation index was prepared based on the result of the

local election of Nepal back then (Election Commission, 1998). However, the milestone of the decentralized local self-governance system was started after the promulgation of the Local Self-Governance Act (LSGA) in 1999. The LSGA 1999 had provided the legal basis for managing local government bodies in Nepal (Khanal, 2016).

The Communist Party Nepal United Marxist and Leninist (CPN-UML) had won the election in most of the DDCs. Nepali Congress, Nepal Labour, and Peasant Party, and Rashtriya Prajatantra Party (National Democratic Party) were the other political parties who had won in a few DDCs. There was competition among these four major political parties in DDCs elections (Election Commission, 1998). Using the number of votes received by two major Parties, the competition index was calculated for regression analysis. Similarly, the result of second Constituent Assembly (CA) election (separately both First Past the Post and Proportional Election) which was held in 2013 is also used as independent variable to explain the impact on HDI.

The sources of expenditure at the district level were the grant (conditional and un-conditional) of government of Nepal and bi-lateral and multi-lateral development partners and own source revenue of the local governments. The district expenditure of government of Nepal incurred by the then District Development Committees, Village Development Committees, Municipalities and other line agencies (district offices) such as education, health, agriculture and livestock, industry, forestry, drinking water, and so on is used as the economic aspect for this study. The total district expenditure of five fiscal year from 2009/2010 to 2013/2014 is converted into average district expenditure dividing by the population of the respective district which is used as one of the independent variables in the regression analysis (Central Bureau of Statistics, 2017). The local election data of 1998 is collected for the regression analysis that seems old but due to the political instability in the country, there was no further local election onward that date till 2017. Therefore, this data is used assuming that the political competition and citizen participation in the respective district have been remained same.

The main objective of the study is to examine the influence of political, social, and economic factors on Human Development.

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It is because human development index is the indication of average achievement of health (life expectancy), education (adult literacy and mean years of schooling), and a decent standard of living (per capita GNI). The HDI is the outcome of government expenditure, a vision of leadership, peoples' participation, ethnic uniformity, etc. Therefore, this study has used explanatory variables i.e., average district expenditure as an economic factor, political competition and citizen participation as political factor, and ethnic uniformity as social factor. To address the objective of the study, the HDI has been used as a dependent variable because it is the key output of the government target assuming that this index is a better measure of human well-being than a mere economic indicator such as gross domestic product (GDP) growth.

The research goal was to test the different three hypotheses whether it is applicable in Nepal or not. Hypothesis one is connected to the relationship between ethnic diversity and public goods provision. Hypothesis two is linked to the relationship between citizen participation in election process and human development, and third one is the association between political completion and government performance which is represented by the human development index.

Human Development and Government Performance

There are economic inequalities everywhere around the globe. The major agenda of each county is to reduce inequalities. Together with economic inequality, there are also dissimilarities in crucial features of human development such as health, education, dignity, and respect for human rights. More specifically, quality of human development is the composite index of quality of health (life expectancy, number of physicians and beds), quality of education (access to the internet in primary and secondary school, pupil-teacher ratio, percent of trained teacher), and quality of standard of living (access to electricity, drinking water and sanitation) (Conceicao, 2019). The Human Development Index (HDI) indicates an increase in the success or performance of a country or region. The decentralized local governments spend the general allocation fund and special allocation fund that is reflected in capital expenditure, which is aimed at increasing HDI (Rahayu et al., 2016). Since 1990, HDI has been used by the United Nations Development Programme (UNDP) as a tool to measure the success or performance of human development within a country or region (Fattah & Muji, 2012).

For human development, peace is essential and for sustainable peace, human development is essential. Moreover, inclusion and participation are significant elements for both peace and human development (Tiwari & Tropp, 2009). The Nepal HDI was firstly published in 1998 focusing political economy for the first time in Nepal. Secondly, it was published in 2001, covering poverty reduction perspectives. Thirdly, it was available in 2004, which examined poverty reduction from an empowerment perspective, emphasizing equal opportunities. The 2009 version of the report discussed state transformation and human development and identified the cause and effect of

exclusion. The 2014 version of the report attempted to assess the production capability at the district level of Nepal (United Nation Development Programme, 2014). Human Development broadly represents human capability and well-being. The human capacity encompasses the process, outcome, and choice accompanied by the freedom to choose. There is an influence of political activities in all socio-economic areas.

Human Development also influences the life style of each individual of the society and leads a certain pace and particular direction of development in the community (Chitescu & Lixandru, 2016). According to the definition of United Nations Development Programme (UNDP), human development is concerned with the expanding people's choices which is being reflected by average achievements in three dimensions. The first dimension is a long and healthy life, which is measured by life expectancy at birth. The second dimension is the level of knowledge of citizen which is measured by adult literacy and mean years of schoolings, and third and last dimension is a decent standard of living that is measured by Gross National Income (GNI) per capita in purchasing power parity (PPP \$) (National Planning Commission, 2014).

Participatory Democracy

At the most basic level, participation is the exercise of peoples' involvement in decision making process that affect their lives. Participation helps people identify opportunities and strategies for action, and create the conducive environment for cohesion to effect transformation. Significant and meaningful involvement depends on the willingness and ability to participate and express the voice. However, people's participation in election is generally measured by voter turnout numbers. Turnout indicates the per cent of eligible voters who actually cast their vote. It is believed that the election provides the opportunity to make a fundamental contribution for strengthening democratic governance. Modern theorists on participatory democracy do not want to limit participation to political decision-making, but stress that participation should encompass such areas as the workplace and local communities (Pateman, 1970).

It is experienced that an excess of liberalism support to weaken the democratic institutions and brings scepticism about voting and disaffection among citizens. Generally, it is seen that a large portion of citizens in the society are not much interested in caste votes during the election.

However, the politically active persons who are closed to the political leaders are encouraged to participate in the election process, and they do the actual work (Barber, 2003).

Without public involvement in the democratic process, democracy faces the problem of its legitimacy and its guiding force (Dalton, 2008). The saying is that more people who participate in a democracy, the more democratic it becomes. But disbelievers have confronted that statement on the basis that everyone does not have the skills to make

informed political decisions. It is because, there is a problem of participation gap because the better-off are more engaged in policy, while the poorest vote less and lack the resources to lobby for change (Dalton, 2017). The participatory democracy is a process of collecting decision or demand from both direct and representative approaches. It is because the citizens have the authority to decide on public policy. Generally, it is assumed that citizens reward those lawmakers that implement policies proposed by the citizens' by re-electing them; and can punish the legislators who do not take the citizen's demands/needs into account by not re-electing them (Aragones, and Sánchez-Pagés, 2009).

Participatory democracy believes that participation has several functions in a democracy. The first function of participatory democracy is educative: citizens may increase their civic skills and become more competent if they participate in public decision-making. The second function of participatory democracy is the integrative function. The processes of the participation of the citizen or their representatives in a decision-making process will be helpful to address their feelings, desires, and necessities that ensure the demands of their community. These kinds of practices contribute to increase the acceptance of public decision, and people also take ownership of the public decisions. Another aspect of participation in decision making processes is to obtain greater legitimacy of public decisions (Michels & De Graaf, 2010). Based on the review of certain literatures, the following hypothesis has been set and tested.

H₁: There is a positive association of citizen participation with HDI scores.

Political Competition and Development

Some theorists, who favour a narrow conception of political participation, emphasize the negative aspects of participation and regard massive participation as dangerous. Dahl (1956) argues that an increase in political activity among the lower socio-economic classes could lead to more authoritarian ideas and thus to a decline in consensus on the basic norms of democracy. Traditionally, it was claimed that increasing political competition minimizes the political rants and ensures efficient use of public resources. It also creates incentives for the elected representatives working towards public interests (Barrow, 1973; Stinger, 1972). The higher political competition makes the incumbent politicians accountable for their actions (Persson et al., 1997). The strong political competition may induce political parties to implement growth-promoting policies rather than special interest policies (Besley et al., 2010).

The indication of a well-functioning of local democracy is meaningful competition among the political parties during the election. The presence of strong opposition parties can keep the incumbent party more alert and sincere to produce better performance through the threat of electoral defeat in subsequent elections (Liaqat et al., 2017).

The empirical assessment indicates that electoral competition where the number of political

parties compete in the election process found a significant positive impact on the productive efficiency of local government policy. However, there is a weaker positive effect of the intertemporal competition of election results over time found. The fact is that the positive effects might be mitigated by the political contest that can lead to more fragmented governments. As a result, it works contrary to their productive efficacy (Ashworth et al., 2014).

The political competition can prevent leaders from blocking technological and institutional innovation (Acemoglu & Robinson, 2006). The political competition may also lead to pro-growth policies such as more efficient taxation policies, more lavish capital spending, and adoption of labor and other market reform (Rodrik, 1999). The political competition may allow local government to receive more resources from the central government, as a result, it helps increasing spending capacity at local level services (Arulampalam et al., 2009). Conversely, political competition may reduce public sector spending capacity by reducing rent-seeking and corruption (Keefer & Knack, 2007).

Dash and Mukherjee (2013) found that politically-competitive governments perform well along with the HDI. The increasing voter participation was also found to be positively associated with HDI score. Moreover, the increase of public spending on developmental activities was also found to have a positive and significant effect on HDI performance (Dash & Mukherjee, 2013). Political competition plays a limited role in determining economic performance (Pinto & Timmons, 2005; Cleary, 2007; and Moreno-Jaimes, 2007). The available empirical evidence does not help one to arrive at a definite conclusion. The relation between political competition and economic performance is neither direct nor straightforward; instead, it is context specific and system-specific (Dash & Mukherjee, 2013). Referring to Besley, Persson, and Sturm (2005), the following hypothesis has been set and tested.

H₂: High political competition at the local level does have a positive association with a higher level of performance

Ethnic diversity and public good provision

Ethnic diversity has a direct effect on growth, while the ethnic polarization has non-negligible indirect economic effects (Goren, 2013). There is a complex relationship between ethnic heterogeneity and economic growth. Empirical research of cross-country data finds a negative, or statistically insignificant relationship between ethnic heterogeneity and development. There is a trade-off between the benefits and cost of ethnic diversity and heterogeneity (Montalvo & Reynal-Querol, 2017). The population composition (homogeneity or heterogeneity society) or ethnic fractionization of the district is used as one of the independent variables in the study to predict the relationship with human development. However, the national scenario of population distribution shows that the total population of Nepal comprises of 126 castes/ethnic groups in Nepal. Chhetri was the largest caste/ethnic groups having 16.6% of the total population followed by Brahman-Hill (12.2%),

Magar (7.1%), Tharu (6.6%); Tamang (5.8%); Newar (5%); Kami (4.8%) Musalman (4.4%) Yadav (4%) and Rai (2.3%) only (Central Bureau of Statistics, 2012). To examine the relationship between ethnic diversity and public good provision, the following hypothesis has been constructed and tested.

H₃: There is a negative relationship between ethnic heterogeneity/diversity and public goods provisions.

II. DATA AND METHODS

The empirical analysis in this study has used a data set of 75 districts before the restructuring of local government in 2017. The total district expenditure of five fiscal year from 2009/2010 to 2013/2014 was collected from the published report entitled 'Government of Nepal, Consolidated Financial Statement of various fiscal year of Financial Comptroller General Office. The HDI score of 2014, the district-wise population of 2011, the District Development Committees (DDCs) election of 1998, and the Constituent Assembly election of 2013 have been used to examine the relationship between political competition citizen participation in the election at district and national level and HDI. The ordinary least square (OLS) regression method has been used to estimate the contribution of predictor variables on human development index 2014 in Nepal. The population uniformity index, citizen participation index, and political competition index have been prepared for the regression analysis. Although the federal system is in place after the promulgation of new Constitution of Nepal in 2015, there is no latest data about the participation and completion of district-level elections from 1998 till 2017 because of the political instability and uncertainty in the country since 2002. The DDCs' election data of 1998 has been used as a proxy for local election participation and local election competition in the study. The local election data of 1998 is used in the analysis that seems old but due to the political instability in the country, there was no further local election after that till 2017. Therefore, this data is used assuming that the political competition and citizen participation in the respective district will be remained same. However, the data of the CA election, 2013, has been used as a proxy of national-level political competition and participation index.

Population Diversity Index

Hirschman- Herfindahl Index (HHI) of population diversity in terms of ethnicity/caste has been constructed. The method used for calculating the population diversity index of each district is described as follows.

- Step one: Calculation of proportion of each caste = Total population of each caste divided by the total population of the respective district
- Step two: Square of the proportion of each caste
- Step three: HHI decimal of each district = Sum of the proportion of all caste of the respective district

The Hirschman-Herfindahl Index (HHI) can be derived as follow (Koopmans & Schaeffer, 2013).

$$HHI = 1 - \sum_{i=1}^K S_i^2$$

Where, S_i is the population share of (ethnic) group 'i' in total population, and K is the number of groups or categories. The index varies between 0 and 1. It gives the proxy for 'fractionalization' with a high level of ethnic diversity reflected in a high score on the index (Andrews et al., 2005). This formula has been used to calculate the participation index and political competition index. However, for this study purpose, the HHI of ethnic/racial uniformity has been calculated using the following formula.

$$HHI = S_a^2 + S_b^2 + S_c^2 + \dots S_n^2$$

Where S_a is the percentage share of the 'a' ethnic group in total population and S_n is the percentage share of the 'n' ethnic group of the total population, which is expressed in decimal, not in the whole number.

Citizen Participation

The citizen participation index has been calculated in such a way that the total ballot/casted votes dividing by the total eligible voters for voting in the election. It is used as the proxy indicator of citizen participation in decision-making process. Stockemer (2017) also suggests that the voter turnout can be measured as the percentage of registered voters that actually turn out (RV turn out).

Participation index is calculated as follows:

- Number of total voter minus (subtraction) votes cast in First Past the Post, Proportional and local election separately
- The ratio of total ballot/casted and total eligible votes
- One minus (subtraction) ratio of the ballot and total eligible vote is measured as participation index.

Political Competency

The political competency is derived from the ratio of vote difference between the two largest political parties or two contestants. The number of votes difference between two bigger political parties from the total vote cast in the local election 1998 (DDCs' election) and second Constituent Assembly (CA) election in 2013 (separately both First Past the Post and Proportional Election) is used to prepare the political competition index. The process in the preparation of political index is described as follows. The value of political competition index lies between zero and one; higher the value indicates a higher level of completion between two major political parties namely winner and looser (Dash & Mukharjee, 2013).

Step One: Derive the absolute number of vote difference between two major political parties

Step Two: Calculate vote different percent dividing different number by total ballot casted

Step Three: Calculate index number = one minus (subtraction) vote different percentage

Dummy Variables

The seven Provinces and three geographical areas have been generated as dummy variables in this study. The reason to include these variables is that the cost of the essential public services will be higher for the governments in more elevated location and low population. The cost-of-service delivery might be relatively costly in mountain and hill areas than the plain area (i.e., Terai). Therefore, the geographic location may affect spending efficiency and ultimately, the output of expenditure. Only two dummy variables have been utilized in regards to geographical area/region and six dummy variables related to Provinces since there are three geographical regions and seven Provinces respectively, to avoid falling into the *dummy-variable trap* (i.e., the situation of perfect collinearity).

Dummy variables (Ecological belt):

1= Mountain; 2= Hill; 3=Terai

- Mountain = 1; if ecology is 'Mountain'; 0 otherwise
- Terai = 1; if ecology is 'Terai'; 0 otherwise
- Hill is considered as the reference category

Dummy variables (Province level)

P1= Province One; P2 = Province Two; P3 = Bagmati Province; P4 = Gandaki Province; P5 = Province Five; P6= Karnali Province; P7 = Sudurpaschim Province

- P1 = 1; if Province One; 0 otherwise
- P2 = 1; if Province Two; 0 otherwise
- P3 = 1; if Bagmati Province; 0 otherwise
- P4 = 1; if Gandaki Province; 0 otherwise
- P5 = 1; if Province Five; 0 otherwise
- P6 = 1; if Karnali Province; 0 otherwise
- Sudurpaschim Province is considered as the reference/benchmark category

Model Estimation

The following four models have been estimated to examine the level of contribution of some predictor variables on human development in Nepal which is represented by HDI.

Model One

This model assumes that the HDI depends on average district per capita expenditure; population uniformity; local election completion index, 1998; local election participation index, 1998; first past the post-election of CA 2013 competition index; and first past the post-election of CA 2013 participation index. The equation for Model 1 is given below:

$$HDI_{2014} = \beta_0 + \beta_1 Ave_PC_Exp + \beta_2 Pop_Uniformity_Index + \beta_3 Loc_Ele_Com_Index + \beta_4 Loc_Ele_Part_Index + \beta_5 FPTP_Com_Index + \beta_6 FPTP_Part_Index + \beta_7 Province_Com_Index + \beta_8 Province_one + \beta_9 Province_two + \beta_{10} Province_three + \beta_{11} Province_six + \beta_{12} mountain + \beta_{13} terai + \epsilon$$

Model Two

This model performs with the same assumptions and dummy variables as used in Model One along with two additional dummy variables; Seven provinces and Three

ecological belts. The equation for Model Two is given below:

$$HDI_{2014} = \beta_0 + \beta_1 Ave_PC_Exp + \beta_2 Pop_Uniformity_Index + \beta_3 Loc_Ele_Com_Index + \beta_4 Loc_Ele_Part_Index + \beta_5 FPTP_Com_Index + \beta_6 FPTP_Part_Index + \beta_7 Province_Com_Index + \beta_8 Provinces (dummy) + \beta_9 Ecology (dummy) + \epsilon$$

Model Three

This model assumes that the HDI depends on average district per capita expenditure, population uniformity, local election competition index, local election participation index, first past the post-election of CA 2013 participation index, first past the post-election of CA in 2013 competition index and dummy variables such as Province One, Province Two, Bagmati Province, Gandaki Province, Province Five, Karnali Province, Mountain and Terai. The equation for Model Three is given below:

$$HDI_{2014} = \beta_0 + \beta_1 Ave_PC_Exp + \beta_2 Pop_Uniformity_Index + \beta_3 Loc_Ele_Com_Index + \beta_4 Loc_Ele_Part_Index + \beta_5 FPTP_Com_Index + \beta_6 FPTP_Part_Index + \beta_7 Province_Com_Index + \beta_8 Province one + \beta_9 Province two + \beta_{10} Province three + \beta_{11} Province six + \beta_{12} mountain + \beta_{13} terai + \epsilon$$

Model Four

This model is recommended by the backward method of SPSS program. In this model, it is assumed that the HDI depends on average district per capita expenditure, citizen participation in the local election (DDCs' election), first past the post-election of Constituent Assembly in 2013 participation, Province one, Bagmati Province, Gandaki Province, Province five and mountain area.

The equation for Model Four is given below:

$$HDI_{2014} = \beta_0 + \beta_1 Ave_PC_Exp + \beta_2 Loc_Part_Index + \beta_3 Loc_Ele_Com_Index + \beta_4 Province one + \beta_5 Provinces three + \beta_6 Province four + \beta_7 mountain + \beta_8 terai + \epsilon$$

Definition of Variables

The variables have been defined as follows.

Y	=	HDI_2014	(Dependent variable)
Ave_PC_Exp	=	Per Capita average district expenditure	
Pop_Uniformity_Index-2011	=	Population uniformity index-2011	
Loc_Ele-Com_Index	=	Local election completion index, 1998	
Loc_Ele_Part_Index	=	Local election participation index, 1998	
FPTP_Com_Index	=	First past the post-CA election competition index, 2013	

FPTP_Part_Index	=	First past the post-CA election participation index, 2013
Prop_Com_Index	=	CA proportional election competition index, 2013
Ecology	=	Dummy variable 'Mountain'
Provinces	=	Dummy variable 'Terai'
Mountain	=	Dummy variable 'Mountain'
Terai	=	Dummy variable 'Terai'
P1	=	Dummy variable 'Province One.'
P2	=	Dummy variable 'Province Two'
P3	=	Dummy variable 'Bagmati Province'
P4	=	Dummy variable 'Gandaki Province'
P5	=	Dummy variable 'Province Five'
P6	=	Dummy variable 'Karnali Province'
ε	=	Error term

Ordinal Least Square Assumptions

The following Ordinary Least Square (OLS) assumptions have been checked/met in the best performing Model 4, based on AIC values, as presented in Table 2, among all four models.

Normality test of residuals

The classical normal linear regression model assumes that each disturbance or error is distributed normally with mean $E(u_i)=0$. The normality assumption says that the error has a normal distribution (Gujarati, Porter, and Gunasekar., 2015). Both the *p*-values of Kolmogorov-Smirnov (*p* = .200) and Shapiro-Wilk (*p* = .757) were above non-significant (*p* > .05). The *p*-value of one-sample Kolmogorov-Smirnov test is greater than 5 percent (0.873), meaning the null hypothesis residual was normally distributed and could not be rejected thereby meeting the normality test of residuals.

Autocorrelation

The correlation between members of a series of observations ordered in cross-sectional data is called spatial

autocorrelation. The classical linear regression model assumes that such a correlation does not exist in the disturbance term. The autocorrelation of the Model 4 has 75 observation/districts numbers (*n*), 8 number of predictors (*k*) and an estimated Durbin Watson (DW) value of 1.761. The DW table value at 5 percent significant point has $d_L= 1.399$, $d_U =1.867$. The estimated/computed *d* value (1.761) lies between lower ($d_L= 1.399$) and upper ($d_U =1.867$) limits. It means that there is inconclusive evidence regarding the presence or absence of positive first-order serial correlation. Therefore, to confirm the serial autocorrelation, the non-parametric run test is used. The result of the run test Asymp. Sig. (2 tailed) is found to be greater than 5 percent (.560), meaning that no autocorrelation exists in the null hypothesis and cannot be rejected. Hence, it can be confirmed that there is no serial autocorrelation in the residuals (Gujarati, Porter, and Gunasekar, 2015).

Homoscedasticity

There is an equal variance of disturbance term in all levels of dependent variables. The null hypothesis assumes that heteroscedasticity is not present in the model. To check the hypothesis, Breusch-Pagan and Koenker test is carried out. The LM of BP test is 8.157 (Sig. 0.418) and LM of Koenker is 12.271 (Sig. 0.140). Both tests suggest that null hypothesis cannot be rejected at alpha 5 percent level, meaning that the disturbance appearing in the population regression function is homoscedastic, which means they all have the same variance.

Multicollinearity

Multicollinearity is when two or more explanatory variables in a multiple regression model are highly linear. Statistically, it is not fair to be multi-collinear in two or more explanatory variables. The value of the Variance Inflation Factor (VIF) of all eight independent variables is less than 10, so there is no problem of multi collinearity. It means no linear relationship among independent variables (Gujarati, Porter, and Gunasekar, 2015).

Results of the regression analysis

The descriptive statistics of the variables are presented in Table 1 below.

Table 1: Descriptive Statistics of variables

	N	Mean		Std. Dev.
	Statistic	Statistic	Std. Error	Statistic
Ave_PC_Exp1	75	14.28	2.617	22.664
HDI_2014	75	.46759	.006468	.056017
Pop_Uniformity_Index-2011	75	.24885	.012762	.110525
Loc_Ele-Com_Index	75	.72060	.025334	.219395
Loc_Ele_Part_Index	75	.08895	.014530	.125835
FPTP_Com_Index	75	.92517	.009187	.079561
FPTP_Part_Index	75	.74101	.004989	.043206
Prop_Com_Index	75	.93653	.006937	.060072
Population-2011	75	291303.77	22789.284	197360.986
Valid N (list wise)	75			

Source: Researchers' calculation using SPSS 20.

Table 1 shows the descriptive statistics of the studied variables. The total former 75 districts are used as the observation for the study. The index of HDI_2014 is used as the dependent variable with the mean value is 0.46759 and standard error is 0.006468. Similarly, the mean values, standard errors and standard deviation statistics of all variables are shown in Table 1. Further to this, the adjusted R square of Model One is 0.528 is shown in Table 2 indicating 52.8 percent of the variability of HDI is accounted for by the variables in the model. The *p*-value of the F-test is found to be zero to three decimal places. Therefore, it can be said that the model is statistically significant. The coefficients for each variable indicate the amount of change. It can be expected that a decrease of 0.076 scores in HDI for every one-unit increase in local election participation index, assuming that all other variables in the model are kept constant. The average per capita district expenditure and population uniformity index are found to be significant at one (1) percent significant level. An increase of 0.001 scores in HDI for every one-unit increase in per capita average district expenditure, assuming that all other variables are kept constant. It is found that there is a negative relationship between population

uniformity (-0.238) and, HDI. It means that the higher the population uniformity, the lower the HDI and vice versa.

In other words, the negative coefficient indicates that the more significant the proportion of the predictor variable, the lower is the value of the dependent variable (HDI scores in this study). In model one, the first past the post-election competition and proportional competition of CA 2013 were not found significant to explain HDI (Table 2). Among the four models, the model four is found to be the best model because the Akaike's Information Criterion (AIC) value is the lowest (-310.214) compared to the other three models. The study aimed to detect if the HDI score differs among the three geographical (ecological) regions and seven Provinces of Nepal. The regression results of Model four show that HDI score is found to lower in the Mountain region by 0.037 (approx.) unit compared to Hill region. The slope coefficient for the mountain region is statistically significant at one percent level. Therefore, the overall conclusion is that the mean HDI score of Mountain, Hill, and Terai regions is not the same. The regression results of model three show that the HDI scores of Province Two and Karnali Province are found to be lower by 0.026 and 0.010 units, respectively, compared to Province Seven (Table 2).

Table 2: Results of regression analysis

Variables	Model One	Model Two	Model Three	Model Four
Ave_PC_Dis_Exp	0.001 (5.550)***	0.001 (5.408)***	0.001 (5.314)***	0.001 (5.662)***
Pop_Uniformity_Index	-0.238 (-5.367)***	-0.221(-3.433)**	-0.080 (-1.368)	
Loc_Ele_Com_Index	-0.050 (-2.257)**	-0.049 (-1.995)**	-0.013 (-0.656)	
Loc_Ele_Part_Index	-0.076 (-1.800)**	-0.077 (-1.757)*	-0.055 (-1.457)	-0.067 (-2.305)**
FPTP_Part_Index	0.027 (0.240)*	0.025 (0.217)	0.201 (1.964)**	0.163 (1.826)***
FPTP_Com_Index	0.202 (1.555)	0.195 (1.460)	0.067 (0.640)	
Prop_Com_Index	-0.248 (-1.453)	-0.249 (-1.437)	-0.050 (-0.365)	
Provinces		-0.001 (-0.306)		
Ecology		0.001 (0.208)		
Province One			0.061 (3.076)**	0.087 (8.071)***
Province Two			-0.026 (-1.363)	
Province Three			0.055 (3.017)**	0.078 (7.720)***
Province Four			0.063 (3.412)**	0.085 (7.855)***
Province Five			0.022 (1.246)	0.042 (3.773)***
Province Six			-0.010 (-0.644)	
Mountain			-0.034 (-3.685)***	-0.037 (-4.707)***
Terai			0.001 (0.110)	
Constant	0.578	0.583	0.303	0.301
Durbin-Watson	1.291	1.251	1.780	1.761
F Value	12.807	9.695	13.961	27.385
F (Sig.)	0.000	0.000	0.000	0.000
R- Square	0.572	0.573	0.780	0.768
Adjusted R Square	0.528	0.514	0.724	0.740
AIC	-266.179	-300.091	-300.107	-310.214

Note: Dependent variable is HDI_2014. Figures in parenthesis are the absolute values of t-statistic. *, **, *** indicate variables whose coefficient at the 10%, 5%, and 1% significance level respectively.

It is interesting to know that the efficiency value of 0.087 change in Province One of model four in HDI means how we might compare the strength of that coefficient to the coefficient for another variable. To address this issue, refer to the column of Beta coefficients known as standardized regression coefficients, as represented in Table 3. The beta

coefficients are generally used to compare the relative strength of the various predictors within the model. Because the beta coefficients are all measured in standard deviations, instead of the units of the variables, they can be compared to one another. In this example, Province One has the largest Beta coefficient (0.610), and the first past the post

constituent assembly participation has the smallest Beta (0.126). Thus, one standard deviation increase in Province One leads to a 0.610 standard deviation increase in the predicted HDI, with the other variables kept constant. And, one standard deviation increases in the first past the post

constituent assembly participation index, in turn, leads to a 0.126 standard deviation increase HDI with the other variables in the model held constant. Moreover, there is a significant contribution of average per capita district expenditure (beta coefficient = 0.359) to HDI (Table 3).

Table 3: The coefficients values of best model four

Model		Coefficients ^a			t	Sig.	Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients			Tolerance	VIF
		B	Std. Error	Beta				
-	(Constant)	.301	.067		4.462	.000		
	Loc_Ele_Part_Index	-.067	.029	-.150	-2.305	.024	.826	1.211
	FPTP_Part_Index	.163	.089	.126	1.826	.072	.739	1.352
	Ave_PC_Exp1	.001	.000	.359	5.662	.000	.873	1.146
	Mountain	-.037	.008	-.292	-4.707	.000	.910	1.099
	Province one	.087	.011	.610	8.071	.000	.614	1.629
	Province three	.078	.010	.533	7.720	.000	.737	1.358
	Province four	.085	.011	.542	7.855	.000	.738	1.355
Province five	.042	.011	.265	3.773	.000	.710	1.409	

a. Dependent Variable: HDI_2014

Source: Prepared by researchers, 2020

III. DISCUSSIONS

Per capita district expenditure was found statistically significant to explain human development. The result justifies the findings such as higher the spending on education, health and infrastructure has positive and significant impact on public welfare (Fattah & Muji, 2012). The conclusion of this study is also close to the result like a greater public investment in education, health, and infrastructure has a positive effect in reducing inequality in the long run (Baca Campodonico, Peschiera Cassinelli, & Mesones, 2014). The result of the study explained that the government expenditure for health showed positive effect on HDI in the district/municipality of Central Java (Sulistiyowati, Sinaga, & Novindra, 2017). This study also gives the same result of Fattaha and Muji (2012), Baca Campodonico, Peschiera Cassinelli, and Mesone (2014), and Sulistiyowati, Sinaga, and Novindra (2017) that the average district expenditure has positive effect on HDI. Therefore, it can be concluded that public expenditure at local level can contribute to increase human development.

Population/ethnic homogeneity or uniformity is the opposite of ethnic diversity. The index used here is ethnic homogeneity. The result shows that the relationship between ethnic uniformity and HDI is found negative meaning that the result could not confirm a negative association between ethnic heterogeneity/diversity and public goods provision. The result of this research displays that there is a negative association between local election participation and HDI which supports the hypothesis there is a positive association of citizen participation with HDI scores. However, there is a positive association between of first past the post constituent assembly election competition and HDI which justifies the hypothesis. The result shows that the political competition at both local and national level was found statistically insignificant, meaning that political completion does not

affect human development (independent variable). So, we cannot confirm the hypothesis that high political competition does have a positive association with a higher level of performance (Besley, Persson & Sturm, 2005). However, we cannot reject it, as there is no proof that there is no relation between the independent variable and the dependent variable.

IV. CONCLUSION

This study attempted to examine the effect of political competition, participation, and average per capita district expenditure on human development index (HDI) or the human development performance of the districts in Nepal. The first research hypothesis that there is a negative relationship between ethnic heterogeneity/diversity and public goods provisions (1-HDI 2014) is accepted at 0.01 alpha level in model one.

The findings suggest that population uniformity, local election competition, local election participation, and constituent assembly proportional election competition have a negative relationship with HDI. However, the first past, the post constituent assembly competition and participation found a significant positive contribution to HDI in Nepal. Other than the political factors, a few socio-economic and geographic factors also have influenced the human development index in Nepal. The increasing public expenditure-oriented activities at the district level contribute positively to the escalation of the HDI in Nepal. There is the highest contribution of Province One to HDI compared to the other six provinces. However, there is also a significant contribution of Bagmati Province, Gandaki Province, and Province Five compared to Province Two, Karnali Province, and Sudurpaschim Province. These findings indicate that more public expenditure is required to improve the human development index (scores) of Province Two, Karnali

Province, and Sudurpaschim Province. This finding could be useful for the policymakers, particularly those Provinces that are not performing well to improve the HDI in Nepal.

REFERENCES

- [1]. Acemoglu, D., & Robinson, J. A. (2006). Economic backwardness in political perspective. *American political science review*, 100 (1), 115-131.
- [2]. Andrews, R., Boyne, G. A., Meier, K. J., O'Toole Jr, L. J., & Walker, R. M. (2005). Representative bureaucracy, organizational strategy, and public service performance: An empirical analysis of English local government. *Journal of Public Administration Research and Theory*, 15 (4), 489-504.
- [3]. Aragonés, E., & Sánchez-Pagés, S. (2009). A theory of participatory democracy based on the real case of Porto Alegre. *European Economic Review*, 53(1), 56-72.
- [4]. Arulampalam, W., Dasgupta, S., Dhillon, A., & Dutta, B. (2009). Electoral goals and center-state transfers: A theoretical model and empirical evidence from India. *Journal of Development Economics*, 88 (1), 103-119.
- [5]. Ashworth, J., Geys, B., Heyndels, B., & Wille, F. (2014). Competition in the political arena and local government performance. *Applied Economics*, 46 (19), 2264-2276.
- [6]. Baca Campodonico, J. F., Peschiera Cassinelli, J., & Mesones, J. (2014). The impact of public expenditures in education, health, and infrastructure on economic growth and income distribution in Peru. *Health, and Infrastructure on Economic Growth and Income Distribution in Peru (February 14, 2014)*. Inter-American Development Bank.
- [7]. Barber, B. (2003). *Strong democracy: Participatory politics for a new age*. University of California Press.
- [8]. Barro, R. J. (1973). The control of politicians: an economic model. *Public Choice*, 14(1), 19-42.
- [9]. Besley, T., Persson, T. & Sturm, D. (2010), Political competition and economic performance: Theory and evidence from the United States, *review of economic studies*, 77: 1329-1352.
- [10]. Besley, T., Persson, T., & Sturm, D. (2005). *Political competition and economic performance: Theory and evidence from the United States* (No. w11484). National Bureau of Economic Research, retrieved from <https://www.nber.org/papers/w11484>.
- [11]. Central Bureau of Statistics (2012). National Population and Housing Census 2011 (National Report), Volume 01, NPHC 2011, Kathmandu Nepal
- [12]. Central Bureau of Statistics (2017). National Population and Housing Census 2011 Household and Population by Sex, Ward Level (Based on new structure of 753 local unit), Kathmandu. Nepal.
- [13]. Chitescu, R. I., & Lixandru, M. (2016). The influence of the social, political and economic impact on human resources, as a determinant factor of sustainable development. *Procedia Economics and Finance*, 39, 820-826.
- [14]. Cleary, M. R. (2007). Electoral competition, participation, and government responsiveness in Mexico. *American Journal of Political Science*, 51(2), 283-299.
- [15]. Conceicao, P. (2019). *Human Development Reports*. United Nations Development Programme.
- [16]. Dahl, R. A. (1956), *A Preface to Democratic Theory*, Chicago: *The University of Chicago Press*.
- [17]. Dalton, R. J. (2008). Citizenship norms and the expansion of political participation. *Political studies*, 56(1), 76-98.
- [18]. Dalton, R. J. (2017). Is citizen participation actually good for democracy? Retrieved January 23, 2021 from <https://www.democraticaudit.com/2017/08/22/is-citizen-participation-actually-good-for-democracy/>
- [19]. Dash, B. B. & Mukherjee, S. (2013). Does political competition influence Human Development? Evidence from the Indian States, *working paper No. 2013-119, the Journal of Development Studies, Volume 51, 2015 - Issue 1*. Retrieved from <https://www.tandfonline.com/doi/figure/10.1080/00220388.2014.947280?scroll=top&needAccess=true>
- [20]. Election Commission (1998). *Result of Local Bodies Election, 1998*, Kathmandu, Nepal.
- [21]. Fattah, S., & Muji, A. (2012). Local government expenditure allocation toward human development index at jenepono regency, South Sulawesi, Indonesia. *IOSR Journal of Humanities and Social Science*, 5(6), 40-50.
- [22]. Goren, E. (2013). How ethnic diversity affects economic Development? Oldenburg Discussion Papers in Economics, No. V-353-13, University of Oldenburg, Department of Economics, Oldenburg
- [23]. Government of Nepal (2015). The Constitution of Nepal, Ministry of Law, Justice and Parliamentary Affairs, Kathmandu Nepal
- [24]. Government of Nepal (2013) Consolidated financial statement, Financial Comptroller General Office, Kathmandu Nepal. Available at www.fcgo.gov.np
- [25]. ----- (2015) Consolidated financial statement, Financial Comptroller General Office, Kathmandu Nepal. Available at www.fcgo.gov.np
- [26]. Gujarati, D., Porter C. D. & Gunasekar. S. (2015). *Basic Econometrics, fifth edition, Mc Graw Hill*
- [27]. Keefer, P., & Knack, S. (2007). Boondoggles, rent-seeking, and political checks and balances: public investment under unaccountable governments. *The Review of Economics and Statistics*, 89(3), 566-572.
- [28]. Khanal, G. (2016). Fiscal Decentralization and Municipal Performance in Nepal. *Journal of Management and Development Studies*, Vol. 27, 59-87. Available online <http://nasc.org.np>
- [29]. Koopmans, R., & Schaeffer, M. (2013). *De-composing diversity: In-group size and out-group entropy and their relationship to neighborhood cohesion* (No. SP VI 2013-104). WZB Discussion Paper.
- [30]. Liaqat, A., Callen, M., Cheema, A., Khan, A. Q., Naseer, M. F., & Shapiro, J. N. (2017). The role of election competition in strengthening Pakistan's fledgling local democracy. *International Growth Centre Blog*. Available at:

- <http://www.theigc.org/blog/roleelectioncompetition-strengtheningpakistansfledglinglocaldemocracy/>
- [31]. Michels, A., & De Graaf, L. (2010). Examining citizen participation: Local participatory policy making and democracy. *Local Government Studies*, Vol. 36 (4), 477-491. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/03003930.2010.494101>
- [32]. Ministry of Finance (2015). Economic survey fiscal year 2014/15, Kathmandu, Nepal
- [33]. Montalvo, J. G., & Reynal-Querol, M. (2017). Ethnic diversity and growth: Revisiting the evidence. *Review of Economics and Statistics*, 1-43.
- [34]. Moreno-Jaimes, C. (2007). Do competitive elections produce better-quality governments? Evidence from Mexican municipalities, 1990-2000. *Latin American Research Review*, 42(2), 136-153.
- [35]. National Planning Commission. (2014). Nepal human development report 2014: Beyond geography, unlocking human potential. Government of Nepal, National Planning Commission. Kathmandu Nepal.
- [36]. Pateman, C. (1970). *Participation and democratic theory*. Cambridge University Press.
- [37]. Persson, T., Roland, G., & Tabellini, G. (1997). Separation of powers and political accountability. *The Quarterly Journal of Economics*, 112(4), 1163-1202.
- [38]. Pinto, P. M., & Timmons, J. F. (2005). The political determinants of economic performance: Political competition and the sources of growth. *Comparative Political Studies*, 38(1), 26-50.
- [39]. Prasetyo, A. D., & Zuhdi, U. (2013). The Government Expenditure Efficiency towards the human development. *Procedia Economics and Finance*, 5, 615-622.
- [40]. Rahayu, S., Raviyanti, A. A., & Mahardika, D. P. (2016). Local government revenue, general allocation fund, special allocation fund, capital expenditure to human development index (HDI) in Papua, Indonesia. *Advanced Science Letters*, 22(12), 4077-4081.
- [41]. Rodrik, D. (1999), Democracy plays higher wages, *Quarterly Journal of Economics*, 114, 707-38
- [42]. Fattah, S., & Muji, A. (2012). Local government expenditure allocation toward human development index at jeneponto regency, South Sulawesi, Indonesia. *IOSR Journal of Humanities and Social Science*, 5(6), 40-50.
- [43]. Stigler, G. J. (1972). Economic competition and political competition. *Public Choice*, 13(1), 91-106.
- [44]. Stockemer, D. (2017). Electoral participation: how to measure voter turnout? *Social Indicators Research*, 133(3), 943-962.
- [45]. Sulistyowati, N., Sinaga, B. M., & Novindra, N. (2017). Impacts of Government and Household Expenditure on Human Development Index. *JEJAK Journal of Economics and Policy* Vol 10 (2), 412-428
- [46]. Tiwari, B. N., & Tropp, S. (2009). Nepal Human Development Report, 2009: State Transformation and Human Development. United Nations Development Programme, Kathmandu, Nepal.
- [47]. United Nations Development Programme (2014). Nepal Human Development Report, 2014: Beyond Geography, unlocking human potential. Nepal Planning Commission, Kathmandu, Nepal.