Structural Transformation and its Impact on Economic Performance in Nepal

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Abstract

The GDP of nation is contributed by three sectors (primary, secondary and service). The transformation of economy from one sector to another is called structural transformation. Structural Transformation has usually positive impact on economic growth of Nepal. This research aims to answer the questions about what are the effects of structural Transformation on growth in Nepalese economy. Economic performance is measured by Per Capita Income. This study tries to find out which sectors a government should make better strategies to uplift and which sector to give less priority based on its contribution on economic growth. Time series data from 1975 AD to 2020 AD have been taken. Auto Regressive Distributed Lag (ARDL) Model is used as econometric tool to analyze the data. The expected result is that there is a long run association between per capita GDP and sector wise GDP. Also there is a significant relationship in structural transformation and economic growth in Nepal. So government should give more concern to develop service sector followed by primary sector and secondary sector.

Key words: Structural Transformation, Economic growth, ARDL Model

I. Introduction

Economic growth is a substantial rise in production of goods and services over a period of time. Economic growth refers to positive change in the level of production of goods and services over a period of time. Economic development occurs when there is an increase in real income or increase in GDP Per Capita, increase in literacy rate and education standards, quality of living, and improvement in environmental levels and increase in life expectancy. Structural transformation is regarded as the process of moving of labor from low productivity agriculture to high productivity manufacturing and service sector. According to the World Bank (1995) GDP is the sum of the final value of goods and services produced inside a country over a specific period. GDP includes exports and excludes imports. If the structural transformation brings economic growth and sustainable development with increasing gross domestic product and per capita of the nation then it is favorable structural

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transformation. The shifting of contributors of GDP from agricultural sector to industrial and service sector is called structural transformation of the economy. Structural transformation means allocation of activities of the economy across major sectors (primary sector, secondary sector and service sector) which assists in modern economic growth.

Dynan and Sheiner (2018) reveal that GDP plays a key role in measuring and providing the economic wellbeing of people of a country. The main reason for measuring economic growth is to discover the phases of the economy (prosperity, recession, depression and recovery). GDP of any country is higher means there are better opportunities to fulfill basic requirements for normal living and also increase government revenue and savings. GDP is taken as the major indicator to measure the performance of the economy of a nation or state.

According to Gregor & Verspagen (2016), structural transformation to more productive sectors leads to economic growth of the nation. The transition of low income nation to high income nation involves a deep procedure of structural transformation. Structural transformation occurs in each and every process of economic development. To achieve higher and sustainable economic growth, there is a requirement of transformation of traditional agricultural to modern industrial sectors and service sectors. Countries which are able to transform their economic structure are capable of rapid economic growth. For sustainable economic development, there is a need for economic growth but a sufficient structural change is also required in the economy for translating the growth into development. Nepal is the least developed country in the world where one fourth of the population is under poverty. The main source of income is remittance; it covers around 30% of GDP. Agriculture is the main source of living for Nepalese people. . In Nepal sectoral structure of GDP are primary sector (agriculture, forest, fishery and mining), secondary sector (production industry, construction, electricity, gas and water supply) and service sector (hotel and restaurant, retail and whole-seller, transportation, communication, tourism, health and education defense and public administration).

Objective of the study

The purpose of this study is to examine the structural transformation from primary sector to service sector and growth of the economy. The specific objectives of the study is to analyze the impact of structural transformation in economic performance (Per Capita GDP) of Nepal.

Hypothesis of the study

H1: There is a significant impact of structural transformation in the GDP per capita growth.

H2: There is long run co-integration between the Per Capita GDP and primary sector GDP, secondary sector GDP and service sector GDP.

Rationale of the study

This research will help economic analysts, academicians and researchers to identify the impact of structural transformation on economic growth of Nepal since the last 40 years. It helps to understand the relationship between primary sector, secondary sector and service sector with per capita GDP of Nepal. From this research they also can analyze which sector has excess impacts on economic growth at present and which sector should be given more emphasis by the government sector.

II. Theoretical Framework

Theoretical Framework

Figure 1 : Theoretical Framework

Independent variables   Dependent variable
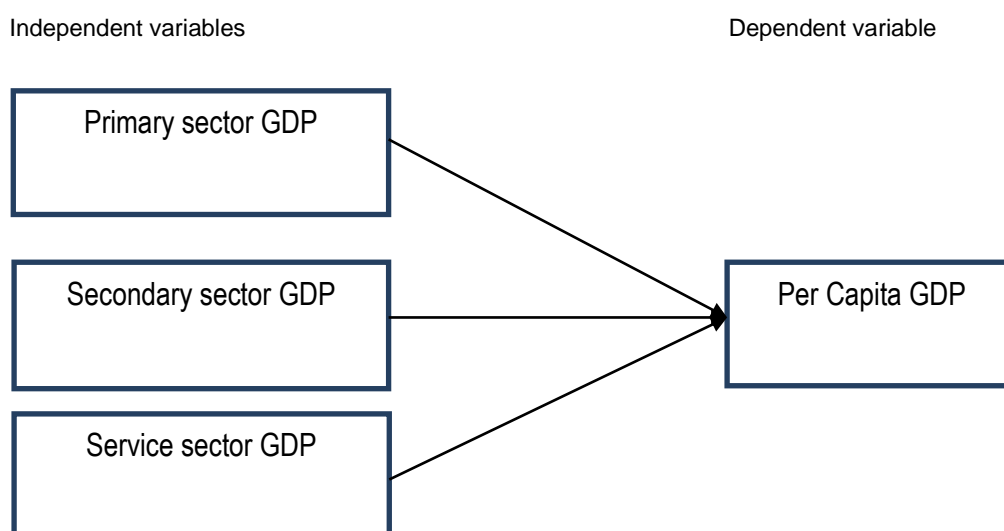
Source: (*Bhatta, 2014)*

The model becomes:

Per Capita GDP = f (primary sector GDP, secondary sector GDP, service sector GDP).

Definition of Variables

Per Capita GDP (Dependent Variable)

GDP Per Capita is used as the tool to measure the level of economic development of a country. And also helps to compare economic state between countries over different periods of time. The nation has always aimed to increase GDP Per Capita in order to lead

the nation towards growth and prosperity. The level of GDP per capita indicates the average living standard of the people of a nation. According to Poudel (2010), GDP per capita is one of the major indicators of prosperity in the economy. The living standard is compared with this indicator in comparative analysis with the international economy. The lower level of GDP per capita of Nepal indicates that there is less economic development. Therefore one of the main reasons for the development effort is to raise the GDP per capita of the nation.

Primary Sector GDP

Primary sector GDP includes total production of goods and services from various sectors like agriculture, forestry, fishing and mining during a specific period of time. It consists of all manufacturing sectors involved in extracting and producing raw materials like farming, fishing, mining, extraction of oil and gas etc. inside the nation. In developed countries, the production pattern of primary sector output is advanced and high, in comparison to less developed countries. Natural resources are directly utilized in primary sector GDP.

Secondary Sector GDP

Secondary sector GDP includes total manufacturing activities that produce finished usable products usually during one year period. Secondary sector consists of the production industry, construction, electricity, gas and water supply. This sector uses outputs from the primary sector and produces finished goods. Finished goods are ready for sale, consumption and export too. There were very few modern industries in Nepal until the 1980s.

Service Sector GDP

Service sector GDP means monetary value of intangible goods and services produced during one year period. Increasing trend of the service sector in Nepal is a new transformation in economic structure. Service sector includes sectors like health, education, drinking water; sanitize environment, travels and tourism, transportation, hotel and restaurants, information and communication and banking and insurance, defense and public administration. Service sector is the latest structural transformation aspect of the economy. In the case of Nepal, the service sector is regarded as the largest contributor to GDP.

Theoretical Review

Lewis Dual sector model of economics

W. Arthur Lewis developed this theory in 1995 AD. This theory is also called the unlimited supply of labor model or Dual Sector Model. This theory explains the growth of developing nations in terms of labor transition between two economic structures: capitalist sector and agriculture or subsistence sector.

As per Lewis model, the industrial sector would offer higher wages which would attract laborers, also higher quality of life. Labor productivity is low in the subsistence sector when people leave and move towards the industrial sector (to town) but there will be no impact in output because of their low contribution in agriculture. The number of people decreases in villages and the same amount of food is available in villages with the same amount. And those who move to town in the industrial sector would earn more which will increase their total income. It leads to higher savings which contributes towards high investment, more capital will be formed and productivity increases. This theory focused on essential for nations to transform economic structure with lower labor productivity towards industrial activities with higher labor productivity.

Allen Fisher (1935) had proposed that economic progress would lead to disclosure of the service sector that followed primary sector and secondary sector development. In 1940, Collin Clark developed the Fisher concept as Clark- Fisher development theory. In this model, structural change should take place for economic progress in capitalist economies. This theory is appropriate for modern explanations of development and significance of the service sector as an index for a nation's development.

Victor Fuchs: The significance of service sector

American economist Victor Fuchs focused on the service sector and tried to develop a general theory of economic development based on the economic situation of America in the 1960s and 1970s. He stated that the rising service sector leads to an increased employment pattern in western countries.

Empirical Review

According to theories, there are three stages of development, first stage when there is dominant role of primary sectors also called agricultural sector, there is second stage when secondary sector (industrial) is dominant and the third stage when there is dominant role of service sector in economic development. In the case of Nepal, the third stage has appeared without the appearance of the second stage. It means the industrial sector is backward and it plays the least role in the economic development of Nepal. Many scholars and researchers have done various studies regarding structural transformation in different nations. And it is found that the patterns of structural transformation vary. There are various literatures regarding structural transformation and some of them are reviewed below:

Bhatta (2014) found that the industrial sector is significant to increase PCI (Per Capita Income) in comparison to the agricultural sector and service sector of Nepal. There is a co-integrating relationship between real gross value-added and service sector value added The study using regression analysis also found that employment contributes more for raising per capita pay; requiring business drove development rather than simple development of financial sub-areas. Dahal (2017) Agriculture, manufacturing and service sectors are the key economic sectors of a village. The long run studies show that the economies of developed nations move from agriculture to industrial to service sector.

Those conclusions are mostly matched to developed nations but not with the developing nations like Nepal. The study was done using Auto regressive distributed lag model measures the association between values added and service sector value added.

Jayasooria (2017) revealed that there is a significant impact of structural changes between pre economic and post economic policies for economic growth even if there is transformation of structure. Growth empiric's structural transformation and sectoral interdependence of Srilanka has been studied using time series econometric model, vector autoregression for cause and effect analysis and co integration to estimate the long run relationship in sectoral growth. The relationship between agricultural, manufacturing and service related GDP has been studied in an open economic policy, different government policy regimes and major policy eras from 1950 to 2015. The service sector economic system has a positive impact on economic growth.

Raihan & Khan (2020) revealed that the economy of Bangladesh has gone through structural change from agriculture to industrial sector since 40 years. This study is done using descriptive analysis. Manufacturing sector is more attractive as it increases the exports of a country. Manufacturing sector includes the garment industry. The study concluded that Bangladesh is doing better in production of clothes items and other manufacturing sectors are still not developed in Bangladesh.

Malunda & Musuna (2012) through case study reveals through descriptive analysis that economic transformation has led to significant change in growth of agricultural sector, industrial sector and service sector; it has led to poverty reduction by increasing the wage of people. This study focused on sector-wise transformation; though the service sector contributes more to GDP it does not give more emphasis on service sector only. The case study was done in order to examine how structural transformation has an impact on economic growth.

Paudel and Wagle (2020) using descriptive and trend analysis, revealed that structural transformation in Nepal is different from that of the developed nations because the structural transformation in Nepal jumped to the service sector directly from the agricultural sector. The transformation does not transform from agriculture to industrial or manufacturing sector to service sector. This shows that the condition of the industrial sector in Nepal is not impressive. Sectoral value added GDP is taken to measure Per Capita GDP of Nepalese economy.

III. Research Methodology

Research Design

The study is based on descriptive research design and causal comparative research design. Descriptive research design will be used to access the details on economic growth, sectoral changes and their impacts on the economy of Nepal. Causal comparative research design will be used to examine the causal relationship between per capita GDP and sectoral .The study is based on the ARDL model with three independent variables and one

dependent variable. ARDL model is an OLS based model proposed by Pesaran et al. (1996). This model was adopted by Dahal (2017) in a study "Stride of the service sector in Nepal's trajectories of structural change".

Population and Sample

For the population and sample, the time series data of 46 years have been collected from various sources. The period date from 1975 AD to 2020 AD is used in this research.

Nature and sources of Data

Secondary sources of data have been used in this study. Economic time series data from various sources are downloaded from publicly available online sources such as economic survey, World Bank Reports; websites of ministry of finance and various journals and articles.

Methods of Data analysis

Unit Root Test

The study starts with unit root test to ascertain the stationary of time series data. Null hypothesis is defined as the presence of non stationary. And alternative hypothesis is defined as stationary. Augmented Dicky Fuller (ADF) Test proposed by Dicky and Fuller (1979) will be used to measure unit root of variables. Whether the regressors are I (0), I(1) or integrated of order or mutually co integrated.   That's why ADF (Augmented Dickey Fuller) test is used in this study. The equation for ADF unit root test up to one autoregressive lag is given as:

$$\Delta Y = \lambda - \Phi t + \delta Y_{t-1} + \beta_1 \Delta Y_{t-1} + \mu_t$$

Where,

Δ= a difference operator

δ = Coefficient of one period lag

B1 = Coefficient of lagged term

μ = White noise error

λ = Intercept term

φ = Coefficient of time trend

ARDL WALD Test for co integration

Autoregressive Distributed Lag (ARDL) models are regularly used to break down powerful associations with time series data in a solitary condition system. The current estimation of the reliant variable is permitted to rely upon its own previous acknowledge – the autoregressive part – just as current and past estimations of extra informative factors – the disseminated lagged part. The factors can be fixed, no stationary, or a combination of the two sorts. In its Error Correction (EC) term, the ARDL model can be utilized to isolate the since quite a while ago run and short-run impacts, and to test for co-integration. If two time series data are integrated at same level and when there is linear combination of time series data which are stationary then there exists co integration. The series also must have common trends to be co integrated. Co integration test is used to examine whether there is a correlation between various time series data on long run. The estimated ARDL model is expressed below.

$$\Delta PCGDP_t = \alpha_0 - \lambda_1 PCGDP_{t-1} + \lambda_2 PGDP_{t-1} + \lambda_3 SECGDP_{t-1} - \lambda_4 SERGDP_{t-1} - \sum_{t=1}^{p} \alpha_{1t} \Delta PCGDP_{t-1} + \sum_{t=2}^{q} \alpha_{2t} \Delta PGDP_{t-1} + \sum_{t=0}^{r} \alpha_{3t} \Delta SECGDP_{t-1} + \sum_{t=2}^{s} \alpha_{4t} \Delta SERGDP_{t-1} - v_t$$

In the above equation, PCGDP refers to per capita GDP, PGDP is primary sector GDP, SECGDP refers to secondary sector GDP and SERGDP refers to Service sector GDP. Δ indicates first difference operator and v_t is white noise error. $\lambda_1, \lambda_2, \lambda_3, \& \lambda_4$ represent long run dynamics. And $\alpha_1, \alpha_2, \alpha_3 \& \alpha_4$ represent short run dynamics of the study. The test is based on the Wald (F-statistic) and it follows non-standard distribution. The null hypothesis for there is no co integration i.e. λ1=λ2=λ3=0 is tested against the alternative hypothesis for co integration i.e. λ1≠λ2≠λ3≠0..

Residuals Diagnostics Test using Breusch-Godfrey Serial Correlation LM Test

In order to detect the autocorrelation between the variables Breusch-Godfrey Serial Correlation LM Test is done. Serial correlation happens in a period arrangement when a variable and a slacked i.e. lagged rendition of itself (for example a variable now and again T and at T-1) are seen to be associated with each other throughout timeframes. Repeating designs frequently show serial correlation when the level of a variable influences its future level. In the event that a variable's serial correlation is estimated as zero, there is no relationship, and every one of the perceptions is autonomous of each other. On the other hand, if a variable's sequential relationship slants toward one, the perceptions are sequentially associated, and future perceptions are influenced by past qualities. Basically, a variable that is sequentially connected has an example and isn't irregular.

LM test is used for testing the higher-order ARMA errors and is used to check whether there are lagged dependent variables in the model. The null hypothesis for this LM test in this study is that there is no serial correlation up to lag order ***p (lag order is 1)*** i.e. ($\rho_1 = \rho_2 = ... \rho_n = 0$) where ***p*** is a pre-determined integer. Let us suppose the estimated regression model is

$$Y_t = X_t\beta + \varepsilon_t$$

Where, β is the estimated coefficient and ε refers to the errors. The test statistic for lag order p is based on an auxiliary regression for the residuals:

$$e = Y - X\beta$$

$$e_t = X_t Y + \left[\sum_{j=1}^{p} \alpha_j e_{t-j}\right] + u_t$$

The above equation represents the regression of the residuals on original regressor as well as lagged residuals for order **p.**

Stability Diagnostic Test using CUSUM Test

To check whether the model is stable or not, CUSUM test is done through recursive estimations. CUSUM (Cumulative Sum) charts improve the capacity to identify little moves (for example under 1.5σ) by diagramming a measurement that consolidates current and past information esteems from the cycle. In particular, the CUSUM diagram plots the total amounts of the deviations of the example esteems from an objective worth. CUSUM chart plots cumulative sums of variables in each direction (positive and negative) independently. The equation for the CUSUM Test is:

$$W_t = \sum_{j=k+1}^{t} W_j / s$$

W refers to recursive residuals; s is standard deviation of recursive residuals.

Error correction Model (ECM)

When two variables are co integrated there should be Error Correction Model to describe the short run dynamics of co integrated variables towards their long run equilibrium. ECM consists of error of last period and lagged values of first differences on each variable. Thus, this model is used for those data where the variables have long run stochastic trend is co-integration. The equation for error correction model can be express as,

$$\Delta PCGDP_t = \alpha_0 - \sum_{i=1}^{a_1} \alpha_{1i} \Delta PCGDP_{t-i} - \sum_{i=2}^{a_1} \alpha_{2i} \Delta PGDP_{t-i} - \sum_{i=d}^{a_2} \alpha_{1i} \Delta SECGDP_{t-i}$$

$$+ \sum_{i=2}^{a_3} \alpha_{4i} \Delta SERGDP_{t-i} + \psi ECT_{t-1} - v_t$$

In the equation, ψ denotes the speed of adjustment and ECT_{t-1} denotes the error correction term lagged by one period which signifies the speed of adjustment towards its long run. To

be significant, the value of ECT_{t-1} shall be negative and shall fall between 0 to 1. u_t is white noise error term.

Multiple Regression analysis

According to Uyanik and Guler (2013), multiple regression model is that where there is one dependent variable and two or more independent variables. Per Capita GDP is dependent variable and primary sector GDP, Secondary Sector GDP and service sector GDP are independent variables. According to Gujrati, Porter & Gunasekar (2012) in a book "Basic Econometrics", Durbin-Watson d statistics developed by statisticians Durbin and Watson (1950, 1951) is used to ascertain the presence of autocorrelation in residuals. It is the ratio of sum of square of differences in successive residuals.

$$PCGDP = \beta_0 + \beta_1 PGDP + \beta_2 SECGDP - \beta_3 SERGDP + \varepsilon$$

Where,

β_0 = Intercept

ε = Error

PCGDP= Per Capita Gross Domestic Product

PGDP= Primary Sector Gross Domestic Product

SECGDP= Secondary Sector Gross Domestic Product

SERGDP= Service Sector Gross Domestic product

$\beta1, \beta2, \beta3$ = Corresponding coefficients

IV. Results and Conclusion

Unit root test

Before applying the ARDL model of co integration, one needs to test whether the variables are stationary or not. If there is no stationary data, the given F statistics cannot be interpreted. The study starts with a unit root test to ascertain the stationary of time series data. Null hypothesis is defined as the presence of non-stationary. An alternative hypothesis is defined as stationary. Augmented Dicky Fuller (ADF) Test proposed by Dicky and Fuller (1979) will be used to measure unit root of variables to ascertain whether the regressors are I (0), I(1) or integrated of order or mutually co integrated.

Table 1

Unit Root Test for Stationarity using ADF Test at First Difference at 5% level of significance

Variables	T –Statistics	Probability value
PCGDP(with Constant)	-0.8003	0.0000
PGDP(with Constant)	-6.3938	0.0000
SECGDP(with Constant)	-7.2231	0.0000
SERGDP(with Constant)	-4.5847	0.0006
PCGDP(with Constant & Trend)	-10.1301	0.0000
PGDP(with Constant & Trend)	-8.4427	0.0000
SECGDP(with Constant & Trend)	-7.2284	0.0000
SERGDP(with Constant & Trend)	-7.3088	0.0000

(Source: Appendix 1)

The unit root test of the four variables (PCGDP, PGDP, SECGDP, and SERGDP) has been done using Augmented Dickey Fuller (ADF) Test at constant and at constant and trend. All the four variables found to be stationary with constant and with constant and trend at first difference where level of significance is 5%. Therefore, all the variables (dependent and independent) are integrated of order $I(0)$ and $I(1)$.

ARDL MODEL

Selection of model with optimum lags

Since, from the VAR (Vector Autoregressive) model, it is observed that optimum lag for the model is two. Thus among two lag, the suitable lag is selected based on Akaike info criterion (AIC) and Schwarz Criterion (SC). The ARDL model with lag one and lag two are estimated.

Table 2

Selection of model with optimum lags

ARDL MODEL	Akaike info criterion (AIC)	Schwarz Criterion (SC)
With Lag One	15.69911	16.06406
With Lag Two	15.80875	16.34121

(Source: Appendix 2)

While estimating ARDL with lag one, the Akaike info criterion (AIC) and Schwarz Criterion (SC) is 15.69911 and 16.06406 respectively which is less than the AIC(15.80875) and SC(16.34121) value for lag two. Therefore the model with lag one is best fitted for further estimations. According to Dahal (2017), independent variables with one lag tern are called dynamic regressors.

Co integration Test using WALD Test

Table 3

ARDL Model for cointegration using WALD Test

Test Statistics	Value	DF	Probability
F Statistics	2.230444	(4, 35)	0.0857
Chi-Square	8.921776	4	0.0631
Variables		Coefficients	Standard Error
PCGDP		-0.688685	0.31564
PGDP		0.059576	0.023877

SECGDP	0.014752	0.017221
SERGDP	0.003486	0.010046

To check whether the variables have a long run relationship or not, a bound test is done. WALD statistics used to test long run relationships among the variables. Wald test is also called chi-squared test which is used to find out whether the explanatory variables are significant or not. It shows parameters are not zero.

Null hypothesis Ho: PCGDP (-1), PGDP (-1), SECGDP (-1) and SERGDP (-1) are jointly zero.

From the above table, it is seen that the explanatory variables (primary sector GDP, secondary sector GDP and service sector GDP) are not zero jointly. It means that the explanatory variables have long rung association

Residuals Diagnostics Test using Breusch-Godfrey Serial Correlation LM Test

 F Statistics and R squared and the probabilities value of used in testing serial correlation between the variables. A null hypothesis of the study is that there are no serial correlations in the model with lag one.

Table 4

Residuals Diagnostics Test using Breusch-Godfrey Serial Correlation LM Test

F-Statistic	Obs*R-Squared	Prob. Chi-Squared (1)	Prob.F(1,34)
2.046864	2.498470	0.1140	0.1616

(Source Appendix 4)

In the above figure, the observed R squared value is greater than the probability Statistic value. So, null hypothesis is accepted. It means there is no serial correlation between the variables. LM test is used to test for higher order serial correlation. In this test, it is assumed that the error term follows pth order of autoregressive AR(p).

Stability Diagnostic Test using CUSUM Test

In this study, CUSUM test is done in order to test for the stability of parameters of ARDL model.

From the figure, it is cleared that the model with lag one is stable. The result from the above graph indicates that the coefficients lie between the critical bands of the parameter which means coefficients are stable at 5% level of significance. It is concluded that this model is stable. So this model is accepted.

Figure 2

Stability Diagnostic Test using CUSUM Test
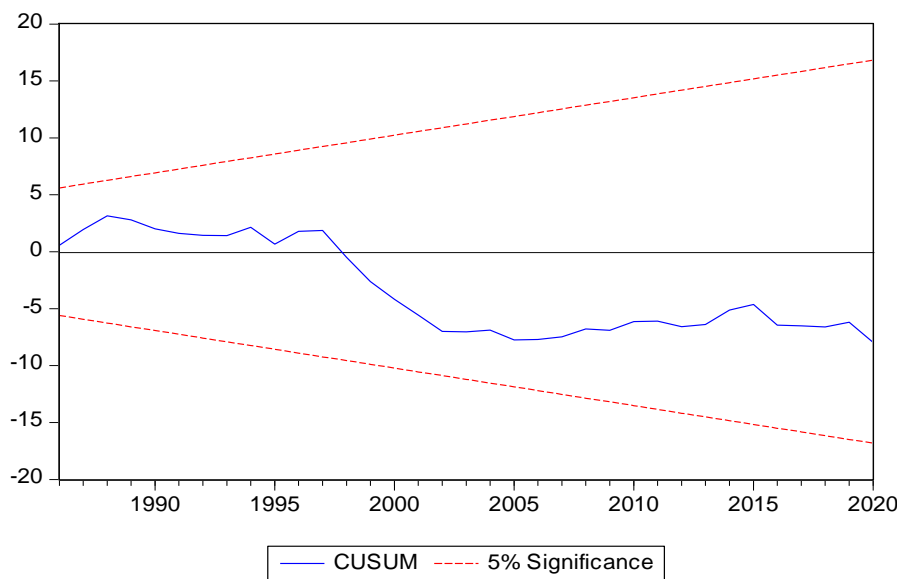
Error Correction Model

If two or more variables are co integrated then there is a long run relationship between the variables. However in short there may be disequilibrium between the variables. Therefore, we can treat the error term in the required equation as equilibrium error. Error term is used to tie the short term behavior of dependent variable with its long run value. ECM was first developed by Sargan and Engle and Grange while correcting for errors. It expressed that when two variables are co integrated, the relationship between them can be expressed as ECM.

Error Correction Model to describe the short run dynamics of co integrated variables (per capita GDP, primary sector GDP, secondary sector GDP and service sector GDP) towards their long run equilibrium. ECT (-1) refers to the speed of adjustment towards long run equilibrium at 63.74% and this result shows that the coefficient of error correction model

with lag one is negative which is significant at 5%. It confirms that there is a long run association between the variables.

Table 5

Error Correction Model

Variables	Coefficients	T-Statistics	Probability
C	75.01037	0.494863	0.6235
D(PCGDP(-1))	-0.936507	-3.427284	0.0015
D(PGDP(-1))	0.062467	2.856894	0.0069
D(SECGDP(-1))	0.058703	2.352315	0.0239
D(SERGDP(-1))	0.046032	3.578010	0.0010
ECT(-1)	-0.637473	-2.074366	0.0449
R-Squared	0.531102		
F Statistics	8.608232		0.000016
DW- Statistics	2.040959		

(Source Appendix 5)

Multiple regression analysis

As per Uyanik and Guler (2013), multiple regression models are those where there is one dependent variable and two or more independent variables. Regression analysis is done for estimating the relationship between the variables. In this research, the dependent variable is per capita GDP and independent variables are primary sector GDP, secondary sector GDP and service sector GDP.

Probability value of primary sector GDP, secondary sector GDP and service sector GDP is smaller than 0.05. So, the null hypothesis is rejected. It means there is a significant

relationship between Per Capita GDP and primary sector GDP, secondary sector GDP and service sector GDP. The coefficient of determination (R-Squared) is 0.584038. It means 58.40% of per capita GDP is explained by primary sector GDP, secondary sector GDP and service sector GDP and remaining 41.60% is explained by factors other than independent variables. Adjusted R squared is 0.488961. It means 48.89 % of per capita GDP is explained by primary sector GDP, secondary sector GDP and service sector GDP and the remaining 51.11% is explained by factors other than independent variables. For a best regression model Durbin Watson value must be greater than 2. In this model Durbin Watson value is 2.143255 which mean that there is a significant relationship between dependent and independent variables.

Table 6

Multiple Regression Analysis

Variables	Coefficient	T- Statistics	Probability
C	1687.569	0.752388	0.4568
D(PCGDP(-1))	-0.958716	-3.105096	0.0038
D(PGDP(-1))	0.047410	1.548091	0.1306
D(SECGDP(-1))	0.068504	2.598903	0.0136
D(SERGDP(-1))	0.055676	2.586372	0.0140
PCGDP(-1)	-0.688685	-2.181847	0.0359
PGDP(-1)	0.059576	2.495097	0.0175
SECGDP(-1)	0.014752	0.856600	0.3975
SERGDP(-1)	0.003438	0.342181	0.7343
R-squared	0.584038		
Durbin-Watson stat	2.143255		
F-statistic	6.142789		0.000059

(Source Appendix 6)

Discussion

Bhatta (2014) found that the industrial sector is significant to increase PCI (Per Capita Income) in comparison to the agricultural sector and service sector of Nepal. Dahal (2017), revealed that there is a co-integrating relationship between real gross value-added and service sector value added. And in this study, there is also a cointegrating relation among real service gross domestic product and per capita gross value added. Jayasooria (2017) revealed that there is a significant impact of structural changes between pre economic and post economic policies for economic growth even if there is transformation of structure. And this study there is also a significant impact of structural transformation in economic performance. Raihan & Khan (2020) revealed that in the economy of Bangladesh the Manufacturing sector is highly significant to increase economic growth also it is more attractive as it increases the exports of a country. From this study, it is found that manufacturing sector has fewer roles in comparison to primary sector and service sector. Malunda & Musuna (2012) concluded that service sector has positive impact on ecomomic growth, in this study also there is significant impact on economic growth. Paudel and Wagle (2020) revealed that structural transformation in Nepal is different from that of the developed nations because the structural transformation in Nepal jumped to the service sector directly from the agricultural sector. This shows that the condition of the industrial sector in Nepal is not impressive. Sectoral value added GDP is taken to measure Per Capita GDP of Nepalese economy, which is exactly matched with this study.

Conclusion

It can be concluded from the research questions and findings of this study that the structural changes have a positive impact on the economic growth of Nepal. With the change in economic structure from agricultural sector to service sector there has been uplift in economic conditions toward a favorable position. Service sector has a higher contribution to the economic growth of the country. But from the analysis of the data, it is apparent that the GDP per capita is not increasing with a higher rate in Nepal in comparison to developed nations. The result shows that the service sector contributes more to GDP in Nepal in comparison to other sectors. The economic structure of Nepal moves directly towards the service sector from the traditional agriculture sector. And the industrial sector has played a very minimal role in economic growth of Nepal from the beginning to till now. Service sector plays a crucial role in the economic growth of Nepal. The manufacturing sector has not been contributing more since the beginning. There shall be sufficient policies developed by the government. .

Implications

The research's suggestion will be beneficial for all the academicians and researchers who want to study about the structural transformation and its impacts on the economy of Nepal since the last forty six years. Academicians can use this knowledge for their research as a reference. The finding of research may be useful for policy makers to understand the economy of Nepal from different perspectives. This research study provides contributions from both practical as well as theoretical perspective. The data are collected from the

formal and authorized sources which are used in the research. The research presents the economic growth of Nepal before and after liberalization from three major sectors of economy. Time series data are collected of forty six years. And the data before 19975 are not available in sources. So this study covers all data available.

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