DETERMINANTS OF ECONOMIC GROWTH OF NEPAL

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ABSTRACT
The purpose of this paper is to analyse the impact of Foreign Direct Investment (FDI), Exchange Rate (EXR) and Consumer Price Inflation (CPI) to the Gross Domestic Product (GDP) growth in Nepal. Descriptive and causal comparative research designs were used to analyse the impact of FDI, EXR and CPI on economic growth of Nepal. The study has used 17 years' annual time-series data of FDI, GDP at current price, CPI, and EXR throughout the FY 2006/07 to 2022/23 in Nepal. The empirical results found that EXR and FDI has positive and significant impact on the economic growth of Nepal whereas the adverse effect of CPI on economic growth has been found. FDI and favorable EXR appearing as key drivers of economic growth, but rising prices could slow down it.

Keywords: Foreign Direct Investment, Gross Domestic Product, Consumer Price Inflation, Foreign Exchange Rate, Nepalese Economy
1. INTRODUCTION

Economic growth is the sustained increase in gross domestic product (GDP) over a long period of time. After World War II, it is a great concern for both the developed and developing countries (Dwivedi, 2010). Therefore, achieving a reasonably high economic growth rate through economic policies and economic decision making is the main goal of every economy. The sustained economic growth plays a crucial role to solve the economic problems like poverty, unemployment and non-utilization of available natural resources optimally. Boldeanu and Constantinescu (2015) concluded that the higher growth rate can improve the living standard of the people and is considered as key for wellbeing and prosperity of the people. Therefore, economic growth has been the main concern of researchers and economists in recent years.

The foreign exchange rate is another determining macroeconomic variable from the external sector for economic growth. The volatility of exchange rate can cause fluctuation in foreign trade and balance of payment as well. It results in a substantial change in foreign direct investment, foreign trade and economic growth (Basirat et al., 2014). Any developing country dependent on remittances with backwardness in industrial development is compelled to import the goods from foreign countries to meet their requirements. Since the payment of the imported goods is done with foreign currencies, the demand for foreign currencies increases and causes fluctuation in the exchange rate. Therefore, these countries' economies are very susceptible to any vulnerable changes in exchange rate. The higher degree of volatility of exchange rate can cause serious problems in any economy. Because the unstable exchange rate brings uncertainty in international trade, inflationary pressure on market price level, and uncertainty on making investment decisions by foreigners in the economy (Gbatu et al., 2017). Karki et al. (2020) also suggested effective economic policy to achieve a low rate of inflation and stable general price level in order to stimulate economic growth. Additionally, effective policy is required to achieve higher economic growth and its stability in developing countries by utilizing the FDI. The countries also must give more priority on the proper economic policy for the optimum use of FDI in host countries along with the development of human capital, infrastructure and institutions, stable government, legal framework, ICT and tax systems (Chowdhury & George Mavrotas, 2006).

Due to the globalization trend in recent decades, the businesses are spreading their wings and investing across borders. This is a big sign of how the world is
becoming one. When a foreign company invests in a business in another country by buying another company or partnering with a local business and transferring new technology and skills, money and new technology move there from outside (Ajaegbu, 2013). Furthermore, FDI has become a major source of resources of needed capital, technology, and skilled management and leadership expertise to various countries for recent decades (Abdouli & Hammami, 2017). Developing countries also can use advanced technology importing from abroad to stimulate their economy through FDI. This includes buying high technology equipment, hiring skilled man power, and partnering with other big foreign companies (Borensztein et al., 1998). For the countries lacking capital, FDI can transfer the needed capital (Pyakurel, 2018), and the countries can enhance the economic progress without scarifying the current needs (Katircioglu & Naraliyeva, 2006). FDI builds the win-win situation for both the “host” and the “home” countries as it transfers needed capital and profits in returns (Ajaegbu, 2013). Those countries who receive FDI also receive the modern knowledge with managerial skills and entrepreneurial expertise that helps to train laborers through training for development (Abdouli & Hammami, 2017). FDI brings new technology and knowledge, making all industries more efficient and spreads to other businesses, resulting the economy grow faster (Carkovic & Levine, 2005). The home countries achieve the advantages of vast markets and industrial growth. On the other hand, the host countries receive new technology and entrepreneurial talents, which further increases the domestic savings and foreign exchange (Hooda, 2011).

Nepal is not able to attract FDI because of the unfavorable political circumstances that are raising havoc in the business environment and causing the low investment in Nepal by foreign countries. Survey Report on Foreign Direct Investment in Nepal (2018) identified the FDI inflow in Nepal is very low in comparison to other countries through many provisions of legal, regulatory, and institutional frameworks. Although there is an increasing trend over the recent past years, the FDI stock reached only 6.1 percent of GDP in FY 2015/16, which was invested by 39 foreign countries' investors in 252 different firms in Nepal. In recent years, Nepal has also given a top priority to attract and mobilize FDI through various plans and policies since the ninth plan with different policies (Pyakurel, 2018). The Foreign Investment and Transfer of Technology Act 2019 (FITTA) in Nepal intends to facilitate the regime of foreign investment in Nepal. According to this act, the minimum investment amount of Rs 5,000,000 (approx. 46,000 USD) threshold is fixed for a foreign investor. As it may underwhelm on FDI inflow in Nepal, the government should increase the minimum amount of foreign
investment. The Investment Board in Nepal (IBN) has identified potential investment sectors for FDI in hydropower, transportation, agriculture, tourism, information communication technology, mines and minerals, health and education, manufacturing, and financial institutions.

Most of the research showed a positive contribution to economic growth, and the economic growth is affected by various factors in the host country (Adewumi, 2006). Alfaro (2003) concluded that FDI has a positive effect on the growth of the manufacturing sector, whereas there is a negative impact on the primary sector. A study has shown that an economy with a well-developed and well-facilitated financial market gains more from FDI (Alfaro et al., 2004). Borensztein et al. (1998) also argued that the economic growth rate depends on the state of technologies used in the developing countries and the implementation of more advanced technologies brought by multinationals. Kundan and Gu (2010) concluded that the GDP growth rate does not depend up on FDI. Pyakurel (2018) emphasized FDI as a significant source for finance in capital deficient, low technological developed, and poor competitive entrepreneurial management countries that are enriched in enormous resource availability. Karki et al. (2020) found the negative relationship between inflation and economic growth. The high inflation adversely affects economic growth in the short run. Low and stable inflation can enhance the economic growth. Therefore, the maximum 6 percent of inflation rate must be maintained as threshold level which is suitable for Nepalese economy.

Johnson (2006) argued that the host countries' economic growth is affected through spillovers of new technology and physical capital inflows in developing countries. The positive effect of FDI inflows on the economic growth of only developing countries was found.

Nahidi and Badri (2014) examined the relationship between FDI and economic growth in Middle East and North Africa countries. The study found that economic growth can be achieved if the degree of development is an inappropriate level and the ready substrates of the host countries. The more developed countries can fulfill the required investment technologies through FDI to affect growth. Economic openness lays positive and significantly affects GDP growth by increasing competitive and productive power in the manufacturing sector. That enhances the productivity and economic growth in host countries.

Bayar (2014) conducted a study on the relationship between economic growth and FDI inflows, including other macroeconomic variables gross domestic savings,
gross domestic investments in Asian economies. The empirical study was based on the data throughout 1982-2012. The positive impact of FDI inflows, gross domestic savings, and gross domestic investments on economic growth, in the long run, was found. The positive affects on economic growth in the long run and the interdependence of the economic growth and FDI inflows to each other in the short run was identified.

Iqbal et al. (2014) found the positive relationship between FDI and economic growth of Pakistan with the help of a descriptive and regression model for the time-series data of the period between 1982 to 2012. Moreover, FDI transfers modern technology through the spillover effects, develops human resources by providing training and education, and creates employment in the host country.

Basirat et al. (2014) found the degree of 95% certainty negative and statistically significant effect of fluctuation on the foreign exchange rate on economic growth in developing countries. The result was found analyzing 18 countries panel data from over the year of 1986 to 2010.

Al-Bayati et al. (2022) found the inverse relationship between official exchange rate and GDP and direct relationship between parallel exchange rate and GDP. It was concluded that a 1% increase in the official exchange rate will lead to a decrease in the GDP of Iraq by 7.666%. and the 1% increase in the parallel exchange rate will lead to an increase in GDP by 5.785%. Similarly, the inflation rate also inversely affects GDP. The GDP will be decreased by 123.487% when the inflation increases by 1% The study was conducted on the basis of secondary data of the period from 1988 to 2020 by using the ARDL model.

The research on the Impact of Macroeconomic Variables on Economic Growth of Pakistan was conducted to know the influence of Government Expenditure, Household Consumption, Inflation, Investment and Net Export on the Economic Growth. The study was based on the secondary data from 1991 to 2020. The model of Augmented Dickey and Fuller (ADF), the test of Johansen Cointegration and Ordinary Least Square (OLS) technique was used. It is concluded that the negative and significant impact of Inflation exists on Economic Growth and the impact of Investment on Economic Growth was positive and significant at 10 percent. (Memon. et. al, 2021)

Kibria et al. (2014) investigated the impact of macroeconomic variables on GDP growth of Pakistan. The study was based on the secondary data of 33 years from the period of 1980 to 2013. The Granger causality test, correlation and regression
analysis method are used to estimate the relationship between the variables. From the correlation analysis the study found that there is a negative and significant relationship between the GDP growth and inflation. Similarly, the positive and significant relationship between GDP growth and exchange rate, and positive and insignificant relationship between GDP growth and FDI was found. The causal relationship among the GDP growth, inflation rate, exchange rate and FDI inflows was found by using pairwise granger causality test. From the regression analysis, the study found the inverse relationship between GDP growth and inflation, and negative with significant impact on GDP growth of Pakistan.

The Nepalese economy is characterized by trade deficit, volatile of foreign exchange rate, high inflation, backwardness of technology, low productivity, high unemployment and so on. Moreover, the economy was adversely affected by political strikes, trade war between USA and China, devastating earthquake of 2015, blockades by India, pandemic period of COVID – 19 disease, projecting the growth of 0.2 in 2020 and 0.6 in 2021(World Bank, 2020), war between Ukraine and Russia (World Economic Forum, 2022) etc. Every year the economic policies are also emphasizing high economic growth. However, on the basis of the annual budgets of the government in recent years, it is observed that the targeted rates of economic growth have not been successfully met. Instead, it has been achieved at low rates and uncertainty as well. Due to this, the trend of economic growth is also fluctuating in recent years. In this background, there may arise a question: what are the economic factors that determine the GDP growth in a developing country like Nepal? How do the macroeconomic factors contribute to GDP growth?

The main objective of this study is to explore the impact of macroeconomic variables CPI, EXR and FDI inflows on the economic growth of Nepal.

2. RESEARCH METHODS

The objective of this study is to explore the impact of macroeconomic variables CPI, EXR and FDI inflows on the economic growth of Nepal based on the published data from the FY 2006/07 to FY 2022/23. The quantitative approach was used to study the impact and descriptive and causal comparative research design were used to analyse. A testable hypothesis was also made to identify the relationship between FDI and GDP growth in the host country Nepal.
2.1 Research Hypothesis

After the review of the literature, the following three testable hypotheses are formulated to find out the relationship between the CPI, EXR, FDI and the GDP growth of the country, Nepal.

H01 : There is no statistically significant positive impact of FDI on GDP growth in Nepal.

H02 : There is no significant adverse effect of changes in the CPI on GDP growth.

H03 : There is no statistically significant positive impact of the EXR on GDP growth.

2.2 Nature and Sources of Data

This study is based on the secondary data published on the website, annual reports and budgets of Nepal Government published by the Ministry of Finance. The secondary data were collected from secondary sources throughout the fiscal year 2006/07 to fiscal year 202/23 to explore the impact of FDI on the GDP growth in Nepal. The time-series data were used as the independent variables, including Foreign Direct Investment (FDI), Consumer Price Inflation (CPI), and Foreign Exchange Rate (EXR).

2.3 Conceptual Framework

Kibria et al. (2014) used the factors Inflation, FDI and EXR to study its impact on GDP growth in Pakistan. Hence the conceptual framework of figure 1 is formulated to study the impact of independent variables inflation, FDI inflows and foreign exchange rate on the dependent variable economic growth in Nepal.

Figure 1
Conceptual Framework

![Conceptual Framework Diagram]
### 2.2.1 Operational definition of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Operational definitions of variables</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>GDP at current price is the sum of the current market value of all the final goods and services that are produced inside the geographical boundary of Nepal during one fiscal year. It is calculated as ( GDP = \sum_{i=1}^{n} P_iX_i ) where ( P ) states the current market price of the individual goods and ( X ) stands for the goods and services produced in the fiscal year. It is also obtained by the expenditure method including the expenses made on consumption, investment on business sectors, expenditure made by the government and the net value export on imports.</td>
<td>Government of Nepal, Ministry of Finance <a href="https://data.mof.gov.np/data.aspx#">https://data.mof.gov.np/data.aspx#</a></td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investment is the total amount of investment made in all the industries established by foreigners in Nepal including share (equity) investments, reinvestment of the profits from stock investments and Investment made through a loan or loan facilities. The FDI amounts are presented here in Nepalese Rupees.</td>
<td></td>
</tr>
<tr>
<td>CPI</td>
<td>CPI is the rate of price changes in one fiscal year that is presented in percentage which reflects the annual percentage change in the price level that a consumer must pay to purchase a basket of goods and services. It is the ratio of the percentage changes in the consumer price index of the current year and the previous year's consumer price index. It measures the increment of the general price level annually.</td>
<td></td>
</tr>
<tr>
<td>EXR</td>
<td>EXR is the price of US dollar per unit which is expressed in Nepalese Rupees and that is calculated as an annual average based on monthly averages.</td>
<td></td>
</tr>
</tbody>
</table>
2.4 Model Specification

As the theory of demand explain that there exists the inverse relationship between price and demand of the goods and services in the market, the households' consumptions are affected by the price level of the country and the GDP at current price is also affected by the inflation as well. Kibria et al. (2014) also used this model to study the impact on GDP growth. Hence household consumptions are affected by the inflation, net export is affected by the exchange rate, A model is formulated in the functional form to find out the relationship or impact of Inflation, FDI, and EXR on GDP growth in Nepal.

GDP=f(Inflation, FDI, Foreign Exchange Rate)

The regression equation is

\[ \ln Y = \alpha + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \mu \]

Where \( \ln Y \) = Natural logarithm of GDP at Current Price
\( \ln X_1 \) = Natural logarithm of Consumer Price Inflation (CPI)
\( \beta_1 \) = Coefficient of Consumer Price Inflation
\( \ln X_2 \) = Natural logarithm of Foreign Direct Investment (FDI)
\( \beta_2 \) = Coefficient of FDI
\( \ln X_3 \) = Natural logarithm of Foreign Exchange Rate (EXR)
\( \beta_3 \) = Coefficient of Foreign Exchange rate
\( \alpha \) = Constant
\( \mu \) = Error term.

To test the impact of independent variables on dependent variables, a linear regression model is estimated, and the data were analysed with the help of the SPSS version 26.

3. RESULTS

3.1 Graphical Presentation:

In figure 2, the GDP and EXR are less fluctuate while CPI and FDI both are highly fluctuated. The highest FDI is recorded in 2022/23 and lowest in 2007/08. In the same way, the maximum value of CPI is in 2008/09 and lowest value is recorded in 2020/21. The GDP and EXR is increasing gradually over the period with very low deviation.
3.2 Descriptive Statistics of Selected Macro Economic Variables: ln(GDP), ln(CPI), ln(EXR), and ln(FDI)

The descriptive statistics of selected macroeconomic variables ln(GDP), ln(CPI), ln(EXR), and ln(FDI) are depicted in table 1. The table summarises the information of 17 years economic data providing the details of every variable as the average value, its distribution (spread), and any potential skew or asymmetry in the data.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness Statistics</th>
<th>Kurtosis Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln(GDP)</td>
<td>17</td>
<td>5.3523</td>
<td>0.2727</td>
<td>-0.429</td>
<td>-0.909</td>
</tr>
<tr>
<td>ln(CPI)</td>
<td>17</td>
<td>0.8487</td>
<td>0.1556</td>
<td>-0.438</td>
<td>-0.753</td>
</tr>
<tr>
<td>ln(EXR)</td>
<td>17</td>
<td>1.9752</td>
<td>0.0942</td>
<td>-0.306</td>
<td>-1.289</td>
</tr>
<tr>
<td>ln(FDI)</td>
<td>17</td>
<td>2.8013</td>
<td>0.6215</td>
<td>-0.804</td>
<td>0.784</td>
</tr>
</tbody>
</table>
Table 1 indicates that the mean and SD of ln(GDP), ln(CPI), ln(EXR), ln(FDI). The mean of ln(GDP) and standard deviation are calculated as 5.3523 and 0.2727, respectively. Additionally, the mean of ln(CPI) is calculated 0.8487, and the standard deviation is calculated by 0.1556. The two other control variables are the ln(EXR) and the ln(FDI). The mean value of ln(EXR) is calculated as 1.9752, and the standard deviation is 0.0942. Similarly, the mean value of the ln(FDI) is 2.8013, and the standard deviation is measured as 0.6215 as well. The mean of ln(GDP) is measured the highest value of 5.3523 indicating the substantial rate of change in ln(GDP) among all the variables and conversely the mean of ln(CPI) is measured 0.8487 reflecting the lower rate of changes. The value of standard deviation of ln(FDI) is obtained 2.8013 as the highest value among the variables indicating the greater amount of variation in ln (FDI). Therefore, there is a higher level of risk to turn the value and potential deviation from the expected value. The lowest value of standard deviation is 0.0942 of ln(EXR).

The values of skewness of all the variables are negative and lie between 0 to -1 indicating a slightly longer tail towards lower values of the variables. The values of kurtosis of the variables except ln(FDI) are negative indicating a flatter distribution than the normal distribution, suggesting that there is less concentration around the mean than in a normal distribution. But the kurtosis of ln(FDI) is positive (0.78) indicates a slightly more peaked distribution than the normal distribution, suggesting that there is a higher concentration of values around the mean than in a normal distribution. Since the values of skewness lie between the normal range -1 to +1 and the values of kurtosis are also in the normal range of between -1 to +1, the data can be regarded as normally distributed.

### 3.3 Relationship Analysis

#### Table 2

**Correlation Matrix**

<table>
<thead>
<tr>
<th></th>
<th>ln(GDP)</th>
<th>ln(CPI)</th>
<th>ln(EXR)</th>
<th>ln(FDI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln(GDP)</td>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ln(CPI)</td>
<td>Pearson Correlation</td>
<td>-0.527*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ln(EXR)</td>
<td>Pearson Correlation</td>
<td>0.965**</td>
<td>-0.480</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.051</td>
<td></td>
</tr>
<tr>
<td>ln(FDI)</td>
<td>Pearson Correlation</td>
<td>0.914**</td>
<td>-0.337</td>
<td>0.838**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.186</td>
<td>0.000</td>
</tr>
</tbody>
</table>

* * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).
The correlation matrix in table 2 indicates that ln(FDI) and ln(EXR) are positively correlated to ln(GDP) at current price. It implies that the changes in FDI and EXR can change the GDP in the same direction. Hence, the higher economic growth associated with the greater FDI and EXR. While the ln(CPI) is negatively correlated to ln(GDP) at current price. The higher CPI can adversely affect the GDP.

3.4 Regression Analysis

The study conducted the multiple regression analysis to explore the impact of CPI, EXR and FDI on GDP growth in Nepal. The logarithm of Gross Domestic Product (GDP) is a dependent variable, denoted as ln(GDP). The model includes three independent variables: ln(CPI) (logarithm of Consumer Price Inflation), ln(EXR) (logarithm of Exchange Rate), and ln(FDI) (logarithm of Foreign Direct Investment). The findings of the analysis are depicted in Table 3.

Table 3
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.989(^a)</td>
<td>.978</td>
<td>.973</td>
<td>.0.44155901</td>
<td>2.538</td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), ln(FDI), ln(CPI), ln(EXR)

The three independent variables, including FDI, CPI, and Exchange Rate, were analysed. The value of R\(^2\) indicates that 97.8% of the variance was found in GDP growth in Nepal. The result represents that other factors not included in the study contribute only 2.2% of the variance in the dependent variable GDP at the current price. The acceptable Durbin-Watson (DW) test statistic value lies between the range of 1.5 to 2.5 and the value is obtained 2.538 which is approximately equal to 2.5 and can be considered that the model has no autocorrelation and therefore is reliable.
The findings of the analysis represent that the significance value is less than 0.05, so the model is considered to predict how FDI, CPI, and EXR affect the GDP in Nepal. The F calculated value is higher than the F critical value, which shows that the overall model was significant.

From the regression results in Table 5, the model is statistically significant as whole since the constant term is at significance level. The constant value is calculated as B equals 1.678. It represents the estimated value of the GDP at current price when all predictor variables are zero. In this case, when the CPI, EXR, and FDI are zero, the estimated value of the GDP is 1.678. The t-value of 3.957 indicates that this constant is statistically significant at a 0.002 significance level. From this result the equation can be mathematically expressed as:

\[
\text{ln(GDP)} = 1.678 - 0.203\text{ln(CPI)} + 1.711\text{ln(EXR)} + 0.167\text{ln(FDI)}
\]

The results also represent that both the exchange rate and FDI have a statistically significant positive impact on the GDP at current price, while the CPI shows a negative impact. The FDI is statistically significant (p=0.000), indicating a

Table 4
ANOVA$^b$

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>1.164</td>
<td>3</td>
<td>.388</td>
<td>196.749</td>
<td>.000$^b$</td>
</tr>
<tr>
<td>Residual</td>
<td>.026</td>
<td>13</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.190</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), ln(FDI), ln(CPI), ln(EXR)
b. Dependent Variable: ln(GDP)

Table 5
Coefficients$^a$

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>S.E</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>1.678</td>
<td>.424</td>
<td></td>
</tr>
<tr>
<td>ln(CPI)</td>
<td>-.203</td>
<td>.082</td>
<td>-.116</td>
</tr>
<tr>
<td>ln(EXR)</td>
<td>1.711</td>
<td>.234</td>
<td>.591</td>
</tr>
<tr>
<td>ln(FDI)</td>
<td>.167</td>
<td>.033</td>
<td>.380</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ln(GDP)
significant positive relation between FDI and GDP growth. Therefore, the alternative hypothesis is accepted and indicates that FDI has a positive and significant effect on GDP growth in Nepal. The findings revealed that a unit in FDI is associated with an increase of 0.167 units in GDP. The Exchange Rate is also statistically significant as well since the significance value is 0.000. Therefore, the alternative hypothesis is accepted and it is found that there is a positive significant impact of changes in the foreign exchange rate on GDP growth. It reflects that a unit increase in the exchange rate will result in 1.711 units in GDP. In contrast, there exists a negative impact of CPI on GDP and the p-value of CPI is 0.028 representing that the relationship is also statistically significant at significance level. Hence, the alternative hypothesis is accepted expressing the changes in CPI has a significantly adverse effect on the GDP growth. The coefficient is calculated with a negative value of -0.203, which indicates that a higher CPI will lead to lower GDP. A unit increase in inflation rate (CPI) will result in 0.203 unit decreases in GDP. Since the tolerance values are greater than 0.2 and the values of VIF are below 5, the values are considered the acceptable levels of multicollinearity. Hence, the collinearity statistics suggest acceptable levels of multicollinearity.

4. DISCUSSION

The results of the study reflect the significant relationships between FDI, EXR, CPI, and GDP associated with their impact on economic growth of Nepal.

The results represent FDI has a statistically significant positive impact on the GDP at current price. It reveals the positive relationship between FDI and GDP growth in Nepal. This result is similar with several previous studies such as Johnson (2006), Kundan and Gu (2010), Nahidi and Badri (2014), Bayar (2014), Iqbal et al. (2014), Kibria et al. (2014), Alfarooq (2003), Alfarooq et al. (2004), Borensztein et al. (1998), Pyakurel (2018) since they concluded the link or effect between FDI and GDP.

It is found that there is a positive significant impact of changes in the foreign exchange rate on GDP growth. This positive link of foreign exchange rate with economic growth is consistent with the findings from the study in Pakistan by Kibria et al., (2014) and positive relationship between parallel foreign exchange rate and GDP was found by Al-Bayati et al. (2022) in Iraq. In contrast, the negative relationship between foreign exchange rate and GDP was estimated in the study of Basirat et al. (2014) in developing countries and the negative relationship between
official foreign exchange rate and GDP was also observed by Al-Bayati et al. (2022) in Iraq.

This study explores the negative impact of CPI on GDP expressing the changes in CPI has significantly adverse effect on the GDP growth. Similar negative relationship was also identified on the study by Karki et al. (2020) in Nepal, Al-Bayati et al. (2022) in Iraq, Memon. et. al. (2021) and Kibria et al. (2014) in Pakistan.

5. CONCLUSION

The overall results of the study reveal the significant influence of macroeconomic variables CPI, EXR and FDI on economic growth of Nepal. As the changes in FDI and EXR positively impact on the GDP, FDI and exchange rate appear as key drivers of economic growth. Conversely the negative impact of CPI exists on GDP. This study shows that foreign investment and favourable exchange rates can boost the Nepalese economy, but high prices hurt it. Therefore, the government should implement the anti-inflationary economic policies for the stable price level. This information can be used to make plans for long-term economic growth. The government should also maintain exchange rate stability for attracting FDI in Nepal to enhance economic growth by encouraging investment in employment-generating industries and utilising natural resources.

While the current study explored the relationships between GDP and variables (FDI, EXR, CPI) in Nepal using the regression analysis tools. Still more research can be done in future to analyse how these relationships change over time and whether they're always the same. The further research also can be done to explore the impact of other factors like interest rate, public expenditure and other macroeconomic variables that boost the Nepalese economy by using other various tests i.e. the Augmented Dickey-Fuller test, Kwiatkowski-Phillips-Schmidt-Shin test, Jarque-Bera test, Ljung-Box test, Granger Causality Test, and VAR model.
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