“Reliability of industrial policies in Nepal: An empirical investigation into the role of macroeconomic indicators”

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RELIABILITY OF INDUSTRIAL POLICIES IN NEPAL: AN EMPIRICAL INVESTIGATION INTO THE ROLE OF MACROECONOMIC INDICATORS

Abstract

This study aims to analyze the reliability of Nepal's industrial policies, focusing on the effects of macroeconomic variables on implementation and outcomes. This paper assesses Nepal's industrial policies, emphasizing the need for improvements, export promotion, and human capital development while recognizing the importance of strategic planning and context-specific approaches for economic growth, stability, and development. The analytical and descriptive approaches have been applied to analyze the data by collecting secondary data sources that include official publications, which encompass 47 time series variables from 1974 to 2020. The findings provide mixed evidence for the economic impacts of liberalization, with exports and liberalization driving overall GDP growth. In contrast, other factors like economic openness, tourism, and their relationship with industrial GDP remain statistically insignificant. The paper indicates that remittances and investment have the most substantial impact on GDP, raising it by 1.86 and 1.21 units per unit increase, respectively. Exports have a moderate impact on industrial GDP (0.403 units). Export-oriented industries and tourism lack significant associations with either type of GDP. Liberalization significantly boosted both GDP and industrial GDP, with an increase of 179465.3 and 49595.62 units, respectively. Imports also jumped post-liberalization, driven by higher remittances as 1.215 units per unit increase. This study on industrial policies in developing economies, focusing on Nepal, adds valuable insights. The findings can ensure policymaking, boost economic growth, and strengthen Nepal's industrial sector.

Keywords economic liberalization, industrialization, economic growth, policy coherency, investment environment, government efforts, Nepalese economy, descriptive statistics

JEL Classification C36, L14, O33, P35

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INTRODUCTION

Nepal, located in the heart of the majestic Himalayas, has consistently emphasized industrial development as a vital component of its economic growth strategy. Over the years, several industrial policies have been implemented to strengthen specific sectors, attract foreign investment, and stimulate overall economic activity. However, the effectiveness of these policies in achieving their intended goals remains a subject of debate.

In Nepal, a country prioritizing sustainable economic growth and development, evaluating industrial policies becomes crucial. The impact factors such as GDP growth rate, inflation, exchange rates, interest rates, and government fiscal policies provide valuable insights into the effectiveness of current industrial policies. To succeed in the global economic arena, it is essential to possess a comprehensive understanding of the intricate relationship between macroeconomic variables and industrial policies.

Evaluating the reliability of Nepal's industrial policies is a challenging endeavor that necessitates a comprehensive empirical analysis of the influence and effectiveness of macroeconomic factors. The primary focus is on understanding the impact of these variables on the implementation and outcomes of industrial policies, thereby addressing the broader question of the effectiveness and dependability of Nepal's current industrial strategies.

1. LITERATURE REVIEW

Nepal aimed to address its economic deficit and enhance competitiveness by removing trade barriers and encouraging foreign equity investments. The focus was on sectors that manufacture products the general public uses, with policies prioritizing advantages in comparison, efficiency, capacity utilization, modernization, and technological advancement (Regmi, 1994). Sharma (2009) highlighted the slight improvement in gross productivity despite implementing liberalization measures.

Shreshtha (2010) concluded that Nepal's open-market-aligned industrial policy changes did not significantly enhance economic performance. He suggests a robust government and targeted industrial policy strategies to promote entrepreneurship, citing the ineffectiveness of trade liberalization for industrialization and export promotion. Khatri (2018) notes progress in Nepal's industrial policy implementation but suggests more efforts are needed to improve the investment climate, promote exports, and develop human capital.

In Nepal's industrial policy, Panthi (2019) observed positive developments while emphasizing the importance of further improvements. The focus is enhancing the investment climate, promoting exports, and developing human capital. Hayashi et al. (2020) examined the various factors crucial in determining the effectiveness of industrial policy in Nepal. The study highlighted the significance of a stable macroeconomic environment, robust institutions, and a favorable political climate in achieving the best possible outcomes.

Pradhan et al. (2020) highlighted the importance of policymakers, taxation, and other variables in promoting growth in the domestic economic ecosystems of middle-income countries. They emphasize the need for a framework that supports ICT infrastructure. Kharel and Chalise (2021) emphasized the significance of maintaining macroeconomic stability for Nepal's industrial strategy to be successfully implemented. Panta et al. (2022) stressed the importance of meticulous design and implementation when it comes to leveraging industrial policy to foster economic growth in Nepal. Their analysis proposes a concentration on enhancing exports, fostering innovation, and enhancing the investment climate in industrial policy.

Upadhyaya et al. (2023) provide evidence that trade openness is significant in promoting Nepal's long-term development and safeguarding the environment. The study highlighted the positive relationship between faster economic growth, job creation, investment, exports, and reduced inflation. Lagged GDP, GCF, exports, HDI, and employment ratio have been found to significantly impact short-term GDP growth. These variables demonstrate a strong and enduring relationship with GDP growth.

Nepal's industrial policies showcase a range of viewpoints on their efficacy, highlighting the continuous requirement to improve the investment climate, boost exports, and nurture human capital development. The extensive study on industrial policy highlights the complex dynamics of global economic policies, strategic planning, and tailored approaches to foster stability and drive development in various socio-economic environments. Humphrey and Schmitz (2002) shed light on the crucial role of international market access in overcoming this challenge. Furthermore, they provided insightful recommendations on how emerging nations can effectively develop their industrial strategies.

Regarding industrial policies, Pack and Saggi (2006) remarked that there is an information dimension, and it is impossible for the government to identify with any degree of accuracy or certainty the relevant companies and markets affected by market imperfections. Industrial policy can foster

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corruption and profiteering. Recent industry successes suggest limited roles for public intervention as global industrial networks expand and least-developed nations dominate historically successful industries (Kniivilä, 2007).

Regarding the promotion of investment in specific sectors, Bjorvatn and Coniglio (2007) highlighted that government industrial policy employs various tools, including interventions in credit markets, foreign exchange, licensing procedures, trade policies, and direct control through state ownership. Kniivilä (2007) studied seven industrializing developing countries, finding that the growth of the manufacturing sector increased work opportunities for people with low incomes in non-agricultural sectors. The impact on poverty reduction varied across countries, emphasizing the essential role of industrialization in long-term economic development and poverty reduction.

As per Haque (2007), industrial policy plays a vital role in global economic development, value chains, and marketing networks in light of the evolving trends in international trade rules. In light of prevailing neoliberal influences, the article emphasizes the enduring importance of industrial policy in fostering development and competition within specific country contexts. Since the 1960s, there have been significant developments in industrial strategies. However, when comparing East Asia and Latin America, policy implications have not experienced a similar resurgence (Shapiro, 2007).

Policies need to encourage certain behaviors and structural change, as noted by Rodrik (2009). The process through which the government and the private sector work together to identify the root causes of obstacles to new economic activity and provide remedies is more accurately described as industrial policy. Any selective government action known as an industrial policy aims to change the sectoral distribution of output in a direction that would, in theory, give more opportunities for economic development (Evenett, 2004).

As remarked by Te Velde et al. (2010), the integral complement to the industrial policy of economic growth directly depends on economic fundamentals such as skills and capital formation, as well as the efficiency of the combined factors of production. Altenburg (2011) argues that active governments in high-income nations encourage structural change by promoting new endeavors.

Olarinde and Yahaya (2018) explored the topic of institutional convergence in the literature. Abebaw (2019) reveals the impact of macroeconomic variables on industrial output in Ethiopia between 1991 and 2018. By utilizing diverse tests and models, the study uncovers the detrimental influence of lending rate and trade balance on industrial growth while highlighting the positive impact of inflation. The article proposes implementing a strategic lending rate to promote balanced trade and enhance firms' export and import management for their benefit.

Lawson et al. (2019) examined the various factors impacting Ghana's foreign direct investment (FDI). Their analysis underscores the significance of national policies in attracting and shaping FDI in the country. Yazdani and Daryani (2021) shed light on the concerns raised in the literature regarding foreign direct investment in emerging markets. Based on extensive research using econometric models and panel data from 38 countries spanning the years 1990 to 2014, this study uncovers a significant finding: sudden withdrawals of foreign direct investment have a negative impact on output. The impact of sudden stops and financial crises on output is significant, highlighting the need for proactive monetary and exchange rate policies to mitigate the decline in output.

Soltani et al. (2021) employed the Keynesian DSGE model to analyze the Iranian banking and finance sector. The study revealed that to address economic shocks caused by interest rate regulation, banks should establish a commission and provide non-profit services rather than focusing on income distribution. Momoh and Abdulminiru (2021) conducted an analysis of Nigerian macroeconomic policies aimed at enhancing savings. Their findings propose the expansion of rural bank branches and the revision of rural banking laws in Nigeria.

Zhuang et al. (2021) found that reliable institutions played a crucial role in enhancing the connection between infrastructure and trade openness. That study makes a valuable contribution to policymaking for trade openness and economic

development. Hamid and Saleh (2022) discovered that advancements in technology during oil surpluses profoundly impacted various aspects of the industry. These improvements led to increased productivity, cost reduction, modernization of manufacturing processes, higher levels of domestic production, and a decreased dependence on imports of raw materials.

Karas (2022) emphasizes the noteworthy effects of employment. Personal cost per employee and interest rate influence SME survival, showcasing enhanced precision when macroeconomic variables are utilized instead of accounting variables. Lambe et al. (2022) revealed that establishing enduring partnerships with suppliers can have a positive impact on the financial performance of Nigerian companies in the consumer and industrial product sectors.

Yülek and Akkemik (2023) found that industrial policy can boost economic growth with careful design and implementation. Thus, industrial policy should prioritize exports, innovation, and investment. In a comprehensive study, Emmanuel et al. (2023) examined working capital management policies, macroeconomic variables, and profitability. The study examined data from 83 JSE-listed industrial firms between 2010 and 2020. The study found a strong link between firm profitability and economic growth. GDP increases consumer per capita income, which boosts consumption and profitability.

Waiswa (2023) highlighted the impact of various factors on Ugandan food prices, including weather patterns, international food prices, domestic demand, and production input costs. Efficient policies should acknowledge and tackle these factors and consider the influence of macroeconomic indicators on food price inflation.

The study seeks to analyze Nepal's industrial policies, taking into account different viewpoints and emphasizing the continuous need for improvements, promoting exports, and developing human capital. There is a significant void in the lack of a thorough integration of different research on Nepal's industrial policies. Various studies focus on specific aspects, but a comprehensive overview is lacking. An in-depth analysis is required to combine various viewpoints and tackle contradictory findings, providing a well-rounded understanding for making informed decisions in Nepal's industrial development. Thus, the study proposes the following hypotheses:

H1: Exports have a significant positive influence on industrial GDP.

H2: There is a significant positive correlation between the Economic Openness Index and industrial GDP.

H3: There is a significant positive correlation between tourism and industrial GDP.

H4: Liberalization significantly boosts overall GDP.

H5: Liberalization significantly boosts industrial GDP.

H6: Liberalization significantly increases imports.

H7: Remittances have a significant positive impact on the increase in imports after the liberalization period.

2. METHOD

This quantitative study uses analytical and descriptive research designs and methodologies. To assess the variables, secondary data were utilized to calculate the effects of independent factors on the dependent variable. The collected data have been analyzed using EViews statistics software version 10 for interpretation. Secondary and time series data were used in this investigation. Industrial Statistics Policy 2021/22 (Government of Nepal, 2022), Economic Survey (Ministry of Finance, 2023), and Quarterly Economic Bulletin (Nepal Rastra Bank, 2022) of Nepal were the primary data sources. The study used 47 sets of time series data (1974–2020), analyzing the relationship between dependent and independent variables. Dependent variables are GDP, IGDP, and import, whereas Economic Openness Index, remittance, investment, export, import, and tourism income are independent variables.

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$$R\_GDP = f(R\_REM, R\_INV, R\_EOI, R\_TOURISM, Dummy), \quad (1)$$

$$R\_IGDP = f(R\_EXPORT, R\_TOURISM, R\_INV, R\_REM, Dummy), \quad (2)$$

$$R\_IGDP = f(R\_EXPORT, R\_TOURISM, R\_INV, Dummy), \quad (3)$$

$$R\_\_IMPORT = f(R\_REM, R\_TOURISM, Dummy), \quad (4)$$

where R_INV = Real Investment; R_GDP = Real Gross Domestic Product; R_IGDP = Real Industrial Gross Domestic Product; R_IMPORT = Real Import Amount; R_EXPORT = Real Export Amount; R_TOURISM = Real Tourism Income; R_REM = Real International Remittances; Dummy = 0 Before liberalization and 1 after liberalization.

3. RESULTS

3.1. Model I

This study examines the statistical significance and explanatory power of a regression model that analyzes the factors influencing a country's Gross Domestic Product (GDP). The model takes into account various factors, including remittance, investment, Economic Openness Index, tourism income, and the effects of liberalization.

The findings (Table 1) reveal that the model is highly statistically significant (p-value < 0.001) and accounts for approximately 98.72% of the variation in GDP. Specifically, remittance and investment exhibit significant associations with GDP (p-value < 0.001). As per the results, a one-unit increment of remittance is estimated to lead to an increase of around 1.86 units in GDP, while a one-unit increase in investment is associated with an estimated increase of approximately 1.21 units in GDP. Conversely, the Economic Openness Index and tourism income do not demonstrate a significant association with GDP (p-value > 0.05) within this model. Furthermore, the positive coefficient (179465.3) suggests that GDP has significantly increased after implementing liberalization (p-value = 0.0273).

Figure 1 shows the histogram and the error term, which is normally distributed. The Jarque-Bera test assessed the normality of this model's residuals. The results indicate that the null hypothesis is accepted where the probability value of the test (0.2397) was greater than a 5% significance level. This implies that the model's residuals have a normal distribution. Table 2 depicts the results of the Bruesch-Pagan-Godfrey test, which has been used to detect heteroskedasticity in econometric regression analysis.

The null hypothesis of homoscedasticity may not be rejected at a significance level of 5% if the p-value of the observed R-squared is larger than 5%.

Table 1. Regression model

Variable	Coefficient	Std. Error	t–Statistic	Prob.
R_REM	1.8593	0.2848	6.5282	0.0000
R_INV	1.1217	0.1867	6.0063	0.0000
R_EOI	7773.9240	4978.535	1.5615	0.1261
R_TOURISM	–2.2565	1.5546	–1.4514	0.1543
Dummy	179465.3000	78412.98	2.2887	0.0273
C	275960.600	102790.0	2.6847	0.0104
R–Square	0.9873	Mean dependent var		1271026.0
Adjusted R–Square	0.9857	S.D. dependent var		836560.0
S.E. of regression	99941.28	Akaike info criterion		25.9813
Sum squared resid	4.10E+11	Schwarz criterion		26.2175
Log-likelihood	–604.5605	Hannan–Quinn criterion		26.0702
F–statistic	636.4027	Durbin–Watson stat		1.2233
Prob(F–statistic)	0.0000			

Note: R_INV = Real Investment; R_TOURISM = Real Tourism Income; R_REM = Real International Remittances; R_EOI = Economic Openness Index.

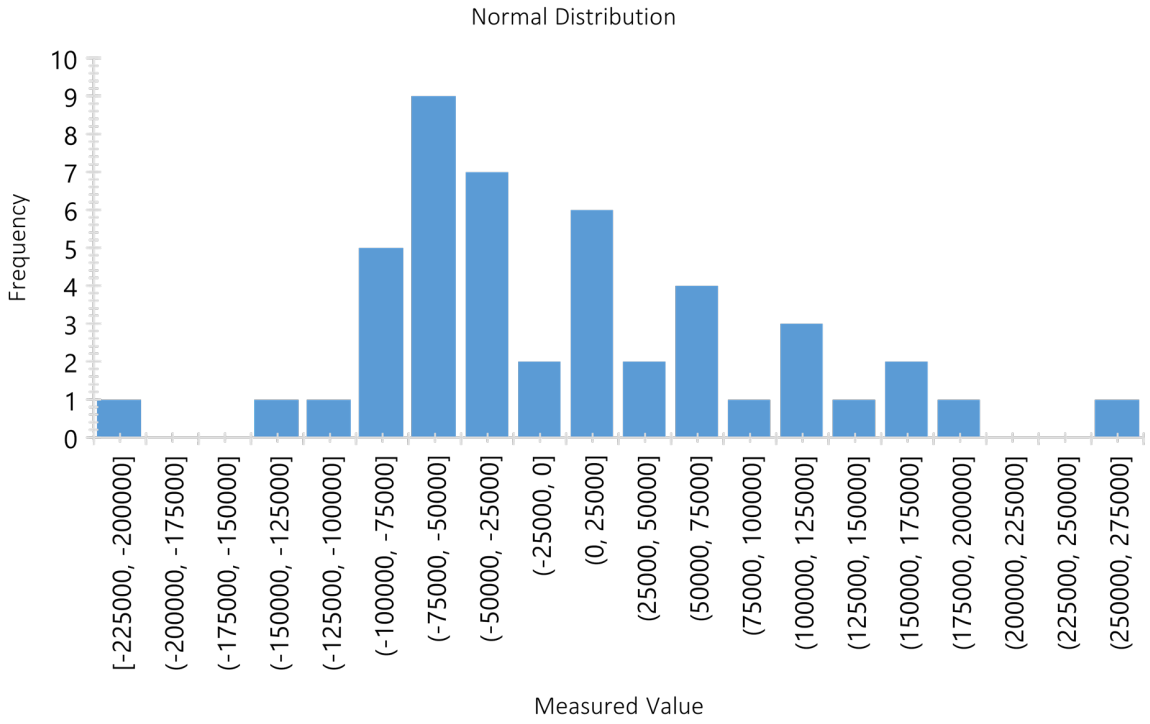

Figure 1. Normality test of model 1

Table 2. Heteroskedasticity in economic regression

F-statistic	0.9989	Prob. F (5,41)	0.4305
Obs*R-squared	5.1039	Prob. Chi-Square (5)	0.4033
Scaled explained SS	4.1473	Prob. Chi-Square (5)	0.5284

This implies that the data exhibit homoscedasticity, meaning that the variability of the residuals is constant across all levels of the independent variables. The Breusch-Godfrey LM test has been applied to assess the presence of serial correlation in this model.

Table 3. Breusch-Godfrey Serial correlation LM test

F-statistic	5.1419	Prob. F (2,39)	0.0104
Obs*R-squared	9.8073	Prob. Chi-Square (2)	0.0074

The absence of serial correlation in the residuals is the null hypothesis test. Table 3 displays the outcomes of the Breusch-Godfrey serial correlation LM test. The null hypothesis of serial correlation is accepted based on the F-statistic and the likelihood of the observed R-squared, both of which are less than the 5% threshold of significance.

3.2. Model II

As a theoretical phenomenon, the fundamental assumption of regression is that independent variables should not be multicollinear. The multicollinearity of independent variables was examined using variance inflation values (VIF). All the VIF values are less than 10 except remittance and investment. So, remittance is excluded because of (10 > VIF) value (Table 4).

Table 4. Multicollinearity of VIF

	Coefficient	**Uncentered**	**Centered**
Variable	Variance	VIF	VIF
R_EXPORT	0.02604	17.2289	3.8822
R_TOURISM	0.1121	10.2153	3.3601
R_INV	0.0013	30.0414	13.3378
R_REM	0.0028	20.1997	12.9532
Dummy	2.63E+08	15.5050	6.2679
C	76025880	7.5184	NA

Note: R_INV = Real Investment; R_EXPORT = Real Export Amount; R_TOURISM = Real Tourism Income; R_REM = Real International Remittances.

3.3. Model III

This model provides a basic framework for understanding Nepalese economic growth through export, tourism, and real investment.

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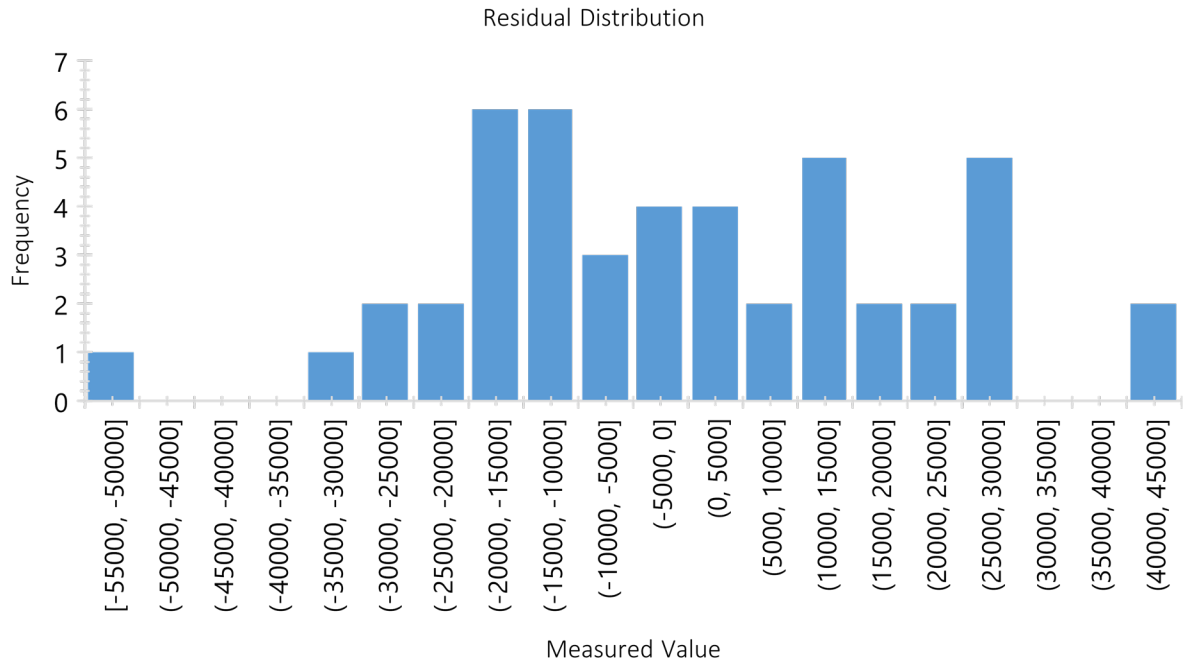

Figure 2. Normality test of model 3

Table 5. Variance inflation factors

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
R_EXPORT	0.0253	17.0412	3.8399
R_TOURISM	0.1022	9.4622	3.1124
R-INV	0.0003	6.1519	2.7314
Dummy	2.58E+08	15.4370	6.2405
C	63171026	6.3499	NA

Note: R_INV = Real Investment; R_EXPORT = Real Export Amount; R_TOURISM = Real Tourism Income.

Table 5 shows the VIF values and suggest some degree of multicollinearity among the predictor variables, with R_EXPORT and Dummy having particularly high VIF values, indicating potentially problematic levels of multicollinearity. It may be necessary to investigate further and potentially address multicollinearity issues in the regression model.

Figure 2 depicts the histogram, revealing a normal distribution of error terms. To further evaluate the normality of the model's residuals, the Jarque-Bera test was conducted. The results indicate that the null hypothesis is accepted where the probability value of the test (0.9018) was found to be greater than the 5% level of significance. This implies that the model's residuals are regularly distributed.

Table 6. Heteroskedasticity for residuals

F-statistic	1.3709	Prob. F (4,42)	0.2603
Obs*R-squared	5.4279	Prob. Chi-Square (4)	0.2461
Scaled explained SS	3.6802	Prob. Chi-Square (4)	0.4510

The findings of the heteroskedasticity test are presented in Table 6. The null hypothesis of homoscedasticity remains unchallenged at a significance level of 5%. This suggests that the data demonstrate homoscedasticity, indicating that the residuals have a consistent variability across all levels of the independent variables.

Table 7. Godfrey serial correlation LM test for residuals

F-statistic	11.6933	Prob. F (2,40)	0.0001
Obs*R-squared	17.3407	Prob. Chi-Square (2)	0.0002

The Breusch-Godfrey LM test was applied to assess the presence of serial correlation in the model. The null hypothesis test examines whether there is any serial correlation in the residuals. Table 7 presents the results of the Breusch-Godfrey serial correlation LM test, indicating that the null hypothesis of serial correlation was accepted. This conclusion is supported by the F-statistic and the observed R-squared, both of which were below the 5% threshold of significance.

Table 8. Determination of R^2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R_EXPORT	0.4026	0.1592	2.5289	0.0153
R_TOURISM	0.3549	0.3196	1.1105	0.2731
R_INV	0.2689	0.0159	16.8255	0.0000
Dummy	49595.62	16055.58	3.0889	0.0036
C	36945.39	7948.020	4.6484	0.0000
R–squared	0.9715	Mean dependent var		202449.8
Adjusted R–squared	0.9688	S.D. dependent var		122418.0
S.E. of regression	21623.34	Akaike info criterion		22.9012
Sum squared resid	1.96E+10	Schwarz criterion		23.0980
Log-likelihood	–533.1787	Hannan–Quinn criterion		22.9752
F–statistic	358.0892	Durbin–Watson stat		0.7548
Prob(F–statistic)	0.0000			

Note: R_INV = Real Investment; R_EXPORT = Real Export Amount; R_TOURISM = Real Tourism Income.

As per Table 8, the model shows statistical significance (p-value < 0.05) and accounts for around 97.15% of the variation in industrial GDP. The variables considered in the model include investment, export, tourism income, and a dummy variable. Notably, the export, investment, and dummy variables strongly correlate with GDP, as indicated by a p-value of less than 5%. Based on the analysis, it is found that an increase in exports is expected to have a positive impact on industrial GDP, with an estimated increase of around 0.4026 units.

Similarly, an increase in investment is also projected to contribute to industrial GDP, with an estimated increase of approximately 0.269 units. However, there is no significant association between remittance and tourism income with GDP (p-value > 0.05) in this model. In addition, the coefficient (49595.62) indicates a substantial increase in industrial GDP following the adoption of liberalization (p-value = 0.0036). In addition, the coefficient of 49595.62 indicates a substantial increase in industrial GDP following the adoption of liberalization (p-value = 0.0036).

3.4. Model IV

This model provides a basic framework for understanding Nepalese import patterns.

Table 9 shows the VIF values and suggest some degree of multicollinearity among the predictor variables. While R_REM and Dummy have relatively lower VIF values indicating moderate multicollinearity, R_TOURISM has a higher VIF value, suggesting a potentially more problematic level of multicollinearity for that variable. Further investigation and potential remedial actions may be needed to address multicollinearity issues in the regression model, especially with respect to the R_TOURISM variable.

Figure 3 displays a histogram, indicating a normal distribution of the error term. The results indicate that the null hypothesis is accepted where the probability value of the test (0.1518) was found to be greater than the 5% level of significance. This implies that the model's residuals are regularly distributed.

Table 9. Regression of model IV

Variable	Coefficient	Uncentered	Centered
	Variance	VIF	VIF
R_REM	0.0067	3.6783	2.3587
R_TOURISM	1.4551	10.1941	3.3531
Dummy	1.23E+09	5.5803	2.2558
C	4.44E+08	3.3751	NA

Note: R_TOURISM = Real Tourism Income; R_REM = Real International Remittances.

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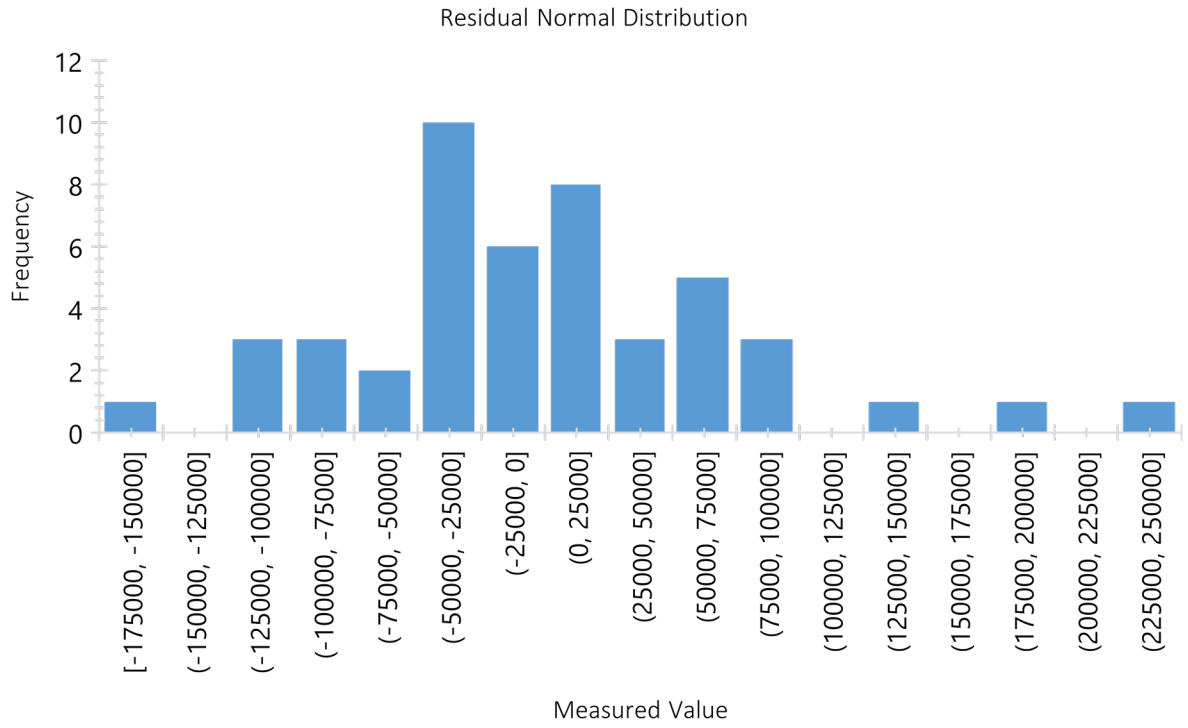

Figure 3. Normality test of model 4

The Breusch-Godfrey LM test was used to assess the presence of serial correlation in the model. The test results are presented in Table 10.

Table 10. Serial correlation test

F-statistic	15.6216	Prob. F (2,41)	0.0000
Obs*R-squared	20.3262	Prob. Chi-Square (2)	0.0000

The test's null hypothesis assumes the absence of serial correlation in the residuals. The null hypothesis of serial correlation has been accepted based on the F-statistic and the likelihood of the observed R-squared, both of which fall below the 5% significance threshold. Table 11 shows the outcomes of the Bruesch-Pagan-Godfrey test, which is used in econometric regression analysis to identify heteroskedasticity.

Table 11. Heteroskedasticity or homoscedasticity check

F-statistic	8.0022	Prob. F (3,43)	0.0002
Obs*R-squared	16.8387	Prob. Chi-Square (3)	0.0008
Scaled explained SS	21.3301	Prob. Chi-Square (3)	0.0001

The null hypothesis of heteroscedasticity may not be rejected at a significance level of 5% if the observed R-squared is less than 5%. The data show a lack of constant variability in the residuals across all levels of the independent variables, indicating heteroscedasticity.

Table 12 indicates that the overall model was statistically significant (p-value < 0.05), and that explains approximately 93.87% of the variation in import using variables such as remittance, tourism income, and a dummy variable. Specifically, remittance and dummy variables are significantly associated with GDP (p-value < 1%). It signifies that a one-unit increase in remittance has been estimated to increase imports by around 1.2151 units. On the other hand, tourism income does not show a significant association with GDP (p-value > 0.05) in this model. In addition, the dummy variable coefficient of 141691 suggests a significant increase in imports following liberalization. This is further supported by the t-statistic of 4.0368, which is statistically significant at a 1% level (p-value = 0.0002). However, the data indicate a notable increase in imports following the adoption of liberalization policies (p-value = 0.0036).

Thus, the results of the hypotheses testing show that:

Table 12. Least squares method for industrial GDP

Variables	Coefficient	Std. Error	t–Statistic	Prob.
R_REM	1.2151	0.081724	14.8688	0.0000
R_TOURISM	–1.0538	1.206275	–0.8736	0.3872
Dummy	141691.0	35099.92	4.0368	0.0002
C	98118.52	21069.28	4.6569	0.0000
R–squared	0.9387	Mean dependent var		352208.6
Adjusted R–squared	0.9344	S.D. dependent var		306975.5
S.E. of regression	78624.33	Akaike info criterion		25.4640
Sum squared resid	2.66E+11	Schwarz criterion		25.6215
Log-likelihood	–594.4044	Hannan–Quinn criterion		25.5233
F–statistic	219.4050	Durbin–Watson stat		0.6678
Prob(F–statistic)	0.0000			

Note: R_TOURISM = Real Tourism Income; R_REM = Real International Remittances.

1. H1 is accepted: The result indicates that exports have a significant influence on industrial GDP.

2. H2 is rejected: The result indicates no significant correlation between the Economic Openness Index and industrial GDP.

3. H3 is rejected: The result indicates no significant correlation between tourism and industrial GDP.

4. H4 is accepted: The result indicates that liberalization significantly boosts overall GDP.

5. H5 is accepted: The result indicates that liberalization significantly boosts industrial GDP.

6. H6 is accepted: The result indicates a significant increase in imports after the liberalization period.

7. H7 is accepted: The result indicates a significant positive impact of remittances on the increase in imports after the liberalization period.

4. DISCUSSION

The study emphasizes macroeconomic variables, which are significant economic factors that have a profound impact on the overall economy. Within this context, the investigation seeks to comprehend the impact of macroeconomic variables on the dependability and efficiency of industrial policies in Nepal. The study's findings highlight the strong correlations between remittance and investment with GDP, while the Economic Openness Index and tourism income do not show similar connections. Regmi (1994) highlighted the favorable effects of liberalization on economic growth; these findings align with Nepal's economic strategies.

This study presents findings derived from a regression model identifying the significant factors influencing a nation's GDP. Remittances and investment play a crucial role in boosting GDP, leading to a notable increase of 1.86 and 1.21 units, respectively, for every unit of growth. Exports significantly influence the industrial gross domestic product (GDP), making a substantial contribution of 0.4026 units. No significant correlation has been observed between the Economic Openness Index (EOI), tourism, and either form of Gross Domestic Product (GDP).

Nepal sought to tackle its economic deficit by eliminating trade barriers and promoting foreign equity investments, particularly emphasizing sectors that produce goods consumed by the masses. The policies focused on promoting efficiency, maximizing capacity utilization, modernizing operations, and driving technological advancement. This alignment with strong correlations between critical factors and economic development aligns with the overarching objective of fostering economic growth through meticulous economic planning.

The industrial policy has been identified as a crucial instrument for fostering economic growth

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(Yülek & Akkemik, 2023). The study highlights the significance of meticulously designing and implementing industrial policy, particularly fostering exports, driving innovation, and enhancing the investment climate. These aspects align with the previous focus on the positive effects of liberalization on economic development. The literature indicates that a well-considered approach to industrial policy, focusing on specific factors, can significantly contribute to economic growth. Research highlights the significance of well-planned economic policies, emphasizing that when effectively handled, specific factors can have a favorable impact on a country's economic growth.

CONCLUSION

This study seeks to empirically investigate and analyze the performance of Nepal's industrial policies in terms of reliability, with a specific focus on the impact of macroeconomic variables. This study examined the effectiveness of industrial policies by measuring their influence on crucial economic indicators and examining the specific effects on different sectors. The implementation of liberalization has significantly boosted both the GDP and industrial GDP, resulting in substantial increases of 179465.3 and 49595.62 units, respectively. After the liberalization period, there was a significant increase in imports, driven by a rise in remittances at a rate of 1.2151 units per unit increase.

The correlation between various economic factors and GDP in a liberalized economy highlights the substantial and favorable influence of remittances and investment on both GDP and industrial GDP. However, the study found no similar connections observed between the Economic Openness Index and tourism. The data have also shown a notable increase in GDP and industrial GDP after liberalization, as indicated by the positive coefficients. In addition, it emphasizes the positive and significant impact of remittances on imports, while no similar effect was seen for tourism. The positive coefficient of the dummy variable supported the increase in imports following liberalization. This study is expected to support the development of sustainable economic growth strategies in Nepal.

AUTHOR CONTRIBUTIONS

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