Economic Liberalization in Nepal: Determinants, Structure and Trends of FDI

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Abstract

Economic liberalization in Nepal has opened foreign direct investment (FDI) with assumption of positive impact on GDP and Export trade. This study examines on the relationship between FDI and GDP and the impact of FDI determinants on FDI inflow in Nepal. We use here multiple regression models. The result indicates positive relationship between GDP and FDI. Further, liberalization and privatization policy are positive but insecurity is disturbing.

Key words: *FDI, economic liberalization, privatization, firm* etc.

1. Introduction

In 1990s, there was open development policy debate on how to develop the country with higher economic growth and how to tackle major economic issues such as unemployment and poverty under resource constraint. Behind this development thinking, there was the expectation of the people and problem of critical subsistence households. As its economic cure, Nepal adopted *economic liberalization* for minimizing public expenditure burden of lost public enterprises, mobilizing private savings and investments as well as FDI and meeting Multilateral Donors condition of economic reform (Bista, 2008, Bista 2011 & Bista, 2016). Despite controversy on economic liberalization and privatization process, all sectors were liberalized for private and foreign investment through Industrial and Foreign Direct Investment (FDI) Policy of 1992(HMG, 1993, Bista, 2004, Bista 2005, Bista, 2008, Bista 2011 & Bista 2016), except few national sensitive areas. In addition, fiscal barriers in international trade and market competition inside the country were well tuned through Value Added Tax (VAT) introduction under fiscal reform (MoF, 1995, Bista, 2004, Bista 2009 & Bista 2016). Nepal did trade liberalization, despite non compatibility bilateral trade treaty. Thus, economic liberalization was adopted for FDI inflow.

There was policy logic behind FDI inflow for technology and knowledge inflow, management transfer and extension of export destinations, along with domestic market competition in labor market, good market and money market. Issue is whether the policy logic has become in reality in ex ante or not. This paper deals on this issue.

The paper has main objective to estimate the impact of liberalization on FDI inflow in Nepal and the effect of FDI inflow in GDP. In addition, the paper analyzes structure and trend of FDI inflow in Nepal. This is followed by econometric model. Its data sets are time series and secondary sources.

2. Effect of Economic Liberalization and FDI

Economic liberalization is no regulation in market. In other words, the government leaves economic activities (investment, production and distribution) in market with assumption of fair and free price mechanism and competition. How much this approach is compatible in developing country like in Nepal where markets of labor, good and money are imperfect under natural monopoly and social justice and welfare of mass people is serious issue to be addressed? Debate on this issue is going on. Some literatures are critical on its positive impact with argument of imperfect market and irrational consumers. However, policy literatures have expected positive effect from economic liberalization and FDI. NPC (1992) and Industrial Policy (1995) provide arguments behind it: a) Nepal has surplus and cheapest labor having comparative advantage to FDI firm, b) there is accessibility in Indian market, c) there is no regulation of currency convertibility and share equity in FDI, d) Nepal has not higher corporate tax and strict on direct tax, e) Nepal provides fiscal safeguards to those FDI firm in rural areas, f) there are opened all economic sectors for FDI and nature of FDI, g) there are various resource potential areas such as water resources and tourism. This expectation is supported by economic theory of firm. The comparative advantage of cheapest labor can reduce marginal cost of product and substitutability potentials between factors of production. It would be excessive marginal benefit to FDI firm.

Although FDI firms are naturally profit motive, direct and indirect positive impact of FDI firm is expected. Policy literatures provide arguments behind it. a) Entry of FDI firms in Nepal will bring technology, knowledge, brand and management, along with scale, quality and quantity, b) Demonstration effect of FDI firm will motive the domestic firms for adopting and exploring technology and management improving scale, quality and competition, c) Entry of FDI firms will increase market competition in domestic and competitive capacity in international market, d) Export destination and volume will be intensified, e) There is a great prospects of developing labor and money market. Besides it, subsequence of export promotion, market competition and FDI inflow will be positive on fiscal potentials, employment creation, reduction of trade deficit, competitive price of quality goods and availability of varieties goods, and consumer decisions.

Theory of firm in micro economics explains the firm as profit motive. In order to make profit, the firm has two problems such as profit maximization and cost minimization which depend on types of market. In economic liberalization, there is possibility of transformation from monopoly market to perfect market. Price of products depends on demand of

consumer, substitutability and competition. The firm can only minimize cost of production through factors production and scale of production. However, in developing countries, FDI firm behaves monopolist which has not positive impact. Vast literatures support this argument. Some literatures find FDI firm bigger than government and tax manipulator. Some literatures find no corporate responsibility of the firm. However, in Nepal, there are few literatures on the impact of FDI such as Bista (2005), Dahal (2005) and Rana and Pradhan (2005). Bista (2004), Bista (2005), Bista, (2009), Bista (2011), and Dahal (2005) found positive impact of FDI in Nepalese economy but Bista (2005) examined the effects of FDI in Nepal through case study method. His result was positive effect of FDI on employment, local development, CSR and economic growth, despite small inflow of FDI. The study had not dealt with FDI's effect on Industrial productivity But Dahal (2005) finds poverty linkage of FDI. Similarly, Rana and Pradhan (2005) suggested the requirement of FDI performance measurement.

This study follows these studies on the impact of FDI. However, this is different in aspect of its data sets, methods and models. The study examines the impact of FDI based on the secondary data by using econometric models.

FDI trend and structure

FDI trend in south Asia

Statistics of FDI from UNCTAD 2016 provides FDI inflow trend picture. Aggregate FDI inflow in the region is inclining trend with significant growth. In regional disaggregate FDI flow by country, there are heterogeneous trend. For example: in Bangladesh, FDI inflow trend line is found inclining with higher growth rate per annum and size of FDI is significant. However, in Nepal, FDI inflow trend line is fluctuating and declining trend with negligible size. This Nepalese FDI inflow is reverse of South Asian FDI trend.

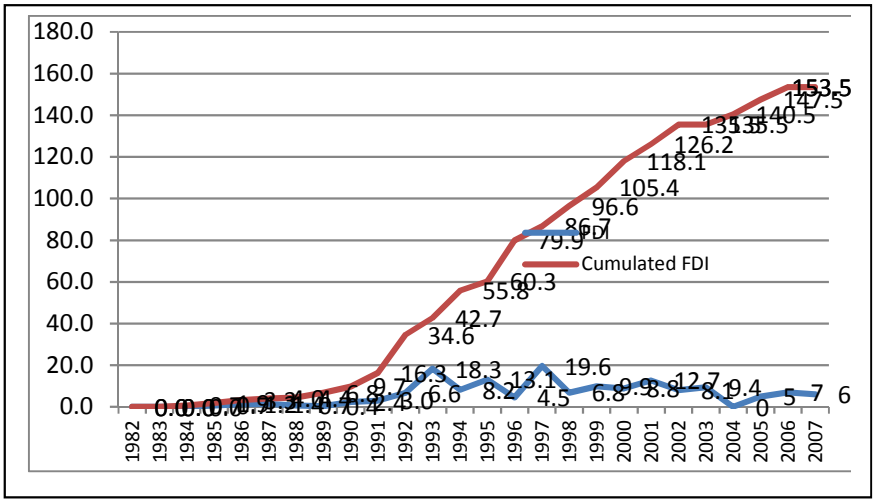
FDI trend in Nepal

Policy Expectation and delivery reality are two different sides of coin but have consequential move relationship between them. Delivery reality of FDI which is the reflection of FDI policy and expectation is illustrated by FDI size, trend and structure. These three indicators explain whether economic liberalization and FDI policy is able to deliver policy thrust, whether the policy is effective to attract FDI as required and as expected and where we are in regional level as well as international level.

Expectation of policy literatures on FDI inflow is not supported by size of FDI inflow in Nepal. In accordance with WBI (2007), FDI size is less than 1 % in South Asia. When we observe its size of GDP, it is negligible, despite labor surplus and comparative advantage. Economic situation of Nepal indicates deserving country for it like other developing

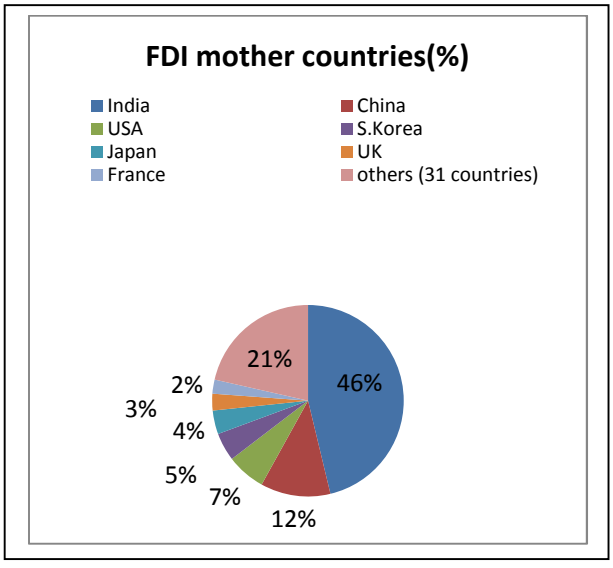
countries. Direction of FDI in the World is market driven rather than deserving country. It may puzzle to the policy maker what to do in the condition of possible FDI shock and its investment and technological multiplier effects.

Trend of FDI inflow in Nepal from 1982 to 2007 is unexpectedly fluctuating line. If we divide economic reform I from 1982 to 1990 and economic reform II from 1990 to 2007, FDI inflow in the period I is inclining trend but in the period II it is found fluctuating in the beginning and then declining. In the economic reform II, there can be divided into two time periods: normal from 1990 to 1995 and insurgency from 1996 to 2007. In the normal period, FDI trend is fluctuating, despite adopting liberalization and privatization policy, business environment and government commitment. In the insurgency, it can be expected. However, overall trend of FDI inflow in Nepal indicates something wrong and is quiet reverse with in South Asia inclining tend line.



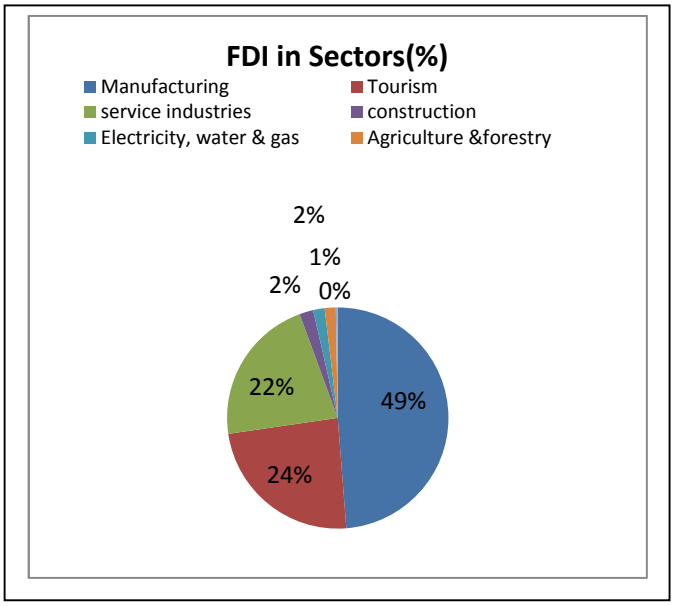
FDI Structure in Nepal

FDI structure is an important indicator to understand which types of FDI firms and FDI mother countries are interested in which sectors, how much this preference of FDI firms is co integrated with national policy priority and whether this pattern of FDI structure is optimal condition to Nepal. We can see the structure from mother countries, sector and manufacturing sector. In FDI mother countries, there is heterogeneity of approximately 37 countries (developed and neighbor countries). Major mother countries are India, China, USA, Japan, France, South Korea and UK. Neighbor countries: India and China are top most FDI source countries for Nepal. Then, it is followed by USA, South Korea, Japan, UK and France. Thus, FDI incidence of India

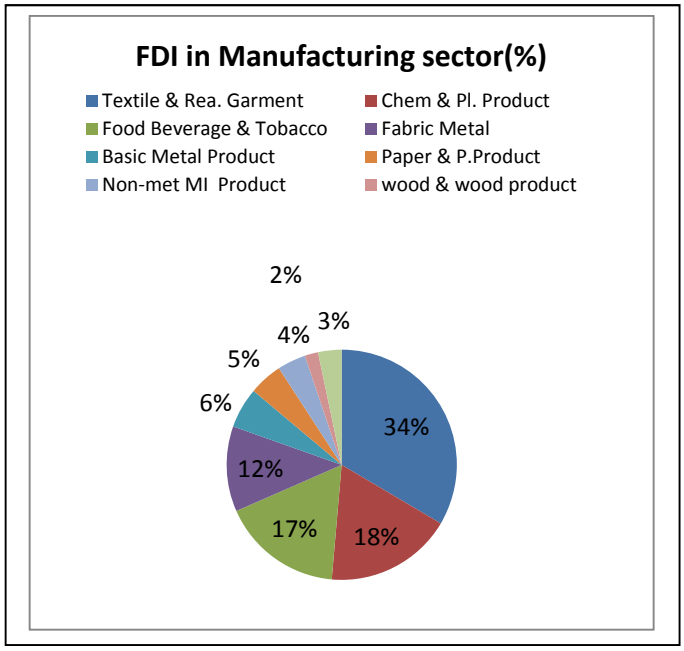


and China is relatively higher in Nepal. How many these countries FDI are beneficial to meet national expectation may be a serious issue.

Nepal is potential for water resources and tourism but largest FDI firms are coming in manufacturing sector and then followed by tourism, service and others. Except manufacturing, tourism and service sector, FDI inflow in construction, electricity and agriculture is negligible having 2% or less than 2%. This sector structure indicates two major attractions: comparative benefits of Nepalese labor and market access in India and China under trade treaty preference. Thus, FDI in sector seems to be market driven as well as profit driven.



When we further classify manufacturing sectors, there are eight major areas: Textile and Rea garment, Chemical and Pl. product, Food Beverage and Tobacco, Fabric Metal, Basic metal Product, Paper and P. product, Non-met MI product and wood and wood product. FDI incidence is heterogeneous within manufacturing sector in which Textile and Rea garment receives largest share and is followed by Chemical and Pl. product, Food Beverage and Tobacco and Fabric Metal. All these manufacturing sectors are value added industries which are more domestic intensive than export, except textile and garment. In case of textile and garment, FDI from India and China came for getting US and Germany Textile Quota trade facility. Therefore, FDI inflow needs reason for coming in Nepal.



3. GDP, Export and FDI Firm

3.1. Model

There are huge literatures (Ahuluwalia, 1991; Balkrishna and Pushpangadan, 1994; Goldar, 2002; Rao, 1996 and Trivedi, *et al* 2000) that estimates total factor productivity of industrial sector at different industrial or firm level through parametric and non-parametric approach and econometric models. This study is similar with these literatures in total factor productivity growth aspect but is different in country and character of industry respect. This paper uses econometric model based on Cobb Douglas Production Model and theoretical Growth model based on Solow Growth.

3.1.1. Econometric Model

Let's suppose there is functional relationship between GDP, FDI and Export in economic liberalization policy environment. This relationship can be illustrated from econometric model to estimate whether FDI affects GDP.

Let's suppose GDP as dependent variable and FDI, Export and GDP ratio, privatization and liberalization dummies as independent variable. Then,

$$GDP = \alpha + \beta_1 FDI + \beta_2 Export/GDP\ ratio + \beta_3 D_1 + \beta_4 D_2 + e$$

Why FDI comes in Nepal is a curious issue. This can be examined on the basis of assumption that past FDI and policy environment affect on FDI inflow. Let's consider FDI as dependent variable and FDI (t-1) and Dummy (policy environment) as independent variable. Then, its econometric model is

$$FDI(t) = \lambda + \delta_1 GDP + \mu_1 D_1 + \mu_2 D_2 + \mu_3 D_3 + e$$

In addition, if we assume FDI (t-1), GDP (t-1), Policy environment and security affect on FDI inflow in the country. Let's consider FDI as dependent variable and FDI (t-1), GDP (t-1) and Dummy (policy environment and security) as independent variable. Then, its econometric model is

$$FDI(t) = \lambda + \delta_1 GDP(t-1) + \delta_2 FDI(t-1) + \mu_1 D_1 + \mu_2 D_2 + \mu_3 D_3 + e$$

3.2. Data Sources

Data sets of FDI, RGDP and export are used in the paper. Its secondary sources which are World Bank Investment Report and Department of Industry, Nepal are used for data sets of these variables. Data sets from 1982 to 2007 are collected for the paper. In order to cross check and get supplementary information, FNCCI and CNI websites are used.

3.3. Estimates

3.3.1. Estimates of FDI Coefficients

Data set of econometric models includes three variables in which GDP(Y) is dependent variable and FDI, export and GDP ratio, dummies (liberalization and privatization) are independent variables. The relationship between GDP, FDI, export and GDP ratio, liberalization and privatization policy was curiosity. In this study, we had focused two questions:

- What would FDI contributes GDP of the country through estimation of coefficient of FDI?
- What would export–GDP ratio affect on GDP?
- What would liberalization dummy and privatization dummy contribute on GDP of the country?

We used time series aggregate data of GDP, FDI and export GDP ratio from 1982 to 2007. We quantitatively answer the first question from econometric model after estimations of coefficients of FDI, export-GDP ratio, liberalization and privatization dummy. From this model, we could interpret effects of FDI on GDP though the estimated coefficients of FDI.

3.3.2. Estimates of FDI determinant coefficients

Data set of theoretical model includes three variables FDI (t), FDI (t-1), GDP (t-1), liberalization (Dummy) and Insecurity (dummy). This model estimates determinant of FDI through estimation of coefficients of FDI (t-1), GDP (t-1), liberalization (Dummy) and Insecurity (dummy) for understanding dependency of FDI inflow in Nepal. In the study, we focused the following question:

- What would be unknown coefficient of FDI (t-1) for understanding how much FDI depends on it?
- What would be unknown coefficient of GDP (t-1) for understanding how much FDI depends on GDP?
- What would be unknown coefficient of liberalization policy for understanding how much liberalization attracts FDI?
- What would be unknown coefficient of insecurity?

From econometric model, we can get all unknown values. Thus, we could interpret the answer of above FDI determinants in Nepal.

3.4. Results

Table-1 presents mean and standard deviation of key variables used in econometric model. In column 1, there are three key variables such as GDP as dependent variable and FDI and Export-GDP ratio as independent variables, along with dummy one(liberalization) and dummy 2(privatization). Standard deviation of these variables from mean is no so far significant. Thus, mean of these variables represents properly times series data of GDP, FDI and Export-GDP ratio collected from secondary source.

Table No-1:-Mean and Standard Deviations: Real GDP, FDI and Export-GDP ratio

Variables	1982-2007
Real GDP	2494.024 (269.65)
FDI	5.90 (1.093)
Export-GDP ratio	0.102 (0.011)

Table-2 provides the results of regression of dependent variable, GDP on two independent variables, FDI and Export-GDP ratio and dummies: D1 (liberalization) and D2 (privatization). There are five parameters: α, β1, β2, β3 and β4. In the results of regression, parameter (α) represents constant and β1 as marginal change of FDI, β2 as marginal change of export GDP ratio, β3 as marginal change of D1 and β4 as marginal change of D2.

Table No-2: Results of Regressions of Real GDP(Y), FDI, Export/GDP, D1 (1=Lib), and D2 (1=Priv)

Dependent variable: Average Real GDP(Y)					
Regressor	**1**	**2**	3	4	5
Constant	648.269 (228.76)				
FDI		0.50 (29.06)			
Export/GDP			6604.33 (3113.93)		
D1(1=liberalization, 0=other)				1387.86 (554.22)	
D2(1=privatization, 0=other)					571.87 (450.37)

Table-3 reveals the results of econometric model in which FDI (t) is dependent and FDI (t-1) and GDP (t-1), D1 (Liberalization) and D2 (Insecurity) are independent. There are five unknown parameters such as α, β1, β2, β3 and β4. In the results of regression, parameter (α) represents constant and β1 as marginal change of FDI (t-1), β2 as marginal change of GDP (t-1), β3 as marginal change of D1 and β4 as marginal change of D2.

Table No-3: Results of Regressions of FDI, Real GDP (t), FDI(t-1)D1 (1=Lib), and D2 (1=Priv), D3 (1=insecurity)

Dependent variable: FDI						
Regressor	**1**	**2**	3	4	5	6
Constant	0.17 (1.07)					
GDP(t-1)		0.003(0.094)				
FDI(t-1)			0.5(0.094)			

D1(1=liberalization, 0=other)	8(2.16)		
D2(1=privatization, 0=other)		3.43(2.79)	
D3(1=insecurity, 0=other)			-3.5(1.07)

4. Discussion and Conclusion

Above results of econometric model is comprised of two aspects: whether FDI inflow affects GDP of the country and what determines FDI inflow in Nepal. About the first question, results of the econometric model estimate unknown five parameters: α, β1, β2, β3 and β4. Marginal change of FDI (β1) is 0.50. Similarly marginal change of export-GDP ratio (β_3) is 6604.33. It is followed by β3 and β4 as 1387.86 and 571.87 respectively. In addition, R2 is 0.88.

Let's suppose there are two scenarios: adopting liberalization and privatization policy and adopting protectionism and state led development policy. Let's suppose Nepal continued the state led development policy, there was not FDI possibility and no significant export-GDP ratio, and then GDP would be 648.269 million ($). However Nepal adopted liberalization and privatization policy, there would be FDI and export GDP ratio. Let's suppose FDI inflow in Nepal is 1, GDP will change 0.5 million ($). If change of export GDP ratio is 1, GDP will increase 6604.33mil ($). In addition, liberalization and privatization policy will contribute 1387.86 mil ($) and 571.86 mil ($). In comparison between two scenarios of policies, liberalization and privatization policy has positive impact on FDI, export–GDP ratio and GDP change. In addition, FDI has positive relationship with GDP but export-GDP ratio has better position in GDP contribution than FDI. This is explained by R2 value (0.88).

About the second question, results of the econometric model estimate unknown five parameters: λ, δ_1, δ_2, μ_1 and μ_2. Constant (λ) is 0.17. Marginal change of FDI (t-1) (δ_1) is 0.50. Similarly marginal change of GDP (t-1) ($\delta 2$) is 0.003. It is followed by μ_1, μ_2 and μ_3 as 8, 3.43 and -3.5 respectively. In addition, R2 is 0.82.

FDI inflow determinants are many heterogeneous variables. Here, there are four major variables such as FDI stock, GDP, policy environment and security motivating FDI firms. Let's suppose there are two scenarios: first, no policy, and good security, no history of FDI and no good economy and second, good policy environment, history of FDI, good economy but no good security. In first scenario, there is no policy, no history of FDI and no good economy but good security. It means 0.17 million ($) FDI inflow. However, in second scenario, there is good policy environment, history of FDI, good economy but no good security. Under good policy environment and insecurity, let's suppose FDI (t-1) is 1, FDI inflow will come 0.50 mil ($) and GDP (t-1) is 1, then FDI will come 0.003 mil ($). In addition, liberalization and privatization policy increases 8 and 3.4 times more but insecurity discourages 3.5 million ($). FDI inflow (t) depends on more FDI (t-1), policy

environment and security along with economic performance (GDP). It is explained by R^2 value (0.82).

The result of the first question from the first econometric model clearly indicates the positive relationship between GDP and FDI, despite small size and fluctuating trend. It explains FDI as potential resources which can contribute in GDP through industrial Productivity growth. However, it is possible more when FDI inflow can be attracted.

The result of the second question from the second econometric model reveals major determinants of FDI inflow to FDI (t-1), policy environment and security situation. In order to attract FDI, determinants of FDI should be analyzed and focused. Physical and policy environment which are still poor and constraints to industrial expansion and trade should be properly and environmental friendly improved.

5. Reference

Alluwalia, J.I..1991. *Productivity and Growth in Indian Manufacturing*. Delhi: Oxford University press

Bala K., Pulapre and Pushpangadam, K..1994. Total Factor Productivity Growth in Manufacturing Industry: A Fresh Look. *Economics and Political Weekly* 29.no 31:2028-35

Bista, R.B.. 2004. Foreign Direct Investment in Nepal: Regression analysis in aspect of GDP growth and export*, Economics Journal of Development Issues, 5(2): 93-110.*

Bista, R.B. 2005. *Foreign Direct Investment in Nepal*. Kathmandu: Center for Integrated Development Studies

Bista, R.B. 2005. 'Direction and effectiveness of trade policy reform: A case study of Indo-Nepal trade development'. *Economic Journal of Development Issues*, 6(2):26-35.

Bista, R.B. .2008.. *Economics of Nepal*. Kathmandu: Prativa Publication

Bista, R.B. 2009. 'Liberalization and Productivity Growth in Nepal: A case of FDI firm', published in

www.iioa.org/conferences/18th/papers/files/90_20091229030_ProductivitGrowthofFDIfirm.pdf Vienna, Austria

Bista, R.B. 2011. *Economics of Nepal.* Kathmandu: New Hira Books

Bista, R.B. 2011. BIPPA and Foreign Direct Investment in Nepalese Economy: A policy analysis, *Artha Journal, 31(1):1-5.*

Bista, R.B. 2016. *Economics of Nepal*. Kathmandu: New Hira Books

Dahal, M. K, Nepal, G. and Aryal, S.. 2005. A Study of the Impact of Foreign Direct Investment Policy of Rich Countries on Poverty Reduction of Developing Countries: A Case Study of Manufacturing Sector in Nepal. Pakistan: SANEI

Golder, B.2002. TFP Growth in Indian Manufacturing in 1980s. *Economic and Political Weekly* 37, no 49:4966-68

His Majesty of Government (HMG). 1993. *Foreign Direct Investment and Technology Transfer Policy 1992*. Kathmandu: Ministry of Industry

Ministry of Finance (MoF). 1995. *Economic Survey*. Kathmandu: MoF

Ministry of Industry (MoI).1993. *Industrial Policy*. Kathmandu: MoI

National Planning Commission (NPC). 1992. *Eighth Five Years Plan.* Kathmandu: National Planning Commission

National Planning Commission (NPC). 1997. *Ninth Five Years Plan.* Kathmandu: National Planning Commission

Rana, M. and Pradhan, S.M.2005. Implementation Evaluation of Foreign Direct Investment in Nepal. *Policy paper 1. Kathmandu: ADB and Economic Policy Network*

Rao, M. J.1996. Manufacturing Productivity Growth: Method and Measurement. *Economic and Political weekly* 31, no 44:2827-36

Trivedi, P., Prakash, A. and Sinate, D.. 2000. Productivity in Major Manufacturing Industries in India: 1973-74 to 1997-98. *Development Research Group Study no-20.* Mubai: Department of Economic Analysis and Policy, Reserve Bank of India