Measuring Wage Inequality of Foreign Direct Investment Industries in Nepal: Gini Coefficient Analysis

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FOREIGN DIRECT INVESTMENT AND WAGE INEQUALITY
A CASE STUDY OF NEPAL

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Abstract:

Foreign Direct Investment (FDI) is an example of inflow and outflow of capital in the World after the globalization initiation. Its possible significant role in developing country like Nepal makes it as an alternative source of foreign capital for mitigating the huge resource gap in the course of development, instead of foreign debt. In Nepal, the structural adjustment has been adopted with economic reform for liberalization for attracting FDI. Significantly smaller FDI inflow statistics in the South Asian context has made an issue related to its unknown outcomes, despite some empirical studies. Similar condition is found its effect on wage level and wage equality led poverty.

This paper empirically assesses to wage inequality and status in the operating FDI industries in Nepal through the Gini Coefficient measurement. This study is based on the primary data collected through the direct questionnaire and case study method from the sample FDI industries.

Key Words: FDI, wage inequality, minimum wage level, manufacturing sector

1. Background:

A challenge of mounting *resource gap* in developing countries in the course of development struggle has been sensitive and serious for a couple of decades. As a best medicine recommended by the World Bank and IMF, *economic reform* has been adopted for economic synchronization with the resource gap issue and also for globalization and regionalism text and context in recent years (Bista, 2004, Bista, 2005a and Bista, 2005b). In this obligatory scenario, developing countries have used optimal and optimization market benefits and opportunities of trade, technology and capital through dependency and liberal market economic policies (Dahal, 2003, Manandhar, 2001, NPC, 1997, NPC, 2002 & SWATEE, 2003). Globalization, liberalization and privatization efforts of these economies are appreciable but its effectiveness depends on synchronization of the inflow of international trade, technology and capital (UNDP, 1993, FNCCI, 1998 & UNCTAD, 2004). Optimization of its productivity and efficiency towards high economic growth and fast changing production possibility curve of the economy if happens, then developing countries will really address macro instability element and development constraints for poverty reduction.

In case of domestication and optimization of foreign capital, so called FDI, empirical and theoretical literatures have depicted mixed picture of productivity and non-productivity as well as efficiency. In addition, harmonization with economic growth is also found critical. Therefore, it is considered complicated matter. Therefore, there are queries on FDI and its effects on

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productivity and efficiencies. This paper deals the relationship between FDI, labor and wage inequality in MNC established in Nepal.

Liberal policy and democracy are complementary each other. After the establishment of democracy in 1990's, Nepal has liberalized all economic sectors to FDI as democratic reflection in economic policy, except few national important areas as defense, communication and environment through *Foreign Direct Investment and One Window Policy 1992 in order to address* the growth of resource gap and development course(FNCCI, 1998, FNCCI, 1998a & FNCCI, 1998b). Favorable Political and Policy environment to do business for the private sector and foreign investors results the higher growth of FDI inflow in the post 1990 (NPC, 1997 & NPC, 2002). It has justified good policy implication. This digit is observed relatively very small in the South Asian Context. It is accounted less than 1 percent. Therefore, its significant role in labor market, commodity market and also capital market isn't observed, although its optimization in productivity and efficiency has been done. There is ambiguity on its positive contribution on economic growth and economic development. However, an obligation is to give top policy priority addressing development constraints: resource lag, mounting trade deficit, unemployment issue and transfer of technology, management, knowledge, skill etc.

Out of total FDI, higher distribution and incident of FDI inflow in manufacturing sector in Nepal is found, although the policy priority in agriculture sector has been given. Its reasons are partially liberal Indo-Nepal Trade and Transit Treaty 1996 and also quota facility of USA and Germany behind it. The manufacturing sector alone has created 50 percent of employment out of 94119, that is smaller to address the growth rate and status of unemployment and also inadequate to affect in the labor market. Therefore, wage level and its determination not by market forces are found.

2.Objectives and Methodology:

Objectives

Main objective of the study is to estimate wage inequality of Labor in the FDI industries for policy implication and recommendation.
Rationale of the study

This study would assess its impact on wage level and wage inequality, which would provide the valuable information about wage level of FDI industries and its impact. It would be good feedback for improving the impact of FDI on wage level and its equality at the policy level with uniformity and adequacy.

Data used and method

The data used in the study is quantitative and primary data based. They were collected from the primary data sources including the sample FDI industries in manufacturing sector of five district areas (Kathmandu, Nwalparashi, Chitwan, Hetuada and Bara). Data collection methods are Direct Interview Method and Key informant interview.

Direct Interview Method:

Direct Interview method concerning above structure of primary data was set up as pre preparation of the field survey of FDI industries. In first stage, the initial questionnaire was pre-

tested in Kathmandu. After then, drawbacks and errors were erased and modified for making final questionnaire.   In the second stage, the final questionnaire was employed to conduct the survey of FDI industries in *Kathmandu, Nawalparashi, Chitwan, Hetuada and Bara.*

Key Informant Interview:

In this study, it was used for investigating particular case of *Bhrikuti Pulp and Paper Public ltd, Choudhary Gram, Nepal Board Pvt Ltd, Lotus Energy Pvt Ltd* etc.

Selection of sector, areas and samples:

The selection of sector, areas and samples of FDI industries from manufacture sector of five district areas (Kathmandu, Nawalparashi, Chitwan, Hetuada and Bara) of Central Development Region, except FDI industries related to beer, alcohol and cigarettes was based on Stratified Purposive sampling method and cross-sectional method.

The sample size was 18 FDI industries. The sample size for depth study was 5 was executed and made cross sectional representative from 5 districts, different tier of investment and types, nature and source of FDI.

Methodology

Explorative, analytical and descriptive methods are applied in this study by help of Gini Coefficient analysis model. Previous similar studies and methodologies followed by UNDP (1993) and also Bista (2004).

3.Theoretical Framework:

 Statistical tool "Gini Coefficient" has been applied in 18 sample FDI industries located in 5 sample areas of the study to measure wage inequality among labor of same category and among the sample FDI industries. Formulae of Gini Coefficient (GC) is as follows:

$$\text{Gini Coefficient} = 1/100 \ (\Sigma X_i Y_{i+1} - \Sigma X_{i+1} Y_i) \ \%$$

Where X_i – ith labour of the sample FDI industries, Y_i - wage of ith labour of the sample FDI industries, X_{i+1} - $_{i+1}$ th labour of the sample FDI industries, Y_{i+1} - wage of i+1th labour of the sample FDI industries

4.Empirical Findings:

The gini-coefficient analysis explains the relationship between FDI and wage inequality of the FDI industries into five-labor categorization *(high skilled labor, skilled, semi skilled, unskilled and daily wages)* and Gini coefficient. It is presented in table no-1 below.

Table No-1: Gini Coefficient of wage

Production	Gini coefficient
High skilled	0.23
Skilled	0.46
Semi Skilled	0.44
Unskilled	0.25
daily wage	0.09

Source: derived from Annex no-I

Gini-coefficient of skilled labor of the FDI industries is highest of all that is 0.46magnitude implying that there may be extremely higher wage inequality among skilled labor in the FDI industries. In the semi-skilled labor, its estimated gini coefficient is 0.44 implying that second higher wage inequality among the semi-skilled labor is found. Its magnitude is lower in the case of unskilled labor, although there is significant wage inequality. Its gini coefficient is estimated 0.25. Further, the gini coefficient of higher skilled labor is estimated at 0.23 implying to significant wage inequality among higher skilled labor in FDI industries. Least gini coefficient is found in daily wages labor in FDI industries is estimated at 0.09.

The analysis explains that the FDI industries in Nepal have brought significant wage inequality from 9 percent to 46 percent in different labor categorization. Wage inequality in skilled and semi skilled labor is extremely high that can lead inequality in the community. In reverse, daily wages labor 's wage inequality is 9 percent that is least one. In high skilled and unskilled, wage inequality lies between 23 percent and 25 percent. There is liberal labor policy and also liberty to the FDI management for determination of wage level. It may decrease if labor market forces work in the case of FDI industries. But it doesn't indicate positive in the equity and justice in the community. There may be suspicious and fear that the difference wage inequality among the skilled and semi-skilled labor and high skilled and unskilled would increase to the category of new inequality and the rich and the poor gap in the community. Thus, economic development and social harmony would be influenced, although contribution of FDI industries is positive to the community and also to the nation.

5. Conclusion:

This paper estimates wage level and its inequality in FDI industries based on the primary data. Data collection methods are direct interview method and key informant interviews from the 18 sample FDI industries and 5 sample FDI industries respectively. The gini coefficient is used to find out wage inequality in FDI industries has resulted wage inequality among higher skilled, skilled, semi-skilled, unskilled and daily wages lying between 9 percent and 46 percent in the intra FDI industries. Its major reasons may be non-uniformity wage level and no standard wage level with respect to different categorical labor. Since FDI industries have fixed wage level according to the industry' s rule and regulation, there are found different categorical wage level to the same category of labor. It is a policy lapse. Therefore, its outcome would be good input to the planner and the policy maker to improve the policy lapse for minimizing wage inequality at same level of labor category.

The existence of wage inequality in the FDI industries may be a cause of income inequality of the community. There is a possibility of high contribution on rich-poor gap. So, the government

should focus on the side effects in the policy formulation to reduce the inequality and also structure of employment.

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Annex: I

Gini coefficient of wage of Unskilled labour

wage (Y)	NO of Labour (X)	Cum Y	% Y	Cum X	% X	Xi Yi+1	Xi+1Yi
2560	132	2560	9.8	132	22	....	382.2
2705	102	5265	20.1	234	39	442.2	1101.48
2800	95	8065	30.7	329	54.8	1197.3	1995.5
4030	61	12095	46.12	390	65	2527.3	2163.83
4100	22	16195	61.7	412	68.6	4010.5	5676.4
4514	140	20709	78.9	552	92	5412.5	7890
5512	48	26221	100	600	100	9200	....

						Xi Yi+1	Xi+1Yi
						22789.9	20209.41

Gini Coefficient of Wage of Semi skilled

wage (Y)	NO of Labour (X)	Cum Y	% Y	Cum X	% X	Xi Yi+1	Xi+1Yi
2700	163	2700	6.7	163	43.4	....	383.91
2885	52	5585	13.9	215	57.3	603.26	845.12
3179	13	8764	21.8	228	60.8	1249.14	1430.08
3211	18	11975	29.9	246	65.6	1817.92	2009.28
4000	6	15975	39.9	252	67.2	2617.44	2808.96
4100	12	20075	50.1	264	70.4	3366.72	3607.2
4630	6	24705	61.7	270	72	4343.68	5756.61
4720	80	29425	73.5	350	93.3	5292	7173.6
5000	16	34425	85.9	366	97.6	8014.47	8590
5608	9	40033	100	375	100	9760	....
						37064.6	32604.76

Gini Coefficient of Wage of Skilled Labour

wage (Y)	NO of Labour (X)	Cum Y	% Y	Cum X	% X	Xi Yi+1	Xi+1Yi
2720	5	2720	4.9	5	1.4	....	14.7
3065	59	5785	10.5	64	18.02	88.298	292.82
3165	54	8950	16.25	118	33.2	348.6	737.04
3300	17	12250	22.2	135	38.02	617.82	1072.164
3311	51	15561	28.2	186	52.4	1163.28	1818.26
3541	3	19102	34.7	189	53.2	1500.24	2319.52
4911	66	24013	43.6	255	71.8	2491.46	3783.86
5000	25	29013	52.7	280	78.8	3435.68	4901.36
5230	5	34243	62.2	285	80.26	4230.75	5836.356
5802	5	40045	72.7	290	81.6	5075.52	6968.64
7000	40	47045	85.4	330	92.9	6753.83	9290
8000	25	55045	100	355	100	8540	9557.882
						34245.5	34713.36

Gini Coefficient of Wage of High skilled

wage (Y)	NO of Labour (X)	Cum Y	% Y	Cum X	% X	Xi Yi+1	Xi+1Yi
2910	2	2910	5.5	2	1.2	....	53.9
3255	15	6165	11.5	17	9.8	14.16	329.22
3539	31	9704	18.5	48	28.9	181.3	547.6
3981	3	13685	26.16	51	29.6	729.86	1185.04
4000	27	17685	33.8	78	45.3	1000.48	1649.44
6000	6	19685	37.6	84	48.8	1703.28	2052.96
6151.5	10	25836.5	49.4	94	54.6	2410.72	4826.38
6474	74	32310.5	61.7	168	97.7	3356.48	6170
16000	4	52310.5	100	172	100	9770	....
						19166.3	16814.54

Gini Coefficient of Wage of Daily wage

wage (Y)	NO of Labour (X)	Cum Y	% Y	Cum X	% X	Xi Yi+1	Xi+1Yi
2160	30	2160	20	30	31.25	....	889.8
2160	13	4320	40	43	44.79	1250	2124.8
2160	8	6480	60	51	53.12	2687.4	5687.4
2160	40	8640	80	91	94.79	4249.6	8000
2160	5	10800	100	96	100	9479	....
						17666	16702