

## Impact of Informal Sector on Poverty and Employment in Nepal: A Micro-Level Study of Chitwan District

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### Abstract

*When the landlocked Himalayan kingdom of Nepal is still struggling to raise the level of its economic growth and development, majority of the people find refuge in the informal sector in the absence of slow growing formal sector. The present micro level study is about the rural and urban locations of the Chitwan district, also known as 'Rapti Valley'. Most of the people are engaged in the informal sector that has varying effects on them in terms of income generation. The latter seems to be determined mainly by the household property, level of literacy and the number of persons employed in any unit. Although there is no apparent differentiation in the income earnings between males and females, the latter seem to be more efficient and articulate in many ways. Income earnings have been higher in the urban location than the rural. Income level and the factors determining it seems to vary among different social groups in the district. For a better development of the informal sector, government must play the role of effective facilitator.*

### Introduction

Nepal is a landlocked economy with low level of development and highly instable pattern of economic growth. Nepal has recently gone through many phases of political turbulence and these were of different nature. It has also been experimenting with the democratic system and the recent experiment also does not seem to be quite encouraging. Its economic implications might be in the form of weak strategy with regard to economic growth and development. The country has not been able to show economic growth rate that might be considered sufficiently high and sustainable to take care of the chronic poverty, unemployment and lack of economic opportunities. It is under these circumstances that in developing economies, like Nepal, informal sector has been occupying significant space.

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Informal sector has been in operation for ages. Initially economists did not take note of it and the job was done by the sociologists and the anthropologists. Hart (1970, 1973), a social anthropologist, is considered to be the first to bring the concept of informal sector in developing countries in the academic discourse. Although his original concept confined the concept to be used for self employment, his notion later helped in using the concept for theoretical models of development and in national accounting (Gerxhani, 2004). It got formally recognized as a fillip to modern economic activities only recently in 1972 when the International Labor Organization (ILO), in its Kenya Mission Report, recognized *informal sector* to describe the activities of the working poor who were working very hard but were not recognized, recorded, protected or regulated by the public authorities. This major sector finds more relevance in developing economies as Papola (1980) argues that in developing economy, being dualistic economy, small and tiny production units run in unorganized and informal ways and mostly on self-employment basis. Informal sector may be in the farm sector as well as in the non-farm sector. The informal sector is characterized by low productivity, low investments, poor working conditions, long and uncertain working hours, low wages, poor market conditions and poor institutional support (UNESCO, 2006; Papola, 1980; Ruffer, & Knight, 2007). Role of the informal sector has been underlined to reduce income inequality in a developing economy in the long run in conformity with the Kuznets inverted U-curve. Initially the inequality may increase before it declines. Even when it starts declining it may not be a continuous process as it may keep on increasing intermittently before finally declining (Bhattacharya, 2007).

Reasons broadly attributed by economists for joining the informal sector in developing countries may be to safeguard poor and marginalized from poverty, destitution and unemployment but a detailed picture offers quite interesting explanations. Marcouiller *et al.* (1997) have offered an array of factors through extensive literature survey. These factors may be like: informal sector might be the second best choice after the formal sector; informal sector remains unregulated by the institutions or the society; household care may be ensured while pursuing the informal sector activities; independence from regulated and low paid jobs; more remunerative for many; low wage jobs in secondary labor market fails to reward the investments in human capital like schooling and skill formation; etc. He infers from his study that Mexico offers to showcase greater inclination towards informal sector because of greater returns in this sector and hence people there joined informal sector as a matter of choice. Berman (1980) finds that there are some behavioral barriers to entry in the informal sector like scarcity of jobs, informal sector activities being controlled strongly by the locals and natives, low returns and dualistic pattern of labor market, etc. Based upon his study of informal sector in Calcutta (now Kolkata) city in India, Romatet (1983) argues that in the informal sector wage rate is not guided by the productivity but is determined arbitrarily at the subsistence level. Based upon Latin American experiences, Jonakin (2006) has added that informal sector is being known for a 'second-best' solution to a systemic problem of excessive government. He argues that informal workers were generally praised for their entrepreneurial skill; their extensive presence and poverty were indications of an underlying systemic failure.

Thus, there are a large range of expectations from the informal sector in a developing economy particularly which are not well mobilized like the Nepalese economy. We take up the case of Nepal through a study of one of its districts (Chitwan) to estimate the impact of the informal sector on poverty. We shall also be looking into various socio-economic variables that seemingly affect earnings in the informal sector.

### **Background of the Nepalese Economy**

Nepal is a slow developing economy with a population of 23.2 millions in 2001. Annual growth rate of population has been well above 2 percent in Nepal and there seems to be no apparent moderation. As a result, population density has increased from 64 persons / km<sup>2</sup> in 1961 to 157 in 2001. It appears that the pace of demographic transition has been slow in Nepal as we find that in 2006 total fertility rate was 3.1 and crude birth rate was 28.4 (Economic Survey; 2008; 106). Even the mortality rates, including the infant mortality rate, have been higher. demographic profile of Nepal that shows that growth rate of population has been well above 2 percent mark since for almost five decades as a result the population has doubled between 1971 (11.6 millions) and 2001 (23.2 millions) in this hilly nation (CBS, 2007). Sex ratio has been slightly against women or sometimes slightly favorable and thus it is not a major issue here. In urban area, it has been unfavorable to women that would have been due to male migration to urban locations. It appears that the pace of demographic transition has been slow as in 2006, crude birth rate was 28.4 and crude death rate was 8.7; total fertility rate came down from 6.3 in 1971 to 4.1 in 2001 and now at 3.1 in 2006. Besides, base of the age pyramid has been wide showing still high growth rate of population in this country in the coming period as well. According an estimate, the population of Nepal is projected to be 28.6 millions in 2011 and 34.2 millions in 2021 (CBS, 2007). Literacy rate has been quite low at 54.1 percent in 2001 when female literacy rate was 42.8 percent.

The economy has very irregular pattern of economic growth. Long-term growth trend shows that the annual growth of the GDP has been 4.25 percent per annum during 1964/65 to 2001/02; different sub-periods show that it increased from 2.14 in 1964/65 to 1974/75 to 4.23 in 1975/76 to 1990/91 and finally to 4.62 percent during 1991/92 to 2001/02 (Agarwal, & Upadhyay, 2006, 58). However, in the recent years this trend seems to be moderating as the annual growth rate has come down to 3.34 percent during 2000/01 to 2007/08. This decline might be attributed to poor performance of the non-farm sectors notwithstanding some better performance of the farm sector. This trend was set in the 1990s as well but that time the decline in the non-farm sector has not been that sharp. The Three Year Interim Plan (2007-2010) finds that "the targets of economic growth rates set in the development plans could not be achieved and Nepal lagged behind in economic progress even in relation with the least developed countries". This shows that the Nepalese economy has still not been able to move sufficiently and with confidence. It gets manifested in terms of poverty and unemployment.

Poverty in Nepal, like other developing countries, is mainly absolute where a group of people survives even without basic means of living and nourishment. Nepal has a large

section of population under poverty. In 1995/96, 41.76 percent of the country's population was below poverty line that has now come down to 30.85 percent in 2003/04 (MOF, 2008). Still, the poverty size in this Himalayan state has been very high. The poverty has been more in the rural area than in the urban area. Employment scenario in the economy was not very good and this became worse due to conflict in the country. According to the Economic Survey 2007/08, in Nepal 5.1 percent of the population (10 years and above) was unemployed as per 2001 census. However, according to the Nepal Living Standard Survey 2003/04, 2.9 percent of the population aged 15 years and above was unemployed. The incidence of unemployment was more among the males than females. The youth unemployment rate was quite high at 15.0 percent causing a situation of economic distress in the economy. Like any other poor and developing economy, the Nepalese economy has also been carrying the burden of chronic poverty and unemployment. According to Nepal Living Standard Survey (NLSS) 2003/04, the incidence of poverty was 30.9 percent. Although it has come down from the previous estimate for 1995/96 (41.8 %), still it has been quite high. According to the Tenth Plan, the number of economically active population was estimated to reach to 11.6 million toward the end of the plan period, out of which only 4.1 percent were estimated to remain unemployed (MOF, 2008). The Nepal Labor Force Survey (NLFS) 2008 has estimated that the current labor force participation rate (the proportion of population aged 15 years and above who were currently economically active) decreased marginally from 85.8 percent in 1998/99 to 83.4 percent in 2008. The time-related underemployment rate for the population of 15 years and above is 6.7 percent in 2008 as compared to 4.1 percent in 1998/99. The time-related underemployment rate increased for all age groups in between these two survey periods.

Thus, we find that there is acute problem of chronic poverty along with unemployment and underemployment. The situation is becoming difficult due to poor sources of earnings and poor economic growth in Nepal. According to Human Development Report 2009, Nepal ranked 144<sup>th</sup> (HDI value being 0.553).

Although, there have been efforts by the Government of Nepal to mitigate poverty and unemployment, the situation seems to be still not fully manageable due to various reasons like structural constraints, poor governance, political conflict, etc. If we look at some of the macroeconomic indicators, we can find that the Nepalese economy is still under the grip of low level economic development. Gross domestic savings rate was 9.7 percent in 2006-07 and the gross investment was 28.0 percent necessitating huge amount of borrowings or transfer from abroad by the Nepalese workers abroad. This is also reflected in huge gap between exports and imports leading to wide trade deficit (18% in 2006/07). It is expected to go up further. However, a large number of Nepalese workers working abroad have been a great source of relief to the economy as their remittances have been around 14 percent of the GDP. Thus, the economy does not seem to be moving properly and sufficiently to imbibe a sense of confidence even in the modern economic activities as we have already seen that the non-farm sectors' performance has not been encouraging despite the country receiving huge amount in terms of remittances.



## Informal Sector in Nepal

### *Economic Profile of Chitwan District*

Given the above, poor and marginalized need to find some means of livelihood. Informal sector may be a good source of livelihood. To understand the significance of the informal sector in Nepal, we take up the case of the informal sector in Chitwan district. It is one of the seventy-five districts of Nepal and is also known as 'Rapti Valley'. The district covers 2238.39 km<sup>2</sup> in Central – Southern Nepal. Dhading, Makwanpur and Parsa districts in the east, Nawalparasi and Tanahun districts in the west (Narayani River), Gorkha and Dhadhing districts in the north and Bihar state of India in the south make the boundary of the district. Chitwan has a population of 470.7 thousand in 2001 and growth rate of population has been very high; this is being contributed by immigration also. Around 27.5 percent population was urban and the remaining was rural. Sex ratio has been favorable to women. In 2001, the ratio of child population (0-14 years) was 36.5 percent and elderly population (65 years and more) accounted for 4.5 percent of the total population. This leaves more than half (59%) of the population in the working age group. Majority of the land holdings in the district was marginal (55.5%) while medium and big land holdings were together less than 1 percent. Thus, the farm sector does not imbibe much confidence for employment. According to the CBS Industrial Census 1997, there were only 71 manufacturing units with a total employment of 3755 persons and total fixed capital of Rs 432 millions (the average fixed capital per unit was 6.1 million). This underlines narrow industrial base in the district. There seems to be more employment in the cottage industries in the district as in 2001/02, total employment in this sector was 8130. However, there seems to be large scale dropouts of the cottage industry units as there was a registration of 2767 units but renewal was performed by 1784 units. Only 3.1 percent of the active population in Chitwan is employed in the industrial sector where relatively large number of cottage industries is found like in the Nepalese economy. Thus, it appears that the economic base is not widened and it remains at low level without much diversification in the district of Chitwan.

In this backdrop we study role of the informal sector in the rural and urban locations of the district. In rural areas we take up only non-farm activities where business activities are generally traditional and less progressive whereas in urban area these are more modern, more dynamic and more diversified. A total sample size of 418 has been taken wherein 266 (63.6%) were in the urban area with the remaining 152 (36.4%) from the rural area. The urban area has been split into U<sub>1</sub> and U<sub>2</sub>. There are two municipalities in the district: U<sub>1</sub> refers to the old and developed municipality of *Bharatpur Nagarpalika* whereas U<sub>2</sub> refers to relatively new and less developed *Ratnanagar Nagarpalika*. Rural area is inhabited by the villagers and the VDC (Village Development Committee) lies in the area.

### *Sampling Method*

Experiences gained in a number of countries have shown that survey data on the informal sector can be obtained with acceptable quality provided the survey design and

It was so between the rural and urban households as well but not between the households of the two urban locations. This implies that in a broader manner the education has been changing with the sex and female headed (where women were leading the informal sector enterprise) households were better just like in the urban location the respondents had more schooling. Literacy level, HH literacy level, and dependency ratio between two urban locations were not found significant different in all the cases due to same nature of development.

Although it might not be directly linked with the education, but providing formal or semi-formal training to the respondents to carry out their work in the informal sector might assume significance. Training raises the level of skill formation and thereby the efficiency level of the persons is supposed to be enhanced that becomes helpful in greater returns. It also demonstrates a type of institutional mechanism that is functioning to raise the working style of the people where there might be much greater scope of skill development. Table-3 demonstrates that majority (66.7 percent) of the respondents did not receive any training. However, the training was given more to men than women. There does not appear to be any clear trend when looked through different locations. Still, it might be derived that the discrimination has been the worst against the rural women and the least in the U<sub>1</sub> (that is highly urban context). Thus there has been some element of bias against women when it is extending support through skill formation although its actual extent remains to be studied.

Table: 3 Training Status in the Study Locations

Location	Sex	Trained	Untrained	Total	Trained (%)	Untrained (%)	Total (%)
U <sub>1</sub>	Male	42	80	122	34.4	65.6	100.0
	Female	13	49	62	26.5	73.5	100.0
U <sub>2</sub>	Male	30	31	61	49.2	50.8	100.0
	Female	5	16	21	23.8	76.2	100.0
R	Male	46	72	118	39.0	61.0	100.0
	Female	3	31	34	9.7	90.3	100.0
Total	Male	118	183	301	39.2	60.8	100.0
	Female	21	96	117	21.9	78.1	100.0
	All	139	279	418	33.3	66.7	100.0

Before we move to estimate employment and earnings from the informal sector activities, it would be helpful to understand different parameters which seemingly play crucial role in the determination of income and employment in informal sector. Table 4 offers information on some major dimensions. We may infer some major points now. Average initial investment has been higher in the urban area than in the rural location. Probably this is the reason that the reinvestment period is somewhat lower in case of the female respondents. Thus, women entrepreneurs were found to use the investments with greater efficiency as the reinvestment amount was also found to be lower by the women than men. Women entrepreneurs seem to be more helpful in employment generation in all the locations. Besides, they also get greater support from the household members in

running their business. However, the training imparted to them, as discussed above, has been far lower in all the locations. These points suggest that despite being more efficient, there is some *in-built* system of bias against the women entrepreneurs. It is because we find that women entrepreneurs have been more articulate in mobilizing resources through the microfinance activities as the governmental financial support was found to be too little as in the total sample only 13 respondents (that is, around 3 percent only) could benefit and it was mainly in the rural area.

### *Pattern of Employment*

Here we did not make any comparison with the formal sector for lack of comparable data. However, we need to understand the pattern of employment in the informal sector. It is believed that the informal sector is managed by one's own labor as well family labor and sometimes hired labor also. We may have a glance in this respect at Table 4 containing curious results. Taking all the persons sampled, we find that almost three-quarters (73.4 percent) of the units were run by the respondents themselves or with the support of the family members. It is further interesting to observe that almost 18 percent of the units were run where the respondents were not working and the work was being done by the family members or wage earners. In some cases even unpaid workers were employed and they were simply hired casually on subsistence basis without paying any regular wage in cash. It shows that there is further degree of informality within the informal sector. Thus, if people are engaged from outside the family, it could be wage earners as well as unpaid workers. The latter hints at the prevalence of large scale poverty in the area that may force some people to work just on subsistence and they do not insist on wage payments in cash. They may also lack bargaining power.

**Table: 4 Nature of Employment in the Informal Sector**

Types of employment	Persons		Male		Female	
	N	%	N	%	N	%
Self-employed (single person)	159	38.0	130	43.2	29	24.7
Family members employed	148	35.4	81	26.9	67	57.3
Family & unpaid others employed	6	1.4	6	2.0	0	0.0
Family, unpaid & wage earners employed	40	9.6	26	8.6	14	12.0
Self-employed & wage earners employed	36	8.6	33	11.0	3	2.6
Wage earning employed	29	6.9	25	8.3	4	3.4
<b>Total</b>	<b>418</b>	<b>100.0</b>	<b>301</b>	<b>100.0</b>	<b>117</b>	<b>100.0</b>

The pattern of engagement or employment differs when we compare male and female run units. Male respondents mostly depend (43.2%) on self-employment followed by engagement of family members (26.9 percent) whereas women respondents mainly and with greater emphasis depend upon family support (57.3%) followed by self employment (24.7%). This underlines that the women are more articulate in mobilizing household support unlike their male counterparts who basically depend upon themselves or wage earners and unpaid workers. Women generally do not prefer to employ wage earners

when they themselves are involved. However, when they are not directly involved they may hire wage earners along with the family members. Thus, women entrepreneurs mainly depend upon household support and themselves whereas men depend upon themselves, household and wage earners as well as unpaid workers.

Women are found to be hard workers if compared with their male counterparts engaged in the informal sector (Table 5). A year is divided into four seasons – summer, rainy, autumn and winter. Women have been putting in longer working hours in all the seasons than the men. It is estimated that barring summers the difference in the working hours by women and men are significantly different in all the seasons. Similarly, women on an average were found to be working more in a month as the average working days for women have been more in all the seasons in a year and it was significantly different from that of men. What has been more curious and this also supports our earlier claim that women respondents have been more articulate in mobilizing greater family support in running the informal sector activities. It is estimated that in all the four seasons average daily working hours by family workers have been more when women were looking after the activities. This difference was found to be significant during rainy and winter seasons. From this discussion we can derive that women engaged in informal sector economic activities have been working hard and putting in more working hours in a day and for more days in a month. Besides they have been getting greater family support in running their enterprises.

**Table: 5 Distribution of Seasonal Working Status by Sex**

Seasons	Female (n=117)	Male (n=301)	Differences in mean	Z-values
1	2	3	4 (2-3)	5
<b>Average monthly working days in</b>				
Summer	27.45	26.35	1.10	3.004*
Rainy	25.58	23.90	1.68	2.384**
Autumn	26.79	25.54	1.25	2.674*
Winter	26.85	24.92	1.93	2.925*
<b>Average daily working hours in</b>				
Summer	10.34	9.96	0.38	1.451
Rainy	10.11	9.24	0.87	2.209**
Autumn	10.23	9.68	0.55	1.970**
Winter	9.85	9.16	0.69	2.152**
<b>Average daily working hours by family member in</b>				
Summer	5.73	4.99	0.74	1.686
Rainy	5.78	4.78	1.00	2.202**
Autumn	5.72	5.60	0.12	0.268
Winter	5.82	4.75	1.07	2.818*

\*significant at 0.01 level; \*\* significant at 0.05 level

A little more exercise would help in understanding the size distribution of the informal sector enterprises through location and also through mobility of the enterprises. We may divide the informal sector enterprises into three size categories based upon number of employment: Own account worker (1 person); Micro enterprises (2-4 persons); and small scale enterprises (5-9 persons). It is found that 42.8 percent enterprises were own account while 53.8 percent were micro enterprises. The small scale enterprises were only 1.3 percent of the total sample size. It is interesting to observe that in rural area micro enterprises (64.5 percent) were more than the own account enterprises (34.2 percent) unlike in the urban location where the micro enterprises and own account enterprises were having equal share (47.7 percent) while the small scale was 4.5 percent. In terms of mobility, it is found that fixed location enterprises were more than half (59.0 percent) followed by the mobile (29.7 percent) and semi-mobile (11.2 percent). There is a sharp contrast between the mobile and fixed enterprises as the former has mainly Own account worker enterprises (69.4 percent) whereas the latter has mainly the micro-enterprises (68.8 percent). This is due to the fact that the mobile enterprises are mainly small and being managed by one worker whereas there might be greater scope to expand the fixed enterprises where there might be greater requirements of workers who come from different sources like family and wage earners.

**Table: 6 Household Earnings by Mobility, Industry and Nature of Employment**

Mobility	N	Av. HH Earning from IS (NRs)	Av. HH Earning from OS (NRs)	t-values	Correlation Coefficient (r)
<b>Household earnings by mobility</b>					
Mobile	124	73,207	14,416	15.31*	-0.019
Semi-mobile	47	72,236	13,586	8.30*	-0.096
Fixed	247	90,418	15,350	20.12*	-0.050
<b>Household Earnings by Types of Employment</b>					
Self-employed	159	65,193	13,747	16.92*	-0.018
Family member employed	148	83,892	16,176	15.62*	-0.184**
Family & unpaid other employed	6	85,000	9,500	6.92*	0.594
Family, unpaid & wage earner employed	40	139,030	14,800	10.74*	-0.038
Self-employed & wage earner employed	36	121,111	20,722	10.63*	-0.070
Wage earner employed	29	54,931	8,376	9.86*	-0.349

\*significant at 0.01 level; \*\* significant at 0.05 level

### **Income Generation in the Informal Sector in Chitwan District**

The above discussion might indicate that the activities in the informal sector have been highly heterogeneous in many ways like size, number and pattern of employment, area distribution, mobility of the enterprises, and sex wise distribution of the enterprises. We shall be discussing later the distribution pattern of the enterprises in terms of community

or caste. Such pattern might have its impact on earnings levels also. We may find that earnings have not been same for different categories. To begin with, we may have a glance at Table-6. From this table, it is brought out that the respondents engaged in the informal sector enterprises are taking this as their main occupation. At the same time they are also having some other source of earnings in the households. Thus, looking even at the level of the households of the respondents it is obvious that they are treating the informal sector activities as their primary or main occupation while some members in the family might engage in the secondary occupation to supplement the household incomes. However, what is interesting that the level of income from the informal sector activities has been many times more than from the secondary occupation. There does not appear any specific relationship between the earnings from the primary and secondary occupations in the households engaged in the informal sector.

Earnings from the fixed enterprises have been more than from the mobile and semi-mobile enterprises. The mobile and semi-mobile enterprises have almost same average level of earnings. This is somewhat linked with the earlier analysis that showed that the fixed location enterprises generally engage more workers while mobile and semi-mobile are mainly own account worker based. Such pattern needs to be analyzed further in a separate study as the two have different pattern of seller-buyer relationships and many other things are also likely to impact their operations. If we now look at the earnings from the informal sector based on nature of employment in different types of enterprises, it is generally found that the earnings have been more when wage earners are also engaged along with the family members or with oneself (respondents). However, if it is left to the wage earners alone, the earnings have been the lowest followed by the enterprises where respondents were working alone. One further point needs to be noted here. Generally there has not been any trend, as argued earlier, in relationships between the earnings from the informal sector enterprises and other earnings in the household. But in case of enterprises where it was operated by the family members the relationship has been inverse showing that if family members get engaged in the main activity, their subsidiary or secondary occupation gets ignored.

From these arguments it appears that the number of the workers in any enterprise makes impact on the overall earnings from any informal sector enterprise. Besides, there are other likely determinants. We now make efforts to estimate the income function in the informal sector in Chitwan district based upon data collected from a large number of respondents. We would be doing it through different ways to have a better understanding of the various dimensions of the informal sector in a poor economy like Nepal that might have some broad relevance for other such economies.

How the informal sector earning has been affected by changing household properties, labor forces, education, etc was also examined using multiple regression technique. In functional relation,

$$Y_i = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7)$$



It is assume that there is linear relation of Y with explanatory variables. Hence the estimated equation form will be as follows.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + U$$

Where U = error term

Estimated regression equation for all respondents will be

$$Y = 9783.50 + 16485.44 X_1 + 0.28 X_2 + 6677.12 X_3 + 143.51 X_4 + 1113.34 X_5 + 4011.57 X_6 - 11130.25 X_7$$

$$(0.83) \quad (12.88)^{\#} \quad (1.36) \quad (12.67)^{\#} \quad (0.32) \quad (0.74) \quad (1.16) \quad (3.48)^{\#}$$

$$R^2 = 0.624; R^2_{Adjusted} = 0.617; F = 97.145^{\#}$$

Figures in parentheses are t-values. #: Significant at 1 percent level.

Y = Annual income of the household from the informal sector

X<sub>1</sub> = Number of employed in informal sector enterprises

X<sub>2</sub> = Amount of investment in the unit

X<sub>3</sub> = Number of schooling years of the persons

X<sub>4</sub> = Average monthly working days

X<sub>5</sub> = Household property

X<sub>6</sub> = Dummy variable (Female=1 and Male=0)

X<sub>7</sub> = Dummy variable (Rural=1 and Urban=0)

From this estimate, it is derived that income level of an informal sector unit is determined by the number of persons employed in the units, level of literacy of the respondents. This further shows that the income level significantly varies between the rural and urban locations where in the case of the latter income level is estimated to be higher. However, no such variation is found between the male and female entrepreneurs. Even the household property does not seem to affect the level of earnings.

The table 7 gives estimates of income of the informal sector units for different social groups and males and females. Here, we get some curious results. From this it comes out that although in the earlier estimates for all the samples taken together, level of literacy (number of schooling years) of the respondents has been significant determinant of income, it is not so when it is estimated at the disaggregated level. For Muslims and others, it is not estimated significant. It also leads to some thinking whether the role of literacy is not important for some social groups because of their in-built skill or it is because some types of occupations do not require much skill. It needs to be established elsewhere. Amount of investment in the informal sector units is not an important determinant. Rather, it is estimated for the upper castes and the females that it has

negative impact on the earnings. May be it is so due to lethargy creeping in when the people have more investment resources at their disposal.

**Table: 7 Estimation of Income Earning Functions  
in the Informal Sector of Chitwan District**

Social Groups / Sex	Estimated Coefficients								N
	$\beta_0$	$\beta_1$	$\beta_2$	$\beta_3$	$\beta_4$	$\beta_5$	$R^2$ ( $R^2_{Adj}$ )	F	
Brahman / Chhetri	-19051.4 (2.271)*	1798.03 (4.356)#	-0.224 (1.721)\$	1289.71 (1.257)	29.36 (0.092)	42133.24 (30.094)#	0.928 (0.926)	434.6#	173
Vaisya	-13711.7 (2.033)*	2221.02 (5.461)#	0.166 (1.480)	3465.45 (3.967)#	-103.63 (0.392)	36917.77 (22.888)#	0.948 (0.946)	488.3#	139
Dalit	-12128.7 (1.072)	1257.74 (1.964)\$	0.173 (0.549)	4259.15 (2.338)*	-86.143 (0.193)	38044.82 (17.485)#	0.937 (0.930)	141.9#	53
Muslim	20472.93 (0.887)	-923.11 (0.842)	1.205 (0.583)	-2737.05 (0.876)	-1073.40 (1.335)	45219.13 (10.527)#	0.934 (0.916)	51.2#	23
Others	-57922.0 (1.181)	513.33 (0.203)	-1.240 (0.799)	5088.45 (0.698)	644.14 (0.356)	56806.73 (4.365)#	0.855 (0.819)	23.6#	25
Females	-25905.1 (2.08)*	1185.70 (2.78)#	-0.428 (2.31)*	682.12 (0.58)	345.92 (0.74)	43804.47 (28.01)#	0.929 (0.926)	292.1#	116
Males	-11226.5 (1.94)\$	1940.67 (5.50)#	0.073 (0.67)	4039.24 (4.87)#	-307.90 (1.36)	38934.25 (29.04)#	0.919 (0.917)	666.9#	300

Y: Annual income of the household from the informal sector

$X_1$ : Number of schooling years of the respondent

$X_2$ : Amount of investment (NR)

$X_3$ : Number of persons employed in the enterprise

$X_4$ : Average number of working days in a month

$X_5$ : Household property

Figures in parentheses are t-values.

#: Significant at 1 percent level; \*: Significant at 5 percent level; \$: Significant at 10 percent level

Number of workers is helpful in raising the income level only in some caste groups like Vaisya and Dalit as well as among the male respondents. But it is not so for other social groups and females. Working days in a month is not found to be a significant determinant of income in the informal sector. It might be because generally all are working for most of the days in a month. However, the most important determinant of income has been household property of the respondents in raising their income levels. This might work in different ways and it needs to be investigated elsewhere.

### *Income Generation Based Upon Caste Groupings*

Besides the impact of sex and location, in the South Asian context, social groupings also seemingly play important role in economic activities. It is more so at the traditional and micro or informal level. Therefore, we would also be analyzing the income generation in the informal sector while taking into account different social groups (Table

8). It appears that the average income earnings have been higher for the upper castes (Brahman/Chhetri and Vaisya) while the earnings have been lower for the lower caste (Dalit) and the Muslims engaged in the informal sector business. Generally income generation from the informal sector activities have been either almost similar or more in case of the informal sector enterprises being run by the women entrepreneurs in case of the upper castes as well as for Dalit. But the situation gets reversed among Muslim community and others. This might have been a reflection of the prevailing social order in different castes and social groups in Nepal just like that in the neighboring Indian scenario.

**Table: 8 Distribution of Daily IS Earnings Between Castes**

Caste	Sex	N	Average	Levene's Test for equality of Variance		t-test for equality of Means	
				F	p	t	p
Brahman/Chhetri	Male	100	269.62	0.554	0.458	0.261	0.794
	Female	74	263.18				
Vaisya	Male	117	218.66	8.764*	0.004*	-2.920*	0.004*
	Female	23	333.80				
Dalit	Male	39	187.64	0.820	0.369	-0.688	0.494
	Female	15	213.11				
Musalman (Muslim)	Male	20	230.58	1.391	0.251	0.523	0.606
	Female	4	183.33				
Others	Male	25	266.20	0	0	0.743	0.465
	Female	1	66.67				

\*: Significant at 0.01 levels.

**Table: 9 Distribution of IS Earnings between Different Locations (NRs)**

Caste	U <sub>1</sub>		U <sub>2</sub>		R	
	N	Mean	N	Mean	N	Mean
Brahman/Chhetri	87	307.38	31	246.61	56	215.25
Vaisya	57	301.16	27	192.04	56	194.82
Dalit	14	249.17	12	167.64	28	179.10
Musalman (Muslim)	12	282.36	9	168.89	3	145.56
Others	14	252.86	3	186.11	9	291.48
Total	184	295.22	82	206.34	152	204.20

This issue may be further probed through Table 9 and this shows that there is a definite gap among the different castes and social groups in terms of income earnings from the informal sector enterprises. This holds true even among different locations like rural and U<sub>1</sub> and U<sub>2</sub>. It is again established that the upper castes (Brahman, Chhetri and Vaishya) have higher earnings in that order in all the locations demonstrating better economic organization and skill on their side. Dalit and Muslim generally seem to be having almost similar earning levels in all the three locations taken together and their earning levels have been lower than the overall average showing that they have not been

as efficient and skilled in deriving economic gains from the engagements in the informal sector. All these issues prompt us now to look into the determinants of earnings to different social groups engaged in the informal sector in the district of Chitwan.

**Table: 10 Distribution of Household Earnings (yearly) by Place of Residence and Sex**

Place of Residence	Sex	N	Average HH earnings from IS (NRs)	Z- values	Average HH earnings from OS (NRs)	Correlation coefficient (r)
U <sub>1</sub>	Male	122	96,027.87	1.002	15,179.92	-0.014
	Female	62	104,414.52		12,912.90	-0.106
U <sub>2</sub>	Male	61	70,963.93	0.297	12,899.25	-0.084
	Female	21	74,133.33		8,495.24	0.042
Rural	Male	118	68,831.66	0.916	16,728.03	0.039
	Female	34	76,741.18		18,411.76	-0.156

\*significance at 0.01 level; IS – Informal sector; OS – Other sources

### *Impact of Informal Sector on Household Earnings*

After the estimation of earnings in the informal sector, it becomes imperative to understand in a low income and developing economy, how the earnings from the informal sector have been making impact on the households. This is significant because generally people engaged in the informal sector carry on their business with little or very little funds, facilities and training. Most of the people come from a background where they lack any alternate source of livelihood or any such opportunity and even the state may not be of much support. Table 10 offers yearly income earnings from the informal sector activities in different locations. This suggests that earnings to women entrepreneurs have all along been higher than their men counterparts in all the locations – U<sub>1</sub>, U<sub>2</sub> and rural. However, it was not found to be significantly different between women and men even in U<sub>1</sub> location. Still, it is important to note that women are earning higher than their male counterparts despite the latter enjoying better initial conditions like better training facilities, more capital availability and greater mobility.

**Table: 11 Impact of informal Sector Earnings on Household Earnings**

Household monthly income level (NRs)	IS earnings excluded		IS earnings included	
	N	%	N	%
Poor (<10000)	394	94.3	54	12.9
Low (10000-20000)	22	5.3	172	41.1
Middle (20000-30000)	1	0.2	104	24.9
High (>30000)	1	0.2	88	21.1
All income group	418	100.0	418	100.0

Table 11 finally establishes that earnings from the informal sector have been of great help and support in carrying out the livelihood of the households. This may be claimed because this sector is not only able to support the subsistence of the households depending

upon it but also many households have been made to move to middle level of income and even many have been able to join the higher income groups. Without the earnings from the informal sector more than 94 percent households were drowned in poverty. However, due to the income generated from the informal sector activities, only 12.9 percent households remained in poverty. More than two-fifth of the households moved to the low income level. What has been more rewarding is it that 46 percent of the households have been able to join the middle income and high income groups almost equally. This suggests that in developing economies if informal sector activities are pursued earnestly, it has the potential to not only take the households away from miseries and poverty but also it is helpful in moving to better economic status.

### Conclusion and Policy Suggestions

The above analysis of the informal sector in Chitwan district of the landlocked Nepalese economy brings out many features. It shows that the people engaged in the informal sector are spread in the urban as well as rural areas. The activities are highly diversified and heterogeneous in nature. People may get engaged in fixed location activities or mobile and semi-mobile activities. The informal sector entrepreneurs may not remain confined to oneself or family labor. They also employ wage earners and others if there is need for them. Thus, this sector also provides direct employment besides likely possibilities of generating indirect employment. Generally there is no formal training for people engaged in such activities. Only in some cases there has been some training and that too mainly for men. Some important points emerge from the above analysis. Women are found to be more efficient and it is also found that where women are taking up informal sector activities, there is better household conditions like lower dependency ratio, better employment scenario in the household, generally lower family size signifying more advanced demographic status, and higher household property, and better educational background in the household. There have been some elements of seasonal variation when we consider the number of working days in a month or average daily working hours. Generally, working hours have been long for all. Still, women have been putting in more working hours in a day or more number of days in a month than their male counterparts. Women are found to be more articulate in mobilizing family participation in their business. Income generation in the informal sector seems to have some common pattern in rural and urban locations. Literacy level of the respondents and households has been the most important determinant. Daily level of investments in the business is not so high; still this has some effect in some contexts. Same seems to be true for the household labor as well as wage earners employed in the informal sector units. Social structure seen through caste or community also seems to have its bearing on income generation. The upper caste people (Brahman / Chhetri and Vaisya) have been earning more from the informal sector than Dalit (lower caste) and Muslims. This might be also attributed to better endowments for the upper caste entrepreneurs in terms of household properties, literacy, etc.

On the whole, we find that the informal sector has been helpful in income generation for the stakeholders and it has been helpful in employment generation in Chitwan district of Nepal. The earnings made from the informal sector has been instrumental in taking out the households from the poverty and almost half of the households have been moved to middle income level and even high income category signifying role of the informal sector in reducing poverty. Besides, it also reflects potentialities of the informal sector in being better source of earnings for many. However, what appears from the above analysis is it that the state support has been quite low if not altogether absent. The state may help the participants of the informal sector in direct as well as indirect manner. For direct intervention, it may organize some quality training to them as per their local conditions from really competent agencies and also extend some support in terms of credit facilities, social security and providing physical space, etc. Through indirect method, it may help in raising the literacy and help in skill formation etc. Women should be given greater prominence as they are found to be more efficient not only themselves in many ways but also in mobilizing household participation and using the scarce resources more efficiently. Thus, there should be a coherent policy strategy to tap the potentialities of the women by some meaningful interventions keeping the local conditions into mind because uniform policy may not be applicable throughout the country. What needs to be emphasized more here is it that the poor and lower caste or social status people need to be offered extra state support so that their efficiency levels also increase in conformity with the others. This process will help in initiating the convergence of growth and development.

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## Introduction

The performance of initial public offerings (IPOs) is one of those empirical questions that continuously draw the attention of many researchers in finance. Several researchers have been carried out to examine the performance of IPOs in the developed countries like United States, France, Germany, United Kingdom, Japan, Israel, etc. and in the developing countries like India, Malaysia, China, etc. where IPO market mechanisms may not be identical. Several empirical studies put forward that IPOs are sold at a significant discount, a phenomenon known as underpricing, from the prices that prevail in the aftermarket that results into significantly better performance of IPOs than that of equity market in general. The deeper the underpricing, the higher will be the initial returns resulting into better performance of IPOs for the investors. On the other hand, the deeper the underpricing, the lesser will be the net proceeds for the issuing companies resulting into the loss of wealth of the company as it represents the part of the cost of going public for the companies.

Various explanations have been laid down to explain why IPOs outperform the market initially due to the underpricing of IPOs under varying IPO market mechanisms. There are both supporting and opposing evidence for these explanations in the finance literature. This study aims to examine the mechanism of Nepalese IPOs market, which stands out as an emerging market and their performance.