Determinants of Informal Employment and Wage Differential in Nepal

– *Resham Bahadur Thapa Parajuli*[*]

Abstract

Wage discrimination in formal and informal sectors is one of the pressing issues that might perpetuate uneven livelihood options and human capital formation at household level. This paper analyzes on what determines whether a person works in informal sector. It also gauzes the degree of wage discrimination in formal and informal sectors in Nepal using country representative labor force survey based cross-section data produced by ILO in 2008. It is found that the gender, geography, educational status, marital status, age of the employee and ethnicity of the employee definitely matter whether an individual works in informal or formal sector. These variables need to be considered while formulating social security policies. Since the wages for relatively educated workers are significantly low in informal sector than formal one, it demands a suitable policy intervention to check probable working poverty in Nepal.

Keywords: Determinants of informality, informal employment and wage differential

JEL classification numbers: I30, J70, J71 and J31

I.   Introduction

Though most of the economic policies are based on the assumption that the economy mostly operates in formal and efficient ways, the informal economic activities are increasing day by day. It may be due to the out sourcing in the name of efficiency or might be due to the structure of the very economy as well. There is ever increasing trends in the unobserved[1] (informal or underground or shadow) size of many economies these days. Though the size of the informality or unobserved economy differ country to country, the share of unobserved economy is increasing

---

[*]   PhD Scholar of Economics, Hull University Business School, University of Hull, Hull, UK
       (Email: r.b.thapa-parajuli@2014.hull.ac.uk) and Lecturer, Central Department of Economics,
       Tribhuvan University, Nepal (Email:resham@cedecontu.edu.np)
[1]   Unrecorded, underground and shadow economies have been used interchangeably in this paper.

in advanced as well as developing economies alike. Countries having peewee share of unobserved economy like Canada, Switzerland, Austria and the US etc. are also showing unexpectedly raising trends of unobserved economic activities these days. The estimates made by Schneider and Enste (2002) reports that the size of the unobserved economy in developing countries ranges from 35 to 44 percent of GDP whereas the same for transition and OECD countries ranges from 21 to 30 percent and 14 to 16 percent respectively during the last quarter of twentieth century. As Kumar (2005) and Sinha & Singh (2010) also reveal that unobserved economy, rather they prefer to call it black economy, in India has assumed almost half the size of official one. Some other empirical studies depict the inevitability of ever growing scale of unobserved and underground economic activities blaming for unbridled liberalization that hardly promoted growth but added more policy uncertainties. Nepal is not exception in this regards.

Although there are no recent studies conducted to estimate the size of unobserved economy in Nepal, indications like higher budgetary and fiscal deficit, increased cost of production, growing informality of economic activities etc apparently signal the growing size of unobserved economy and informality in works. For example, the scale of money laundering is not known in Nepal but a case can be made for its increasing magnitude due to the informal nature of the economy, predomination of cash transactions, open border with major trading partners, unstable political situation and rampant existence of corruption, bribery, smuggling, human and drug trafficking, use of counterfeit currency, and of late, extortion, looting and arms trading. Growing number of recorded severe crimes are the reflection of such activities and root cause of social evils in Nepal.

Similar to global and local scale, undesirable raise in unobserved economy, the employment status is strikingly being more informal though we advocate formalization of the same. Moreover, the employment in the informal sector is not decent as ILO (2010) reveals. Empirically testing this fact, a seminal study conducted by Angel-Urdinola and Tanabe (2012)[2] reveals that more than two third informal sector workers in Middle East and North Africa region have no access to health insurance. Informal sector workers do not contribute directly to a pension system either. It blocks them from economic and social security after their retirement. About one third of total economic output in the region remains undeclared and therefore not registered for tax purposes. In Nepal too, more than 80 percent of the economically active population work informally (UNDP/CBS/ILO, 2008), who are socially and economically insecure like Middle East and North African case. Out of numerous untapped and unused economic

---

[2]   This paper is heavily influenced by this paper. If any lines and theme perfectly match, it is not intentional one.

potential in informal sector, there can be underused human capital. They are mostly unskilled and less educated. And, being in the informal sector, the educational attainment might be low.

The unobserved and underground economy ignites the informal sector employment helping for poorer segment of the society; the ill-effects of such employment overweigh the positive effects (Kumar, 2011). There are sufficient rooms to believe in his argument that such informality has serious macro and micro level adverse consequence in the overall economy. In Nepal, Considering the present political and social dynamics, it is urgent to understand the current situation of underground economy that not only downsizes the pace of growth but also encourages the anomalies in the form of widening inequality, enmity and immorality (Raut et al, 2013). There is dearth of literature regarding the size of unobserved economy, determinants of informality and the human capital aspect of informality in Nepal. But, it is safe to assume considering the volume of unobserved size of the economy at its 38 per cent of GDP in Nepal (World Bank, 2012) that there several people work in informal sector. It is urgent to know about the determinants of informal employment in Nepal and see whether there exists discrepancy in human capital formation among the people working in formal and informal sectors. Therefore, this piece of work aims to analyze the determinants of informality of employment in Nepal followed by a serious examination of education attainment and wage discrimination status among formal and informal sectors in Nepal.

The remaining sections of the paper are organized as follows; the second chapter deals with a brief review of determinants of informal employment whereas the model and data are explained in chapter three. The empirical analysis is made on chapter four and concluding remarks are presented in chapter five.

II.   A Brief Review of Determinants of Informal Employment

Globally, the main reasons for substantial rise in shadow economy are: the rise of the burden of taxes and social security contributions; increased regulation in the official economy, especially of labor markets; forced reduction of weekly working time; earlier retirement; and the decline of civic virtue and loyalty towards public institutions combined with a declining tax morale (Cassel & Cichy, 1986; Thomas 1992; and Schneider and Enste, 2000). In this context, Becker (1968) argues that people engage in shadow economic activity for financial/economic gain, and weigh expected gains with expected costs in ways that is not consistent with the predictions of traditional economic theory. There have been contesting arguments regarding the relationship among growth and the shadow economy. Studies such as by Adam and Ginsburgh (1985) and Asea (1996) find a positive relationship

between the growth and the shadow economy. However, Schneider and Enste (2000) and Loayaza (1996) observe a negative relationship among them.

The informality is heterogeneously defined. It is unregistered small firm like the street vendor. The informality indirectly exists in large registered firm too. They employ a share of its workers without a written contract as defined intentionally to avoid government regulations and taxes (De Soto, 1989) and Gerxhani (2004). Their study conforms the firms, workers and untaxed activities as the sources of informality functionally. Regarding the studies of the informal employment covering Middle East and North African economies conclude that the rapid increase in labor informality is due to: (i) a rapid increase in the growth of the labor force, (ii) accelerated urbanization, (iii) a contraction in public sector employment, and (iv) an institutional constraints for establishing new businesses (Angel-Urdinola and Tanabe, 2012).

The determinant for informality has multiple and uneven facets. Informal employment has increasingly become a permanent state of employment associated with low pay, poor working condition, and limited mobility to formal sector jobs. The declining fertility and mortality coupled with the increasing share of the youth population who attain tertiary education are important factors contributing to the expansion of informal sector (Wahba, 2009). This study even concludes that the informal employment constitutes an important entry point for highly educated male workers. But, the Rodman (2007) argues that one of main reasons for the raise of informal employment in Middle East and North African Region is the decline in public sector employment as a share of total employment. This study also argues that formal business faces important challenges that restrain their capacity to grow, such as dealing with complex bureaucratic procedures; access to poor infrastructure, credit, technologies; and high labor taxes. The World Bank (1999) concludes that the excessive regulation on the labor market pushes the economic activity towards informal one in Morocco. However, informality in Iraq is due to the externalities of the ongoing armed conflict (Looney 2006).

There are many ways to measure informal employment such as (i) the share of unpaid employment, (ii) the share of self-employed as a share of total employment, (iii) the share of overall employment not contributing to social security (Gasparini and Tornarolli, 2006 and Loayza and Rigolini, 2006); and (iv) the share of employees without a contract. In characterizing informal employment from the social protection side, a core definition relates to the absence of worker coverage by traditional social security programs—most notably health insurance and pensions, but often also other benefits available to workers by virtue of their labor contract (Perry and others, 2007). But the term informality considered in this study is limited to the definition provided by Nepal labor Force Survey (NLFS) report

produced by UNDP/CBS/ILO (2008). The report defines the informal employment as: (i) who operate their own business with no employees, (ii) private unregistered company workers or if registered only employing less than ten persons, and (iii) those family members working on family business. The concept is claimed to be ILO international standard definition of the informal sector.

III. The Model and Data

The informality profile is constructed using the information in NLFS data set produced by UNDP/CBS/ILO (2008) which is the latest national level representative household surveys regarding information on formal and informal employment information. The share of workers in the informal sector according to various characteristics, such as their level of education, age, gender, analytical domain, marital status, and occupation among others are summarized and analyzed. Also, the profile includes urban and rural workers. Many informality studies (see Perry et al, 2007) exclude rural employment from the analysis since it is mainly informal. This is not necessarily the Nepalese case since there is an important presence of the public sector (and thus, of formal employment) in rural areas. While rural employment remains more informal than urban employment, informality rates in both rural and urban areas are somehow comparable and the relationship of informality and personal characteristics (such as age, gender, and years education) behaves rather similar in Nepalese case.

To provide more insights about the determinants of informality, a simple Probit regression model is estimated. The dependent variable of the regression model is a binary variable that takes a value of one if the worker is employed in the informal sector and zero otherwise. Separate coefficients are estimated for Male, Female and full sample. The major explanatory variables are: (i) an urban dummy; (ii) demographic characteristics of the worker (male dummy, ethnicity, marital status and age group); (iii) the highest educational level attained by the worker; and (iv) experience proxy of the worker. These variables are regressed using MLE method to capture and analyze probability of participating informal employment instead of formal one with stated socio-economic heterogeneity. Following Gujarati (2004) and Greene (2006), the equation is defined in terms of log odd ratio as:

$$L_i = Ln\left[\frac{p_i}{1-p_i}\right] = \beta_1 + \beta_2 X_i + \mu_i \ldots\ldots\ldots(1)$$

Where, p_i is probability to participate in informal employment, X_i are set of explanatory variables defined above, β_i being constant parameters and μ_i is individually and identically distributed error term.

The logarithm of hourly wage measured in rupees is regressed with years of formal schooling, experience proxy measured by multiplying age with formal years of schooling and gender dummy recorded as one if male with zero otherwise as defined in equation (2). Then the return to education of workers in informal and formal can be compared. It is indicative to the impact of informality in human capital formation. To avoid a strong selection bias, the analysis is restricted to wage earning individuals and work full time. The descriptive analysis on average hourly wage rates (in local currency) by educational attainment, gender, age group, and sector of employment for workers in the public, private formal, and private informal sectors is also made.

$$Ln(wage) = \beta_1 + \beta_2 Sch\_year + \beta_3 Exp + \beta_4 G\_Dummy + \mu_i \dots\dots\dots\dots\dots\dots(2)$$

Where hourly wage is measured in natural logarithm form and regressed with formal years of schooling, experience proxy measured by multiplying age with formal years of schooling and gender dummy recorded as one if male with zero otherwise. The expected wage rate is estimated by taking anti-logarithm on both sides of the equation (2).

IV. Empirical Analysis

4.1 Determinants of informality in Nepal

Based on the methodology and data stated above, various regression equations are estimated and necessary outputs are reported in Table (1). The World Bank (2012) claims that more than one third economic activities are unrecorded in Nepal. It is higher than the world average. It sounds a bit higher which includes whole informal agriculture, informal non-agriculture and undefined illegal activities. Thus such huge volume of unrecorded GDP has two facets, first informal legal economic activities and second informal illegal activities. Among the legal informal sectors, more than 70 percent people are engaged and if agriculture sector also clubbed with, it reaches more than 90 percent figure in Nepal according to NLFS report of UNDP/CBS/ILO (2008).This remarkable statistic indicates that more than two thirds of all the workers in Nepal may not have access to health insurance and/or are not contributing to a pension system that would provide income security after retirement age. It counters the probable economic benefit from demographic dividend in Nepal. At the same time, more than one third of total output in the economy remains undeclared and therefore not registered for tax purposes. It signals for the unrecognized source of government revenue. It is intuitive to argue that the informal sector workers are employed with jobs with the low productivity. In this context, the determinants of informality in Nepal are interesting to note, are as below.

The regression equation (1) is estimated and reported in Table (1) and Table (2). The Table two is produced by taking the anti-log of the coefficients reported in Table one reference to equation (1) which is known as the odd-ratios. They signify the ratios of the probabilities to its null for each and every respective coefficient as explained in Gijarati (2004) and Green (2006). The ethnicity is grouped as Bramhan, Chhetry and Thakuri, Janajati and Dalit. As an individual being Janajati and Dalit are more likely to participate in the informal employment relative to reference group. It might be the cause of such ethnical skewness towards informal activities that Janajati and Dalit possess the skills suitable for informal employment gained from the traditional economic activities. But, it must have smaller weight. Another cause must be the relatively less readiness, skill and administrative hurdles they face to have formal jobs. Consequently majority of them opted for informal economic activities for survival. Within the dalit group, we found interesting findings that as an individual being Dalit women are less likely to participate in informal job compared to so called upper cast groups women. So, we can cast the doubt regarding the livelihood aspect of the informality that it is further widening the poverty among the vulnerable group though optimists do believe that informality sometimes helps reduce rampant poverty in the transition economy like Nepal.

Another determining factor for informality used and estimated in the analysis is weekly income measured in rupees terms. Since a job in informal sector is the job in transition too. As people get jobs in another sector they instantly shift and change the profession within the informal too. It might be the case in Nepal too that the regression coefficient reported in Table (1) suggests that a person who earns one percent more wage weekly has less likelihood to participate in the informal sector. On the one hand he might have gained little bit more necessary amount and leave. It might be the situation that whoever earns more has higher chance to get another job soon. Similar is the findings for Dalit female.

Marital status of an individual also definitely determines the labor participation situation in Nepal. The information available in UNDP/CBS/ILO (2008) data set, the marital status is categorized into four groups like never married, married living together, widow/widower and Separated/divorced. Never married being reference group, married and widow/ widower have less likely to participate in the informal job market. It might be the signal, other things remaining the same, that the marriage is still one of the constraints in labor force participation. One reason can be the unnecessarily more hour allocated for the rituals and family matters or it might be the case of the transitional friction of the labor force participation in Nepal. Within this subcategory too, female group seems more vulnerable that divorced and widow female are less likely to be engaged in job market though informal. It signals for the possibility of vicious circle of poverty, poorer and marginalized falling into more vulnerable zone of poverty.

Table 1: Probit regression results (Employment is 1 if informal, 0 otherwise)

INDEPENDENT VARIABLES	ALL	MALE	FEMALE
ETHNICITY (REFERENCE GROUP: BRAMAN, CHHETRY AND THAKURI			
All Janajati	0.128***	0.141***	0.0430*
	(0.0252)	(0.0280)	(0.0606)
All Dalit	0.0980**	0.120**	-0.0937*
	(0.0201)	(0.0217)	(0.0598)
WEEKLY INCOME (LOGARITHM)	-0.0425*	0.00557*	-0.258*
	(0.0310)	(0.0345)	(0.0771)
MARITAL STATUS (REFERENCE GROUP: NEVER MARRIED)			
Married (Living Together)	-0.0711**	-0.0538*	-0.165*
	(0.0301)	(0.0346)	(0.0647)
Widow and Widower	-0.0772*		
	(0.0682)		
Widower		-0.0513*	
		(0.0896)	
Widow			-0.127
			(0.118)
Divorced (Living Separate)	0.000475*	0.0655*	-0.131
	(0.0693)	(0.0889)	(0.128)
GENDER (REFERENCE GROUP: MALE)	0.422*		
	(0.0568)		
GEOGRAPHY (REFERENCE GROUP: URBAN)	0.160**	0.0530**	0.912
	(0.0458)	(0.0495)	(0.139)
EXPERIENCE (AGE * YEARS OF EDUCATION)	-0.00302***	-0.00323***	-0.00213***
	(0.0004)	(0.0004)	(0.0012)
AGE GROUP (REFERENCE GROUP: 14-24)			
(14-24)		-0.295	0.242
		(0.114)	(0.408)
(25-34)	0.0454*	-0.256*	0.247
	(0.0614)	(0.0926)	(0.373)
(35-54)	0.0424*	-0.226*	-0.0232
	(0.0821)	(0.0827)	(0.365)
(54-64)	0.258*		
	(0.1004)		
EDUCATIONAL LEVEL (REFERENCE GROUP PRIMARY AND BELOW)			
Primary and Below		0.471	1.179
		(0.145)	(0.346)
Secondary	0.104*	0.622*	1.053
	(0.0712)	(0.1002)	(0.256)
College(11, 12 and Bachelor)	0.0194*	0.597*	0.686
	(0.0998)	(0.0844)	(0.172)
Graduation(Masters and Above)	-0.583*		
	(0.031)		
CONSTANT	-0.132***	-0.225**	-0.236*
	(0.008)	(0.028)	(0.051)
OBSERVATIONS	5,291	4,158	1,133
LR CHI-SQUARE(AT DF = 14)	1012.36***	753.68***	258.73***
PSEUDO R2	0.2680	0.2526	0.3533

Source: Author's Calculation; Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

The relationship between gender and informality depicts interesting fact. In Nepal, controlling for other factors, being a male worker is associated 1.53 times more probability of being employed informally as women generally queue for formal sector jobs. Social and cultural hangover in Nepali societies is in favor of male, it is expected result though. The informality in jobs has geographical location sensitivity too. An individual residing in urban sector has 1.17 times higher probability to work in informal sector than a person living in rural areas. Similar is the case for male and female groups. It is noteworthy here that most of the underdeveloped and developing economies have different characteristic than this. Basically more informal jobs are there in rural areas in those countries. But, our economic structure is concentrated in urban centers only whether it is formal or informal. Perhaps, the result might be different if agriculture activities also considered as informal in our case too.

Table 2: Odd ratios of the coefficients

Independent Variables	All	Male	Female
Ethnicity (Reference Group: Braman, Chhetry and Thakuri			
All Janajati	1.14	1.15	1.04
All Dalit	1.10	1.13	0.92
Weekly Income (Logarithm)	0.96	1.01	0.77
Marital Status (Reference Group: Never Married)			
Married (Living Together)	0.93	0.95	0.85
Widow and Widower	0.93	-	-
Widower	-	0.95	-
Widow	-	-	0.88
Divorced (Living Separate)	1.00	1.07	0.88
Gender (Reference Group: Male)	1.53	-	-
Geography (Reference Group: Urban)	1.17	1.05	2.49
Experience (Age* Years of Education)	1.00	1.00	1.00
Age Group (Reference Group: 14-24)	-	-	-
(14-24)	-	0.74	1.27
(25-34)	1.05	0.77	1.28
(35-54)	1.04	0.80	0.98
(54-64)	1.29	-	-
Educational Level (Reference Group Primary and Below)			
Primary and Below	-	1.60	3.25
Secondary	1.11	1.86	2.87
College(11, 12 and Bachelor)	1.02	1.82	1.99
Graduation(Masters and Above)	0.56	-	-

Source: Authors Calculation

The results indicate that higher the age of an individual higher is the probability to work in informal sector in Nepal. Relative to fresh working age group, older people in full sample as well as in male sample are more inclined to informal jobs in

Nepal. In case of Nepal there are fewer opportunities for fresh workers to work first informally like students and part time jobs, so people directly inter into formal jobs. But, most of the country cases suggest that fresh age group works informally more. It is somehow related to the subsistence level agriculture related dependency in Nepal that informal jobs are by definition no rarely available besides agriculture. The result depicts typical characteristic of the informal employment that higher the age group higher chances to work informally that they never get social securities. Neither they contribute to social security fund nor do they obtain any from government social securities. It might further perpetuate the situation. Again, among the female sample, lesser the age groups higher the chances to work in informal sector if reported. It might have two dimensions. First, supply side argument is, due to family responsibilities and social pattern, older females are more bound to work within the home which is never reflected in the data. And, another demand side argument can be informal job markets demand younger female that they are trustworthy and efficient in the work place followed by slight social change during the years.

Level of education is another deterministic factor whether an individual chooses the informal employment. The result, reference to the group having the educational status less than primary education, indicates that an individual having secondary level education has highest chance to work in informal sector. It might be the case that more than fifty thousand fresh SLC failures inter to the job market in Nepal who rarely get formal job in Nepal. As, an individual lies in college group composed of higher secondary and bachelor level, his/her likelihood to work informally is again higher than reference group. It might be the reason that economy is being more informal that educated people are engaged in it. Intuitively, an individual having higher degree like masters and above has less likely to work in informal sector that such highly qualified people get mostly formal jobs in Nepal. Same is true for male and female sample estimates too.

All the regression models report good fit. The explanatory power of the models ranges from 25 to 36 percent, though it seems smaller. They believe that the data set used is cross section one. All the coefficients besides few in female sample estimates are significant as reported in the respective table footnotes.

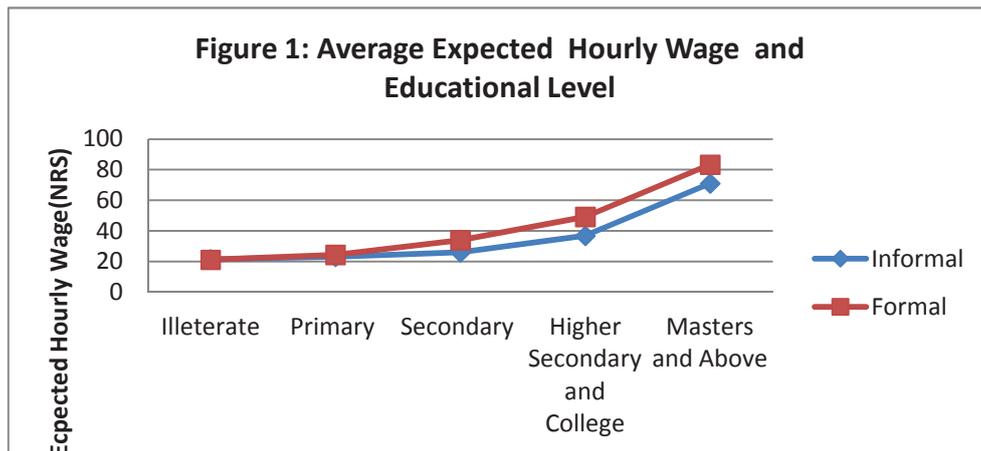## 4.2 Wage discrimination in formal and informal sectors

The regression results reported in Table (3) reveals that formal year of schooling of any worker is determining factor of wage in Nepal. The experience of the worker measured by interaction of years of schooling and age followed by gender are also statistically significant variable to determine wage in Nepal. Since the dependent variable of the regression equation is in logarithms, the size of the coefficients

cannot be interpreted directly. To simplify the interpretation, expected wage rates of an average worker estimated as defined in methodology and plotted.

Table 3: Wage[3] discrimination in Nepal

VARIABLES	Logarithm Measure		Level
	Hourly Wage	Weekly Income	Hourly Wage
Years of Schooling	0.0186***	0.0066	11.46
	(0.0046)	(0.0043)	(13.74)
Experience Proxy (Age* Years of Education)	0.0024***	0.0020***	0.500*
	(0.0001)	(9.46e-05)	(0.301)
Gender (Male Dummy)	0.167**	0.299**	52.62
	(0.0249)	(0.0235)	(74.65)
Constant	2.262**	6.302**	-164.6
	(0.0342)	(0.0321)	(102.6)
Observations	5,588	5,631	5,704
R-squared	0.284	0.232	0.003

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Figure 1: Average Expected Hourly Wage and Educational Level

---

3   The NLFS report available in http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@ilo-kathmandu/documents/publication/wcms_118294.pdf link explains in detail about the measurement of the wage. The questionnaire administered is also mentioned in its annex. They asked the people regarding their time spent in last one year and decomposed monthly level also. To overcome the long recall information bias, they also asked about the monthly and weekly information regarding their time spent in all economic activities. If they are working in informal and paid in kinds, it is indirectly assessed that how many hours or week they have to work to have equivalent amount of goods and services. This paper used hourly and weekly wage information available. Some outliers are treated to reduce the spuriousness of estimate.

As such, having to rely on informal sector jobs may constitute an important loss of human capital. Results in Figure (1) suggests that a worker in the informal sector in Nepal with primary education earns similar wage-rates to those of a worker in the formal one. There seems no substantial difference for secondary level educational group too. Neither they earn more nor there is difference between formal and informal one. On the contrary, returns to investments in secondary and tertiary education are quite significant in the formal and informal sectors. For instance, a typical formal worker in Nepal who has completed secondary, higher secondary and college level respectively would earn double the primary level. It is found that the workers in formal sector, each educational stratum earns about 20 per cent higher wage than informal sector workers. Similar is the case for those who earned higher degree.

Wage regressions indicate that returns to education among workers in the informal sector are generally low. As such, having to rely on informal sector jobs can constitute an important loss of human capital for relatively undereducated workers, especially under the limited situation of intra-sector and inter-sectoral mobility. Results indicate that the average worker in the informal sector is somehow disadvantaged versus the average worker in the formal sector, as they are uncovered against social risks and are generally employed in low paid jobs. As such, having to rely on informal sector jobs constitutes an important loss of human capital for the people working in informal sector.

V.   Concluding Remarks

Significant portion of economic activities in Nepal are unobserved. According to World Bank estimates, it stands at least 38 percent of the GDP these days, which is more than world average. That volume might have legal and illegal facets. Out of legal informal and unobserved segment, informal employment plays significant role that by nature our economy is informal.

There are various socio-economic determinants whether people opt for informal employment. The ethnicity definitely matters whether participates or not in informal job. People living in urban areas are engaged more in informal jobs in Nepal. Wage level definitely matters whether a person remains in that informal job or not. Higher the income higher the chance of participating in the job market but female group behaves opposite to it. Married people are more engaged in informal job than unmarried. Separated and divorced are more inclined to informal jobs but females in this category are not typically. Males are more exposed to informal job. Here experience does not matter whether a person opt to work in informal sector. Contrary to other similar types of economies, people in Nepal work in informal sector despite their older age. Relative to the primary and below education level,

people with secondary education participate in the informal job followed by higher education and college. But, people having qualification equivalent to masters and above qualification naturally less likely to opt for informal employment.

There is wage discrimination in formal and informal sectors. Educational returns are also discriminatory with respect to sector and educational level. It further perpetuates the individual engaged in informal sector that neither they contribute to social security fund nor they get sufficient wage. Therefore, a serious checking mechanism is must at national level that ever increasing unobserved share of national GDP might cause further uncertainties. Among the legal informal employment in Nepal, there is serious uniqueness as the reflection of Nepalese economy. Thus, while formulating any policies related to informal sector, gender, geography, educational status, marital status, age and ethnicity status are to be considered. The wage differential and returns to education in Nepal are different for formal and informal sector. Therefore, suitable compensation packages can be introduced so that the working poverty might not increase further.

REFERENCES

Adam, M.C. and Ginsburgh, V. (1985).The effects of irregular markets on macroeconomic policy: Some estimates for Belgium," *European Economic Review*, 29(1),15–33.

Angel-Urdinola, D. F. and Kimie, T. (2012). Micro-determinants of informal employment in the Middle East and North Africa region. *World Bank.*

Asea, P. K. (1996). The informal sector: Baby or Bath water?" *Carnegie-Rochester Conf.* Series Public Policy, 45,163–71.

Becker, G. S. (1968).Crime and punishment: An economic approach. *Journal of Political Economy*. 76,(2),169-217.

Cassel, D. and Cichy. E. U. (1986).Explaining the growing shadow economy in East and West: A comparative systems approach. *Compar. Econ. Stud.,* 28(1), 200–41.

De Soto, H. (1989). *The Other Path: The Invisible Revolution in the Third World*. New York, NY: HarperCollins.

Eilat, Y. and Zinnes, C. (2000). The evolution of the shadow economy in transition countries: Consequences for economic growth and donor assistance. *CAER II Discussion Paper* No. 83.

Feigh, E.L. (1989). *The Underground Economies.* Tax Evasion and Information Distortion, Cambridge: *Cambridge U. Press*.

Frey, B. S. and Pommerehne,W. (1984).The hidden economy: state and prospect for measurement. *Rev. Income Wealth,* 30(1), 1–23.

Gerxhani, K. (1999). The informal sector in developed and less developed countries: A literature survey. *Public Choice,* 120(3-4), 267-300.

ILO (2002). Decent work and the informal economy: Sixth item on the agenda. *International Labour Conference*, Geneva.

Katsios, S. (2006). The shadow economy and corruption in Greece. *South-Eastern Europe Journal of Economics*,1,61-80.

Kaufmann, D. and Kaliberda, A.(1996).Integrating the unofficial economy into the dynamics of post socialist economies: A framework of analyses and evidence. *The World Bank,* Policy research workings paper No 1691.

Kumar, A. (2011).The cost of the black economy. *The Hindu,* August 20.

Loayza, N.and Rigolini, J. (2006). Informality trends and cycles. *The World Bank,* Policy research workings paper No 4078.

Looney, R. (2006). Economic consequences of conflict: The rise of Iraq's informal economy. *Journal of Economic Issues*, XL(4).

Schneider, F. (2004). The size of the shadow economies of 145 countries all over the world: First results over the period 1999 to 2003. *IZA, discussion* paper No. 1431.

Schneider, F., and Enste, D.H. (2000). Shadow economies: Size, causes, and consequences. *Journal of Economic Literature*, XXXVIII, 77-114.

Tanzi, V. (1980). The underground economy in the United States: Estimates and implications. *Banca Nazionale del Lavoro*, 135(4), 427–53.

……………… (1983).The underground economy in the United States: Annual estimates, 1930–1980. *International Monetary Fund*, Staff papers, 30(2), 283–305.

Thomas.J.J (1992). *Informal Economic Activity.* London School of Economics, London, Handbooks in Economics.

World Bank.(2012). http://www.nationmaster.com/graph/eco_inf_eco-economy-informal.