# *Informal Construction Employment, Earnings and Activities: A Boon or Bane for Tanzania?*

*By*

***Beatrice Kalinda Mkenda[1] and Jehovaness Aikaeli[2],[3]***

## Abstract

*This paper assesses whether the growth of informal construction employment and activities in Tanzania are a boon or bane for informal workers. It examines the importance of employment and income provision, employment conditions, and linkages between formal and informal firms. It also examines the determinants of earnings of workers and the challenges faced by the informal construction sector. The study finds that informal construction activities are important in providing employment and income to people, although a significant number of employees work without contracts and pensions. The level of informal sector earnings is also lower than that of the formal sector. The statistically significant results from regression analysis of the determinants of earnings, which are positively related to earnings are; age, education level, and number of years of experience. The policy implications of this study include: the need for informal construction employees to be affiliated to pensions and health insurance benefits; requirement of a mechanism to enable them to formalize easily in order for them to access credit and to expand their operations; improvement in their skills is also important to enhance their income levels so as to reduce poverty; and to empower them to share in the growth of construction activities is important.*

*February, 2015*

[1]Department of Economics, College of Social Sciences, University of Dar es Salaam, Box 35045, Dar es Salaam, Tanzania; bkmkenda@gmail.com; bkmkenda@udsm.ac.tz.

[2]Department of Economics, College of Social Sciences, University of Dar es Salaam, Box 35045, Dar es Salaam, Tanzania; jaikaeli@yahoo.co.uk; jaikaeli@udsm.ac.tz.

[3]We would like to extend our heartfelt gratitude to all the participants to the Regional Workshop on "Sharing Growth through Informal Employment in East and Southern Africa" that was held in Entebbe (23-24th January, 2014) for their useful comments. Their comments helped to improve our paper. We thank the International Development Research Centre (IDRC) for the financial support that enabled us to undertake this study. We also extend our gratitude to two anonymous referees who provided us with useful comments.



Electronic copy available at: http://ssrn.com/abstract=2706036

## *1. Introduction*

Tanzania's construction sector is experiencing unprecedented growth. The changing skyline of its commercial capital, Dar es Salaam, is testimony to this growth. A number of multi-storey buildings now dot the skyline of the city. This growth in construction activities has been referred to as the "emerging gold mine"; owing to the 24% annual return on investment in real estate that investors in Dar es Salaam can reap.[4] The boom in construction activities is not confined to the commercial capital; other cities are also enjoying growth in construction activities. For example, Mwanza is emerging as a vibrant commercial city; in the words of one journalist, "what used to be a home to thousands of squatters and dusty roads has today become a haven of skyscrapers, modern gardens, well-built roads plus robust economic activities" (Liganga, 2010).

The growth in construction activities has been spurred by two factors; first, there has been an increase in government budget allocation to infrastructure development, which has been recognized as very crucial for propelling overall growth in the economy. For example, from being allocated nothing in the 2005/06 budget, the Ministry of Works' allocation to road funds went up to 8.4% of total government expenditure in 2011/12 (Ministry of Finance, 2014). According to the National Bureau of Statistics (NBS) & Ministry of Finance (2013), the rapid growth of the sector has been primarily driven by developments in roads, housing and mining industries. The second factor is the increase in private investment in real estate and cement production.

This study investigates important aspects of informal construction employment, earnings and activities in Tanzania. Firstly, employing workers informally for construction activities is just as prevalent as in other developing countries. In Tanzania, informal micro and small private entrepreneurs undertake a substantial part of construction activities (see Wells, 2007; NBS & Ministry of Finance, 2013). Given the high growth in construction activities and its labour-intensive nature, it signifies an increase in jobs and income for those engaged in construction work. Thus, we investigate whether informally employed workers are sharing the benefits of this growth in terms of employment provision and income. We further model the key determinants of earnings of informally employed workers in the construction sector. This analysis is important because any attempt to assess whether informal construction workers can benefit from growth must examine issues of employment, and ability to contribute to poverty reduction. The nature of employment in terms of the conditions under which people and whether their jobs are secure are important ones to consider. With regards to poverty reduction, the assessment needs to consider the level of earnings that workers receive, and how they compare to workers in the formal sector, and whether they are sufficient to meet their basic needs. Such an assessment can provide an indication of the level of the wellbeing of people who work in informal construction activities. Thus, the relevant questions we address in this regard are: To what extent do workers rely on informal construction work? Do working conditions in informal construction provide jobs that are secure and decent? What are the levels of income that informal construction workers enjoy? How are earnings determined and how do they compare with incomes in formal employment? These key questions are now addressed.

Secondly, governments in developing countries have seen a rapid increase in informal sector activities, and as a result, they have been putting in place formalization programmes. The basic argument is that through being registered, the informal sector can contribute to tax revenues by widening its tax net to capture incomes in the informal sector. This view is based on the

[4] See The Citizen Newspaper, 2013.



Electronic copy available at: http://ssrn.com/abstract=2706036

assumption that the informal sector is vibrant and productive enough to provide decent incomes for millions of those engaged in it. It is this income, if not taxed, that denies the government potential revenue for social service provisioning. We therefore examine the level of earnings of informal construction workers and assess whether they are high enough to warrant such optimism in terms of its ability to boost revenues for the country.

Lastly, the literature acknowledges that formal construction firms heavily utilise informal construction workers (see for example, Mlinga and Lema, 2001; Wells, 2006; NBS & Ministry of Finance, 2013). This is due to the following reasons; informal workers are cheaper and hence it helps them to cuts costs and to remain competitive, and since most construction work is seasonal, keeping workers on a permanent basis when there is no work is costly. Thus, when work resumes, it is cheaper and easier to resort to informal workers that can be hired for the time they are needed and then dismissed. We investigate the extent to which formal construction firms in Tanzania rely on informal workers for providing labour for their activities. We use survey data that was collected in six major urban centres of Tanzania where construction activities are most visible and are widely undertaken.

The rest of this paper is organized as follows, Section Two provides a brief synopsis of the importance of construction activities in general and in particular in Tanzania. It also reviews literature on perspectives on informality in construction activities, and the relevant definition adopted in this study. Section Three discusses the data and methodology used in analysing the various aspects set forth in this paper. Section Four presents the findings on employment, earnings and informal construction activities in Tanzania. Section Five underscores the key challenges that informal construction activities face, while the lastly Section Six concludes the paper and discusses some policy implications.

## *2. The Importance of Construction Activities and Theoretical Perspectives on Informality*

### *2.1 Importance of Construction Activities*

The construction sector is vital to an economy as it drives growth through forward and backward linkages with other sectors (Moavenzadeh and Rossow, 1975). For example, through consumption of key inputs from the manufacturing sector such as cement, and through construction of non-residential buildings for commercial activities as well as factories, the sector's importance to growth and development cannot be questioned. Another significance of the construction sector can be discerned through activities that are undertaken such as construction of roads, bridges and rail networks. These activities are important as they meet the infrastructural needs for enhancing the smooth running of economic activities. For developing countries like Tanzania, this becomes even more significant since development of key transport routes helps to connect remote rural areas that produce agricultural products to key markets where they are needed. It is in this sense that the construction sector is regarded as a key sector for achieving the Millennium Development Goals (see Lopes *et al*., 2011). Construction activities are also important for aiding in provision of residential houses, hospitals and schools. Such construction of public structures is important for welfare of people as it ensures provision of decent shelter and public services. Given its significance therefore, efforts aimed at understanding its operations so that the challenges that are faced are addressed can go a long way in improving its efficiency, and in further enhancing its contribution to economic growth.

Another key importance of the sector lies in its contribution to employment creation, one of the basic development objectives. Given that construction activities are technically flexible, the

sector ensures employment creation at various levels of skills. For example, there are aspects such as maintenance activities that are highly labour-intensive and others that are more specialized such as engineering and architecture. The sector is also significant in income generation for people that get employed in construction, and for income redistribution, given that small firms get entrepreneurial opportunities (Moavenzadeh and Rossow, 1975). This is important as it can address poverty levels as well as income inequalities that are prevalent in developing countries including Tanzania.

Tanzania's construction sector has enjoyed a steady rising trend in its proportionate contribution to GDP between 2002 and 2011. Its average contribution to GDP over the same period was 5.6%. This is significant and it comes second in the manufacturing sector under the industry and construction category. Compared to other East African countries such as Kenya and Uganda, the share of Tanzania's construction sector was 7.3% in 2012, higher than Kenya's 4%, and it was about half of Uganda's share in the fiscal year 2011/2012, which was 14.9% (Ndaiga, 2012; Uganda Bureau of Statistics, 2014). In terms of employment contribution, the share of formal employment in the sector fluctuated between 2005 and 2007, and between 2010 and 2012, although the trend is rising from 2011 (National Bureau of Statistics & Ministry of Finance (2013, 2012, & 2007). It is likely that more jobs were created in the formal sector beyond 2011, given the rise in private investment in real estate and investment by the government in infrastructure development. In informal construction activities, a 2010 survey by the NBS indicates that 89,664 people, who constituted 81.6% of all people engaged in construction work, were employed by small contractors, and that small and micro enterprises (SMEs) dominated the construction industry, standing at 79% of all construction firms (NBS & Ministry of Finance, 2013).

### *2.2 Perspectives on Informality in Construction*

Many researchers in the literature have defined informality. Hart (1971, 1973), a social anthropologist coined the concept, and he characterised the informal sector as marginal activities whose main task was provision of income for poor people, as well as providing a safety net in crisis times. Activities in the informal sector were seen as operating distinctly from the formal sector (Chen, 2012). Despite Hart's early work, the International Labour Organisation (ILO did the pioneering research on the informal sector in Kenya. The ILO's work characterized informality as avoidance of government regulations and taxes. Although initially seen as providing subsistence to families, the sector grew, and it had positive impacts on income distribution and the labour market. Further research revealed that the sector was actually dynamic and provided potential for economic growth and employment (Gërxhani, 2004).

Other theoretical debates of what constitutes informality sprung up, most notably, by de Soto in the late 1980s (Gërxhani, 2004). Termed the *legalist* school by Chen (2012), this debate and research focused on studying the informal sector in a regulatory framework, and it saw the informal sector as comprising of "micro-entrepreneurs who chose to operate informally in order to avoid the costs, time and effort of formal registration and who need property rights to convert their assets into legally recognized assets" (Chen, 2012; p.5). Thus, the key distinguishing feature of informality according to this approach is its legal status (Gërxhani, 2004).

Other schools of thought on informality that Chen (2012) discusses are the *structuralist* school, and the *voluntarist* school. The structuralist school sees the informal economy as subordinated economic units (micro-enterprises) and workers that serve to reduce input and labour costs and,

thereby, increase the competitiveness of large capitalist firms. The voluntarist school focuses on informal entrepreneurs who deliberately seek to avoid regulations and taxation. Another approach to informality sees the informal sector as production activities that are done illegally (that is, they are forbidden by law. For example, the production and sale of narcotics) and underground (these are activities that are legal when done in compliance with the law, but are deliberately hidden from authorities) (Chen, 2012). All these theoretical debates are insightful, but for the purposes of this study which focuses on informal construction activities, we limit ourselves to the characterisation of informality in construction activities that was developed by Wells (2007).

According to Wells (2007), informality in construction activities exists in four areas, namely, the informal sector enterprises, informal labour, the informal construction system and informal building/settlements (p.87). It is useful to expand on what these areas are. First, in informal construction activities, it is possible to find informal construction firms. These are firms that undertake construction activities but are not registered. In Tanzania, the informal construction sector is recognized as an integral part of the construction sector, and it includes "those enterprises or individuals carrying out, and supplying labour for, construction work without business licences and/or registration with the Contractors Registration Board (CRB)" (Mlinga and Lema, 2001; p2).

The second area relates to labour that is used in construction activities. More often than not, one finds workers that are employed in construction work but do not have contracts. Informality of employment in construction in most developing countries is actually regarded as the norm rather than the exception (Wells, 2007; see also Mitullah and Wachira, 2003, for the case of Nairobi; and Jason, 2007, for the case of Dar es Salaam), owing to the fact that construction workers are employed on a casual basis, with no contracts or social protection. For example, in 2003, the percentage of informal workers in total construction employment in Tanzania was estimated to be 70 to 95 (WIEGO, 2013).

The third area covers the system that is followed when procuring building permits. When the procurement for building permits is marred with informality, then the system is said to be informal. For Tanzania, findings by the Global Housing Indicators (GHI, 2014) show that in 2011, approximately 68% of Tanzania's urban population lived in unplanned settlements. Such a high level of informality in human settlements indicates a dearth of services related to urban planning and also lack of formal capacity to enforce standard building regulations. One can add for the case of Tanzania areas where construction projects are not registered with the CRB. According to the CRB (2011), unregistered construction projects constituted the most common problem on construction sites that they inspected. This constitutes non-compliance with the registration act and puts workers at risk, and it also prevents the CRB from monitoring the required standards on the sites.

The forth area of informality lies in buildings themselves. In the developing world, it is quite common to have areas where residential settlements are built without planning guidelines. For example, a study by Makalle *et al*. (2011) of Dodoma found a steady growth in informal settlements in the housing sector that was providing accommodation to approximately 30% of the city's population. Informal housing settlements are actually a common feature in Tanzania's urban centres. The main factor behind the proliferation of informal housing settlements in Tanzania's major towns is rapid urbanization and unguided spatial expansion the inability of formal urban planning policies and regulations to cope with the pace of growth (Makalle *et al.,* 2011).

According to Wells (2007), these four areas of informality in the construction sector often interrelate, and hence cannot be divided into areas that stand-alone. For example, an informal construction firm can employ workers informally and succeed in building a house in an informal settlement without acquiring the necessary building permit. Indeed, such cases are quite rife in the developing countries. In this study, we focus on informality related to firms in construction activities, and workers that are employed informally in both formal and informal construction firms. It is these forms of informality where policy should focus in order for the participants to share the benefits of inclusive growth.

## *3. Data and Methodology*

### *3.1 The Data*

The analysis uses survey data that was collected in 2013. The survey's target population was the population in urbanized regions of Tanzania, since this is where most informal construction activities are evident, and can be captured. We thus purposively focused on the most urbanized regions based on population data published by the NBS, and we picked on six of them; Dodoma, Arusha, Tanga, Dar es Salaam, Mwanza and Mbeya. To get the samples for the study, we used weights based on the percentage of urban population in each region. The weights were then used on the number of questionnaires we envisaged to administer. In total, the following respondents were interviewed: 1,445 micro and small entrepreneurs; 71 firms; 328 workers; and 28 policy makers and practitioners. Table 1A in the appendix gives a distribution of the respondents surveyed by region. The analysis in this study employs part of the data that was collected on various aspects of construction activities by using structured questionnaires.

The survey included construction firms that are not registered and micro entrepreneurs that operate informally. In total, 9 construction firms were captured that were informally operating without registration. It is important to bear in mind that informality in employment and operations is rampant in formally registered construction firms that were surveyed. The kind of construction projects that informal construction firms undertake are; building of residential houses, schools and religion buildings, office and business premises, and local government infrastructure. The other informal activities that we surveyed were those activities that we classified as micro and small in nature. This group included entrepreneurs who operate with not more than ten employees, some who operate on their own. The distribution of trades is related to how urbanized the region is, with Dar es Salaam and Mwanza topping the list of varieties of informal construction activities. These cities are more urbanized, and construction activities are more evident as the cities expand. They are also the major commercial cities in Tanzania.

### *3.2 Modelling Determinants of Earnings*

To judge whether informal employment is a boon or bane, the role of informal sector employment to earnings should be established. If the sector employs the majority of people but its contribution to earnings and thus welfare is relatively low, it means informal employment, activities and hence the income earned from this sector is rather a bane than a boon to those engaged in such activities.

Our analysis of the determinants of earnings was guided by the human capital theory[5], which has guided empirical analysis of determinants of earnings in the literature (Willis, 1986; Kerr and Teal, 2012). According to the human capital theory, an individual's education and training raises his productivity through knowledge and skills that are imparted, which raises his future income and lifetime earnings. Pattern variations between earnings and education have been studied at least from the 1950s and 1960s (e.g., Miller, 1955). If earnings are *W*, and schooling years were *S*, then the earnings function of *S* is written as, $W = f(S, X)$. Because an individual starts school at some given age, *M*, and he or she may be aged *A* years, the earnings function is derived with a view that the years one has worked *X*, are $X = A - X - M$; and that directly factors age as a variable in the earnings equation;

$$\ln W = f(S, A) + e \, . \qquad (1)$$

In Equation (1), *e* is an error term. The positive impact of education on earnings is hinged on the value derived from productivity enhancement through education, and this is assumed to increase with the level of education. Learning does not only come from school, part of it is from experience, which means on-the-job training is one of the key factors that increase productivity and thus earnings to employees.

The only question that might remain is whether education does really produce utility maximizing earnings in a lifetime and thus influencing employment in some types of jobs. This question can be answered theoretically by a simple illustration. Suppose years of schooling, *S*, provides to *y(S)* earnings, and the schooling cost is *h(S)*. A worker would be maximizing a utility function of the form,

$$U(S, y) = y(S) - h(S), \qquad (2)$$

where *h* is an increasing strictly convex function. We can generalize the education incentive by a continuous discounted present value objective function,

$$\int_s^{\infty} y(S) \exp(rt)\, dt = y(S) \exp(-rS)\, /r \ . \qquad (3)$$

It is assumed that an individual earns nothing before schooling and thereafter earns *y(S)* and that the discount rate is *r*. This objective function sets marginal cost of each additional year of education equal to the marginal earning (which is achievable after schooling), i.e. $h(S) = r(S)$. Since in any one schooling year the marginal cost of schooling is higher than the respective year's foregone earning, this is an incentive for future higher earning, and in view of this marginal equilibrium condition, there is always an optimal schooling choice first-order condition, which can be specified as,

$$h'(S) = y'(S)/y(S). \qquad (4)$$

This condition simply means that if an optimal schooling level is chosen, utility will be maximized and that comes from income returns of education. Intuitively, it is education that leads workers to a choice of better paying jobs in rare professions, and so forth; and it is the same that adds productivity and therefore makes employers willing to pay more to educated employees.

[5] Mincer (1958, 1974) is one who formulated the earnings function over a lifetime, which is widely used in earnings research (see Willis, 1986; Polachek, 2007).

Other investments that can be made to enhance one's productivity are through on-the-job training, medical care, consumption of vitamins, and being knowledgeable on one's economic systems (Becker, 1962). Thus, earnings across individuals will differ due to the acquired characteristics that they possess. Besides the human capital theory, other theories of wage discrimination point to other factors that are not linked to productivity, such as race and gender (Cain, 1984). The empirical analysis is thus guided by the literature, where variables such as number of years spent in school, workers' age, gender, and number of years of experience in the labour market, are the key factors that explain a large part of earnings differentials across individuals. The hypothesised relationships are that the number of years spent in school is positively related to earnings, and that age is positively related to earnings, but earnings will initially rise and then fall. Hence the coefficient on age-squared will be negative. The years of experience also positively influence earnings. It is interesting to see how these factors account for earnings differentials among informal construction workers, and how important the factors are. The specification of the model for estimation is guided by previous studies of other researchers. The logarithmic monthly earnings[6] are modelled as determined by some individual characteristics, and so equation [1] is extended to an estimation model, which is specified as equation [5].

$$\ln W = \alpha_0 + \alpha_1 Age + \alpha_2 Age^2 + \alpha_3 Educ + \alpha_4 Exp + \alpha_5 Sex + \alpha_6 Type + \varepsilon \quad (5)$$

The variables in the empirical model are defined as follows; *Age* is in number of years; *Sex* is coded as Male = 1 and Female = 0; *Educ* is coded as none (0), primary (1), secondary (2) and university or college (3); *Type* is employment type and it is coded as 1 (formal) and 0 (informal); *Exp* is in number of years, and $\varepsilon$ denotes the disturbance term. Due to four ways in which data for earnings was reported, namely monthly, weekly, hourly and per job, monthly earnings are used, with weekly earnings converted to monthly ones by multiplying by four. This resulted in observations dropping to 119.

## 4. *Presentation and Analysis of Results: Evidence from Survey Data on Informality, Employment Conditions, Level of Earning and Regression Results on Determinants of Earnings*

### *4.1 Informality in Construction Sector in Tanzania*

We cover two aspects of informality in construction activities, namely, informal firms, and workers that are employed informally, both by formal firms and informal construction firms. We discuss each of these two aspects separately.

#### *4.1.1 Informal Construction Firms*

The average age of owners of these firms is 45 years, with the youngest and oldest being 26 and 61 years, respectively. A significant number of them attained primary and secondary education. However, more than 50% of these owners indicated having attended specialised professional training that was acquired through vocational training, short courses, and on-the-job-training. The types of specialized skills that the owners have are masonry, carpentry, brick making, plumbing, *inter alia*. The oldest firm was founded in 1990, with the youngest founded in 2013. Regarding the number of years of experience that owners had before founding the firm, the average number of years is 11, with 2 years being the minimum and 20 years being

[6] It is possible to have other functional specifications apart from logs. However, in the literature, the logarithmic form has been found to be more successful, and we employ it here (Bhattarai and Wisniewski, 2002).

the maximum. Before founding the firms, the owners did different jobs in both the public and private sectors.

We investigated what motivated the owners to set up the informal firms in construction. Most of the owners were self-motivated in starting the firms, followed by those that started their firms to diversify their sources of income. As for sources of capital to start up the firms, a significant percentage of the owners used their own savings to start the firms (67%). This is similar to studies elsewhere in Africa on the informal sector, where findings show that own savings are the major source of start-up capital (see for example Tshuma and Jari (2013) for South Africa, Proctor (2014) for Malawi and Mozambique, and Otoo (2012) and Awasu (2012) for Ghana). The use of own savings to establish firms poses a constraint on the scale of the business started, as well as investing back into scaling up the operations and increasing productivity.

The types of activities that the firms undertake involve building of residential houses (most of them indicated that it was their most important activity), followed by construction of office and business premises, schools and religious buildings. The firms also undertake jobs given by the local governments. With regards to workforce, all firms employed casual workers, and they admitted to not giving them contracts. Only one firm had one permanently employed worker who had a contract. This indicates a prevalence of the use of casual labour in informal construction, and the reality of insecurity of jobs in the sector.

### *4.1.2 Micro and Small Entrepreneurs*

The demographics of the micro and small entrepreneurs are that 93% of the entrepreneurs are male, and their average age is 32, with the youngest and oldest being 17 and 68 years, respectively. As for the age distribution of the entrepreneurs, of all the surveyed entrepreneurs, 56% of them were between 25 and 35 years of age. This shows that most of them are youthful, and it reflects the employment crisis in Tanzania that makes youths to resort to the informal sector for earning a living. The average years of experience of the entrepreneurs is 9 years, with 1 year and 49 years being the lowest and highest number of years of experience.

All the entrepreneurs we surveyed operated informally, and we got an indication of why they operated informally, as being; insufficient capital to start big formal businesses (about 67% of the respondents), difficulty in understanding how to formalise, and issues related to tax laws. The responses show that approximately two thirds of the entrepreneurs indicated that insufficient capital prevented them from formalizing their activities. Thus, the perception of the entrepreneurs is that they need sufficient capital to start a big business and hence to operate formally. The respondents had the option of mentioning other reasons for deciding to operate informally. Of all the respondents, seventy of them indicated other reasons as follows; lack of formal employment, which was noted by 77% of the respondents, low education, high formalization cost, and inadequate government help, as well as motivation.

Even though all small and micro entrepreneurs operate informally, an overwhelming majority would like to operate formally, if reasons why they operate informally are dealt with. Around 91% of all small and micro entrepreneurs were willing to formalize their operations. Given that the willingness or intention of small and micro entrepreneurs to formalize is strong, it is encouraging and must be taken as an advantage by policymakers. Such willingness would translate into actions being taken if a careful crafting of formalization processes and procedures is done in such a way that highlights aspects that would benefit entrepreneurs who are currently operating informally. This can improve the way the formalization process is currently

perceived. The current perception of the entrepreneurs of the formalization process is that it has been effective, as approximately 80% of the entrepreneurs gave this indication. Of those that indicated that it was ineffective, about a third of the entrepreneurs said low awareness was the reason for the ineffectiveness, followed by those who indicated that the sensitization process was low. This begs the question; to what extent has sensitization and education of the formalization process and programme occurred?

### *4.1.3 Informality of Employment in Construction Sector*

The other aspect of informality covers employment. Before we discuss the key findings, we present the demographics of the surveyed workers. The proportion of women who work in informal construction activities in our survey is a mere 5%, and the rest, 95%, being men. The low participation of women in informal construction work was also found by the NBS in a nation-wide survey that found only a quarter of women (NBS, 2013; p.21).[7] The mean age of workers is 34, with the youngest aged 16 and the oldest aged 74. The median size of the household of workers is 7.5. The distribution of marital status is as follows; 62% of workers are married, 34% are single, and 1% and 3% are widowed and divorced, respectively. The median number of years they have worked in construction was 17, with the lowest being 1 year, and the highest being 46 years.

The education distribution of surveyed workers is as follows; 56% of the workers have primary level of education. There are both negative and positive aspects to this low level of education of informal construction workers. On the positive side, such workers are absorbed in jobs instead of being easily excluded on account of their low level of education. Thus, construction activities are able to provide employment for people with little education or skill, and those from poor sections of the population, as well as migrants from rural areas (ILO, 2001). On the negative side, low levels of education of workers compromises the quality of the product produced, does not provide workers with a high income compared to others with a higher level of education (see regression results of the positive effect of education on earnings in Table 3), and entails spending on these workers for on-the-job training and vocational training to enhance their skills. For informal construction firms, such expenditure can be quite enormous.

Findings from our survey indicate that both informal construction firms and some formal firms in construction activities employ workers without contracts. They heavily rely on employing informal workers for their construction activities. To gauge the extent to which formal firms employ workers informally in the construction sector, firms were asked to indicate whether they used casual workers in their projects. A staggering 82% of formal firms said that they used casual workers for *all* their projects. This is a clear indication of the significant linkage or dependency that the formal construction firms have on informal workers. Such employment raises some concerns in terms of employment security and protection. Further evidence of informality of employment among construction work is the fact 76% of all surveyed workers working for formal and informal construction firms did not sign contracts, and only slightly short of a quarter signed contracts. All those that did not sign contracts worked informally.

## *4.2 Informal Construction Employment, Level of Incomes and Determinants of Earnings*

[7] The NBS study attributed the low participation of women in construction activities to various social-structural constraints that include among others poor customary laws and norms that hinder women from getting access to key resources such as land, credit, productive inputs, education, and information; the coexistence of multiple laws which create ambivalence (for example, customary and statute laws relating to marriage and inheritance); and gender bias in access to basic human resource development services such as education and vocational training, which causes gender gaps in adult and youth literacy rates and subsequent poverty (NBS, 2013; p.22).

### *4.2.1 Employment Provision and Working Conditions*

Informal construction work provides employment to many young people and adults. We gauged the extent to which construction work is regarded as being the primary source of income by asking workers in both formal and informal construction firms, whether they regarded construction work as their main source of income. About 82% of the respondents regarded informal construction work as their main source of income, an indication that informality in construction work is here to stay. Those who did not consider it as their main source of income had other activities they do together with engaging in construction activities, namely farming (55%), running a business (31%), and having a second job (14%).

The condition of work in informal construction activities is also important. A research by Jason (2007) that targeted informal construction workers in Dar es Salaam finds that work is "insecure, unsafe and unprotected" (p.38). Our study surveyed workers in informal and formal construction firms, and our findings show that the conditions have not changed; both informal and formal firms in the construction sector provide poor working conditions for workers. Specifically, we examined the terms under which workers are employed, and whether they are provided with employment contracts.

Starting with the terms under which workers are provided with employment, our survey shows that 73% of all interviewed workers (from both formal and informal construction firms) are employed informally. The lack of employment contract also indicates that workers are denied benefits that they can enjoy under labour legislation, for example insurance or health cover. The survey shows that 73% of the workers did not get any other benefits apart from their wage. Further, among all the workers that are employed informally, none of them signed an employment contract. The fact that workers do not sign any employment contract means that they are largely very insecure in their jobs. The lack of employment contracts means that workers are outside any labour legislation that can provide them with employment protection. It also means that they can be fired at any time, resulting in a loss of their only source of income, especially for a large percentage of them whose main source of income is informal construction work. The lack of employment contract also indicates that workers are denied benefits that they can enjoy under labour legislation, such as insurance or health cover.

### *4.2.2 Level of Earnings*

How much people earn in informal construction activities is important to examine since it indicates the level of wellbeing and ability to meet basic needs. The level of earnings can also indicate their ability to save sufficiently for expanding their activities. The level of earnings in the sector also allows us to compare them with those earned in the formal sector, and at the policy level, such an analysis can help to provide an indication of whether such earnings can significantly contribute to tax revenues once informal activities are formalized. We also examine what determines the level of earnings of informal construction workers. In general, studies have found a positive association between earnings and level of education. We investigate whether this is the case with informal workers.

Workers were asked to report their earning based on how they are paid, whether at a monthly, weekly, hourly, or per job.[8] We look at average earnings for each of the payment methods. The earnings are reported in Table 1. In general, workers who are informally employed have lower average earnings than formally employed workers, except those that are paid per hour, where the mean earnings of workers who are informally employed are slightly higher. Compared to the minimum wages, the average earnings of informal workers in construction activities are higher. As a basis therefore on which to tax these earnings, it is possible to do so if such employees are registered. This is because it is possible to determine the level of taxation if this information is available, bearing in mind that construction work does not take place all year round. There are times when constructions workers have no jobs.

An interesting analysis of earnings is that related to level of earnings and education. In general, our survey data shows that workers who are informally employed and have a university level of education have the highest level of monthly earnings. At this level, we see a clear association between education and level of earnings. This association is also seen with workers with no education; they have the lowest incomes per job. However, informally employed workers with a secondary or primary level of education tend to have no association with level of monthly earnings.

**Table 1: Level of Earnings**

| ***Monthly earnings*** | | | | | | |
|---|---|---|---|---|---|---|
| | ***Obs*** | ***Mean*** | ***Std. Dev.*** | ***Min*** | ***Max*** | ***Government minimum wages (Class V-VII contractors*)*** |
| Informal | 9 | 232777.8 | 190379.7 | 75000 | 600000 | ***250,000*** |
| Formal | 32 | 407362.5 | 427817.3 | 15000 | 2000000 | |
| ***Weekly earnings*** | | | | | | |
| | ***Obs*** | ***Mean*** | ***Std. Dev.*** | ***Min*** | ***Max*** | |
| Informal | 86 | 65662.79 | 27378.23 | 3000 | 120000 | **5,769.75** |
| Formal | 14 | 271714.3 | 214275 | 28000 | 800000 | |
| ***Hourly earnings*** | | | | | | |
| | ***Obs*** | ***Mean*** | ***Std. Dev.*** | ***Min*** | ***Max*** | ***1,282.15*** |
| Informal | 22 | 13022.73 | 9432.059 | 7000 | 50000 | |
| Formal | 2 | 11000 | 5656.854 | 7000 | 15000 | |
| ***Per job earnings*** | | | | | | |
| | ***Obs*** | ***Mean*** | ***Std. Dev.*** | ***Min*** | ***Max*** | |
| Informal | 70 | 62814.29 | 117465 | 3000 | 800000 | |
| Formal | 14 | 654285.7 | 857892.9 | 10000 | 3000000 | |

***Note**: *These are contractors who are limited to projects whose value does not exceed TZS 450 million. A daily rate is given as TZS 9,616.10, while a fortnightly rate is TZS 115,393.50. The TZS/$ exchange rate is: TZS 1,620/$ (January 2014).*
***Source**: NBS & Ministry of Finance (2013); Ministry of Labour and Employment (2013)*

[8] Workers provided earnings data, and as such, there is a risk of under-reporting the figures here. However, given that there is no other way of getting this information, it can still suffice for use for analysis, bearing in mind this weakness.

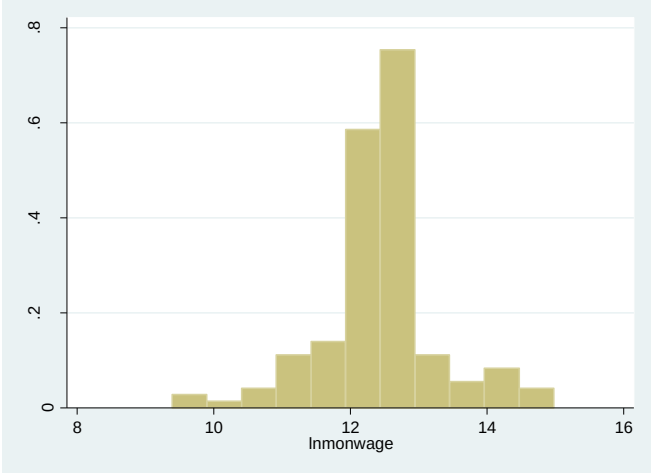
*4.2.3 Determinants of Earnings: Regression Results*

The wage statistics are reported in Table 2, and Figure 1 shows the distribution of the dependent variable *lnmonwage*. Visually, the dependent variable is slightly skewed to the right, and with a Kurtosis value of 5.3, the distribution is leptokurtic compared to a normal distribution. The non-normality of the monthly income is confirmed by the *swilk test* which shows that the hypothesis that *lnmonwage* is normally distributed is rejected.

**Table 2: Wage Statistics**

| ***Mean*** | ***Median*** | ***Skewness*** | ***Kurtosis*** | ***Variance*** | ***Standard Deviation*** |
|---|---|---|---|---|---|
| 12.476 | 12.543 | -0.365 (0.0713) | 5.301 (0.0007) | 0.721 | 0.849 |
| *Shapiro-Wilk W test for normal data* | | | | | |
| ***Variable*** | ***Obs*** | ***W*** | ***V*** | ***Z*** | ***Prob > z*** |
| lnmonwage | 141 | 0.941 | 6.490 | 4.226 | 0.00001 |

**Figure 1: Frequency Distribution of Log of Monthly Wages**




***Note**: lnmonwage = log of monthly wage*

The regression results are reported in Table 3, and they show that the signs on the coefficients are the ones hypothesized in the literature. Except for the coefficient on sex, the results show that all the coefficients are statistically significant. Age is positively related to earnings, and it is statistically significant at 5%; the older a worker is, the more likely that his earnings will be higher. The coefficient on age-squared is negative and it is statistically significant at 5%. It means that as workers get older, earnings fall after a certain threshold. The negative result on the gender variable indicates that women get lower earnings than men, an indication of gender bias in earnings of informal construction workers. However, the coefficient is not significant. Education is positively related to earnings, and the coefficient is statistically significant at 1%; the higher the level of education, the higher the level of earnings. With regards to type of employment, informally employed workers earn less than formally employed workers, and the coefficient is statistically significant at 1%. The number of years of experience is positively related to earnings, and it is statistically significant at 1%; it means that more years of experience result in higher earnings.

**Table 3: Regression Results - Determinants of Monthly Earnings (Workers)**

| | ***Coefficient*** | ***Std. Err.*** | ***t*** | ***P > t*** | ***[95% Conf. Interval]*** | |
|---|---|---|---|---|---|---|
| *Age* | 0.103** | 0.043 | 2.04 | 0.018 | 0.018 | 0.188 |
| *Age squared* | -0.002** | 0.001 | -2.60 | 0.011 | -0.003 | -0.000 |
| *Sex* | -0.252 | 0.325 | 0.78 | 0.439 | -0.391 | 0.896 |
| *Primary* | -0.313 | 0.314 | -1.00 | 0.320 | -0.937 | 0.309 |
| *Secondary* | -0.083 | 0.365 | -0.23 | -0.820 | -0.806 | 0.639 |
| *University/college* | 0.254 | 0.394 | 0.64 | 0.521 | -0.527 | 1.034 |
| *Formal* | 0.410** | 0.187 | 2.23 | 0.028 | 0.046 | 0.789 |
| *Experience* | 0.042** | 0.017 | 2.47 | 0.015 | 0.008 | 0.076 |
| *Constant* | 10.238 | 0.675 | 15.18 | 0.000 | 8.902 | 11.575 |
| *Statistics* | *Number of obs = 119; F(6, 110) = 4.53; Prob > F = 0.0001*<br>*R-squared = 0.249; Root MSE = 0.817* | | | | | |

***Note**: Dependent variable is lnmonwage (log of monthly wages); ***;** - significant at 1% & 5% respectively*

These empirical results are similar to those done elsewhere, and they basically confirm what the human capital theory predicts. At the policy level, the results are insightful as they point to a key policy implication to enhance earnings of workers in the construction sector. This is that investing in education to enhance their productivity is important as it enables them to get higher earnings. Another policy implication points to the lower earnings that informally employed workers receive in construction work. While it is not possible to defend this through survey data, it is quite possible that those who are informally employed are given wages below the government minimum rates, and without contracts. It is difficult to control this except by ensuring an effective enforcement of the law. Thus, policymakers have to look into monitoring the payment of legally stipulated minimum wages to workers.

## *5. Inclusive Growth for Informal Construction Activities: What are the Challenges?*

Informal construction activities in Tanzania face challenges that are limiting them from benefitting from the current growth of the sector. The barriers that they are facing can be appreciated by revisiting the idea of what constitutes inclusive growth. We use the IDRC's definition as "growth that takes place in a context in which economic opportunities (including employment opportunities) expand, the poor's access to these opportunities improves, and inequalities are reduced" (Heintz, 2012). This definition of inclusive growth has three connotations. Firstly, expansion of employment opportunities within the construction sector requires that the barriers that the sector currently faces that inhibit such expansion are eliminated. Secondly, inequalities relating to income must become progressively less. Two key questions are; to what extent do employment opportunities provide workers with sustainable incomes? Do employment opportunities provide the workers with opportunities to provide for their retirement? Thirdly, ability for workers to share in growth depends on their skill levels. Thus, do the skill levels that workers have allow them to take advantage of growth in construction activities? Based on these questions, what evidence is there from the survey? This is addressed in the next sub-sections.

### *5.1 Lack of Social Protection*

The level of poverty and increasing size of the informal sector in developing countries has renewed efforts to consider issues of social protection for millions of people who are eking out a living in the sector. The level of poverty means that millions are unable to meet their very basic needs, and the huge informal sector that most find themselves in is characterized by low and uncertain incomes, as well as lack of savings for old age (see Canagarajah and Sethuraman,

2001). Unique to informal construction activities is the risk among workers of having no income when construction activities are not taking place, and the additional fact that operating in the informal sector means not having any mandatory contributions to social security funds. A more serious concern is the risk of injury that construction workers face, which can deprive them of a source of income, if an injury is sustained. Our study included questions to assess how prevalent lack of social protection was among micro entrepreneurs.

Our data indicates that among micro entrepreneurs, 99% of them do not make contributions to any social security fund. Of the 1% that put some outlay for old age, they contribute to the Parastatal Pension Fund (PPF) and the National Social Security Fund (NSSF). Such a small percentage of entrepreneurs that make contributions to social security is not ideal for inclusive growth, as it is puts them in a vulnerable situation.

### *5.2 Source of Finance for Business Operations and for Start-Up Capital*

Lack of access to finance limits the ability of informal construction firms to expand and create more jobs (NBS & Ministry of Finance, 2013; Heintz, 2012). While lack of access to finance constrains many small-scale firms, firms operating informally face a further barrier in that their records are informal, and hence cannot access formal banks for capital to finance their operations. This affects their ability to improve productivity and production scale. Our findings show that 41% of the micro entrepreneurs got their start-up capital for their construction activities from friends and relatives. Less than half of the respondents accessed loans, and of these, their source was from friends and relatives, microfinance and banks. The situation with informal construction firms is not any better. Two-thirds of the firms used their own savings to start business.

This dearth of access to formal channels of finance that informal firms and micro entrepreneurs face traps them in low productivity operations, and it limits their opportunities for expansion and to benefit from the current economic growth. Further, it has implications on the extent to which poverty and levels of inequality can be reduced. The heavy reliance on own savings and loans from friends and relatives to finance their activities and to start their businesses only perpetuates the existing poverty and low level of growth (see Singh *et. al.*, 2012). To break the vicious cycle of informality and low income, the entrepreneurs have to be encouraged to formalize their operations so that they can access formal sources of finance that can help to increase their level of productivity and boost their earnings.

Our findings from the survey concur with those found by the NBS (2013) in a countrywide survey, which found that "most of the bottom contractors in class seven are weak due to inadequate working capital and lack of support from the government and financial institutions" (p.16).[9] Other constraints that the country-wide survey found that hamper the informal construction sector's effective contribution are; lack of adequate skills, lack of capital, prohibitive regulations, and insecure operating environment (NBS, 2013, p.127).

### *5.3 Level of Education*

An entrepreneur's level of education has an impact on the scale and nature of activities that they do. For example, entrepreneurs with good education are confident and are able to understand procedures involved in loan applications. This can allow them to expand their

[9] Note that according to the classification by the CRB, contractors who are in classes five to seven are small ones (NBS, 2013).

operations, and eventually if they were operating informally, they can transition to formal activities. Such advancement can help in increasing their income level, as well as providing more employment. For practical skills such as construction, a good skill level can also ensure delivery of construction products that are of required standard. Our findings however show that more than half of the micro entrepreneurs surveyed had primary education level as their highest level of education. This is a barrier that limits their ability to access loans to expand their activities.

## *6. Conclusion and Policy Implications*

This paper assessed whether the growth of construction activities and employment in Tanzania is a boon or bane for informal construction workers. Specifically, it examined the importance of employment and income provision of informal construction activities. These aspects are important to examine given the unparalleled growth of construction activities in Tanzania that begs the question as to whether informal workers are benefitting from that growth. The investigation included employment aspects, namely, provision of contracts, security of employment, and linkages between formal and informal firms. On the income side, the study examined the level and determinants of earnings that workers get from informal construction activities. The paper also examined the challenges faced by the informal construction sector, which are preventing workers from benefitting from inclusive growth.

The study used survey data collected from Tanzania's six urban areas. The results are quite revealing; most micro entrepreneurs in informal construction use their own savings to start their businesses and for their operations. Another finding from regression analysis is that education and skills are important for higher earnings. We also found that very few informal construction workers belong to pension funds. This renders them vulnerable, in case of injury and old age.

The policy implications are as follows; firstly, with regards to finance, there is a need to develop a mechanism that enables them to formalize easily for them to access credit and to expand their operations so that more jobs are created. The Business Registrations and Licensing Agency (BRELA) can encourage such steps by offering certification to entrepreneurs who get registered so that they act as a guarantee for a loan either through microfinance institutions or from banks.

Secondly, investing in improving the education and skill levels of informal construction workers is important. Specifically, the skill levels of workers can be improved through courses in vocational training institutions, as well as tailor-made on-the-job training. The CRB should ensure that people who work in construction sites have minimum certified skills that are issued by recognized vocational colleges. Continuous upgrading of skill levels of workers is also important, and hence the CRB should see to it that skill levels of workers are upgraded through running refresher courses and specific construction courses. Since they are charged with seeing to it that contractors are registered, they can strictly enforce rules that will see to it that contractors are registered when they use workers with required skill levels. Another way is setting up a skill development fund through contributions for upgrading the skill levels of workers. This can be encouraged among informal firms so that the task of skill development is shared across all contractors. The contribution can be a small proportion of the value of projects procured through local government, similar to the higher education fee that formal firms contribute to. This investment in skill development of informal sector workers can help to empower workers to share in the growth of construction activities, and it can help to reduce

poverty through higher earnings. Overall productivity of informal firms can also be enhanced through utilization of more skilled workers.

Lastly, a pension fund that is tailor-made for informal workers needs to be set up. Instituting a requirement that informal contractors who register with the CRB remit a certain percentage of all their workers' salaries to the pension fund can achieve this. This will ensure that employees are provided for in their old age, as well as other benefits that may include health insurance, contribution to the education of their children if the workers die and funeral assistance. Education programmes are also important for the workers on these benefits so that they can understand and are therefore sensitized to demand these benefits as a legal requirement

## APPENDIX

**Table 1A: Distribution of Respondents Surveyed**

| | Micro & Small Entrepreneurs | Firms | Workers | Policy makers & Practitioners |
|---|---|---|---|---|
| Dar es Salaam | 785 | 26 | 109 | 16 |
| Tanga | 105 | 7 | 35 | 2 |
| Arusha | 132 | 12 | 41 | 2 |
| Mwanza | 211 | 13 | 64 | 4 |
| Mbeya | 143 | 9 | 54 | 4 |
| Dodoma | 69 | 6 | 25 | 0 |
| Total | 1445 | 73 | 328 | 28 |

## REFERENCES


Awasu, C., (2012), "Relational Transactions: The Social Dynamism of Informal Finance in Ghana", *African Journal of Social Sciences,* Vol. 2 (1); pp. 1-14.

Bhattarai, K and T. Wisniewski, (2002), "Determinants of wages and labour supply in the UK", School of Economic Studies, University of Hull, UK.

Becker, G.S., (1962), "Investment in Human Capital: A Theoretical Analysis", *The Journal of Political Economy, Vol. 70 (5); pp.9-49.*

Business Registrations And Licensing Agency (BRELA), (2008), "The Property and Business Formalization Programme Reform Proposals Volume IV: Business Formalization Reform Outlines and Packages For Mainland Tanzania Programme, Programme Management Unit.

Cain, G.G., (1984), "The Economics of Discrimination: Part 1 & Part 2", *Focus,* Vol. 7 (2), University of Wisconsin-Madison, Institute for Research on Poverty.

Canagarajah, S and S.V. Sethuraman, (2001), "Social Protection and the Informal Sector in Developing Countries: Challenges and Opportunities", Social Protection Discussion Paper Series No. 0130, Social Protection Unit, The World Bank.

Chen, M.A., (2007), "Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment", DESA Working Paper No. 46.

Contractors Registration Board (CRB), (2011), "Annual Report and Accounts for the Year 2010", Dar es Salaam.

Gërxhani, K., (2004), "The Informal Sector in Developed and Less Developed Countries: A Literature Survey", *Public Choice,* Vol. 120 (3/4); pp. 267-300.

Global Housing Indicators (GHI), *Global Housing Policy Indicators*, "Dar es Salaam, Tanzania Results", http://globalhousingindicators.org/en/content/dar-es-salaam-tanzania; accessed January, 2014.

Heintz, J., (2012), "Informality, Inclusiveness, and Economic Growth: An Overview of Key Issues", SIG Working Paper 2012/2, University of Massachusetts, Amherst, USA, Political Economy Research Institute.

International Labour Organization (ILO), (2001), "The construction industry in the twenty-first century: Its image, employment prospects and skill requirements", Report from the Tripartite Meeting on the Construction Industry in the Twenty-first Century: Its Image, Employment Prospects and Skill Requirements, Geneva.

ILO, (2005), "Baseline Study of Labour Practices on Large Construction Sites in the United Republic of Tanzania", WP.225, Sectoral Activities Programme, Geneva.

ILO, (2012), LABORSTA Internet, http://laborsta.ilo.org, accessed: September 10th, 2012.

Jason, A. (2007), “Informal Construction Workers in Dar Es Salaam, Tanzania”, WP.226, Sectoral Activities Programme, International Labour Office, Geneva.

Kerr, A. and F. Teal, (2012), “The Determinants of Earnings Inequalities: Panel data evidence from South Africa”, CSAE Working Paper WPS/2012-04.

Khan, R.A., (2008), *“*Role of Construction Sector in Economic Growth: Empirical Evidence from Pakistan Economy”, Paper presented at the First International Conference on Construction In Developing Countries (ICCIDC–I): “Advancing and Integrating Construction Education, Research & Practice”, August 4-5, 2008, Karachi, Pakistan.

Kweka, J. and L. Fox, (2011), “The Household Enterprise Sector in Tanzania: Why It Matters and Who Cares”, Policy Research Working Paper 5882, The World Bank, Washington DC.

Liganga, L., (2010), “Mwanza: From dusty town to emerging economic giant”, The Guardian, March 7th.

Lopes, J.P., R.A. Oliveira and M.I. Abreu, (2011), “The Construction Industry and the Challenges of the Millennium Development Goals”, paper presented at a conference on “Management and Innovation for a Sustainable Built Environment”, 20–23 June 2011, Amsterdam, The Netherlands.

Manju, K.S., (2012), *“*The Informal Sector in Zambia: Can it Disappear? Should it Disappear?”, International Growth Centre working Paper 12/0425, June.

Miller, H. P., (1955), *Income of the American people*, United States Government Printing Office, Washington, DC.

Mincer, J., (1958) "Investment In Human Capital and the Personal Income Distribution," *Journal of Political Economy*, Vol. 66; pp. 281-302.

Mincer, J., (1974) *Schooling, Experience, and Earnings*, Columbia University Press for the National Bureau of Economic Research, New York.

Ministry Of Labour And Employment, (2013), *New Minimum Wages for the Private Sector, Government Notice No. 183.*

Ministry Of Works, (2003), “Construction Industry Policy”.

Mitullah, W.V. and I.N. Wachira, (2003), “Informal Labour in the Construction Industry in Kenya: A Case Study of Nairobi”, Sectoral Activities Programme Working Paper, ILO, Geneva.

Mlinga R. S. and N.M. Lema, (2001), “Informal Contractors in Tanzania-their Characteristics and Reasons for Informality”, Paper done for the University of Cape Town, Rondebosch 7700, South Africa and University of Dar-es-Salaam, Tanzania.

Mlinga, R.S. and J. Wells, (2002), “Collaboration Between Formal And Informal Enterprises in the Construction Sector in Tanzania”, *Habitat International*, Vol. 26 (2); pp. 269-280.

Moavenzadeh, F. and J.A.K. Rossow, (1975), "The Construction Industry in Developing Countries", Technology Adaptation Program, Massachusetts Institute of Technology.

National Bureau Of Statistics (NBS) & Ministry of Finance, (2013), "Integrated Business Survey, 2010: Construction Industry Analytical Report Tanzania Mainland", Dar es Salaam.

NBS, (2004), "Analytical Report for Employment and Earnings Survey 2001", Dar es Salaam.

NBS, (2007), "Analytical Report: Employment and Earnings Survey 2002", Dar es Salaam.

NBS, (2007), Analytical Report for Integrated Labour Force Survey (ILFS), 2006.

NBS, (2013), "Unemployment Estimates for the Year 2011", http://www.nbs.go.tz; accessed: April 3rd, 2013.

Ndaiga, H., (2012), "Construction industry in Kenya geared for growth", *Construction Business Review*, October 10th, http://www.constructionkenya.com/2739/construction-industry-in-kenya-geared-for-enormous-growth/; accessed, February 2014.

Otoo, B.K., (2012), "Micro-Credit for Micro-Enterprise: A Study of Women "Petty" Traders in Central Region, Ghana", *Internation Journal of Scientific Research,* Vol. 5 (3); pp. 247-259.

Polachek, S.W., (2007), "Earnings over The Lifecycle: The Mincer Earnings Function and its Applications", IZA Discussion Paper No. 3181, November.

Proctor, F.J., (2014), "Rural economic diversification in sub-Saharan Africa", IDS Working Paper, Septmeber, University of Sussex.

Singh, A., S. Jain-Chandra, and A. Mohommad, (2012), "Inclusive Growth, Institutions, and the Underground Economy", IMF Working Paper WP/12/47, Asia and Pacific Department.

The Citizen, (2013), "Revealed: Dar's new emerging 'gold mine", Nation Media Group, Dar es Salaam, 7th November.

Tshuma, M.C and B. Jari, (2013), "The informal sector as a source of household income: The case of Alice town in the Eastern Cape Province of South Africa", *Journal and African Studies and Development,* Vol. 58 (8); pp. 250-260.

Uganda Bureau Of Statistics (UBOS), (2014), "GDP Tables FY 201112", http://www.ubos.org/statistics/macro-economic/national-accounts/; accessed February, 2014.

United Republic Of Tanzania (URT), (2010), Economic Survey 2009.

URT, Minisitry Of Finance, (2014), "Infrastructure Projects Votes", Dar es Salaam.

Well, J., (2006), "Subcontracting in the Construction Industries of Developing Countries: An Assessment from Two Perspectives", *Journal of Construction in Developing Countries,* Vol. 11 (1); pp. 17-36.

Wells, J., (2007), “Informality in the construction sector in developing countries”, *Construction Management and Economics*, Vol. 25 (1); pp. 87-93.

Willis, R.J., (1986), “Wage Determinants: A Survey and Reinterpretation of Human Capital Earnings Functions”, in *Handbook of Labour Economics Volume I*, (ed.) Ashenfelter, O. and R. Layard, Elsevier Science Publishers BV.

Women in Informal Employment: Globalizing and Organizing (WIEGO), (2013), “Construction Workers”, http://wiego.org/informal-economy/occupational-groups/construction-workers; accessed November 2013.

**WEBSITES:**

http://www.nbs.go.tz
http://wiego.org/informal-economy/occupational-groups/construction-workers
http://laborsta.ilo.org
http://www.constructionkenya.com
http://globalhousingindicators.org/en/content/dar-es-salaam-tanzania