

# Labour As an Export: Estimating Uganda's Exportable Labour Using a New Pro-poor Index of Unemployment

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*This paper reviews recent evidence suggesting the need for many African countries to expand labour exports so as to benefit from increased remittance inflows. Export of labour has continued to be viewed as brain drain with a general lack of sufficient data on what exactly constitutes exportable labour. This paper estimates Uganda's exportable labour using a new Unemployment Index that draws from Kakwani and Son (2006). It finds that Uganda's exportable labour is more than twice the current pool of Ugandan emigrants and is constituted by mainly the unskilled casual workers plus those released from the fast declining informal sector. Policy implications are drawn to harness this substantial labour resource through gainful employment abroad.*

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## BACKGROUND AND RESEARCH OBJECTIVE

Labour, has become an increasingly important commodity export worldwide. Its importance seems to originate from the remittance inflows that are experienced by the labour sending (exporting) countries particularly the developing and least developed. The importance of labour exports is increasingly recognized in Africa as a source of foreign exchange remittances. Although recent data (IFAD, 2006, World Bank 2008) show that North Africa and South Africa are the major remittance recipient regions in Africa, other SSA countries' remittance receipts are also increasing and reported to have significantly contributed to economic performance and poverty reduction in the region. For example, private remittance inflows are reported to have grown at an average annual rate of 14.7% for Uganda and 15.1% for Kenya suggesting that labour exports have become major source of foreign exchange for the region.

Despite the increasing importance of private remittance inflows as a source of foreign exchange, few countries in Africa are reported to have enacted explicit policies for promoting promote labour export and maximize foreign exchange earnings from remittance (IFAD, 2006). Few are deliberately seeking foreign employment opportunities for their unemployed workforce. Few have established support mechanisms and infrastructure for their nationals working abroad, enacted policies and measures for reducing costs of remittance, and generally mainstreaming labour export policies within their national economic and employment policies.

Uganda is one typical African country that has registered steady growth in labour remittances since the 1990s and which are reported to have had substantial benefits to the local economy. Since the mid-1990s, government estimates indicate that private remittances from Ugandans living abroad rose from US \$ 109.6 million in 1993 to US\$ 1.4 billion by 2008 (Bank of Uganda, 2008). However, in spite of some recent efforts to externalize labour, the potential for export of labour has remained relatively unknown to policy makers and other stakeholders particularly with regard to the size of exportable labour available, the adequacy of the institutional and legal framework to facilitate labour exports as well as the adequacy of foreign demand and markets. Besides, at the highest level in government, export of labour is still regarded as brain drain without due regard to the type of labour export that may not constitute brain drain. For instance, recent studies-Turyasiima and Dimanche (2004) and Austin (2004) established that while Uganda's labour force was growing at an average of 3.4% per annum and only 14% of the employed population was employed in the formal sector, there were skill surpluses in the middle and lower level categories of labour particularly teachers, and arts and social science professionals. The studies also found that remuneration in Uganda's private sector was not conducive enough to attract some skills and hence

employers in the private sector found difficulty in attracting and retaining a variety of skill categories. Such types of labour could obtain more gainful employment abroad if facilitated and supported. However, there is a general lack of information of what constitutes exportable labour both in terms of numbers (labour force size) and skill types. This paper draws on a study conducted during the period October 2008-January 2009 whose objectives included estimating Uganda's labour pool that may be available for export without damaging Uganda's economy. The paper reviews some recent literature on labour export, outlines the methodology and estimation procedure as well as the results and some policy implications.

## **RECENT LITERATURE**

Poverty [and the need to export labour for gainful employment abroad] is closely related to the inadequacy of productive employment opportunities in a country (Vientiane, 2006; Winters, 2002). Through employment, people earn incomes, which enable them and their dependants purchase goods and services necessary to meet their basic needs. Providing gainful employment is therefore likely to be the most effective way to fight poverty. This employment may either be locally available or sought abroad in net labour importing countries (Nielson, 2002). Most of the net labour importing countries are from the North although many developing countries also are net labour importing particularly in the Middle East. Although there are many restrictions in movement of persons across international borders, especially by the North, recent empirical evidence suggests that export of labour, particularly of unskilled labour is beneficial to both the North and the South almost equally.

According to Winters (2002), temporary migration and trade in labour, particularly unskilled labour, is beneficial to both developed and developing countries alike and contributes to a faster growth in world GDP and quickens poverty reduction in LDCs. Winters (2002) established that developing countries gains from unskilled labour export through remittances more than offset the exported labour's original (low) contribution to home output, so that the welfare of those who remain behind also rises. For the developed (labour importing) regions, higher imports of unskilled labour are more beneficial in terms of welfare than are those on skilled workers.

According to Winters (2002), increase in supplies of unskilled labour reduces unskilled wages and stimulates most sectors of developed countries' economies (agricultural, manufactures and some services), whereas the benefits of increased supplies of skilled labour are concentrated in just a few services sectors. Globally, world welfare is likely to increase through increased trade in labour. Winters argued that an increase in developed countries' quotas on the inward movements of both skilled and unskilled temporary workers equivalent to 3% of their workforces would generate an estimated increase in world welfare of over \$US150 billion p.a. – about 0.6% of world income (Winters, 2002).

Apart from the direct effect on the economies of the developed countries through supplies of cheaper labour and on the economies of developing countries' through remittances, increased trade in unskilled labour seems to fulfil the principle of comparative advantage (Nielson, 2002; Zutshi & Self, 2002). Developed countries by their nature tend to have a labour force that is well trained and experienced. As such, they are major suppliers of skilled labour (which they tend to have in excess) while demand for less-skilled low-paid workers is higher. Demand for unskilled temporary workers is therefore higher than for skilled temporary workers. According to Winters (2002), the highly industrialised countries particularly USA, Canada, Japan and Australia also happened to be the major "high demand" countries for unskilled labour. By 2002 for example, the USA constituted the largest share of demand for labour with an average annual demand estimated at about 2.7 million unskilled temporary workers and about 2.4 million skilled temporary workers. On the other hand, developing countries tend to have excess supply of unskilled labour that they could effectively export without harming their countries' output. The biggest challenge has been insufficient data on what size of the labour force would be exportable without hurting the output of the local economies while contributing to improved welfare and poverty reduction.

## **METHODOLOGY**

This study considered exportable labour to refer to labour that is in search of gainful employment but whose deployment outside the country would not affect the local economy's output and competitiveness. To estimate the size of this kind of labour in a country with a weak labour market such as Uganda, it was imperative that all categories of labour are examined in terms of the level of unemployment but also underemployment.

Given that a country's labour force is composed of both skilled and unskilled labour, the analysis had to consider both the skilled and the unskilled labour that were not gainfully employed. Skilled labour is composed of outputs from tertiary and higher education while the unskilled usually comprises of those who dropped out of school or those who did not attend school at all.

In order to establish the size of skilled labour that were unemployed, graduate statistics were obtained for the tertiary and higher education sector for the period 2000-2008 and using this data estimates made for the period 2009-2020. The estimates were made using the Auto-regressive Integrated Moving Average (ARIMA) estimation procedure. These estimates represented the projected skilled labour supply from the country's education sector. These estimates had to be compared with an estimate of jobs created annually (job creation) to determine whether there would be a job deficit or surplus for the projected period. This required assembling data on employment to be able to project employment levels for the next 10 years as well as job creation. Data on employment was obtained from estimates of the sector representatives of the entire services sector as well as for the public service. Using ARIMA, projections employment level and annual job creation were also made for 2009-2020<sup>1</sup>.

In addition to primary data on education outputs and formal employment, data on informal sector employment was obtained from the Uganda Bureau of Statistics covering the National Labour Force Survey of 2002/2003 and the National Household Survey 2005/06. This data was used to establish trends in informal sector employment and establishing the labour force size absorbed or released from the sector.

## **STUDY FINDINGS**

### **Labour Force Size and Trends**

Total labour force size, measured by the size of the population in the age brackets 14-64 (UBOS, 2007) increased from 9,773,000 in 2002/03 to 10,882,000 in 2005/06, an estimated annual average increase of 3.4%, which translates to an average of about 380,000 persons annually. However, in terms of distribution, the broad occupational distribution of the population maintained largely the same pattern with the majority 'employed' in agriculture and a much smaller proportion in paid or wage employment. Although official data did not provide a breakdown of paid employment per sector, other government reports indicated that the services sector including the public service is the largest source of employment accounting for over 90% of paid employment (UEPB, 2005; PEAP, 2004). The reports show that services together with manufacturing account for nearly 100% of paid employment.

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<sup>1</sup> Data from Uganda Bureau of Statistics shows that over 90% of formal employment in Uganda is in the public sector and services. Because these tend to employ mainly skilled professionals at different levels, it was considered appropriate to assume that data on employment reported reflected job opportunities for the skilled labour which are competed for only by outputs from education.

Table.1 .Employment Distribution of Uganda’s labour force 2002-2005

Employment Status	2002/3	% of popn	2005/2006	% of popn	% Growth
Self-Employment in Agriculture	6,117,898	62.6	7,584,754	69.7	11.2
Self-Employment in Non-Agriculture	2,179,379	22.3	1,458,188	13.4	-9.4
Paid Employment	1,475,723	15.1	1,839,058**	16.9	24.6
Total Labour Force	9,773,000	100	10,882,000	100	11.4

**Source:** UBOS, 2008; Authors’ Computations, \*\* Figure includes all those not in self-employment but are employed or seeking paid employment.

Further analysis of the labour force data in table 1 shows that there is substantial increase in self employment in agriculture, both in absolute and percentage terms. While the growth in self-employment in agriculture is in line with the overall growth in labour force size, there is a decline in self-employment in non-agriculture (the informal sector), which suggests that there is increasing attrition (occupational migration) to paid employment, either locally or abroad<sup>2</sup>. The decline in the informal sector averaged 3.1% per annum between 2002-2005 amounting to a total of 202,682 persons migrating from the sector over that period. Lastly, the level of paid employment grew at a higher rate than the overall growth in the labour force (3.8% vs. 3.4%) suggesting a much greater increase in the demand for paid jobs than any other form of occupation.

#### **Estimating Local Employment/Unemployment and Exportable Labour**

Unemployment occurs when a person is available to work and seeking work, but the person is without [work](#). (Wikipedia, 2006). According to Riddell (1999), the principle objective of measuring unemployment in an economy is to provide a measure of the extent of unused labour supply, that is a measure of the number of individuals available for work but are not employed. The prevalence of unemployment is usually measured using the unemployment rate, which is defined as the percentage of those in the [labour force](#) who are unemployed. The unemployment rate is found by dividing the total number of unemployed by the total labour force. Although different types of unemployment may be found, which principally relate to the underlying causes rather than any unique manifestations, the common denominator has been to look at the proportion of individuals in the labour bracket who are without jobs. The common type and measure of unemployment is the open unemployment type which estimates the number of persons actively searching but are unable to find jobs (Kingdom and Knight, 2005).

Recent empirical literature suggests that measuring the open type of unemployment is not suitable for LDCs and grossly underestimates the level of unemployment. Kakwani and Son (2006) argue that a more suitable measure of unemployment in LDCs should take into account the weak labour markets in those countries. Because demand for paid labour is very weak in LDCs, most LDCs have a large proportion of their labour force employed in the informal sector, which is characterised by providing low incomes for its workers. Incomes in the informal sector are often so low that workers are unable to afford the basic necessities of life for their families. The fact that workers in LDCs are unlikely to get any monetary support from the government when unemployed, they cannot afford to stay idle. They have to do some work to survive but often report themselves as employed. Consequently, the conventional measure of unemployment reported from labour force surveys tends to underestimate the true measure of

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<sup>2</sup> The informal sector is mainly composed of school dropouts who get involved in blue-collar work with skills acquired through coaching and mentorship processes while on the job, upon which individuals graduate to set up their own informal business operations. The sector also includes graduates of educational institutions who decide to go into self-employment in the informal sector after failing to obtain paid employment.

unemployment in those countries. Thus, many developing countries have low open unemployment rates but still suffer from massive poverty because of the low earnings of a large segment of their ‘employed’ workforce.

This paper adopts the Kakwani and Son (2006) measure of unemployment which recognises the high rate of under employment in the informal sector. This measure estimates both the *open unemployment* and combines it with the level of *underemployment* in the informal sector to estimate unemployment. The measure defines underemployment as persons who earn below the *subsistence wage*<sup>3</sup> and is expressed as below.

$$U_{\alpha}^* = 1 - \frac{1}{n} \sum_{i=1}^n \delta_{i\alpha} (1 - r_i)$$

Where:  $U$  is the unemployment rate;  $r_i$  is the unemployment status of a

person  $i$ ;  $n$  the number of persons in the labour force and  $\delta$  is the degree of employment of a person i.e. fully employed or under employed if earning above or below the minimum wage respectively.

Kakwani and Son (2006) unemployment index simply requires that an estimation be made of the number of persons earning below the minimum wage and summed up with those openly unemployed to come up with a measure of unemployment suitable for developing countries. However, because of the absence of a minimum wage in Uganda, the high incidence of casualisation<sup>4</sup> of labour that has been reported together with a relatively large informal sector, a slight modification is made in Kakwani and Son Index to accommodate the existing reality in the labour market. A new model is adopted that considers three key aspects of the labour market: skilled labour supply from education institutions which tends to be higher than job creation, the high rate of casualisation and lastly the attrition from the informal sector into the paid employment market. This model estimates total unemployment to include the sum of graduates produced from the education system in a given year that are unable to find jobs ( $gu_t$ ), the total number of casual workers (who earn below the poverty line)  $c_t$  together with informal sector workers unable to find or continue in informal sector employment in a given year ( $m_t$ ). This model was considered to be more robust in capturing the under employed but also in capturing the effect of the dwindling size of the informal sector on the level of unemployment. This model is illustrated below:

$$U_t^{**} = \frac{1}{n} \sum_{i=1}^n \delta_i (gu_{it} + c_{it} + m_{it})$$

Where

$n$  Is the total labour force

$\delta_i =$  1; if the  $i^{th}$  person belongs to the category  
0; otherwise

$$gu_t = \sum_{i=1}^n \delta_i gu_{it} = (go_t - jc_t)$$

$$c_t = \sum_{i=1}^n \delta_i c_{it}$$

<sup>3</sup> This applies very well where a local minimum wage has been set. Through a survey, it then becomes easy to estimate the proportion of workers earning below the minimum wage.

<sup>4</sup> According to Austin (2004) casual labour in Uganda is temporary, earns very low pay (estimated at an average of UGX50, 000/= per month that was equivalent to less than USD 30 at the time. As a result of low wages, casual workers are in constant search for more gainful employment.

$$m_t = \sum_{i=1}^n \delta_i m_{it} = (IS_{t-1} - IS_t)$$

Data on employment<sup>5</sup> was collected from the various sectors of the economy for the period 2002-2006 from both primary and secondary sources. Using this data, annual job creation was estimated for the period 2009-2020 using the Auto Regressive Integrated Moving Average (ARIMA). The estimates represented annual labour demand for paid employment during the period. Similarly, data on annual graduate output for the period 2000-2007 was collected from a survey of Universities and tertiary institutions in Uganda and the ARIMA estimation applied. These estimates represented labour supply for paid employment. The ARIMA is more robust than the ordinary time series analysis as it combines both the effect of time as well as the variable itself in estimating future values of the variable. The results of the estimation procedure are presented in table 2 below.

Table 2. Projected Numbers of the Unemployed 2009-2020

Type	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Graduate	21,055	14,713	13,335	11,674	9,683	7,308	4,482	1,131	-2,885	-7,518	-13,040	-19,544
Casual	1,220,508	1,266,887	1,315,029	1,365,000	1,416,870	1,470,711	1,526,598	1,584,609	1,644,824	1,707,327	1,772,206	1,839,550
Informal Sector Migrants	41,528	40,184	38,926	37,708	36,528	35,384	34,276	33,204	32,164	31,158	30,182	29,238
Total	1,283,091	1,321,784	1,367,290	1,414,382	1,463,081	1,513,403	1,565,356	1,618,944	1,674,103	1,730,967	1,789,348	1,849,244

Source: Compiled by authors from survey Data

The table shows that casual workers by constitute the largest portion of unemployment in Uganda followed by informal sector unemployment. Total unemployment is projected at over 1.28 million in 2009 and expected to grow to about 1.85 million by 2020. The pool of unemployed labour constitutes a large labour resource from which labour exports could be effected to further benefit the economy. However, given that the local economy is dependent on cheap labour for competitiveness, not all casual workers are exportable without causing shocks to the local economy. A conservative estimate of 20% is assumed to be safe enough for casual workers to be withdrawn without any shocks to the local economy. This estimate together with the graduate unemployed and those released from the informal sector gives an estimate of 306,684 for 2009 and 377,604 for 2020. These figures represent the labour force size that is available for export (deployment abroad) without causing any shocks to the local economy but with potential to engender positive effects on household poverty and local economic performance. These estimates are more than double the current size of Uganda's total emigrants abroad estimated by the World Bank (2008) at 154, 697 in 2005 suggesting a potential to triple remittance earnings with more systematic labour exports efforts.

## CONCLUSION AND IMPLICATIONS

- Exportable labour measured by the locally unemployed and underemployed gives far larger estimates of exportable labour than otherwise focussing on the skilled unemployed whose export is feared to constitute brain drain.
- Policy on export of labour will need to focus more on the unskilled casual labour as they constitute the largest pool of unemployed exportable labour.

<sup>5</sup> Data obtained from the formal employment sectors was assumed to relate to skilled workers who tend to be formally employed and reported as such. This is also premised on the fact that over 90% of employment in Uganda is in the services sector who tend to employ mainly skilled workers. On the contrary, casual workers are often not reported and tend to comprise mainly unskilled workers.

- Decline in the informal sector employment has created an important source of unemployed exportable labour adding further justification for implementing systematic efforts to promote labour exports
- Given that exportable labour is significantly higher than current levels of emigration (more than twice) mainstreaming labour export as part of the mainstream government economic policy and budgeting. Current efforts at exporting labour as well as the numbers exported require to be more than doubled in order to register positive impacts on local unemployment and poverty as well harness the beneficial effects of remittance inflows to local economic performance.

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