The Impact of Labour Migration on Wages in the Source Country Labour Market: Empirical Evidence from Zimbabwe

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Abstract: *The study investigates the impact of labour migration on wages in the sources country labour market, in the context of Zimbabwe; for the period 1985-2013. Our main argument is that labour migration can have a negative impact on wages in the source country and as such our model includes various interaction terms in order to determine the macroeconomic situation under which this can happen. An OLS (Ordinary Least Squares) estimation criterion was used to estimate a wage model which represents the labour market. Various diagnostic tests were done to check the reliability, signifance and stability of the model. The study found out that there is a negative relationship between labour migration and wages in Zimbabwe. The results provide further justification for the policy recommendations that can be used to reduce outward migration and also increase wages in Zimbabwe.*

Keywords: *Labour Market, Labour Migration, Gross Domestic Product (GDP), Wages, Zimbabwe*

1. INTRODUCTION:

Zimbabwe has experienced economic downturn that led to the outflow of skilled and unskilled labour. Employees from other sectors of the economy have not been spared by the economic challenges in the country [1]. The pressures of poverty, population growth, high levels of inflation, high unemployment rate and political instability produced a volatile cocktail of insecurity. These reasons mostly caused skilled and non-skilled labour force to emigrate to other countries in search for greener pastures. Besides the search for greener pastures 17.8% simply left the country because they could not get any jobs locally [2].

Background of the study

Labour migration in the Southern African Development Community (SADC) region dates back to a period before colonization of Africa that is, 150 years ago [3]. The flow of migrants from Zimbabwe to neighboring countries in the uneven way continues intense as before, and migrating flows from, to, and within Zimbabwe have presented critical problems to the country's migration management capacity. Due to large scale of out migration, Zimbabwe has seen an accelerated immigration of professionals primarily to different countries such as South Africa but also to United Kingdom and Australia. International Labour Migration [4], therefore, aims at harnessing the development potential of migration for the assistance of concerned governments, individual migration for the benefit of concerned government, individual migrations and society at large.

The cause of migration from Zimbabwe has resulted from the negative effects of the IMF/World Bank Economic Structural Adjustment Programme (ESAP) introduced in 1990-1995 [5]. ESAP was introduced in order to raise income levels thereby facilitating higher growth rates, job creation and improving the living standard of people [6]. This programme led to economic hardships that led many professionals such as teachers, nurses and doctors to leave the country in search for greener pastures abroad [7].The country has experienced a large number of its citizens with its migration history being labeled as unusual. Historically, countries were either recipients or senders of migrants but Zimbabwe had always been in the unusual position of only sending since 1990.

The country has become a more exporter of migrants due to continuing deterioration of economic and political conditions from 2002 [5] which climaxed around 2008-2009.The research by [8] indicated that immigration rate to other countries for the period 2000-2005 averaged around 20.2 percent. It is quite clear that the political instability in the country gave greater effect to the migration process outside the country prior to 2000 migration levels averaged slightly below 8 percent [10]. However thereafter, immigration levels soared to more than 5,000 annually before falling to slightly above 1,000 after the formation of the Government of National Unity in 2009 [9]. This shows that

people had great expectations, which were not delivered and the rate of immigration started to increase after year 2010. The most popular destinations were South Africa, United Kingdom, Australia, Botswana and Tanzania

The economy of Zimbabwe's was also characterized by high inflation, shortage of basic commodities and drastic monetary policy changes between 2002 and 2008, [8]. The unpredictable monetary policies which consequently led to economic downturn and brain drain in the education and health sectors throughout the country became impossible to prevent. Employees from other sectors of the economy left without any option except leaving the country. Professionals in all sectors of the economy are still migrating to neighboring countries in spite of the cosmetic political and economic changes brought in the country.

The country's failure to extract benefits from outflow of labour has resulted in the castigation of the international community by government officials for crippling the Zimbabwean economy by employing its highly skilled professionals. For instance the Zimbabwean government was quoted in the [8] study castigating the move made by countries in the region for intending to employ Zimbabwean lecturers, teachers, nurses and doctors. The movement of labour was described as having disastrous consequences in the education and health sectors, which are pillars of the economy. In relation to this issue [11;12] observed that outflow of skilled labour has always been viewed in a negative way often castigating highly skilled professionals for abandoning their country in search of greener pastures in developed countries.

Based on National Accounts Statistics (2009), some sectors such as agriculture, a major contributor to Gross Domestic Product (GDP), declined by an annual average of 9 per cent from the year 2000 to 2008 [13]. The manufacturing sector declined by more than 8 per cent and the mining sector also experienced an average decline of 7 per cent per annum during the same period. The causes of poor performance of these key sectors include lack of foreign direct investment (FDI), foreign currency shortages, loss of skilled labour and unreliable energy supplies [13]. It has been shown that an alarming number of both skilled and unskilled people who have migrated to other countries. It can therefore be deduced that there is an outrageous huge number of people who have left the country due to various reasons. The migration of skilled professionals in the health and education sectors has contributed to poor service delivery. This situation has resulted in the increase of Zimbabweans seeking basic services in neighboring countries at a higher cost. Those who could not afford resorted to the indigenous knowledge systems. In the education sector this migration resulted in direct shortage of science teachers and the government tried to solve the problem by employing untrained teachers.

The total number of people who left the country about 14 percent was highly skilled which include medical personnel, accountants, nurses, engineers and also teachers [1]. The migration of highly skilled labour force has also resulted in an increase in the service fees to an extent that most service charges went beyond the reach of many citizens hence most migrants were economically active hence it deprived the nation of its labour force.

Statement of the Problem

For the past decade, the economy of Zimbabwe experienced high inflation rates, declining in GDP accompanied by high levels of unemployment and also low wages. According to [14], Zimbabwean economic growth declined to -17.7% in 2008, wages fell by 15%, unemployment increase to 80% in the same year and inflation levels increase to 150889%. In general, the fall in wages in Zimbabwe was one of the main reasons that caused labour migration to other countries. This prompted the researchers to investigate the impact of labour migration on the labour market (wages) in Zimbabwe.

Objectives of the study

The main objective of this study is to assess the impact of labour migration on wages in the labour market in Zimbabwe for the period 1985-2013. To achieve this objective the following specific objectives guided the study:

i. To investigate the impact of labour migration on wages in the labor market.
ii. To find the impact of inflation on wages.
iii. To determine the impact of unemployment on wages.
iv. To examine the impact of GDP on wages.

2. MATERIALS & METHODS:

Model Specification:
Our model is similar to the one used by [15] and [16] and we state it in linear form as follows:

$$lnW_t = \beta_0 + \beta_1 lnM_t + \beta_2 lnGDP_t + \beta_3 lnU_t + \beta_4 lnF_t + \mu_t \quad \text{(a)}$$

Where:
W_t = real wages in time t; M_t = migration in time t; GDP_t = real GDP growth in time t; U_t = unemployment in time t; F_t = inflation rate in time t & μ_t = white noise error term

Data Sources and Problems

The study uses annual time series data covering the 1985 to 2013 period. The data is secondary; it was obtained from existing publications. The period chosen was long enough to analyze the impact of immigration on labour market taking into account other variables. Data was obtained from ZIMSTAT and World Bank. The data has got problems in terms of quality, consistency; accuracy and reliability are very acute in less developed countries like Zimbabwe included. This is due to inadequate monitoring of the economy and inaccurate reporting and recording of data. Also the hyperinflation and the removal of zeros by then Reserve Bank of Zimbabwe governor Dr Gono makes it difficult for the study to use the real values and therefore, we decided to use percentage changes. These highlighted problems in the data sources are likely to reduce the precision of the parameters.

3. RESULTS PRESENTATION, INTERPRETATION & DISCUSSION:

Descriptive Statistics

The table below shows the descriptive statistics consisting of the mean, maximum, standard deviation among other known measures of dispersion. For the measures the minimum and maximum values help in checking out outliers in the data. The number of observations is 29 for each and every variable. GDP has a low standard deviation of 7.698460 this indicates that there is small variability in the data. F has the highest standard deviation of 28203.36 indicating a low degree of its reliability on its contribution towards explaining variations in independent variables. M has the second lowest standard deviation recording a value of 28082.62 that explains variability in the dependent variable.

	W	GDP	F	M	U
Mean	83.24828	1.261424	6139.002	35675.52	43.51724
Median	84.90000	2.680594	22.59382	21389.00	42.70000
Maximum	103.3000	10.55174	150888.9	87958.00	82.60000
Minimum	49.60000	-17.66895	-7.700000	10323.00	6.800000
Std. Dev.	14.73171	7.698460	28203.36	28082.62	24.73293
Skewness	-0.667196	-0.921916	4.913981	0.857317	0.062955
Kurtosis	2.600893	3.189659	25.67424	2.126032	1.885439
Jarque-Bera	2.344032	4.151451	737.9415	4.475417	1.520204
Probability	0.309742	0.125465	0.000000	0.106703	0.467619
Observations	29	29	29	29	29

Diagnostic Tests

Test for Multicollinearity

Correlation Matrix

	W	GDP	F	M	U
W	1.000000	-0.315189	-0.212010	-0.884273	-0.243803
GDP	-0.315189	1.000000	-0.492564	0.017598	-0.378825
F	-0.212010	-0.492564	1.000000	0.310972	0.332662
M	-0.884273	0.017598	0.310972	1.000000	0.497903
U	-0.243803	-0.378825	0.332662	0.497903	1.000000

H_0: there is perfect multicollinearity

H_1: there is no perfect multicollinearity

Decision: We reject the null hypothesis and conclude that there is no perfect multicollinearity

R^2 Goodness of Fit Test

$R^2 = 0.893304$

H_0: the model is incorrectly specified

H_1: the model is correctly specified

Decision: We reject the null hypothesis and conclude that the model is correctly specified since R^2 is greater than 50%.

R^2 gives information about the goodness of fit of a model and a model is not useful unless and until its R^2 is at least 60%. Our R^2 of 0.893304 means that approximately 89% of the changes in wages are endogenously explained and only 11% is explained exogenously.

Model Significance Test

F-statistic = 50.23450

Prob (F-statistic) = 0. 000 000

H_0: the model is insignificant
H_1: the model is significant
Decision: We reject the null hypothesis and conclude that our model is significant since there is no probability of rejecting the model as shown by a probability of zero, implying that the model is significant and therefore acceptable for policy prescription purposes.

Stationarity Test
ADF Test in Levels

Variable	ADF Test Statistic	CRITICAL% LEVELS			DECISION
		1%	5%	10%	
W	-4.079***	-3.753	-2.998	-2.639	Stationary
GDP	-7.045***	-3.670	-2.976	-2.627	Stationary
M	-3.881***	-3.670	-2.976	-2.627	Stationary
U	-8.714***	-3.711	-2.981	-2.630	Stationary
F	-3.328**	-3.788	-3.012	-2.646	Stationary

***, ** and * means significant at 1%, 5% and 10% respectively
H_0: the series is non-stationary
H_1: the series is stationary
Decision: We reject the null hypothesis and conclude that our data has no unit roots (hence stationary). This means that our data has constant variance and thus does not exhibit trends in the long run.

Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	97.95288	2.180775	44.91654	0.0000*
F	-6.72E-05	4.30E-05	-1.561714	0.1314
M	-0.000474	4.41E-05	-10.73869	0.0000*
U	0.077542	0.051208	1.514252	0.1430
GDP	-0.599633	0.163606	-3.665101	0.0012*

By substituting coefficients, the estimated model becomes:

$$\ln W_t = -97.95288 - 0.000474\ln M_t - 0.599633\ln GDP_t + 0.077542\ln U_t - 6.72E\text{-}72\ln F_t + \mu_t \quad \ldots\ldots\ldots\ldots\ldots\ldots (b)$$

Interpretation & Discussion of Results
$\ln M_t$ (Migration)

From the results, labour migration has a negative sign and is statistically significant at1% level of significance. This means that a 1% increase in migration in Zimbabwe will lead to approximately 0.0005% decrease in wages. This implies that increases in labour migration initiate a fall in wages in the source country, in this case, Zimbabwe. For the past decade Zimbabwe experienced exodus of its working manpower because of low wages. Low wages forced many citizens to leave their home country to nearby countries. Migrants who consist of large numbers of unskilled workers increase supply of labour in the market leading to a fall in wages. This is supported by [17] who noted that native and migrant labour does compete in the labour market. The impact of labour immigration on wages was small; a 10% increase in immigrants' numbers reduces wages by 0.2%. The study by [18] using OLS in Israel also found that a 10% increase in immigrants share leads to a less than 3%decrease in wages in the short run. Thus, labour migrants have negative labour market outcomes.
$\ln GDP_t$ (real Gross Domestic Product)
This variable has a positive sign and is statistically significant at 1% level of significance. This means that a 1% increase in GDP in Zimbabwe will lead to approximately 0.6% decrease in wages.

4. RECOMMENDATIONS:

i. Migration affects both sending and receiving countries. African countries need to adapt a unified migration policy which will reduce migration flows out of their home countries.
ii. In an effort to reduce outflow of skilled manpower from Zimbabwe, the government needs to swiftly put its political house in order so as to address the country's economic problems. Both the public and private sectors should offer regionally or even globally favourable working conditions because home is best. A sizeable number of Zimbabweans returned home with high expectations immediately after the formation of the GNU [19]. This positive development was however short-lived as the working conditions were still far below what

neighbouring countries were offering. For example, the Lesotho government offers Zimbabwean doctors salaries ranging from US$1729 to US$2729 compared to US$300, which the government of Zimbabwe is giving to its doctors [20].

iii. Labour migration policies can be a tag for scientific talent to re-circulate among countries. [21] suggests that the losses from the beneficiaries of migration incurred by developing countries should be offset to some degree by the transfer of resources. Zimbabwe can levy a tax on companies in countries that employ their highly skilled labour. The money can be used to set up companies or help in developing more human capital in the country. This could in the long run accelerate the process of filling the employment gaps that will have been created by outflow of labour and in turn influence development in the country. The Zimbabwean government needs to engage its European and United States counterparts to loosen the administration hassles of applying for visas. Notably, the Zimbabwean government has currently successfully negotiated for the removal of visa requirement for one to visit South Africa, which has become home to many Zimbabweans [22].

iv. Rather than concentrating on the effects of outflow of the highly skilled labour force, Zimbabwe must also concentrate with the semi-skilled labour force, which is willing to work hard and improve their work skills. Many countries have taken advantage of this group whom they exploit to the benefit of their development by paying low wages and salaries. Some large companies are no longer manufacturing their products in their countries of origin, but where there is a source of cheap labour and where the political and economic conditions are set right. Besides such countries as China, Japan and Taiwan, Zimbabwe can be an alternative for cheap labour as there is a large labour force eager to work and is well renowned for its productiveness. This could harness labour migration of both the highly skilled and unskilled workers, and in turn positively benefit the nation from Zimbabwe.

5. CONCLUSION:

The major objective of this study was to analyze the impact of labour migration on wages in the source country labour market in Zimbabwe. This research concludes that wages and labour migration have a negative impact. The research also found out that GDP have a negative impact on the wages in the Zimbabwean labour market for the period under the study. It also concluded that unemployment and inflation have an insignificant impact on wages in the Zimbabwean labour market for the period under study.

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