Tanzanian Journal of Population Studies and Development, Vol. 28 No. 2, 2021: 43-62

Costs and Gains of Circular Labour Migration: The Case of Ukerewe and Muleba Districts, Tanzania

Raphael N. Jettah[*], *Abiud Kaswamila*[†] *& Kalista P. Higin*[‡]

Abstract

Circular labour migration has both costs and gains. Surprisingly, in most cases the costs are ignored while assessing the gains from migration, hence resulting into over-exaggeration of the potentials of migration. This study was conducted in Kakukuru and Nyakabango wards of Ukerewe and Muleba districts, respectively, with the aim of assessing the costs and gains of circular labour migration. Data was collected using household surveys, focus group discussions and key informant interviews. Qualitative and quantitative methods were used in data analysis. A total of 512 households sampled randomly were involved in the study. The findings revealed that the costs and gains from circular labour migration displayed almost a similar pattern across the studied localities. Both costs incurred and gains received were considerably small. The gains received by households by involving in circular labour migration were higher than the cost of circular labour migration, but the difference between the two was small. It is recommended that the government, at all levels, should strengthen this undertaking so that gains from circular labour migration can be maximized. Policy makers should think of vitalizing circular labour migration through enacting laws, as well as including circular labour migration in large national surveys such as the National Population and Housing Census, as well as the Household Demographic Survey, so as to track its contribution to the household as well as to the nation at large.

Keywords: *circular labour, migration, costs and gains, Lake Victoria Basin, Tanzania.*

1. Introduction

Circular labour migration has recently emerged as a key feature of contemporary migration (EMN, 2011; UNECE, 2016). This is because such migration category is inconclusively debated to result into a win to migrants and their families (Castles & Ozkul, 2014; EMN, 2011; UNECE, 2016). As a result, it has been attracting the interests of many scholars (Castles & Ozkul, 2014; Potts, 2010). Owing to its being obscured in the censuses of countries, its exact statistics has been very difficult to establish (Masanja, 2013), therefore, making it difficult to carry out critical analysis of the costs and gains from circular labour migration. This has also affected the common reportage format. Despite this shortcoming, literature has shown that this kind of movement is of great magnitude all over the globe.

[*]Institute of Rural Development Planning, Dodoma, Tanzania: rndaro@irdp.ac.tz (Correspondence author)
[†]Department of Geography and Environmental Studies, University of Dodoma
[‡]Department of Geography and Environmental Studies, University of Dodoma

In India, for instance, the number of people engaged in circular labour migration is estimated to range between 30-50m, while in China the number exceeds 120m (Bird & Deshingkar, 2009; Pattenden, 2012). In Germany, it is estimated that about 60% of all migrants are circular migrants (Constant et al., 2012; Trifan, 2015). Research findings by Bird and Deshingkar (2009) in India showed that circular migration rates were high in remote rural areas among poor people, in drought prone areas, and in high population densities; while destination areas have been towns and coastal areas for fish processing (Bird & Deshingkar, 2009; Deshingkar, 2005). Bird and Deshingkar (2009) further argued that young adults and larger families have greater propensity to migrate.

In Sub-Saharan Africa (SSA), circular labour migration has been partly documented (Awumbila et al., 2016; Potts, 2010, 2013) despite the fact that a lot of documentation has been on the rural-urban trajectory. Because of the failure of national censuses to capture this information, the analysis on this migration category has been limited (Potts, 2013). However, literature (Kok et al., 2006; Potts, 2013) has revealed that circular migration forms a large proportion of movement among the black African population. In the Agincourt sub-district in South Africa, for instance, Kok et al. (2006) report that for every permanent migrant there were three temporary migrants; of which more than one million were circular migrants. A study by Collinson et al. (2003) in the same area in 2006 also found that 55% of the households surveyed contained at least one member who was involved in circular labour migration.

In the Lake Victoria basin, circular labour migration has been a dominant practice among households (Drimie et al., 2009; Lounio, 2014; Msijaki, 2017). The usual practice has been that of households sending part of their members to work in the fishing sector to meet their livelihood requirements (Lounio, 2014). With the recurrent adverse climatic conditions that adversely affect their livelihood, the situation has been intensified (Drimie et al., 2009; Lounio, 2014). However, limited information is available on household involvement in circular labour migration, hence making it difficult to carry out critical analysis on the costs and gains of circular labour migration, which is essential for decision-making. Understanding the gains over the costs of circular labour migration is essential for informing stakeholders in which areas to intervene for improved livelihood, as well as to avoid unnecessary risks.

This study, therefore, sought to assess the costs and gains of circular labour migration in the Lake Victoria basin. Specifically, the study intended to examine the costs incurred and gains received by households from circular labour migration and their variation across studied areas, and to find out if the gains received were sufficient to offset the costs incurred by households involved in circular labour migration.

2. Literature Review

2.1 Theoretical Literature Review

The study was informed by the household strategy theory (HST), as well as the cost-benefit analysis theory (CBAT). The HST emerged in the 20th century and shifted views on migration from an individual to a collective household level of analysis (Oishi, 2002). According to household strategy theorists, migration decisions are not made by individuals but by households (Lauby & Stark, 1988; Oishi, 2002). The premises behind this theory lead people to think that the household is an appropriate unit of analysis for migration research, which this study adopts. Although this assumption has been challenged on the account that it does not explain migration for women, who in most cases make the decision to migrate on their own (Oishi, 2002), experience has shown that in circular labour migration—where migrants maintain permanence at origin—the decision to migrate is always a collective household decision (Bigsten, 1996).

The CBAT draws its origin from welfare economics of the 19th century (Pearce, 1983). Ever since its introduction, the theory has been widely applied to govern decisions on social welfare interventions across the globe. The main premise behind this theory lies in the argument that every investment decision on social welfare should be evaluated in terms of its consequences, or costs and benefits, to avoid unnecessary risks (Dreze & Stern, 1987; Pearce, 1983). Although the theory was thought to have its orientation from an economic discipline, it is useful in informing other multi-disciplinary studies, including household involvement in circular labour migration.

2.2 Conceptual Review of Migration Costs and Gains

Sjaastad (1962) and Carrington (1996) had clear categorizations of migration costs despite the fact that their focus was on individual and social costs rather than household costs, which is in most cases identified as the units of analysis in migration research (Oishi, 2002). This is because the decision to migrate, mostly in circular labour migration where a migrant maintains permanence at origin, is always a household decision rather than an individual choice (Lauby & Stark, 1988; Oishi, 2002). However, much of their classification still holds, and it is used in this study.

Adjusting their classification to fit households rather than individual migrants, household migration costs may be categorized into monetary and non-monetary (Carrington, 1996; Sjaastad, 1962). Monetary costs include the cost of physically sending migrants away and pocket-money expenses given to them by households on departure (Carrington, 1996; Sjaastad, 1962). Non-monetary costs include the real human resource cost, that is, earnings forgone by households in sending migrants away, and the cost of materials given to these migrants on their departure (Carrington, 1996; Sjaastad, 1962). Non-monetary costs may also include psychic cost, which is the psychological cost

incurred by a household for being unwilling to send their member into migration (Sjaastad, 1962). These costs need to be taken into account when analysing the benefits of circular labour migration.

On the other hand, the gains from migration are grouped under the umbrella word 'remittance', which is any consignment received by a household from its migrant member (Awumbila et al., 2016; Janků, 2007). Remittance can be monetary or non-monetary (Janků, 2007), despite the fact that many studies ignore the non-monetary aspects. Monetary remittance is money received by households from migrants, while non-monetary remittance includes food, materials and skills received from migration by households (Janků, 2007).

2.3 Empirical Literature Review

Several documentations on circular migration and remittance (Awumbila et al., 2016; Prabal & Ratha, 2012) have not been able to unpack the aspect of cost in drawing conclusions regarding the potential cost of migration to the household of the sending community. But literature (Kurekova, 2011; Tallinn, 2010; Wickramasekara, 2011) has revealed that migration is costly. As Kurekova (2011) argues, migration can only take place when a household is able to fund it. According to Wickramasekara (2011), these costs are expected to be higher in circular migration because of its repetitive nature, which adds extra costs that are difficult to recover by circular migrants. Ignoring these costs may lead to over-exaggeration of the benefits of circular migration.

Datta (2020) made a useful attempt to write on circular labour migration following his study in India. In this study, it was observed that circular labour migrants received low earnings, which made them live in precarious conditions. However, his conclusion was unable to relate the situation with the cost involved in migration. Prabal and Ratha (2012) and Ratha et al. (2011) observed that migration and remittance resulted into increased income, poverty reduction, and improved health and educational outcomes. A study by Ratha et al. (2011) also cautioned that such gains might have come at substantial social costs to the migrants and their families. However, he placed little emphasis on migration costs. Likewise, several authors (Awumbila et al., 2016) have written on how remittance improved income and livelihood assets in sending communities. Nonetheless, these studies have been unable to fully unpack the costs involved in migration.

Indeed, there have been a substantial number of studies that have tended to describe the gains from migration in terms of remittance received only to justify the potential of migration, and their conclusions have been, in most cases, in the expected direction – i.e., higher gains with migration. Such conclusions make it difficult to understand whether such gains are sufficient to offset migration costs incurred by households. This shortcoming suggests a need for a study in which

gains from migration will be examined against the costs of migration so as to advise stakeholders to make appropriate decisions regarding the involvement in circular labour migration. This study, therefore, intends to bridge this gap by analysing the costs and gains from circular labour migration in Lake Victoria basin.

2.4 Theoretical and Conceptual Framework

The conceptual framework of this study is presented in Figure 1. As stated earlier, the decision to migrate is rooted in improving livelihood challenges, which may be internal or external. It is forces exerted by livelihood challenges that set a household on the move. As literature suggests, migration is costly and it is only possible when a household is able to fund it (Wickramasekara, 2011; Kurekova, 2011). This creates migration costs, yet the potential of migration should not only be judged in terms of what households receive from migration but also in terms of what they spend on migration (Wickramasekara, 2011). This argument sets the point of the operation of the CBAT.

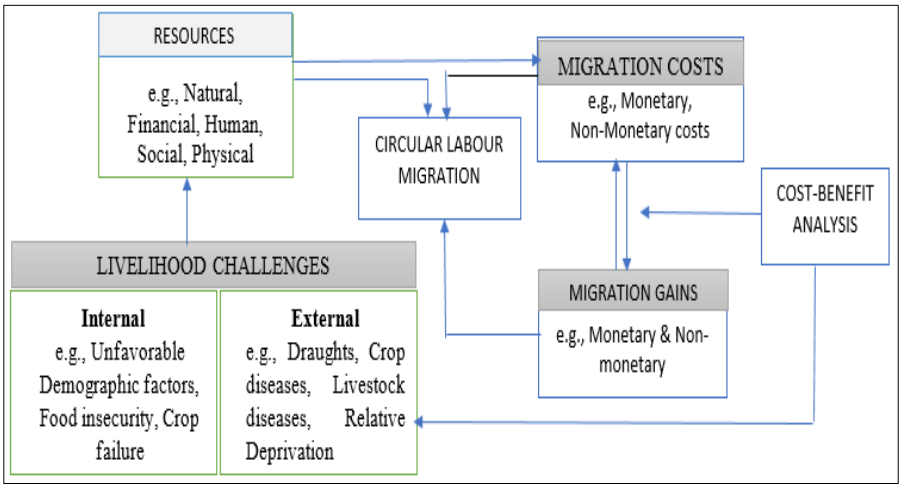

Figure 1: Relationship between Costs and Gains of Circular Labour Migration

3. Methodology

3.1 Study Area

The study was conducted in two wards, namely, Kakukuru of Ukerewe district and Nyakabango of Muleba district. The two districts are located along the shores of Lake Victoria in which temporary circular labour migration is more evident than in the other wards (Lounio, 2014; Msijaki, 2017; Sospeter et al., 2017). The usual practice is that of households sending some members away for circular labour migration to address livelihood challenges.

3.2 Sampling and Sample Size

A total of 512 households that involve circular labour migration and that do not involve circular labour migration from the two wards were randomly sampled and used in the study. Sampling began by identifying a cluster of wards from the two districts where circular labour migration was more prominent. Then one ward from each district was randomly selected. From the two randomly sampled wards, two villages from each ward were also selected randomly. Using the sampling frame collected from the village executive officers of these villages, a total of 512 households were selected for interview.

3.3 Data Collection

Methods of data collection used in this study were household survey, focus group discussions (FGDs) and key informant interviews, using a checklist. The household survey was applied to a randomly selected sample from the study area. The method was administered using a questionnaire created using a survey solution software to enable data collection using android tabulates. Enumerators were well-trained before the data collection exercise began. In the FGDs, a total of 12 focus groups (six from each ward) containing 12 respondents were involved. Moreover, 15 key informants were involved: 7 key informants were local leaders, and 8 were ordinary people.

3.4 Data Analysis and Presentation

Data analysis was done using IBM SPSS. This software was used for quantitative data collected by a household survey, while content analysis was used for qualitative data from the FGDs, as well as from key informant interviews. Techniques of data analysis—including, frequencies, cross tabulation, chi-square, independent sample t-tests and paired sample T-Tests—were used in the analysis. Data presentation was done using texts, tables and transcriptions of information from key informants.

4. Results and Discussion

4.1 Sample Characteristics

As illustrated in Table 1, of all the 512 households surveyed, 83.6% were male-headed against 16.4% which were female-headed. According to Brown and Walle (2020) and URT (2015), the dominance of male-headed households over female-headed households displays a typical characteristic of many households in Africa. URT (2015) links this scenario to cultural norms that recognize males as heads of households. The analysis of household circular labour migration status revealed that 42.2% of the households were involved in circular labour migration compared to 57.8% of households that were not involved in circular labour migration. Further, investigation on the sex of household members involved in circular labour migration revealed that there were more male

circular labour migrants (89.6%) than females (10.4%), hence confirming the fact that males are more migratory than females (Birchall, 2016). Adults aged between 18-44 occupied a large proportion (73.8%) of circular labour migrants.

Table 1: Sample Characteristics

Variable	Kakukuru (Ukerewe)	Nyakabango (Muleba)	Overall
Sex of Household Head			
Male	257(84.5)	171(82.2)	428(83.6)
Female	47(15.5)	37(17.8)	84(16.4)
Household Circular Labour Migration Status			
Non-Circular labour migrant households	168(55.3)	128(61.5)	296(57.8)
Circular labour migrant households	136(44.7)	80(38.5)	216(42.2)
Sex of Circular Labour Migrants			
Males	147(89.1)	68(90.7)	215(89.6)
Females	18(10.9)	7(9.3)	25(10.4)
Age of Circular Labour Migrants			
Below 18	1(0.6)	1(1.3)	2(0.8)
18-44	113(68.5)	64(85.4)	177(73.8)
45-70	50(30.3)	10(13.3)	60(25)
71 and above	1(0.6)	0(0)	1(0.4)

Note: *Figures in brackets are percentages

Source: Field data, 2020

4.2 Gains against Costs of Circular Labour Migration

The costs and gains from circular labour migration were analysed to find out if the gains were enough to offset the costs incurred by households involved in circular labour migration. However, because of the difficulty in recalling data on costs and gains among respondents, we decided to use information on household involvement in circular labour migration covering a period of 12 months prior to the survey to carry out a quantitative analysis of costs and gains.

4.2.1 Circular Labour Migration Costs

In this study, households' circular labour migration costs were computed from three variables: the cost incurred by households by physically sending circular migrants away; the opportunity cost forgone (real human labour cost); and the cost of materials given to circular labour migrants on the day of departure and/ or cost of materials sent to migrants. The psychological costs incurred by household for being unwilling to send their members into migration were assumed to be zero, as suggested by Sjaastad (1962). This is because the study assumed that the decision to migrate is made by the whole household as proposed by household strategy theorists (Lauby & Stark, 1988; Oishi, 2002). Therefore, every member was comfortable with the departure of the circular labour migrant.

1. Monetary Costs for Sending Circular Labour Migrants Away

The monetary costs incurred by physically sending circular labour migrants away include the cost of transport, pocket money and other monetary allowances given to the migrants on the day of travelling. To obtain this cost, the sum of transport cost, pocket money and any other monetary allowances given to a circular labour migrant was calculated using IBM SPSS. Secondly, both descriptive and independent sample t-tests were carried out to determine the overall mean and its variation across studied areas. The results presented in Table 2 reveal that, on average (twelve months prior to the survey), households in the study area incurred about TZS35,328 as the cost of physically sending their circular labour migrants to their destinations. The existence of such cost possibly supports the arguments by Kurekova (2011) who argued that "… migration can only occur when households are able to fund it." Further analysis by independent sample t-test revealed the existence of a non-statistically significant difference in means between Kakukuru and Nyakabango (MD=TZS -15,389; T(183)= -1.288; P=0.201), implying that the cost incurred by households in physically sending circular labour migrants to their work destinations did not vary significantly across households in the two wards.

Table 2: Monetary Costs for Sending Circular Labour Migrants Away

Location	N	Mean (TZS)	Std error
Overall	185	35,328	5,178
Kakukuru (Ukerewe)	114	29,422	4,939
Nyakabango (Muleba)	71	44,811	10,879

Notes: Means Difference (MD)=TZS-15,389; T(183)= -1.288; P=0.201

Source: Field data, 2020

The use of money to finance migration in the study area was also reported during one FGD, where one of participants from Nyakabango ward in Muleba District was quoted saying, "*I spent a lot of my money sending my sons for circular labour migration, who never returned even after several promises to come back*."

Further findings from a FGD with a group of participants who had been involved in circular labour migration revealed that, in most cases, households in the study area financed the initial travelling cost, while other subsequent costs were met by either the employer or the migrant himself/herself.

2. Opportunity Cost

According to Carrington (1996) and Sjaastad (1962), the opportunity costs are also referred to as real human labour costs. In this study, these are the costs forgone by a household for sending one or more of its members for circular labour migration. To get these costs, it was assumed that these costs equalled the costs that a household would use if it were to hire someone else to perform the usual duties

of the circular labour migrant during the time of his/her absence. The costs incurred by a household for each circular labour migrant were recorded and then summed up using the IBM SPSS, to obtain the total cost incurred by the household. Afterwards, an exploration analysis and independent sample t-tests were carried out. The results (Table 3) revealed that, on average, households in the study area incurred TZS118,240 as the opportunity cost for the absence of their members. Further analysis by an independent sample t-test revealed that the cost variation was not statistically significant across Kakukuru and Nyakabango (MD=36,887; T(183)=1.785; P=0.076), implying that the two wards incurred almost similar opportunity costs for the absence of their members.

Table 3: Real Human Labour Costs

Location	N	Mean (TZS)	Std error
Kakukuru (Ukerewe)	114	132,148	13,756
Nyakabango (Muleba)	71	95,261	13,734
Overall	185	118,240	10,076

Notes: Means Difference (MD)=36,887; T(183)=1.785; P=0.076
Source: Field data, 2020

3. Cost of Materials

The cost of materials was computed from the local market value of the materials (e.g., clothing materials, food items, etc.) given to circular labour migrants on the day of departure; and the local market value of materials sent to circular labour migrants to support them when in migration. Results (Table 4) show that, on average, materials given or/and sent to circular labour migrants cost a household about TZS20,022. Further analysis by an independent sample t-test revealed a statistically significant difference in means between Kakukuru and Nyakabango (MD=TZS.17,578/=; T(174.1)=2.013 p=0.046); with relatively higher means in Kakukuru (TZS26,768) compared to Nyakabango (TZS9,190). The value of Eta-squared was 0.0216. indicating a small magnitude of the difference (Cohen, 1988).

Table 4: Cost of Materials

Location	N	Mean (TZS)	Std error
Kakukuru (Ukerewe)	114	26,768	7,446
Nyakabango (Muleba)	71	9,190	4,558
Overall	185	20, 022	4,941

Notes: Means Difference (MD)=17,578; T(183)= 2.013; P=0.0216
Source: Field data, 2020

Further findings from a FGD with a group of youths in both study areas showed that 87.5% of the participants admitted that households usually provided materials, mostly clothing, during the initial travelling, and very rarely sent such items to circular labour migrants at destination, after departure.

This was also confirmed by one participant in a FGD with circular labour migrants in Kakukuru ward, where one male participant was quoted saying: "*I was given clothing materials during my initial travelling, and nothing else was ever given or sent to me afterwards, by the household*."

4. Total Circular Labour Migration Costs

The total circular labour migration costs incurred by each household were computed by summing up the monetary costs incurred by households for physically sending circular labour migrants to their destinations, the real human labour costs, and the cost of materials given or/and sent to circular labour migrant member(s). Independent sample t-tests were carried out to assess the overall means and its variation across studied areas. Results in Table 5 show that, on average, it cost about TZS172,311 for a households to get involved in circular labour migration. Further comparison between Kakukuru and Nyakabango revealed that the costs did not vary significantly across these two studied wards (MD=TZS41,759; T(183)=1.433; P=0.153), indicating that the two studied wards incurred similar costs for getting involved in circular labour migration, and the noted difference was merely due to chance.

Table 5: Total Circular Labour Migration Costs

Location	N	Mean (TZS)	Std error
Kakukuru (Ukerewe)	114	188,338	18,233
Nyakabango (Muleba)	71	146,579	22,490
Overall	185	172,311	14,209

Notes: Means Difference (MD)=TZS41,759; T(183)=1.433; P=0.153

Source: Field data, 2020

The presence of such costs possibly supports the argument by Carrington (1996) and Sjaastad (1962) who were of the opinion that migration is costly, and that is why Kurekova (2011) advised that it should be financed if it is to succeed. According to Wickramasekara (2011), the costs of migration are higher in circular labour migration than in any other kind of migration because of its repetitive nature. Wickramasekara (2011) further argues that if these costs are ignored in assessing the gains, people may end up with a wrong conclusion by exaggerating the benefits of circular labour migration.

4.2.2 Gains from Circular Labour Migration

As suggested by Janků (2007), gains from circular migration entail any consignment, whether monetary or non-monetary, that households receive following their involvement in circular labour migration. The gains from migration were computed from monetary remittances and the local market value of non-monetary remittances (e.g., food, cloth, food stuff, other materials and skills) received by households from their circular labour migrant members.

1. Monetary Remittances

The monetary remittances for the household were obtained by summing up the value of money received by the household from each of their circular labour migrant members, using IBM SPSS. This was followed by exploratory analysis, and independent sample t-tests that were carried out on this variable. The explorative data analysis was performed to examine the overall remittances received by households in the study area while, an independent sample t-test was used to test whether the amount received by households varied across the wards. The results presented in Table 6 indicate that households in the study area received an overall average of TZS241,256 as monetary remittances from their members who were in circular labour migration. Further analysis by the independent sample t-test indicated that the amount of remittance between Kakukuru and Nyakabango varied non-significantly (MD=111,887; T(158)=0.956; P=0.34), implying that the two studied areas almost received equal amounts of remittance money, and the existing variation was just by chance.

Table 6: Monetary Remittance

Location	N	Mean (TZS)	Std error
Kakukuru (Ukerewe)	101	282,515	86,519
Nyakabango (Muleba)	71	170,627	38,096
Overall	160	241,256	56,439

Notes: Means Difference (MD) =111,887 T(158)=0.956 P=0.34
Source: Field data, 2020

Further findings from a focus group discussion with a group of circular labour migrants revealed that most monetary remittances are mostly used in purchasing farm inputs, paying farm workers as well as meeting daily consumption of households. According to Crush (2012), monetary remittances in rural areas usually come in small amounts and can only be used to meet minor consumption.

2. Local Market Value of Material Remittance

Respondents were asked to price the kind of non-monetary remittances (items) received from each of their migrant members 12 months before the day of the survey, in case it was acquired at the local market. Table 7 provides a list of various items that were received. As indicated, clothing materials received by households from circular labour migration were equal to 35.2%, followed by side dish items which amounted to 34.6%, and food grains, root food and flour that came to 29.1%.

Table 7: Non-Monetary Items Received

Responses	Frequency**	Percent
Food grains, roots food items and flours	52	29.1
Clothing materials	63	35.2
Side dishes items e. g. Fish, Vegetable	62	34.6
Other items	2	1.1
Total	**179**	**100**

Notes: **Multiple response
Source: Field data, 2020

The local market value for each item, and for each circular labour migrant, was obtained and summed up using IBM SPSS to get the total for a household. Then both exploration and independent sample t- test were carried out. Results in Table 8 indicate that, on average, households received items amounting to TZS152,493 per year from their members who were in circular labour migration. The results of independent sample T-tests further showed that the local market value of items received did not vary significantly between Kakukuru and Nyakabango (MD=98,574; T(158)=1.055; P=0.294).

Table 8: Local Market Values of Materials Received

Location	N	Mean (TZS)	Std error
Overall	123	152,492	41,018
Kakukuru (Ukerewe)	91	178,137	53,920
Nyakabango (Muleba)	32	79,563	34,876

Notes: Means Difference (MD) = 98,574; T(121) = 1.055; P=0.294
Source: Field data, 2020

3. Local Market Value of Skills Received

The study was interested to determine the local market value of skills received by households in the study area. This is because the findings had indicated that circular migration returnees brought with them technical know-how and different ways of doing things that could influence ideas (Constant et al., 2012). Yet, studies by Chappell et al. (2010) and Wickramasekara (2011) revealed that most of the skills acquired by circular labour migrants at destinations were neither required nor used at the origin, therefore counting them as benefits of migration would lead to an over-exaggeration of their values. As Nassar (2008) argues, the skills level is less important to a household than the relevance of the skills once the migrant returns. In this case, only skills that were used by households were considered in this study. Skills acquired by circular labour migrants, but were neither required nor used at the households, were not considered. Only 9.5% of all households admitted that the skills acquired by their circular labour migrants were both required and used at their households. The presence of this low proportion probably supports earlier observations by Chappell et al. (2010) and Wickramasekara (2011), who ascertained that not all skills were relevant at the origin.

The availability of some useful skills brought by circular labour migrants, despite being very rare, was also confirmed during an interview with one household respondent, a male aged 58 years, who said:

> *"… Sometimes circular labour migrants acquire useful skills. A son of mine was trained how to drive an engine-powered passenger boat on his way to circular labour migration. Having mastered how to do this job, he was assigned a boat as an independent pilot. He*

then came and took two of his younger brothers and trained them free of charge. This service would have cost them not less than TZS50,000 each if we had used family resources to hire someone to train them. Now, as we speak, each has his own machine."

To get the local market value of these skills, it was assumed that this value equalled the cost that a household could have spent to obtain the services/ products provided/obtained by the circular labour migrant household if such skill was not acquired by a circular labour migrant. In other words, it equalled the amount that was saved by a household for not hiring someone else to provide such skills, just because their circular migrant members could provide it. In this case, respondents were asked if such skills needed someone else with the same skills to be hired to provide such services or products for a household, how much it would cost a household to pay him/her at a local market value. The results (Table 9) indicate that, on average, a total of TZS57,684 was received by households per year as remittance in terms of skills. Further analysis by independent sample t-test showed a non-significant variation between Kakukuru and Nyakabango (MD=54,238; T(17)=0.832; P=0.417).

Table 9: Local Market Values of Skills

Location	N	Mean (TZS)	Std Error
Kakukuru (Ukerewe)	12	77,667	48624
Nyakabango (Muleba)	7	23,429	13,373
Overall	19	57,684	31,185

Notes: Means Difference (MD)= 54,238; T(17)=0.832; P=0.417
Source: Field data, 2020

4. Overall Gains from Circular Labour Migration

The overall gains from circular labour migration were computed by summing up all monetary remittances, the local market value of items received by households from circular labour migrants and the local market value of skills used at a households, using IBM SPSS. Secondly, exploration analysis and an independent sample t-test were carried out to determine the overall gains and the variation of gains across the studied wards. The results (Table 10) revealed that, on average, the household received a total of TZS358,610 per year as total remittances. There was a non-significant variation across Kakukuru and Nyakabango (MD=230,511; T(161)=1.353; p=0.178)

Table 10: Overall Gains from Circular Labour Migration

Location	N	Mean (TZS)	Std error
Overall	163	358,610	82,404
Kakukuru (Ukerewe)	103	443,461	126,647
Nyakabango (Muleba)	60	212,950	49,815

Notes: Means Difference (MD) =230,511; T(161)=1.353; p=0.178
Source: Field data, 2020

As shown in Table 10, the overall average cost was TZS358,610 per year. Further analysis of location-specific results revealed that the cost was non-significantly higher in Kakukuru (TZS.443,461) than in Nyakabango (TZS.212,950), implying that the two study areas gained almost equally from circular labour migration. These are possibly the type of gains that literature suggests, and which are used to justify the significance of circular labour migration (Kurekova, 2011; Wickramasekara, 2011); while ignoring the cost incurred by households in getting involved in circular labour migration. According to Ratha et al. (2011), a significant proportion of remittances is usually spent in rural areas in the improvement of farm productivity and purchasing of agricultural equipment. In this case, this is possibly the amount that households invest in various household activities for improving livelihood (Lacroix, 2013; Mishi & Mudziwapasi, 2014; Ratha et al., 2011). It is this cost which is suggested in literature (Carrington, 1996; Sjaastad, 1962) that it should be examined against the cost of migration to see if it is enough to offset costs that a household incur by getting involved in circular labour migration.

4.2.3 Assessment of Gains over the Cost of Circular Labour Migration

In this study, two approaches were used in assessing the gains over the costs of circular labour migration. The first one is a quantitative approach that compared the costs that households incurred for being involved in circular labour migration against the gains that they received from migration. The second is a qualitative approach in which household respondents were asked to provide their subjective judgement on what they perceived to be the gains over the costs of circular labour migration.

1. Quantitative Assessment of Gains over the Costs of Migration

In examining whether gains from circular labour migration were sufficient to counter costs that a households incurred for being involved in circular labour migration, a paired sample t-test was carried out on the total gains and total costs. The results (Table 11) indicate that gains from circular labour migration were significantly higher than costs of migration (MD=187,962; T(162)=-2.281; p=0.024). The eta squared (η^2) value was 0.01, indicating a small magnitude of the difference as suggested by Cohen (1988) and Lakens (2013).

Table 1: Quantitative Assessment of the Gains over the Costs

	N	Mean (TZS)	Std error
Gain	163	358,610	82,404
Cost	163	170,648	15,303

Notes: Means Difference MD=187,962; T(162)=2.281; p=0.024
Eta squared(η^2) =0.01

Source: Field data, 2020

Further comparison by ward (Table 12) also revealed similar results for both Kakukuru (MD=255,956; T(101)=2.014 p=0.047) and Nyakabango (MD=71, 238; T(59)=1.664; P=0.0148) wards. The eta square (η^2) measure of magnitude of the difference for both Kakukuru and Nyakabango was 0.0197 and 0.0229, respectively, indicating that the difference was small, using the criteria suggested by Cohen (1988) and Lakens (2013).

Table 12: Gains and Costs of Circular Labour Migration

	Kakukuru (Ukerewe)			Nyakabango (Muleba)		
	N	**Mean (TZS)**	**Std error**	**N**	**Mean (TZS)**	**Std error**
Gain	102	443,461	126,647	60	212,950,	49,815
Cost	102	187,505	19,149	60	141,712	25,221
MD=255,956; T(101)=2.014 P=0.047				MD= 71, 238; T(59)= 1.664; P=0.0148		

Source: Field data, 2020

The results in Table 11 show that the gains (TZS358,610) that households received in the study area were sufficient to offset the costs (TZS170,648) that households incurred by getting involved in circular labour migration (P=0.024), despite the fact that the magnitude of the difference was small ($\eta^2 = 0.01$). The small difference implies that, although the gains were higher than the costs of migration, the difference might be very small to meet livelihood challenges; a situation that calls for stakeholders to find a way for strengthening and vitalizing this undertaking in favour of maximum gains. Research has shown that the development benefits of labour migration depend, among other things, upon the degree to which migrants are protected and empowered by both origin and destination (MFEPWS, 2013).

The findings which show that gains were higher than costs were also true for area-specific results (Table 12). These findings support earlier findings by Mishi and Mudziwapasi (2014) in Zimbabwe, who observed that remittance plays a significant role in the sustainability of family livelihoods. The findings further seem to contradict those of Chappell et al. (2010) in their study in Jamaica, Ghana and Macedonia, which observed that remittances and incentives from migration alone were not able to compensate for the impact of emigrating labour force. Such contradicting results might be because circular labour migration is never uniform in its appearances as it manifests differently in different localities (Zapata-barrero et al., 2012).

2. Respondents' Qualitative Judgment on Gains over Costs

Respondents were asked whether gains received by households from their migrant members were enough to offset costs of migration. The findings (Table 13) indicate that 47.7% were of the opinion that the gains received were

insufficient to offset the costs of migration, while 38.0% were of the opinion that the gains were enough to offset the cost of migration. There was also a substantial proportion of respondents (14.3%) who could not make up their minds whether the gains from circular labour migration were sufficient to offset the costs of migration (see Table 13). Further analysis of locational-specific results revealed that results varied between Kakukuru and Nyakabango. As Table 13 shows, there was a relatively higher proportion of respondents (63.8%) in Nyakabango who said that the gains were not enough to offset the costs of migration, compared to Kakukuru (25%).

Table 2: Respondents' Qualitative Judgement of Gains over Costs

Responses	Wards		Total
	Kakukuru	*Nyakabango*	
No	52 (38.2%)	51(63.8%)	103(47.7%)
Yes	62(45.6%)	20(25%)	82(38%)
Not sure	22(16.2%)	9(11.2%)	31(14.3%)
Total	**136(100%)**	**80(100%)**	**216(100%)**

Source: Field data, 2020

The low proportion of respondents (38%) reporting that the gains were not sufficient to offset the cost of migration despite the quantitative assessment which indicated that the gains were significantly higher than the costs (Tables 11 and 12), could be attributed to two reasons. One reason might be related to the substantial proportion of respondents (14.3%) who could not make a definite prediction. Secondly, it might be due to the fact that the returns could not reach the senders' expectations and possibly the response on this item was due to the fact that respondents' judgement was influenced by reaction upon this shortfall. This fact can also be confirmed by the small value of eta squared in the quantitative assessment (η=0.01), indicating that the difference is not as big when judged using Cohen's (1988) criterion.

Similarly, during FDGs with a group of elders who had never been circular labour migrants, minds were divided. While 66.6% and 58.3% of the participants from Kakukuru and Nyakabango wards, respectively, had the opinion that the gains were sufficient to counterbalance the costs of migration, it was impossible to get sufficient cash while staying at home. The rest—33.4% and 41.7% from Kakukuru and Nyakabango, respectively—had the opinion that the gains from circular labour migration were not able to mitigate the costs that a household incurred in migration. The main argument was that the gains mostly benefited circular labour migrants themselves rather than the senders (i.e., households) as very little was brought back to the households. Wickramasekara (2011) observed that the destination area tends to benefit more compared to area of origin of circular labour migrants. Some studies (Collinson et al., 2006; Crush, 2012; Zeeza et al., 2011) have also observed that remittances in rural areas are very occasional, and usually come in small amounts.

5. Conclusion and Recommendations

The costs and gains from circular labour migration displayed almost similar pattern across the studied localities. Both costs incurred and gains received were considerably small. The gains received by households involved in circular labour migration were significantly higher than the costs incurred by household not involved in circular labour migration, but the magnitude of the difference between the two was small. It is recommended that the government, at all levels, should strengthen this undertaking by creating an enabling work environment for circular labour migrants so that the gains from circular labour migration can be maximized. These measures include enforcing the Tanzania Minimum Wage Order of 2013, which stipulates the minimum wage to be paid to employed circular labour migrants; and monitoring wage payment, ensuring job safety and security by emphasizing the entry of fair contractual agreements that ensure the security of jobs and safety at work places. Monitoring wage payment will not only maximize the gains for circular labour migrants, but also enhance wage predictability that will make the government utilize this as a source of revenue through imposing income tax. Policy makers should think of vitalizing circular labour migration through laws, and should also include circular labour migration in large national surveys such as the population censuses as well as household demographic surveys, so as to track its contribution to household, as well as national, welfare.

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