Gender Analysis of Motivating Factors for Joining Informal Cross Border Trade
In Four Selected Border Settlements of North Eastern Nigeria

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Abstract
A significant proportion of cross-border trade in North East Nigeria is conducted informally. The paper examines motivating factors and their significant differences in determining the participation of men and women in informal cross border trade in the region. Data employed for the study were obtained through observatory methods on four major market border settlements. Wilcoxon sign rank test was applied in analyzing the data. Results obtained revealed that there were significant differences in the motivating factors for joining the trade between men and women. Finally the paper suggests that emphasis should be placed in the promotion of the trade and that State needs to participate fully by sensitizing its key players to reap the benefits of cross-border trade as it is a legitimate source of employment and income.

Keywords: Informal, Factors, Border settlement, Wilcoxon test.

Introduction
Informal cross border trade (ICBT) in West Africa is increasing at an alarming rate. The expansion has been credited with deepening regional integration, improving economic growth and benefiting the population through employment, market and product diversification, increased outlets for goods produced and manufactured in the region and improvements in food availability (Morris & Saul 2000).

Trading activities in the North Eastern part of Nigeria is primarily informal, that is, a trade which consists of imports and exports of legitimately produced goods and services (i.e., legal), which directly or indirectly escape from the regulatory framework for taxation (import and export duty taxes) and other procedures set by the government, and often go unrecorded or incorrectly recorded into official national statistics of the trading countries (Balami, 2008). Reports from World Trade Organization, (2011) and United Nation Development Fund for Women, (2011) place Informal Cross Border Trade (ICBT) at approximately 40% of the Gross Domestic Product (GDP) of the region and it is considered the most popular form of trade by men and women in the North East border settlement of Nigeria (Lawan 2015).

Informal cross border trade cuts across all gender, ages, ethnic groups and religions (Lawan, 2016). It plays a vital role in poverty reduction, employment, and income opportunities (Kabira 2006; Cagatay and Ozler 1995). ICBT is a vital source of livelihood for the poor and an important component of Africa’s economy, contributing immensely to the economy of Africa, particularly in terms of uplifting trader’s economic status, and strengthening food security, regional economic trade and social integration (Matsuyama 2011). ICBT does not occur in a vacuum as it takes place within a broader trade perspective and developmental context internationally. Traders participate in import of essential and scarce commodities into their countries (Mijere 2006, Yusuff 2015). Few studies were made in the past to exam the motivating
factors for joining informal cross border trade in the region in relation (Balami 2008, Njikam and Tchouassi 2011, and Lawan 2015) without paying attention to gender issues. This study focuses its attention as to why men and women join ICBT and the differences in the factors that motivate each to participate in four selected border market settlements of Geidam in Yobe State, Banki and Gomboru Ngala in Borno State and Gurin in Adamawa State.

**Literature Review**

Randriamaro (2009) focuses on women’s economic empowerment in South Africa in relation to trade and poverty. He analyses the impact of trade on the feminization of poverty at the micro, and macro level, as well as the effect of the gender disparities underlying poverty on trade and concludes that it helps in easing the problems of unemployment. In a context of feminization of poverty, ICBT is often considered as an engine for offering a lot of employment and income opportunities to men and women traders in developing countries (Jackson, 1996; Cagatay & Ozler, 1995). Thus, the ICBT appears to play a vital role in alleviating poverty and promoting economic empowerment particularly to women. (Chen, Vanek & Hentz, 2006).

Traders were asked by Njikam and Tchouassi (2011) in their study of informal cross border trade between Cameroun and her neighbors as to why they engaged in cross border trading. The response given by female traders differ from that of male. Earning income was the more often reason given by female traders than men. Roughly, both men and women reported employment as a reason. Sharing ideas was given as a reason more often by men than women traders. In addition to these reasons, results of their discussions with different focus groups revealed further the following reasons for engaging in ICBT (Njikam & Tchouassi, 2011).

Firstly, the coexistence of different monetary regimes was considered as another main determinant of ICBT between Nigeria and Cameroon, which is a CFA (African Financial Community) franc zone member country. In Nigeria, the competitive advantage achieved through multiple devaluations of naira vis-à-vis CFA franc boosted the ICBT. For instance, during the period 1986 to 1995, the effective real exchange rate of naira was divided by ten through the 99% devaluation of the naira. This further improved the price competitiveness of Nigerian products. The strong real depreciation of naira thus improved the competitiveness of Nigerian made products and led to intense informal trade with Cameroun. In sum, informal cross-border traders want to take advantage of price differences due to divergent economic policies in neighboring countries (Lawan, 2016).

Secondly, another important reason of engaging in ICBT was related to new oil discoveries made in few West and Central African countries, e.g. oil production in countries such as Gabon, Equatorial Guinea, and Chad greatly improved the real income/purchasing power in these countries. Therefore, cross-border traders tried to take advantage of existing market niches abroad i.e. wider price differentials between Cameroon and her neighboring countries. Igué (1985) found the same evidence in the context of Nigeria-Benin and Nigeria- Niger borders, two of the more active informal trade zones in West Africa.
Thirdly, in the CFA zone, the drop in the income of most urban and rural households in the aftermath of the 1990s structural reforms led to the adoption of survival strategies, example of such was informal cross border trade.

Finally, in the Cameroon-Nigeria border site, another important factor for engaging in ICBT was related to agricultural products complementarities. For instance, Nigerian male and female traders travel to Cameroon to sell fish and return home with more agricultural products – mainly fruits such as banana, and forestry vegetables. This type of ICBT can be considered as a barter trade. The direction and importance of this barter trade were very volatile since they are function of factors such as agricultural production deficits or surpluses (Njikam & Tchouassi, 2011).

In most cases, the informal sector creates a network of relations, conventions and more efficient rules than the formal sector (Little, 2007). Again, informal trade is based on an accumulation of age-old practices that enable traders, particularly women, to adapt to the vicissitudes of their socio-economic environment. Although there may be no obvious continuity between the earliest carriers of kolanuts and palm oil and 21st century traders, the timeless characteristics of cities in Ghana, Togo, Benin or Yoruba-land, and the ancient traditions have engendered the expansion of today’s informal trade practices (Cocqueroï-Vidrovitch, 1994).

**Methodology**

The data for the study was obtained through the observatory method. It involved collecting data on each market segment on the market day. The population was determined by taking the average observation of people who participated in each market taking into consideration the number of male and female traders. The reason for using this method in arriving at the population for this study was because of the way the traders attend markets. It was not unlikely for one to attend market in week 1 and would not show up the next market day. However, by placing them on observation for three months and taking the average attendance, it was possible to get the correct population size. Thus the formula reads:

\[
\text{Pop} = \frac{\text{Obs}_1 + \text{Obs}_2 + \ldots + \text{Obs}_{12}}{12} \quad (1)
\]

Where: \( \sum \) = Summation sign = Sigma

\( \text{Obs.} = \text{Observations} \)

\( i = \text{weeks } 1 \ldots 12 \)

\( n = \text{number of observations} \)
The population of male informal cross border traders in all the four markets in the border settlements using the formulae for example was:

\[ \text{Pop} = \frac{1050 + 980 + 998 + 1102 + 1130 + 993 + 1100 + 1090 + 979 + 1087 + 1020 + 1071}{12} \]

\[ = \frac{12,600}{12} \quad (\text{The population is divided by 12 to avoid double counting since the same people in most cases visit the markets all the time}). \]

\[ = 1,050 \]

Similarly, female population was calculated as:

\[ \text{Pop} = \frac{211 + 2133 + 2098 + 2191 + 2172 + 2167 + 2189 + 2239 + 2164 + 2184 + 2167 + 2105}{12} \]

\[= \frac{25,920}{12} = 2,160. \]

The population of female informal cross border traders far outnumbered male as supported by previous studies (see Morris and Soul (2000), Balami (2008), Njikam and Tchouassi (2011)).

In getting the sample size, the same procedure was repeated except that for every average observation, 20% was taken as sample. Summing up the twelve observations and taking the average (to avoid duplication of figures) and multiplied by 0.2, the required sample size for the study surfaced. Thus the formula for the sample reads:

\[ \text{Sample} = n \times \bar{x} \times 0.20 = \frac{\text{Obs1 + Obs2 + ............. + Obs12}}{12} \times 0.20 \quad ............. \quad (2) \]

Where:
- \( n \) = Number of observations
- \( \bar{x} \) = Mean Observation

The summary of the computation is being presented in Table 1

<table>
<thead>
<tr>
<th>Border Settlement</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Banki – Amchede'</td>
<td>263</td>
<td>53</td>
</tr>
<tr>
<td>Gamboru – Portocol</td>
<td>263</td>
<td>53</td>
</tr>
<tr>
<td>Geidam</td>
<td>262</td>
<td>52</td>
</tr>
<tr>
<td>Gurin – Boggel</td>
<td>263</td>
<td>53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,051</strong></td>
<td><strong>211</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2,160</strong></td>
<td><strong>432</strong></td>
</tr>
</tbody>
</table>

Source: Computed by the Authors

The paper uses a non-parametric test of Wilcoxon signed-rank test. The advantage of using a non-parametric test is that it is free of specific assumptions about the distribution of the population under analysis, which is appropriate in this case given little knowledge of the
characteristics of informal traders. As many of the variables considered here are qualitative in nature they can be classified or ranked but not measured accurately. Hence non-parametric tests are more appropriate for this analysis. Among the various non-parametric tests, the Wilcoxon signed-rank test has the power to utilize information on both the direction and magnitude of the differences within pairs. It gives more weight to a pair that shows a large difference than to a pair that shows a smaller difference.

**Results on Motivating Factors for Engagement in ICBT**

This section is devoted to factors motivating engagement in informal cross border trade. Details of the findings on this for male and female traders are summarized in Figs 1 and 2 respectively.

![Fig 1. Source: Constructed by the Researcher](image)

![Fig 2. Source: Constructed by the Researcher](image)

Traders were asked why they engaged in cross-border trading. The values in the first block from left of Fig 2 reveals that earning income was the reason more often given by female traders than men, 60% of the female traders took to income earning. Roughly, both men and women reported unemployment (i.e. no other job) as their reason. To take care of the family was given as a reason more often by men than women traders. This accounted for 67% of the reasons why men were engaged in ICBT. Though to earn income and take care of family may appear to mean the same, however, in the context of this study they mean two different things. Income earned by women were sometimes reinvested or used in acquiring assets.

**Sign – Rank Test for Motivating Factors**

A uni-variate analysis was conducted using Wilcoxon sign rank test to verify if differences exist in the motivating factors for men and women in joining informal cross border trade. The results
are shown on Table 2. The calculation is carried out using the formula for standard deviation of T. (it is also important to note here that all the respondents in the study completed this part of the question where 416 female and 209 male responded.

The next procedure is to calculate the standard deviation of T.

\[
\sigma_T = \sqrt{\frac{n(n+1)(2n+1)}{6}} \quad \text{........................ (1)}
\]

(According to the \(H_{oT}, \mu_T = 0\).)

where: \(n = \) the number of observations.

\(\sigma_T = \) the standard deviation of T.

Next, is to find the z statistic –

\[
Z = \frac{T}{\sigma_T} \quad \text{............... (2)}
\]

where: \(T = \) sum of all ranks

\(\sigma_T = \) standard deviation of T. Finally, whether to accept or reject the null hypothesis is determined by the value of \(Z\) calculated.

**Table 2: Results of Test for Motivating Factors**

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
<th>Difference</th>
<th>Absolute Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td>13</td>
<td>75</td>
<td>75</td>
<td>4</td>
</tr>
<tr>
<td>77</td>
<td>139</td>
<td>-62</td>
<td>62</td>
<td>-3</td>
</tr>
<tr>
<td>249</td>
<td>52</td>
<td>197</td>
<td>197</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>-2</td>
<td>2</td>
<td>-2</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>-1</td>
<td>1</td>
<td>-1</td>
</tr>
</tbody>
</table>

| 416 | 209 | 29         | 335           | 3    |

\(T = 3\)

Source: Computed by the Researcher, 2013.

Substituting the values for \(n = 5, T = 3\) and \(\sigma_T = 7.42\) in the formula

\[
Z = 0.4
\]

The results of the sign rank test conducted for motivating factors had shown that the \(Z\) calculated was greater than the tabulated \(Z\) at 5% level of significant (which is 0.29). Therefore, the null hypothesis which states that there is no significant difference in the motivating factors between male and female in joining ICBT is rejected. A larger proportion of women considered income earning as a factor, men had a contrary view. This was further confirmed by the statistical test result.
Discussions on Findings

Results obtained from field survey have shown that informal cross border trade creates jobs, especially for women; supplies remote areas and improve the condition of living of participants. Reasons given by male and female traders for joining informal cross border trade differ. Men joined the trade in most cases to take care of their family. Women on the other hand, took the job so as to earn income. The results of these findings were not different from what was obtained by other researchers in the region such as Balami (2008); Njikam and Tchouassi (2011). What is then the implication of the finding? The reason given by men showed that they were forced by circumstance to be in the business of ICBT. In other words, if a male trader has the means to other jobs, he would not be involved in ICBT. For female traders, majority of them took to the job so as to earn income, therefore, only few were forced by circumstance to join the business.

Just as empirically proven in this paper that there was a significant difference in the motivating factors for joining informal cross border trade, same result was obtained by previous researchers mentioned above. Njikam and Tchouassi (2011) in particular showed that same reasons also applied to traders in other parts of Africa.

The study further observed that traders engage in ICBT as a source of employment to earn income, cater for their families and buy cheap goods across the border points. The involvement in ICBT was also linked to the lucrative market opportunities offered by the counterparts in the bordering country. On the other hand, high profit margins obtained from ICBT activities was equally a driving force for engagement in the trade.

The findings further indicated that ‘other’ reasons such as scarcity of food supplies in the neighboring countries could have encouraged people to participate in ICBT (Note that the column for others in Figs 1 and 2 attracted 6% of male and 20% in female traders). Again this result was in consistent with the results of studies obtained in other parts of Africa by researchers such as: Masinjila (2009), Mukasa (2008) and UNIFEM (2011). It however, contradicts Government’s view of Informal Cross Border Trade. As many governments including Nigeria perceive ICBT as modernized smuggling in disguise.

Summary

Informal Cross Border Trade represents a normal market response to cumbersome documentations, time-consuming customs regulations and regional price distortions for border communities. It is a major source of livelihood for people living at border settlements; while for government and other institutions such as Customs, Immigration and Police, ICBT is viewed as an illegal activity/disguised smuggling and a source of unfair competition thus a loss of revenue. Several reasons were advanced for engaging in ICBT, including; a way to earn income and employment, thus a major source of livelihood for people’s survival. It was also reported that the lucrative markets offered by the counterparts in the bordering countries promote and attract people to engage in the trade. History has also shown that the long trade relationship that existed during the trans-Sahara days continued to flourish to date.
Conclusion
The study presents positive aspects of informal cross-border trade to include availability of markets and income. It (ICBT) contributes positively to the economy of the region, therefore, instate of it being perceived as smuggling in disguise, emphasis should be placed for its promotion. States needs to participate fully by sensitizing the key players (informal traders). Already, Nigerian Shippers council of recent has taken the initiative of organizing regional seminars on sensitizing men and women in informal trade in the country. This would empower traders to promote business and make strategic investment decisions with the finances generated from ICBT. It should be viewed as a source of employment that keeps our youths engaged.

References


