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Understanding the Roles of Street Vendors of Agricultural Commodities during the COVID-19 Outbreak in the Informal Economy

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Abstract

The ongoing COVID-19 poses a global challenge which results in significant socioeconomic and psychological impacts. While the entire world appreciates the great job done every single day by the health care personnel, little attention has been paid to people especially women involved in supplying, delivering and retailing food commodities even during the strict lockdown. This study reports the results of a survey conducted in Bukavu, eastern DR Congo among 93 street vendors of agricultural commodities in order to understand their struggle and efforts to meet the basic needs of their families during this pandemic. Street vendors are mainly young women (82.8%) from both rural (40%) and disadvantaged urban entities (60%) and spend 9 ± 3 hours between searching and vending a range of products including vegetables and fruits, from which they earn per day 2.2 ± 1.5 US\$: Over 53% of those vendors earn less than 1.90 US\$ set as a global poverty threshold. Despite the struggle to get goods (46%), the instability of money exchange rate, and the police harassments (ordering the clearance of the streets, imposition of the wearing of masks), street vendors take much of risks to supply food to the community (38%) and to fight for their households' welfare (providing basic needs) during this critical period. However, street vendors (76.3%) are so concerned about the COVID-19 outbreak, which some qualify as a silent world war and the worse disease ever heard. In short, street vending is a source of employment and income for poor dwellers who have limited opportunities in a country where the ongoing pandemic exacerbates the already existing social inequalities.

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Keywords

Street Vendors, Agricultural Commodities, Family Basic Needs, COVID-19, Bukayu

1. Introduction

Entering 2020, the number of hungry and malnourished people around the world was already on the rise due to an increase in violent conflicts and climate change impact (WFP, 2020). In Africa, the COVID-19 pandemic poses challenges to the already strained health, food, and security and broad socio-economic conditions (FAO & African Union, 2020). In the Democratic Republic of Congo (DRC), while numerous public health crises such as malnutrition (Kandala et al., 2011; Barlow et al., 2015) and disease outbreaks including Ebola are still so far eradicated (Katembo et al., 2020; WHO, 2020a), the first confirmed case of COVID-19 has been reported on 10 March 2020 (UNICEF, 2020; WHO, 2020b) in the context of social and political crises, and this has disrupted the Congolese economy and the government agenda. The economic implications are thus detrimental not only to public health systems but also to trade and travel, food and agriculture sector, various market types and retail chains (Olaniyi, 2020; Kumar et al., 2020; Warwick & Rernando, 2020). The DRC is particularly more vulnerable to disease outbreaks such as COVID-19 for many reasons: 1) the country is facing several armed groups that have exacerbated social conflicts and forced thousands of people to displace and deprived millions of basic health and social services (Linard et al., 2013; Barlow et al., 2015) 2) Ebola outbreak in Kivu, Ituri and Mbandaka still needs also the appropriate responses (WHO, 2020a) whereas heavy rains and subsequent flooding have destroyed homes and agricultural fields in South Kivu, adversely affecting at least 90,500 people (USAID, 2020; IFRC, 2020). 3) The health care system is weak and partially supported by the international partners and donors. 4) The rate of poverty and malnutrition is important (Linard et al., 2013; Barlow et al., 2015), accentuated by the inequality to access resources between men and women (JICA, 2017). The national economy is not diversified and relies on the exportation of mineral which is significantly slowed by the ongoing pandemic. After reaching 5.8% in 2018, the economic growth has slowed to 4.4% in 2019, owing to the drop in commodity prices, particularly for cobalt and copper, which account for over 80% of the country's exports (World Bank, 2020). Moreover, border closures and restricted movement of people as well as the limited informal modes of work in an effort to enforce social distancing have resulted in the increased prices of food, in disruption of food supply chains and the exacerbation of food insecurity and financial inequality between men and women (Diwakar, 2020; FAO, 2020; Thornton, 2020; UN Habitat, 2020). In Bukavu, while the informal economic activities are often the unique source of income and food for 90.8% of the active population (Vwima, 2014), women who are acknowledged as the main actors of the informal sector still have limited opportunities to access resources, including credit and information (Mitullah, 2003; Schwarz, 2011). Yet, most of those forgotten heroin are smallholder' farmers and simultaneously agricultural workforce (Mushagalusa et al., 2015; Balasha & Nkulu, 2020), street vendors and retailers of agricultural commodities (Muyanja et al., 2011; Kesonga et al., 2016; Buliyaminu, 2016), they are also owners of micro and small enterprises (Mpaata et al., 2020) and brave fighters for the welfare of the entire community (caregiving, proving food). While all nations and world media acknowledge the great job done by the health care personnel (Doctors, Nurses), little attention has been paid to the valuable contribution of women, especially those involved in supplying, delivering and retailing food commodities even during the strict confinement. The goal of this paper is to honor and acknowledge the valuable contribution of street vendors of agricultural commodities for meeting the daily basic needs of their families during this ongoing pandemic. Specifically, we describe their socioeconomic profile and the organization of their time between searching and selling goods. Second, we report the perceived impact of COVID-19 on street trading. Finally, we analyze the contribution of street vending in the vendors' households and the local community.

2. Material and methods

2.1. Description of the Study Area

This study was conducted in the town of Bukavu, in the province of south Kivu eastern DR Congo. Bukavu is located between 2°31' of latitude Southand 28°50' longitude east, separated from Rwanda by the Kivu Lake and Ruzizi River (Sadiki et al., 2010). It is administratively subdivided into 3 communes (Bagira, Ibanda and Kadutu). Although Kadutu is the largest market in that town, there are also in each commune several selling points or small sized markets of agricultural commodities and manufactured products (Figure 1).

2.2. Data Collection and Analysis

Street enterprises involve the production and trade of goods and services outside of all legal trade and economic regulations (i.e. no license, no insurance, no minimum wage, no health and safety standards) and bureaucratic rules. Goods are sold from fixed stalls, from the pavement, in front of people's houses and doors, in small shops and, in most cases, from people's heads as they walk along the streets (Iyenda, 2005). A semi-structured questionnaire was used to collect data from 93 street vendors of agricultural commodities between 15 May and 22 June 2020. We met them at Panzi, Nyawera, Nguba, Brasserie, Kadutu, Buholo, Chimpunda, Chai and Essence. All vendors were selected based on their long experience in street trade (they had to have vended on street at least 6 months) so that we can have an increased understanding of their motivations to involve in street vending during COVID-19. Interviews and listening to vendors' stories

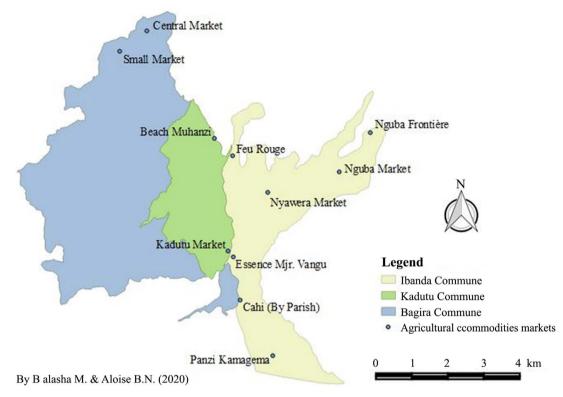


Figure 1. The town of Bukavu and its different markets of agricultural commodities.

were the main methods of data collection. The conversation took about 10 - 15 minutes with each informant accordingly to his mood or the frequency of costumers' appearance. We used a semi-structured questionnaire which included different questions that constituted the main research focus. The questionnaire was subdivided into 4 parts with specific questions including: 1) the description of vendors' socioeconomic profile (gender, age, residence, business capital, earnings), 2) the organization of time (time they search and sell, origin of goods, the type of products sold, the time they leave the street for home, 3) the perceived impact of COVID-19 on street vending and the related reasons 4) the perceived contribution of street vending on the informants' households and the reasons they involve in street business. Agricultural commodities' sellers gave some reasons why they vended on streets than in markets: 1) vending on street is tax free whereas accessing to the public markets requires much of resources: >50 US\$ and a daily tax 2) attracting and serving people who cannot reach the markets or who forgot to buy on large markets some necessary items such as tomatoes, onions, etc. 3) there is less competition between vendors 4) road users are potential customers. However, Chinyakata (2010) noticed that interviews among street traders have many limits including lies, exaggerations, omissions and silence which can result in collecting inaccurate information. During interviews, many street vendors (7% - 14%) were reluctant to respond to our questions and especially when it came to report their turnover and earnings. They were excluded from the calculation of the capital and earnings. That vendors' attitude (being reluctant) can be explained by the social insecurity in the area which makes people not trusting anybody but also street vendors assume that police officers and tax collectors can pretend being buyers, students or researchers. Data analysis was performed by using Microsoft Excel and IBM SPSS Statistical Package Version 21.0 to calculate frequencies, means and standard deviations and percentages, all presented in tables and graphs. A t-test was used to compare male and female' capital and earnings. Considering that money exchange rate is unstable in DR Congo, we used the exchange rate of the period we collected the data where 1 USD = 1900 CDF (Congolese francs).

3. Results and Discussion

3.1. Socioeconomic Profile of the Vendors

Results provided in **Table 1** show that street vendors of agricultural commodities are mainly women (82.8%) and a few males (17%). They are young (33 years old), 46% of them are between 16 - 30 years old whereas the aged people (45 - 65 years old) represent 14% of the entire sample. These results are in agreement with other studies conducted in developing countries by Nirathron (2006) in

Table 1. Socioeconomic characteristics of street vendors.

| Variables | Category | Frequency | Percentage | Mean ± SD | |
|--------------------------------|----------|-----------|------------|-----------------------------------|--|
| Gender | Female | 74 | 82.8 | | |
| | Male | 16 | 17.2 | - | |
| Age (years) | 16 - 30 | 43 | 46.0 | | |
| | 31 - 44 | 37 | 40.0 | 33 ± 11 | |
| | 45 - 65 | 13 | 14.0 | | |
| Household size | 1 - 5 | 32 | 34.4 | | |
| | 6 - 10 | 45 | 48.4 | 7 ± 3 | |
| | ≥11 | 14 | 15.1 | | |
| Residence | Rural | 37 | 40.0 | | |
| | Urban | 56 | 60.0 | - | |
| Capital US\$ | 1 - 19 | 66 | 71.0 | | |
| | 20 - 30 | 8 | 8.6 | 21.3 ± 30 US\$ | |
| | 30 - 40 | 0 | 0.0 | $M: 39 \pm 66 \text{ US}$ | |
| | 41 - 50 | 2 | 2.2 | F: 16 ± 20 US\$ | |
| | >50 | 10 | 10.8 | | |
| Income earned/business day* | 0.5 - 4 | 70 | 75.3 | 22 - 15 1104 | |
| | 5 - 9 | 5 | 5.4 | 2.2 ± 1.5 US\$ M: 3 ± 1.5 US\$ | |
| | >10 | 5 | 5.4 | F: 2 ± 1.4 US\$ | |

SD: standard deviation, *53.3% earned income < 1.90 US\$. M = male F = female.

Bangkok, in Uganda (Muyanja et al., 2011), in Vietnam Thanh (2015) and by Tebello & Tshediso (2020) in South Africa, where the majority of the street food vendors were women (72% - 88%) aged between 20 and above 45 years old. Women dominate street vending due to the limited economic opportunities for them in both rural and urban areas and also gender bias in education result in poor qualification and less competition in the formal job market (Mitullah, 2003; Iyenda, 2005; Tebello & Tshediso, 2020). Street vending has a special appeal for women due to its flexibility. Women can easily combine street vending with other household duties, including taking care of children (Mitullah, 2003) and also this activity does not require much of resources (capital) and has few barriers to entry (Arias, 2019). Almost of the street vendors (86%) are in their active age (≤44 years old). This advocates that this economically active age group cannot find a job or excluded from the formal employment. This situation can reflect also the high unemployment levels in a country (Iyenda, 2005; Shaiara et al., 2015). Results indicate that vendors come from both rural areas (40%) including Nyantende, Buhozi, Ihemba, Kabungo, Ihasi, Kalangwe and disadvantaged urban entities (60%) such as Panzi, Brasserie, Buholo and Cibunda. Results show clearly that, those vendors live in large sized households (7 persons) and 15% of those vendors are from the households of more than 11 people. A study conducted previously in Kinshasa (head city of DRC) mentioned also that street vendors were members of large households (≥7 persons) and lived in the disadvantaged entities in and around Kinshasa where unemployment, poverty and malnutrition were likely correlated (Iyenda, 2005). The same situation has been observed in Bangkok where the highest percentage of vendors came from the region with the lowest per capita income (Nirathron, 2006). While the economic importance of the street trade is not well appreciated due to the informal nature of the enterprise and lack of official data on volume of trade involved (Iyenda, 2005; Alimi & Workneh, 2016), several studies conducted in developing countries concluded that street vending can fight poverty and make women financially autonomous (Nirathron, 2006; Chinyakata, 2010; Otoo et al., 2011; Arias, 2019). Yet, the gender gap in accessing resources (capital), even for the street trade is highlighted. The independent t-test (2.347) revealed strong variability and differences between male (39 ± 66 US\$) and female (16 ± 20 US\$) as regarding the business capital (p = 0.000). However, 7% of the individuals of the entire sample were likely reluctant to declare their business capital. About 71% of street vendors have a business capital less than 20 US\$. This is in agreement with a survey conducted in Kinshasa which reported that the majority of street traders started their businesses with a mere capital ranging between 10 and 50 US\$ (Iyenda, 2005). It was found also in Bangkok that women who had low capital engaged in street food vending as a means of livelihood (Nirathron, 2006).

Street vendors daily earned incomes were not statistically different (p = 0.171) between males (3 \pm 1.5 US\$) and females (2 \pm 1.4 US\$). Even if 14% of these street vendors could not declare their earnings, on average, they earn 2.2 \pm 1.5 US\$ per day and 45.2% among them earn \leq 1.25 USD set previously as the po-

verty line in DR Congo (PNUD, 2013) whereas 53% cannot earn 1.90 US\$ actually considered as a global poverty line (World Bank, 2020). Income from street vending depends on many factors including the products sold and also in terms of the volume and the vending period (Shaiara et al., 2015). For example, cabbage street vendors in Lubumbashi earned in 2015 between 1 - 2.5 US\$ per day during the dry season (Balasha et al., 2015). The earned incomes were still no significant due to the increasing living cost of the basic needs (house rent, food and health care). A survey conducted in Zambia confirms also that street traders do not earn much money to meet adequately their needs. In Gweru urban district, street traders earned between 1 and 2 US\$ per day (Chinyakata, 2010). In Kinshasa, poor people working in the streets and earning a profit between 2 US\$ and 5 US\$ a day asserted that they could not afford to send their children to good schools and provide healthy food (Iyenda, 2005). However, compared to the basic minimum wage in different countries, earnings from street vending can be relatively higher (Nirathron, 2006; Shaiara et al., 2015). For instance, women entrepreneurs engaged in the cowpea street food sector earned incomes 4 times higher than the minimum legal wage in Niamey and Kumasi respectively (Otoo et al., 2011). Projecting the street vendors' incomes to a monthly basis (±65 US\$) and compared to the high school teachers' salary in DRC, averaging 112 US\$ in 2015 (Brandt, 2016) and soldier' wage: 100 US\$ per month (European Network for Central Africa, 2016), we notice that a street vendor earns more than haft of a teacher and a soldier' income respectively. While the legal minimum wage (SMIG) in DRC has been increased up to 7075 CDF = 3.72 US\$ (FEC, 2018), street vendors' earnings are still twice lower than the SMIG. This new SMIG line was expected to be effective not late than 1st July 2019 for workers of agriculture and livestock sector (FEC, 2018), but we do not have workers' evidence if that government commitment has been respected. Among the street vendors, 10% of them claimed working every single day and estimated their monthly earnings between 100 - 155 US\$, which is little higher than many state workers' incomes such as teachers and soldiers. However, we remain cautious of the vendors' declarations because many of people working outside of all legal trade and economic regulations feel uncomfortable about declaring their turnover and profits to avoid harassment from tax collectors.

3.2. Searching Time for Agricultural Commodities (Goods)

Over a half (51%) of street vendors search for goods early morning from 6 - 8 am while 35% others said from 9 - 11 am, and a few (6%) any time (Figure 2). There are a lot of struggles to get goods nowadays, a 30-year-old female vendor explained "since corna outbreak started, we struggle to find goods. We are actually relying only on the local and Idjwi farmers. We go early morning to collect from them banana and penaple. As we are several vendors demanding the products, there is a kind of competition to get goods. The first comes, first served".

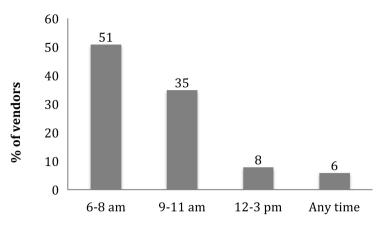


Figure 2. Different moments vendors search for goods.

3.3. Moment Vendors Leave the Street for Home

A large proportion of vendors left late the streets after working long hours (**Figure 3**). About 43% left the streets between 7 - 9 pm and other group of 41% vendors left between 3 and 6 pm whereas a few among them (6%) claimed they left any time. More than 10 street vendors were assisted by their children after 7 pm, while they (mothers) went home to prepare dinner and take care of younger kids. A street vendor met at Panzi explained: "Since agricultural commodities are quickly perishable, we do our best to sell all of them the same day, that is why some of us involve their children to stay on street after 6 pm while we go home to make dinner". The working time between searching goods and vending on streets varies from 2 up to 14 hours, with on average of 9 ± 3 hours per day. In Bangladesh and Kinshasa, street vegetable vendors worked about 12 hours on average daily to earn an income that will allow them to tackle the different problems they face and to look after their households (Iyenda, 2005; Shaiara et al., 2015). In Lubumbashi, Kesonga et al. (2016) even indicated that these street vendors prefer to sell in the evening hours and leave the streets too late.

They collected goods from different places, including large markets and streets, often far from their homes (Figure 4).

More than 40% collected agricultural commodities from streets and large markets as well as from smallhoder' farmers (32%), Muhanzi beach (16%) and 7.4% from their own farms and a little portion from big dealers (4%). These results are in agreement with Kesonga et al. (2016) who showed that about 90% of street vendors in Lubumbashi got supplied from large markets and farms located in peri-urban areas. Muhanzi beach (Kivu Lake) is a place where agricultural products from Idjwi island and Noth Kivu arrive. Since large urban agglomerations surround actually the Kivu Lake, many households prefer buying their food from the Beach where agricultural commodities, including fresh fish from the lake, are relatively cheaper. This is likely normal since traders and customers rely on a density of activities to keep their costs low and their social networks intact (Arias, 2019). Figure 5 presents the different agricultural commodities sold by the street vendors in Bukavu.

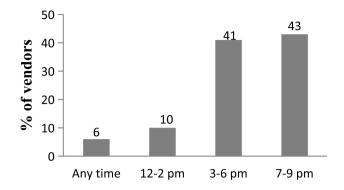


Figure 3. Moment the vendors leave the streets for home.

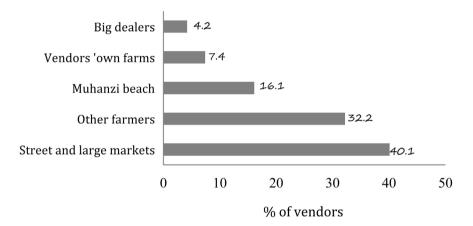


Figure 4. Distribution of street vendors' sources of agricltural commodities.

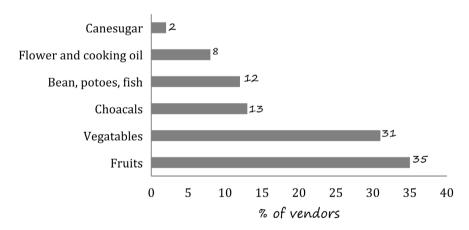


Figure 5. Distribution agricultural commodities sold by street vendors.

Fruits (35%) and vegetables (31%) are the main products sold, followed by bean, potatoes (12%), flower and cooking oil (8%) as well as sugarcane (2%). Citrus fruits, banana, pineapple, prune and avocado are the most observed fruits among street vendors. They claimed that lemons are the most requested fruits, used in common local knowledge as a product to reduce the risk of catching coronavirus during this ongoing pandemic. In middle May and June, while the Corona outbreak raised more concerns and panics among inhabitants in Buka-

vu, we observed almost of street vendors welcoming costumers in these words "welcome, buy lemons, ginger and garlic for your family, these are our traditional medicine to fight all diseases, including corona". Vegetables included squash, sweet potatoes and cassava leaves, amaranths, cabbage and eggplants, onions, and garlic. It was also observed in Kinshasa that many street vendors sold vegetables (cassava leaves, spinach, sweet potatoes, and amaranth) and fruits (Iyenda, 2005). The same trend was noticed by Shaiara et al. (2015) in Bangladesh where more than half (53%) of street traders sold vegetable and fruit (44%).

3.4. Impact of Corona Outbreak on the Street Trade

The ongoing COVID-19 outbreak has strongly impacted the food systems and this situation is seriously felt by street vendors of agricultural commodities (Table 2). About 46% mentioned the scarcity of goods due to the closure of the borders, the increase in good prices (72%) whereas 42% faced a shortage of customers because most of people were confined home, jobless and without money. This is consistent with FAO (2020) that predicted that the ongoing outbreak will strongly affect food production systems, and this will harden difficulties to access food. A high proportion (9%) faced police officers' threats and harassment. Police officers order the vendors to clear the streets and impose the wearing of masks. Since street trade is not legitimately regulated in many countries, actors face police and urban authorities' harassment, often resulting in confiscation of and damage to their goods as well as the loss of money (Mitullah, 2003; Nirathron, 2006; Shaiara et al., 2015). In Lubumbashi, the police harassment was reported as the major constraint for 90% of street vendors (Kesonga et al., 2016). Many street vendors reported that the failure of wearing mask during the COVID-19 peak in DR Congo was fined between 5000 - 50,000 Congolese francs (2.6 - 26.3 USD) in May and June 2020, period of the survey. Few of the street vendors (2%) realized good selling due to the high request of citrus fruits, among urban population. A fruit vendor explained: "citrus fruits are highly requested and its price has increased. Last month, we sold a 1 kg of Lemon about 0.54 US\$ but in the beginning of June, the same mount was negotiated at 2.1 US\$". Coronavirus outbreak impacts all community well-being, health systems and food supply chains which result in food insecurity among poor communities (FAO, 2020; ILO, 2020).

The perceived roles of street vending in the study area are reported in **Table 3**. Providing food to the families (100%), meeting the daily basic needs of families, supplying the community in requested products (38%) and helping relatives and friends (19%) are the most important roles acknowledged by the street vendors. Our findings are in agreement with several studies conducted in many developing countries concluding that street trade allows the most marginalized people from urban and rural areas to support their families and improve their social and economic situation (Mitullah, 2003; Nirathron, 2006; Shaiara et al., 2015; Arias, 2019). For instance, Otoo et al. (2011) reported that street vendors spend directly their earned incomes on their families for food, clothes,

Table 2. Impact COVID-19 outbreak on the street vendors business.

| Impact on business | N (%) | Vendors' reasons | |
|---|---------|--|--|
| Increase in good prices | 67 (72) | Borders are closed, no domestic travel, money exchange rate unstable | |
| Scarcity of goods | 43 (46) | Borders are closed, no domestic travel, we rely on local production | |
| No customers | 39 (42) | Most of people are lockdown home, and do not have money | |
| Law enforcement officers threats (harassment) | 8 (9) | Officers want us to leave the streets and wear masks | |
| Good selling | 2 (2) | Citrus fruits are highly requested | |
| Don't know | 1(1) | Do not know | |
| | | | |

N: number of street vendors.

Table 3. Contribution of street trade in the community during the COVID-19 outbreak.

| Contribution | N (%) | Vendors' reasons |
|---|----------|--|
| Providing food to my family | 93 (100) | Food is the most important thing that makes a family happy |
| Supplying my community and meeting basic needs of my family | 35 (38) | We basically vend what our families and community eat |
| Helping my family and relatives | 18 (19) | Spouse or relatives lost a job |

N: number of street vendors.

health care, and school for the children. However, street food vendors are often criticized not having good hygiene practices and no clear regulations governing the street business (Muyanja et al., 2011; Thanh, 2015).

Even if Nirathron (2006) and Shaiara et al. (2015) support that street vending can fight poverty, some scholars have disagreed by showing that despite being able to offer poor-quality employment and low-level incomes to many households in the cities, street economic activities cannot improve poor urban dwellers' living standards nor develop a country (Iyenda, 2005).

4. Conclusion

While the DR Congo is still facing armed groups, Ebola outbreak and the increasing unemployment rate in urban areas, the COVID-19 pandemic came to challenge and disrupt the government agenda. During this pandemic, many women are involved in informal economic activities including street vending of agricultural commodities to provide food to their families where either one or the other budget-contributing member has lost the job or being confined at home or out. About 71% of street vendors of agricultural commodities work with a mere capital < 20 US\$ and earn on average 2.2 US\$ per day, which is approximately twice lower than the legal minimum wage in DR Congo while 53% among them earn less than 1.90 US\$ per day set as a global poverty threshold. Street earnings are so far insignificant to meet the daily basic needs of vendors'

households which tend to be large (7 people). Street vendors reported that COVID-19 outbreak impacts strongly the food production and supply systems and is making it harder to access goods in Bukavu (East DR Congo), a region where the food deficit is regularly completed with imports from neighboring countries whose borders are currently closed. Even if street vending offers opportunities for poor dwellers to survive, street economic activities are not expected to improve poor urban dwellers' living standards. However, regarding the current roles of street vending within the poor community and the rise of informal economic activities in urban areas, there is a need for an urban planning that integrates the street vending businesses accompanied with strict regulations to avoid frequent problems and clashes between actors: police officers, tax collectors, road users and street vendors.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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