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Debt portfolios of the poor: The case of street vendors in Cali, Colombia

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ABSTRACT

The informal economy plays a significant role in the job market in Colombia. Cali, the third largest city in Colombia, is characterized by a high percentage of socially and economically vulnerable population groups who take part in the urban informal economy, with street vending as their primary source of income. This paper studies the socioeconomic dimensions of street vendors in Cali. In particular, it examines why they are unable to escape poverty and capitalize on their comparatively high earnings, despite a minimal tax burden due to the unregulated nature of their work and benefits from government welfare. The analysis is based on two surveys with 637 participants and 300 participants respectively. The study shows that most of the street vendors do not have access to formal banking systems. Consequently, they usually depend on payday loans with much higher interest rates which absorb a large share of their income and perpetuate their indebtedness, preventing them from improving their living conditions. However, the daily cash flow of street vending masks the high opportunity cost of loans and long-term deficits.

1. Introduction

The informal economy is of particular importance in developing countries around the world. People who work in the informal economy already face numerous challenges (e.g. low educational level, poor economic background) and they are exposed to further social and financial difficulties due to the non-regulated character of the informal sector. In our paper, we examine the informal economic activity of street vendors in the city of Cali in Colombia. The research question driving this research is: *why are street vendors not likely to improve their living conditions despite certain benefits from the government, as well as a comparatively high income?* Our hypothesis is that the main reason why street vendors are unable to improve their living conditions is that they are generally excluded from the formal banking system, therefore, their main source of capital is payday loans offered by moneylenders at predatory interest rates which maintain a vicious cycle of indebtedness. In the first section, we describe the theoretical framework of the informal economy with focus on Colombia, including the political background and the characteristics of street vending. In the second section, we explain the data and methods to test our hypothesis. The study was divided in three complementary parts (observation only and two different questionnaires) and implemented between December 2014 (study 1) and April 2016 (study 3). We examined the socioeconomic profile as well as the debt portfolio of street vendors at two different markets in Cali – the Downtown market and the Santa Helena market. In the third section, we present the results of our analysis. The obtained data on street vendors is not only compared between the two sites, but also with the average working population in Cali as a reference value. After a discussion of the results in the fourth section, we present our conclusions.

2. Theoretical background

There is no consensus on the definition of "informal economy". Generally speaking, the term is used with reference to employment outside formal regulatory arrangements, either in law or in practice (ILO, 2014). The International Labor Organization (ILO) considers informal economic activities all those that are not covered – or insufficiently covered- by formal arrangements that grant workers access to government protection, rights and representation (Gómez, 2016). The term 'off the books' is frequently used because it embodies the non-regulated nature of the sector outside of formal regulation and beyond the taxation regime (Vanek, Chen, Heintz, & Hussmanns, 2012; Vanek, Chen, Heintz, & Hussmanns, 2014).

The informal economy plays an essential role in the urban economies of the global South (Bromley 1978; Chen 2005, 2012; Godfrey 2011). In Latin America, it represents nearly half of the non-agricultural employment amongst the working age population (Gómez, 2016).

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Colombia follows the Latin American pattern. About half of the working age population obtains their income through an informal economic activity (DANE, 2015). During the past two decades, the reduction of the informal sector has been at the top of the policy agenda. Several laws and institutional reforms have been enacted. Between 2009 and 2012, 1.7 million informal workers were integrated into the formal economy, and the number of citizens contributing to health and retirement systems increased by 23.5% and 24.3% respectively. Despite these efforts, the proportion of non-agricultural informal employment could only be reduced by three percentage points – from 58% to 55%- between 2009 and 2013 (Gómez, 2016).

The term "informal economy" covers a wide range of economic activities, from garbage collection or street vending by an individual to small companies with less than five employees (ILO-FORLAC, 2014). Our analysis focuses on the sector of street vending because of its role in the dynamics of the urban informal economy and the relevance on the public agenda concerning poverty reduction and urban planning (Bhowmik 2012; Bromley, 2000; Cross, 2000).

From a theoretical standpoint, the informal economy has been studied from four perspectives: i) legalist, ii) voluntarist, iii) structuralist, and iv) dualist. The legalist perspective refers to all regulations and costs imposed by governments that inhibit small entrepreneurs from entering regulated and formal economic activities (Becker, 2004). The voluntarist perspective focuses on the deliberated decision made by informal workers to avoid taxations and regulations (Chen, 2012). The structuralist perspective argues that the informal economy is a subsidiary sector of the formal economy that allows reducing costs and sustains economic growth (Portes & Haller, 2004). The dualist standpoint considers the existence of the informal economy as an outlet to provide income generation to the poor (Chen, 2012). Empirical analyses that have studied the dynamic of street vending in Colombia, concluded that the voluntarist and dualist perspective are deeply intertwined in this context (Martínez, Short, & Estrada, 2017).

Street vending regulation in Colombia has a long history dating back to the 1930′s, when the government elicited a legal framework concerning the control and regulation of its expansion. This regulatory system remained in effect until 2003. Under this framework, street vending was deemed an illegal appropriation of public space and local governments were granted the capacity to evict street vendors from their vending site and confiscate their merchandise (Donovan, 2008). In 2003, the Constitutional Court revised this legal framework. Since then, street vendors have been protected by law, and their eviction from public space is prohibited, unless they are offered equivalent or better income generation opportunities. Consequently, removing street vendors from public space has become very costly for local governments. Given the lack of resources to provide stable jobs or equivalent income, the occupation of public space to sell goods has expanded in large cities in the country (Martínez & Short, 2017).

Street vendors in Colombia are economically and socially vulnerable by many standards. They suffer from poor access to education and their job provides both an unstable income and harsh working conditions. Furthermore, they tend to be excluded from formal economic structures, like regulated banking systems and retirement plans. These conditions have been reported in different developing regions around the world (Cross, 2000; Chen, 2001; Swanson, 2007). The exclusion of street vendors from the formal banking system is due to various circumstances. For one, they often do not meet certain formal requirements for raising a credit such as formal employment and a co-debtor that can prove financial stability. Furthermore, in the market of credits, the supply curve has a U shape due to asymmetric information and transaction cost which offers low interest rates for rich people (see Fig. 1: r_o in competitive markets or r_m without competition) but excludes poor people from formal loans (Ashta, 2009). Therefore, the only outlet for accessing formal credit for street vendors is through microfinancing schemes but in many cases, those small credits are tied to business plans that street vendors are not in the capacity to develop. Apart from this, holding a bank account in Colombia generally involves activity fees (withdrawal and deposits) which can be difficult to afford. Further reasons are the relatively long time frame required to access a loan and the perception that the bank will reject them anyway (Bhowmik & Saha, 2013; Pérez-González & Muñoz-Molina, 2015). In the absence of a regulated banking system, the black market of payday loans is dominant, because of lower transaction costs and information asymmetry due to their closeness to the community and the potential use of force (Ashta, 2009). As a result, moneylenders are able to push down the supply curve for poorer borrowers but charge much higher interest rates than a formal bank (see Fig. 1: $r_{paydayloansc}$ in competition or $r_{paydayloansm}$ without competition) (Ashta, 2009). There is evidence that payday loans in Colombia are linked to criminal organizations (Miranda, 2016). As the only resort for easy credit, street vendors are exposed to outrageous interest rates and the violence displayed by criminal organizations in the country.

The decision of the Colombian government to allow street vending as a tool to help eradicate poverty and protect vulnerable populations has led to the development of urban economic dynamics that incentivize informality but also facilitate the exclusion from regulated and institutional structures, like banking. Though not illegal, street vending remains a non-regulated economic activity. Thus, government efforts to control and reduce the expansion of informal markets are still challenging. In contrast to the idea of supporting the poor, street vending also led to negative consequences because of the demonstrated links with organizations which profit from tax evasion, the mafia, loan sharks and smuggling (Revista Semana, 2016).

3. Data and methods

Our study was conducted in Cali, the third largest city in Colombia with 2.4 million inhabitants. The city is one of the main industrial centers of the country and the major economic hub in the Pacific region. Cali fits in the general pattern of urbanization in Latin America where demographic changes and large migrations into cities have created an environment of poverty and inequality, yet with the potential for many economic opportunities (Cohen, 2006).

According to the Cali planning department, there are nine street vending sites in the city, though the exact number of street vendors who work at each site is unknown. Government interventions focus on the two largest street vending sites, the Downtown market area, and the Santa Helena market. Downtown covers 13 blocks in the middle of the economic and political center of the city. Street vendors in this area are located along main roads and next to formal commerce buildings and storefronts. They offer a wide variety of articles such as clothing, footwear, accessories, games/toys and food among other products. Santa Helena (3.5 km away from the Downtown) is primarily a street food market located near one of the most violent and distressed areas of Cali. It covers about 12 blocks where formal and informal commerce coexist.

This paper is based on three studies conducted at these two sites. The studies were implemented by the Observatory of Public Policy (POLIS) at the Universidad Icesi in Cali. The first study took place Downtown in December 2014. During the first stage, observational data was collected using a structured guide regarding the type of stall (fixed or mobile), type of products offered and number of people working at each stall. 792 vendors were counted at the site during this phase. In a second stage, pollsters were hired to conduct a detailed survey with 68 structured questions concerning socioeconomic status, family composition, income (including sales and profits), indebtedness, education, life satisfaction and access to government welfare. The survey was completed by 527 street vendors. The respondents were randomly selected in all blocks of the market, and the survey was conducted while they were at their stall. The pollsters approached the respondents by explaining the objective of the study, assuring confidentiality and emphasizing that the acquired data would be used for academic purposes

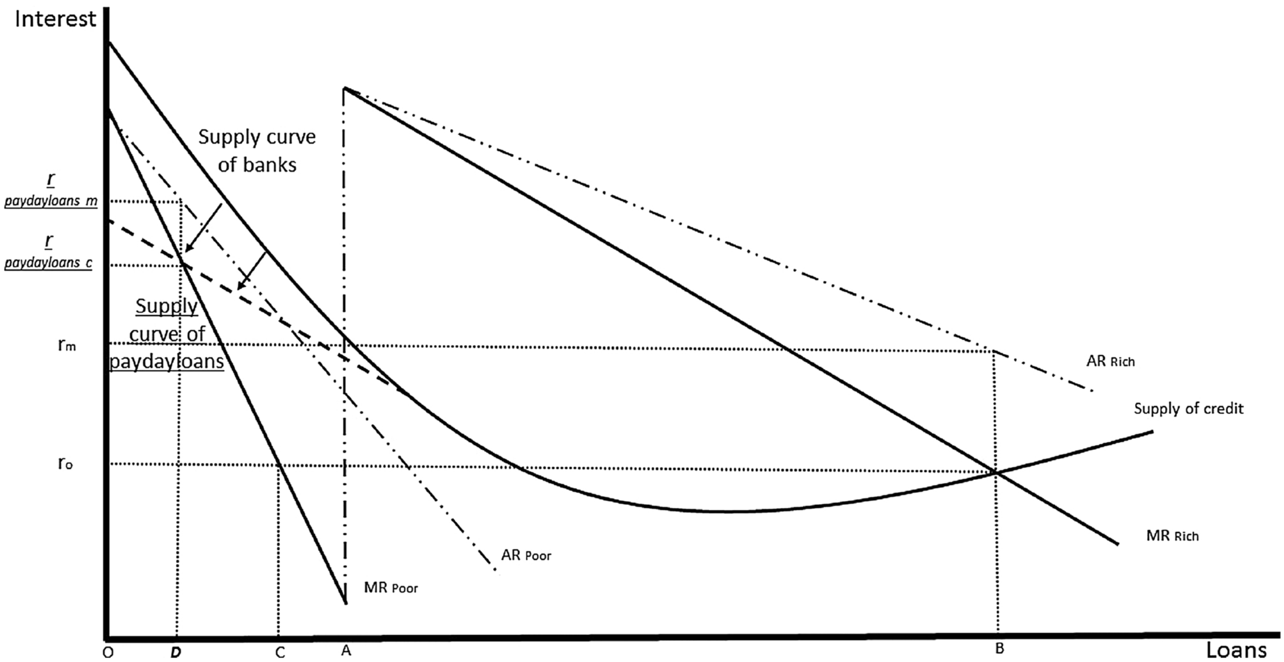

Fig. 1. Formal and informal credit market.
Source: Authors, adapted from (Ashta, 2009)

Table 1
Socioeconomic profile of street vendors in Cali.

Characteristic	Downtown	Santa Helena	Average[a] citizen of Cali
Women (%)	47	52	41
Average age (years)	43	50	40
High school or higher educational attainment (%)	28	10	67
Civil status: marriage and cohabitation (%)	54	47	55
Race: Black (%)	22	32	21
Race: Indigenous (%)	12	18	7
Average number of children	3	3	2
Average Income (USD)[b]	464	431	367
[c]Daily h of work (hours)	10.8	10.1	8.5
Days worked per week (days)	6.6	6.1	6
Persons with disabilities (%)	6	8	2.6
Displaced or victim of civil conflict (%)	14	23	/
More than 5 years as street vendor (%)	69	87	/
More than 5 years located at that place (%)	57	79	/
Street vendors currently paying a loan (%)	37	44	/

[a] Survey of employment and quality of life Cali 2012–2013.
[b] 1 US dollar = 2000 Colombian pesos Source: Authors.
[c] The calculation of income per hour is not relevant in the Colombian context.

only. Also, it was made clear that participation was voluntary and they could stop the survey at any time.

The second study was conducted in Santa Helena in January and February 2016. The same methodology and questionnaire were used as at the Downtown site. 245 vendors were counted at the site during the observational phase. 112 randomly selected respondents took part in the above mentioned socioeconomic survey.

As suggested by the data collected from studies 1 and 2, permanent indebtedness is a prominent characteristic of the population of street vendors. In order to verify the effects of permanent indebtedness, a third and final study was conducted at both the Downtown and Santa Helena sites in March and April 2016. A newly structured survey was designed by the authors to collect information about access to financial institutions and the extent of indebtedness of street vendors. 300 randomly selected street vendors were interviewed, 250 in Downtown and 50 in Santa Helena.

In total, there is complete socioeconomic information on 639 street vendors in Cali (those who answered the questionnaire in the first and second study Downtown and in Santa Helena) plus additional information about indebtedness and access to banking services from a subsample of 300 street vendors.

The socioeconomic information obtained in the first two studies was used to characterize the living conditions and business operation of street vendors. It was then merged with the data obtained in the third study to further examine their debt portfolio and access to regulated banking systems. In this context, the type of merchandise (e.g. watches) was used as a matching variable because on average, vendors report a similar monthly income based on the type of goods they sell. The reported sales are used as a proxy for income. Total costs are the sum of merchandise cost (investment) and storage cost. Profit is the subtraction of income and total costs. These variables were calculated on a monthly and then daily basis. The values are reported in US dollars (1 US dollar equals 2000 Colombian pesos). To estimate the indebtedness, an index was created. The "indebtedness index" is the daily amount to cover loans and interests (debt), divided by daily profit and multiplied by 100. The closer the index to 100, the higher the indebtedness level (in some cases, when the profit is negative, this index is also negative). Finally, net income is defined as the subtraction of profit and debt. All calculations were made using Stata. We used descriptive statistics to conduct this analysis.

4. Results

Table 1 presents part of the information gained about street vendors in Cali who work at the markets Downtown and in Santa Helena (study 1 and 2). As a reference value, it shows the equivalent data (if available) of the average citizen, which derives from an employment and quality of life survey conducted by the national government and is restricted to the working age population in Cali.

When comparing the data obtained at the two street vending sites in our first and second study, we can observe that the percentage of vulnerable population groups is higher in the Santa Helena market than Downtown, such as women (52% vs. 47%), minorities (blacks and indigenous; 32% vs. 22% and 18% vs. 12% resp.), persons with disabilities (8% vs. 6%) and victims of the armed civil conflict (the so called "displaced") (23% vs. 14%). Furthermore, the average age is higher in Santa Helena (50 vs. 43 years), and the educational level is lower in Santa Helena than Downtown (10% with high school diploma or higher educational level vs. 28%). The civil status of marriage and cohabitation (as an indicator of familiar stability) is more frequent in the Downtown market (54% vs. 47%), whereas the average number of children is equal (3 children). The street vendors at the Downtown site tend to work a little longer (10.8 vs. 10.1 daily hours) and more frequently (6.6 vs. 6.1 days per week), but also have a slightly higher average income (USD464 vs. USD431) than in Santa Helena and are less likely to currently pay a loan (37% vs. 44%). On the other hand, the percentage of persons with more than 5 years of professional activity as a street vendor is higher in Santa Helena (87% vs. 69%), as well as the percentage of street vendors located at the same site for more than 5 years (79% vs. 57%). 8 out of 10 street vendors (but only 6 out of 10 debt-free street vendors) are economically responsible for their families. Interestingly, street vendors both with and without debt tend to live in neighborhoods with similar socioeconomic conditions and housing situation.

When comparing the information presented in Table 1 with the equivalent data of an average citizen of working age in Cali (if available), several differences stand out. First of all, the level of education is distinctly higher (67%) in the average population. Secondly, the percentage of vulnerable groups, such as women (41%), minorities (blacks and indigenous; 21% and 7% resp.) and persons with disabilities (2.6%) is lower. The average citizen also works less daily hours (8.5 h) and fewer days a week (6 days/week) and is younger (40 years). On the other hand, the income of the average population in Cali is noticeably lower (367USD) when compared with a street vendor Downtown or in Santa Helena. However, only 30% of the street vendors own a home, compared to 52% of the average population. Furthermore, merely 15% of the street vendors pay for their health insurance (non-subsidized), whereas 69% use the subsidized public health system, and 15% do not have any form of health insurance.

Most street vendors buy supplies for their businesses on a daily or weekly basis (63% and 21% respectively) from wholesalers. This usually requires a direct full cash payment as there is no credit option. Around 38% of the 300 participants in our third study are currently in debt (113 in total; 93 of 250 participants Downtown vs. 20 of 50 participants in Santa Helena), but 68% of them have been in debt in the past year (64% Downtown vs. 90% in Santa Helena). The principal purposes of loans are investment in their businesses (71%) and paying back current debts (24%). Table 2 depicts the most interesting details of the debt portfolio, including the distribution of loans by lender, the average monthly interest rates of the different loans and the average time needed to pay the loan back.

The main source of capital are payday loans (51.3%), followed by microfinances (23.9%) and credits from a bank (16.8%). A loan from a friend or family member is rather rare (3.5% and 4.4% respectively). When comparing the debt portfolio according to the vending site, we can observe that the percentage of payday loans of indebted street vendors in Santa Helena is distinctly higher than Downtown (65% vs. 48.4%), whereas the percentage of microfinancing and credits from a bank is lower (20% vs. 24.7% and 10% vs. 18.3% resp.). Interestingly, the average monthly interest rates of the above mentioned loan types are very similar for street vendors in Santa Helena and Downtown, with the only exception of credits from a bank (2.3% vs. 3.8%). The average interest rate of a payday loan is comparatively high (20.4% and 20.3% resp.), followed by loans from a friend (10%). The interest rates of microfinancing and credits from a bank are considerably lower (2.3% vs. 2.7% and 2.3% vs. 3.8% resp.). The average amount of time required to pay back a loan is over a year (13.1 months), which corresponds to a total interest rate of around 265% for a payday loan. However, the street vendors in Santa Helena need less time to pay off their debts than Downtown (9.7 months vs. 13.9 months). The majority of street vendors (82%) does not have a bank account, which indicates no access to the formal banking system at all. When comparing street vendors with and without debt, the percentage of existing bank accounts is higher among the group with current debts (29% vs. 11%).

Table 2
Debt portfolio of street vendors.
Source: Authors.

Characteristic	Lender	Downtown	Santa Helena	Total
Average interest rates per month (%)	Family	0	0	0
	Friend	10	10	10
	Bank	3.8	2.3	3
	Microfinance	2.7	2.3	2.5
	Payday-loan	20.3	20.4	20.4
Street vendors in debt by lender (%)	Family	5.4	0	4.4
	Friend	3.2	5	3.5
	Bank	18.3	10	16.8
	Microfinance	24.7	20	23.9
	Payday-loan	48.4	65	51.3
Average time needed to pay back a loan (months)	/	13.9	9.7	13.1

Our results, as depicted in Table 3, show that only two products – vegetables and leather goods – generate total losses when looking at the mean value of profits. All the other products show a positive net income and beyond that an indebtedness index below 35% with the only exception of CDs. Street vendors selling CDs have to spend, on average, 51% of their daily income on debts. The lowest indebtedness indexes could be calculated for phone accessories, watches and juices. The highest mean profits as well as the highest mean net income could be calculated for glasses, phone accessories and watches. The merchandise of phone accessories and watches seems most profitable. However, these products can only be found Downtown, not in Santa Helena. The highest indebtedness indexes could be calculated for CDs, fruits and herbs – apart from vegetables and leather goods with negative indexes due to a negative profit. However, we have to take into account the standard deviation of each calculated mean value for profit, debt and net income. This means that due to a high variation between daily gains

Table 3
Daily levels of indebtedness of street vendors.

Merchandise	Profit[a] (Std. Dev.)	Debt[a] (Std. Dev.)	Net Income[a] (Std. Dev.)	Indebtedness index (%)[b]
Vegetables	−15 *(66.68)*	3,7 *(0.47)*	−13 *(59.15)*	−25
Fruits	27 *(65.86)*	8 *(11.08)*	18 *(64.23)*	29
Herbs	34 *(20.90)*	10 *(1.89)*	20 *(20.19)*	28
Juices	33 *(55.94)*	5 *(5.76)*	20 *(48.59)*	16
Glasses	55 *(35.31)*	10 *(7.18)*	34 *(35.39)*	19
CDs/DVDs	13 *(17.16)*	7 *(2.99)*	5 *(16.75)*	51
Leather goods	−7 *(49.93)*	2 *(1.98)*	−8 *(45.64)*	−34
Phone accessories	46 *(45.86)*	3 *(1.73)*	33 *(41.65)*	7
Watches	39 *(49.31)*	4 *(2.64)*	31 *(46.34)*	10

[a] Values in dollars per day (1 US dollar = 2000 Colombian pesos).
[b] (Daily debt payment/Daily profit)x100 Source: Authors.

and losses as well as the amount of debt between the individual street vendors, some of them might have a high profit whereas others register losses.

5. Discussion

As in many other developing countries in Latin America, the informal sector of the Colombian economy still plays a significant role for a relevant part of the working age population and the national government, mostly due to scarce opportunities in the regulated job market and a low educational level. In our paper, we focus on street vending in Cali, the third largest city in Colombia. Cali is exemplary for an encounter of socially and economically vulnerable population groups, such as refugees from the armed civil conflict (the so called “displaced”) and certain ethnic groups. Apart from that, the educational level among the working age population shows major differences. This generates an environment of poverty and inequality which provides a basis for the emergence of the informal market. Given the nature of street vending, working conditions are particularly harsh and the income is rather unstable. In addition, there are connections between street vending and the mafia, smuggling, and other organizations that profit from tax evasion.

The results of our study show that, on average, street vendors are less educated than the general population in Cali and work longer, but they report higher incomes (above the minimum wage). Furthermore, they usually enjoy a double benefit from the government in terms of an untaxable income as well as free or subsided access to health care. But despite those benefits, street vendors do not save money, nor do they deposit it in a bank or make medium- or long-term investments due to a lack of access to formal financial markets. One indicator of savings and capitalization is house ownership which is significantly lower among street vendors as compared to the average citizen (30% vs. 52%). The exclusion from regulated financial markets increases the opportunity cost of saving (keeping cash at home can be risky) to the point that being in debt can be seen as a way to save (Banerjee & Duflo, 2007). Furthermore, the limited access to mainstream credit increases the demand for moneylenders offering payday loans which in turn increases the overall cost of capital (Bhutta, Skiba, & Tobacman, 2015).

The debt portfolio of street vendors reveals that payday loans are their main source of capital, especially in Santa Helena. Contrary to the experience in some developed countries, street vendors in Cali do not use payday loans to overcome short term shocks, such as medical bills (Bickham & Lim, 2015). They generally rely on this kind of loan for their economic activities, such as purchasing merchandise or repaying other debts. The high interest rates of these loans and the time needed to repay them compound the poverty penalty shouldered by street vendors (Mendoza, 2011).

There are significant differences between the individual street vendors considering their work area and merchandise. Street vendors in Santa Helena, primarily a food market, represent a more vulnerable population group than Downtown as there is a higher prevalence of minorities, handicapped and women, and the population is significantly elder and less educated. Moreover, Santa Helena vendors have been disproportionately affected by the armed conflict, and the market itself faces more crime than Downtown, which increases the exposure to victimization. The average income is also slightly lower in Santa Helena and the proportion of vendors paying a loan is higher.

As in previous studies about street vendors, we found that fruit and vegetable vendors are more vulnerable. Comparative studies of street vendors revealed profound inequalities within street vendors depending on the good they sell (Roever, 2014). One possible explanation is that vendors in food markets are subject to various commercial risks such as rising prices, unreliable supply chains, natural disasters and climate changes that affect food prices. Vendors in this sector may be unable to externalize rising costs to consumers because of intense competition and costumer bargaining. These factors may explain why vegetable vendors report a negative average net income in Santa Helena.

Street vending is a short-term commercial activity that requires a constant cash-flow. Most street vendors buy merchandise from wholesalers on a daily basis which demands an immediate cash payment. The day-to-day structure of street vending can explain the need for a high indebtedness ratio, because a higher monetary liquidity is needed when the investment is so frequent. Therefore, a substantial proportion of the income is absorbed by debt obligations. Even though an average street vendor earns 20% more than an average citizen in Cali, their apparently higher incomes are counterbalanced by an average level of indebtedness of 26% which implies that street vendors are not generally better-off than the average citizen. However, the high variation in the standard deviation for each calculated value for profit between the individual street vendors suggests that for some of them, street vending is a very profitable activity.

Most street vendors (between 70% and 89%) have been working at the same location for more than five years even though they have been paying interest rates of up to 20% per month, which speaks for their debt repayment capabilities. However, the time frame characteristics of this market (day-to-day) and criminality increase the opportunity cost of accumulating cash. Since withdrawals and deposits in a formal bank account in Colombia cost a fee, and credits from a bank usually admit only monthly repayments, the traditional financial obligations of the formal sector seem unattractive. Therefore, an affordable loan platform is needed. Nevertheless, this requires a government intervention. So far, the national and local government have concentrated on relocation strategies and permanent control of public space occupation. None of these approaches have been successful (Martínez & Short, 2017). The first step would be to recognize that street vending generates jobs and income for a population that is still excluded from formal markets. Furthermore, any policy intervention can only be effective if it takes into account the current structure of street vending as a day-to-day, cash-based activity. The lack of access to regulated banking services, which results in excessive interest rates of payday loans, stands out as a major problem and may be one cause of a perpetual indebtedness.

The government should develop a new policy strategy. The emergence of impact investors and their idea of achieving both social/environmental and financial returns can offer the capital needed to test innovative financial opportunities for street vendors (Bugg-Levine & Emerson, 2011; GIIN, 2016; Nicholls, 2010; Rivera Acevedo & Tellez, 2016). A loan platform based on the block-chain technology can reduce exponentially both the transaction cost and the information asymmetry of financial formalization, allowing street vendors to access loans at competitive rates (Aldane, 2016; Nakamoto, 2009). Furthermore, an impact bond can be created to test the concept (Rivera Acevedo & Tellez, 2016).

6. Conclusions

Our paper contributes to the understanding of the street vendors' inability to overcome poverty despite their comparatively high income given their exclusion from regulated banking systems. The debt portfolio of street vendors reveals that their main source of capital is payday loans offered by moneylenders. The predatory interest rates of these loans counterbalance the high-income benefits and maintain a vicious cycle of indebtedness, which is one of the main reasons why they are unable to capitalize on their earnings. However, street vending is a cash-based day-to-day activity which masks the high opportunity cost of loans and long-term deficits. Significant differences between individual street vendors can be seen, which are associated with their location and merchandise. According to our study, the street vendors located in Santa Helena represent a more vulnerable population group in terms of educational level, prevalence of minorities and indebtedness. Furthermore, they run a higher commercial risk due to the characteristics of a food market.

The structure of the street vending business and the high cost of capital increases the poverty penalty for street vendors and prevents them from making long-term investments. This means that despite their relatively high income, street vendors, especially in Santa Helena, are by no means better-off than the general population of Cali. A policy intervention is highly recommended. The rising of impact investing and impact bonds in Colombia can offer the capital and the mechanisms necessary to establish an innovative outcome-based policy strategy. It is recommendable to use a block-chain-based technology to reduce the transaction cost and the information asymmetry of financial formalization. In general, providing suitable access to regulated financial services could be a more effective strategy than the current approach of relocation and control of public space.

References

Aldane, J. (2016). Bitcoin: A new currency for development? Calameo.com. *Development Finance, 04*, 8–12.

Ashta, A. (2009). Microcredit capital flows and interest rates: An alternative explanation. *Journal of Economic Issues, 43*(3), 661–683. http://dx.doi.org/10.2753/JEI0021-3624430305.

Banerjee, A. V., & Duflo, E. (2007). The economic lives of the poor. *The Journal of Economic Perspectives, 21*(1), 141–167. http://dx.doi.org/10.1257/089533007780095556.

Becker, K. F. (2004). The informal economy. *Department of Infrastructure and Economic Co-Operation, 20*(March), 731–732. http://dx.doi.org/10.1108/01443330010789214.

Bhowmik, S. K., & Saha, D. (2013). *Financial inclusion of the marginalised: Street vendors in the urban economy* (2013th ed.). S.l.: Springer.

Bhowmik, S. (2012). *Street vendors in the global urban economy.* Taylor & Francis.

Bhutta, N., Skiba, P. M., & Tobacman, J. (2015). Payday loan choices and consequences. *Journal of Money Credit and Banking, 47*, 2–3. http://dx.doi.org/10.1111/jmcb.12175.

Bickham, T., & Lim, Y. (2015). In Sickness and in Debt: Do Mounting Medical Bills Predict Payday Loan Debt? *Social Work in Health Care, 54*(6), 518–531. http://dx.doi.org/10.1080/00981389.2015.1038410.

Bromley, R. (1978). Organization, regulation and exploitation in the so-called ‘urban informal sector’: The street traders of Cali, Colombia. *World Development, 6*(9), 1161–1171.

Bromley, R. (2000). Street vending and public policy: a global review. *International Journal of Sociology and Social Policy, 20*(1/2), 1–28.

Bugg-Levine, A., & Emerson, J. (2011). Impact investing: Tansforming how we make money while making a difference. *Innovations, 6*(3), 9–18.

Chen, M. A. (2001). Women and informality: A global picture, the global movement. *Sais Review, 21*(1), 71–82.

Chen, M. A. (2005). Rethinking the informal economy linkages with the formal economy and the formal regulatory environment. *UNU World Institute for Development Economics Research (UNU-WIDER), 1*(46), 1–30.

Chen, M. A. (2012). *The informal economy: Definitions, theories and policies.* Women in informal economy globalizing and organizing: WIEGO Working Paper, 1.

Cohen, B. (2006). Urbanization in developing countries: Current trends, future projections, and key challenges for sustainability. *Technology in Society, 28*(1), 63–80.

Cross, J. (2000). Street vendors, and postmodernity: Conflict and compromise in the global economy. *International Journal of Sociology and Social Policy, 20*(1/2), 29–51.

DANE (National Administrative Department of Statistics) (2015). *Medición del Empleo Informal y Seguridad Social.* [Retrieved September 20, 2015, from http://www.dane.gov.co/files/investigaciones/boletines/ech/ech/bol_eje_informalidad_may_jul_15.pdf].

Donovan, M. G. (2008). Informal cities and the contestation of public space: The case of bogota’s street vendors, 1988 2003. *Urban Studies, 45*(1), 29–51.

Gómez, E. (2016). *Latin America’s informal economy some formalisation strategies.* Briefing European Parliamentary Research Service. PE 589.783. [Accessed 15 August] http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/589783/EPRS_BRI(2016)589783_EN.pdf.

GIIN (2016). *2016 GIIN annual impact investor survey.* [Retrieved from https://thegiin.org/assets/2016%20GIIN%20Annual%20Impact%20Investor%20Survey_Web.pdf].

Godfrey, P. C. (2011). Toward a theory of the informal economy. *The Academy of Management Annals, 5*(1), 231–277.

ILO (International Labour Organization) (2014). *Transition to formality in Latin America and the Caribbean.* Lima: ILO, Regional Office for Latin America and the Caribbean.

ILO-FORLAC (International Labour Organization ?Programa para la Formalización de la Informalidad) (2014). *Evolución del empleo informal en Colombia: 2009–2013.* [Retrieved 24 September 2015, from http://www.ilo.org/wcmsp5/groups/public/.].

Martínez, L., & Short, J. R. (2017). The informal economy of cities in the south: The case of cali, Colombia. *International Journal of Sustainable Development and Planning, 12*(4), 637–643.

Martínez, L., Short, J. R., & Estrada, D. (2017). The urban informal economy: Street vendors in Cali, Colombia. *Cities, 66*, 34–43.

Mendoza, R. U. (2011). Why do the poor pay more? Exploring the poverty penalty concept. *Journal of International Development, 23*(1), 1–28. http://dx.doi.org/10.1002/jid.1504.

Miranda, B. (2016). *Qué son los préstamos gota a gota que grupos criminales de Colombia exportan al resto de América Latina.* BBC Mundo. [Accesed 16 August] http://www.bbc.com/mundo/noticias-america-latina-37708989.

Nakamoto, S. (2018). *Bitcoin: a peer-to-Peer electronic cash system.* [(2009, March) Retrieved from https://bitcoin.org/bitcoin.pdf].

Nicholls, A. (2010). The institutionalization of social investment: The interplay of investment logics and investor rationalities. *Journal of Social Entrepreneurship, 1*(1), 70–100. http://dx.doi.org/10.1080/19420671003701257.

Pérez-González, S., & Muñoz-Molina, Y. (2015). Knowledge and use of microcredits options in low income small business. *Multidisciplinary Business Review, 8*(2), 44–55.

Portes, A., & Haller, W. (2004). *La economia informal.* CEPAL. CEPAL Serie Politicas Sociales.

Revista Semana (2016). *Bogotá: así se tomaron las bandas el espacio público.* [Accessed 21 November 2016] http://www.semana.com/nacion/articulo/bogota-hurto-homicidio-prostitucion-por-espacio-publico-invadido/456786-3.

Rivera Acevedo, J. D., & Tellez, L. (2016). *Impact bonds in the latin american context: Policy transfer analysis for Mexico, Chile and Colombia. Economic and social development: Book of proceedings.* Varazdin Development and Entrepreneurship Agency (VADEA) 136–151.

Roever, S. (2014). *Informal economy monitoring study sector report: street vendors*Cambridge, MA, USA: WIEGO.

Swanson, K. (2007). Revanchist urbanism heads south: The regulation of indigenous beggars and street vendors in Ecuador. *Antipode, 39*(4), 708–728.

Vanek, J., Chen, M., Heintz, J., & Hussmanns, R. (2012). *Statistics on the informal economy: Definitions, findings, and challenges (Working paper No 2).* Cambridge, MA, USA: WIEGO.

Vanek, J., Chen, M., Heintz, J., & Hussmanns, R. (2014). *Statistics on the informal economy: Definitions, regional estimates and challenges*, *68*. Working Informal Migrant Entrepreneurship And Inclusive Growth Migration Policy Series.