

## **Towards marketplace resilience: learning from trader, customer and household studies in African, Asian and Latin American cities**

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This paper identifies aspects of resilience taking effect in the marketplace and their influences on the roles of low-income traders and customers towards their households. Building on the concept of marketplace resilience and drawing from the findings from 42 publications on urban marketplaces in Africa, Asia and Latin America, this paper identifies the main functions and attributes of marketplaces that contribute or hinder the activities of traders and customers, the main disturbances they can experience in the marketplace and their strategies in building resilience. While this paper demonstrates the significance of marketplaces for the households of traders and customers, it also illustrates how disturbances in the marketplace and trade-offs to maintain trade during crises can negatively impact household needs and conditions, as well as the limited capacities of traders for improving their conditions. The paper finally argues for including marketplaces in resilience assessments and infrastructure studies in low-income urban contexts.

Keywords: marketplaces; urban resilience; traders; customers; low-income cities

### **Introduction**

Resilience assessments have aimed to understand how people are impacted by hazards and what they do during and after crises. In disaster and poverty research (e.g. Hewitt 1983; Oliver-Smith 1996), these studies empirically describe vulnerability, defined as the susceptibility of a person or group and their living environments to suffer from the impacts of hazardous events or conditions, and capacity, defined in the use and access of resources and assets during and in the aftermath of disasters (Wisner et al. 2004; Gaillard 2010). Most

recent research on resilience in low-income urban environments have focused on households and informal settlements (e.g. Chatterjee 2010; Baker 2012; Schilderman 2016).

However, research on resilience lacks inclusion of urban public spaces that may be located outside low-income settlements but are nevertheless significant for meeting household needs. This paper adopts Brown's definition of urban public spaces as 'all the physical space and social relations that determine the use of that space within the non-private realm of cities' (2006: 10) and includes 'all space that is not delineated or accepted as private and where there is at least a degree of legitimate public or community use' (2006: 22). The term encapsulates formal public spaces, such as parks, streets and squares, as well as marginal spaces 'where public access is possible but not formalized' (2006: 22), like ravines and vacant land. Marketplaces, thus, are defined in this paper as the dedicated urban public spaces where the primary activity is to offer goods and services at retail, generally by fixed or semi-mobile traders. Traders' physical structures can be fixed or mobile wherein stands and commodities can stay in place for several months or years, or can be brought at the beginning of the day and removed at the end (see Bromley, 2000). Marketplaces however excludes urban places where retail is not the main activity and where traders are truly constantly on the move.

Many low-income dwellers generate income and pay for basic commodities and services in marketplaces located outside their immediate residential areas. Globally, while estimates show that 79 per cent and 51 per cent of urban employment is informal in low- and middle-income countries, respectively, statistics specifically on informal trade in cities remain limited (International Labour Office 2018). At national levels, however, numbers show that a significant proportion of urban dwellers – and women in particular – work in urban petty trade and access commodities and services in urban public spaces. As an illustration, street trade constitutes 11 per cent of the total work force in Indian cities, 15 per cent in South African cities<sup>i</sup>, and accounts for 12-24 per cent of the informal employment in eight African

cities (International Labour Office 2013). Statistics on the food sources of low-income urban households or customers remain scarce (Skinner and Haysom 2016), but a survey performed in low-income neighbourhoods in three major South-African cities by the African Food Security Urban Network shows that 70 per cent of households buy their food from informal outlets (Crush and Frayne 2011).

Low-income dwellers may encounter disturbances in the urban public space and experience the impacts of affected infrastructure and services within their domestic environments. 'Disturbances' are defined here as the acute shocks (e.g. natural hazards and fire) that suddenly affect a person, a group or the proper-functioning of an infrastructure, and as the chronic stresses (e.g. food insecurity and unemployment) that slowly weaken people's well-being or erode the ability of an infrastructure to fulfill its function (da Silva et al. 2012). The disturbances relate to the shocks and stresses that low-income dwellers experience directly in their workplace and at points of service, but also those that indirectly undermine low-income urbanites' well-being at home. Literature on gender and low-income settlements has demonstrated the negative impacts of inadequate and insufficient urban services and infrastructure on the labour needed to generate household income, namely production, and on household and care duties, meaning reproduction (see Chant and McIlwaine 2015: 59-62). Research has however remained primarily centred on the domestic sphere and home-based enterprises and related to water and sanitation, waste collection, electricity and community spaces (see Chant and McIlwaine 2015: 93-112).

Overall, interlinkages between households, marketplaces and disturbances are excluded from urban planning and humanitarian studies due to respective disciplinary interests, such as infrastructure and settlements in the case of the former, and household and domestic matters in the case of the latter. In marketplace studies, a holistic understanding of the impacts of disturbances on the capacities of traders to generate income and on customers' access to daily

commodities is still lacking. Authors have reviewed the extensive empirical literature on petty trade and summarized global trends in street trade and public policies (Bromley 2000), interrelations between street trade and urban planning in Africa (Skinner 2008), unionization efforts by traders in South and Southeast Asia (Bhowmik 2005) and success factors in street trading enterprises (Wongtada 2014), but there is a need for comprehensive understanding of the roles played by marketplaces in meeting household needs in times of crises. In humanitarian practice in particular, the lack of data on the significance of marketplace actors and infrastructure in meeting household needs during crises limits the improvement and extension of market support interventions (see Juillard et al 2017).

In response to the lack of inclusion of marketplaces in resilience assessments and in infrastructure studies, and to the lack of evidence on how marketplaces contribute to meeting household needs during crises, this paper aims to identify the attributes of marketplaces as well as the aspects of resilience taking effect in the marketplace that influence the roles of its low-income traders and customers vis-à-vis their households. First, the paper introduces and discusses the concept of ‘marketplace resilience’ used in this paper as an analytical approach to assess recent literature. After explanations on the methods, the paper outlines the selected literature, highlighting inter alia geographical focus and gender aspects of the studies. The paper then presents a portrait of marketplace resilience as found in petty trader studies and in customer studies by highlighting the functions and attributes of the marketplaces, the main disturbances and their impacts, and the strategies to build resilience. The paper finally discusses the findings with regard to literature on infrastructure and resilience, and concludes by suggesting further research.

### **Marketplace resilience**

This paper formulates the concept of ‘marketplace resilience’, framed by and adapted from the notion of ‘urban resilience’ reviewed by Meerow et al. (2016, p. 45). Marketplace

resilience is defined here as the ability of traders, customers and their interdependencies within and beyond the marketplace, to maintain or quickly restore trade and the marketplace attributes in the face of a disturbance, to adapt to change and to quickly transform the conditions of the marketplace to better face future disturbances. In this definition, the complexity of the systems approach embedded in Meerow et al.'s definition (2016, p. 45) on 'the urban system and all its constituent socio-ecological and socio-technical networks across temporal and spatial scales' is abridged by looking specifically at the interdependencies within the marketplace, meaning between traders, customers and the attributes of the marketplace, as well as beyond the marketplace, meaning at the households of customers and traders. The concept of marketplace resilience, and its simplified systems approach (see Figure 1), is therefore seen as a way to address the aim of the paper, as it frames the examination of the interrelations between the (1) the marketplace and the households; the impact of disturbances on (2a) marketplace users and (2b) their households; and (3) the strategies to build resilience in response to experienced and future disturbances.

<Figure 1 around here>

The concept of marketplace resilience therefore suggests an analytical framework to be summarized in the following research questions and discussed further below.

- (1) What marketplace attributes contribute to (or hinder) the roles of traders and customers vis-à-vis their households?
- (2) What are the shocks and stresses experienced by traders and customers in the marketplace and how do they impact their respective households?
- (3) What are the strategies deployed by traders, customers and their respective households to build marketplace resilience?

### ***Interrelations between the marketplace users, marketplace attributes and households***

The first question, based on the roots of the concept of resilience in system thinking, relates to identifying the interrelations between marketplaces, traders, customers, and their households. They correspond to the functions of urban services and infrastructures<sup>ii</sup> for the user that are desired to be sustained before, during and after disturbances (Caputo 2013; Meerow et al. 2016). Many urban services in low-income cities are provided by and for populations through an informal market economy and social interactions (Grant 2010). Research has shown how the inadequate provision of urban services, such as water, sanitation, electricity, energy supply and electric power, can negatively impact women's household and care duties by increasing time spent on compensating labor at home, specifically cooking and using warm water, and on accessing commodities and services, such as potable water and food, in the public space, often daily and at a great distance from home (Chant 2007; Unterhalter 2009; Chant 2013; UN-Habitat 2013; Chant 2014; Chant and Datu 2015). Commodities and services may also be more expensive, demonstrated in the case of water, due to transport costs and the multiplication of economic actors involved before water is purchased and consumed (Hughes and Wickeri 2011; World Bank 2013). It is however still unclear how marketplace, as an infrastructure with possible attributes and deficiencies, can influence wellbeing and conditions of its users and their households.

### ***Impacts of disturbances on marketplace users and their households***

The second question investigates the various disturbances putting 'pressure beyond the normal range of variability on which [the marketplace] operates' (Gallopín 2006, p. 264-265) and the impacts on the users and their dependants. In that paper, disturbances include the shocks and stresses faced specifically by traders in the workplace and customers at points of service. In urban settings, disturbances often relate to the location of urban services in areas

prone to risk (e.g. floods and violence), as well as the very characteristics of the infrastructure in place, such as low quality and insufficient maintenance of the built environment (da Silva et al. 2012). These disturbances can result in the loss of or damage to productive assets, the disruption of activities and the increase of health and safety risks. As informal workers, most traders work without access to basic formal infrastructure, social and legal protection, and often work in unsafe and unsanitary environmental conditions (Chen and Beard 2018; International Labour Office 2013). Occupational health hazards experienced by informal workers induce 'hidden costs', including income and work insecurity as well as exposure to work-related risks (Chen et al. 2004, p. 49). Without adequate street lighting and police enforcement, women tend to be more at risk of violence, sexual harassment and conflict when being mobile, both at points of service and while using sanitation facilities (Unterhalter 2009; Hughes and Wickeri 2011; UN-Habitat 2013). Importantly, the impact of disrupted infrastructure can affect a considerable number of people due to their dependency on infrastructure for generating income and for accessing commodities and services (Graham 2010; da Silva et al. 2012).

### ***Strategies for building marketplace resilience***

The third question examines the strategies deployed over time by marketplace users and their households to ensure the continuation of marketplace functions when facing disturbances and to adapt and improve marketplace conditions to better face future disturbances. The built qualities of an infrastructure can be particularly influential as it can protect – or fail to protect – assets and services that urban dwellers rely on when facing disturbances (Moser 1998; Sanderson 2000). This is even more crucial as, similarly to low-income dwellers, very few informal workers insure their assets (Chen et al. 2004; Baker 2012). This is exacerbated by the fact 'urbanites often have few or no real alternatives when the complex infrastructures ... are removed or disrupted' (Graham 2010, p. 2).

In low-income settlements, infrastructure provision can be precarious (Graham 2010). As a result, the maintenance of such infrastructure is ‘often marked by the impromptu coping strategies and altruism of a wide range of social movements’ (Graham 2010, p. 23-24). These actions are ‘part and parcel of ongoing struggles to survive, to secure the essentials and to provide for the family’ (Silver 2014, p. 801). While household coping strategies to financial stresses have been documented in the literature, such as reducing consumption and expenditure, selling assets and relying on social capital (Moser 1998, Sanderson 2000, Beall 2014), those unfolding in urban public spaces such as marketplaces are yet to be explored.

Strategies should also aim at reducing risks in enhancing infrastructure robustness as well as infrastructure provider capacity to anticipate and prepare for future disasters. Importantly, assessments on the strategies deployed can reveal the extent to which people can strategize, and hence their limitations in terms of capacity and power. Desirable change can also overlap with other undesirable processes, such as privatisation or an increase in costs of public services (Chelleri et al. 2015).

## **Methods**

This paper reviews recent empirical literature on marketplaces to identify the attributes as well as the aspects of resilience that influence the roles of its low-income traders and customers vis-à-vis their households. The review explores the topic by drawing from empirical studies that may not have focused directly on the theme or used the same framework but can nevertheless provide new perspectives by collecting relevant findings from separate publications.

## ***Data Sources***

The article sample draws from three online databases. Elsevier Scopus and Thomson Reuters Web of Science were used to find peer-reviewed articles and book chapters, while the Active



Learning Network for Accountability and Performance (ALNAP)'s Urban Response Portal was used to find relevant grey literature in development and emergency practice in urban settings. The main reasons for extending the data source to grey literature was to compensate for the lack of peer-reviewed publications on customer studies after a first round of review and to include relevant research in the humanitarian sector, which has traditionally been published in reports and working papers.

### ***Study Selection***

As this paper is interested in exploring resilience in and related to marketplaces, inquiries in academic databases were selected using various combinations of keywords linking the activity of petty trade with spatial and physical dimensions, as well as with aspects related to vulnerability and resilience (see Table 1). The review was restricted to papers published from 2000 to 2016 in the English language. Papers not focusing on cities from low- or middle-income countries<sup>iii</sup> were ignored. Duplicates and irrelevant research subjects were also eliminated.

< Table 1 about here >

### ***Data Extraction***

Abstracts of the peer-reviewed publications and full texts of grey literature were then reviewed to select for only those corresponding to the following inclusion criteria. If a criterion was not clearly addressed in the abstracts of the peer-reviewed publication, the full text was then reviewed.

- (1)The publications must consist of a condensed empirical study of contemporary phenomena. Historical studies and monographs were excluded.

- (2) The methodological approach must be described and directly involve adult traders, customers or households in the data collection (e.g. through interviews, surveys or focus groups). Desk reviews and studies exclusively on policy or programmes by governments or non-governmental organizations were excluded.
- (3) Studies must relate to the provision of or access to food or other legal everyday commodities. For examples, studies on the trade of construction materials or of illicit substances were excluded.
- (4) Publications must relate to trade occurring in an urban public space and to its spatial or infrastructural dimensions. Papers on trade occurring in private homes and in enclosed shops were excluded. As per the focus on urban public space, the legal status of traders (formal or informal) was not a criterion for exclusion.
- (5) Finally, studies must discuss vulnerabilities or capacities related to the conditions or the use of market space or infrastructure. Studies focusing solely on financial or political dimensions of crises were excluded.

### ***Data Synthesis and Analysis***

A total of thirty-five peer-reviewed publications and seven papers from grey literature were selected for inclusion. The full texts were reviewed and categorized according to the data collection method, main empirical focus and city of empirical study. They were then coded in a qualitative data analysis software for classification and examination based on the aforementioned analytical framework.

### **Results**

The 42 selected papers, shown in Table 2, represent a variety of studies related to marketplace

resilience. The number of publications has increased sharply in recent years (see Figure 2), demonstrating a growing research interest in the topic over the last ten years. Papers have focused on urban areas in Africa (n= 12), Latin America (n= 6) and Asia (n= 6), for a total of more than 30 cities across the continents.

The review of papers focuses on the perspectives of marketplace users, with the total number of accounts exceeding 6,500 from traders and 12,500 from customers or households<sup>iv</sup>. Only five studies consider both traders and customers in the analysis, 26 papers focus solely on traders and 11 papers examine only customers or households. This paper differentiates petty trader studies from customer studies, and publications considering both perspectives are considered as belonging to each category. This resulted in 31 petty trader studies and 16 customer studies.

Of the trader studies that provided data on the gender of their participants (N= 18/31), women's perspectives are preponderant in eleven of them<sup>v</sup>. Studied cities that are known for hosting a female majority in their petty trade population include: Accra (Asiedu and Agyei-Mensah 2008; Lyons and Snoxell 2005), Limbe (Fonchingong 2005), Hanoi (Eidse et al. 2016; Turner and Schoenberger 2012), Cusco (Mackie et al. 2014) and informal settlements in Bolivia, Ecuador, the Philippines and Thailand (Floro and Bali Swain 2013). Petty trade is dominated by men in Dakar (Lyons and Snoxell 2005) and in Dhaka (Keck and Etzold 2013). Thirteen publications on traders did not provide information of the gender of their participants.

Perhaps due to households being an unit of analysis in most studies about customers, only three of the reviewed customer studies included information on the gender of their participants: the paper on 339 customers in Hanoi, of whom 95% were women (Jensen and Peppard Jr 2007), the study on households' food security in Blantyre where parity was reached in the in-depth interviews and where most focus group participants were women, and

the paper on public markets in Mexico that included the perspectives of two male and two female customers (Salcido et al. 2015).

<Figure 2 about here>

## **Marketplace resilience in petty trader studies**

### ***Marketplace functions and attributes for petty traders and their households***

<Table 3 about here>

Table 3 shows the main functions of the marketplace for petty traders as reported in the reviewed articles. The most cited function is to provide the main or a supplemental household income. Indeed, traders depend on income made in the marketplace to provide for their household needs such as food (Floro and Bali Swain 2013; Rudolph et al. 2012; Tawodzera et al. 2012) and children's education (Horn 2009; Tawodzera et al. 2012; Turner and Schoenberger 2012). When levels of income allow, petty trade may also contribute to socio-economic mobility (Asiedu and Agyei-Mensah 2008).

In many reviewed publications, traders are the main household breadwinner and are also responsible for household duties. In Bolivia, Ecuador, the Philippines and Thailand, where the number of female-centred households was higher in food trade than in other forms of self-employment, women outnumber men in self-employment and tend to engage in such activities due to reduced buying power and access to food. Childcare was also an issue for 40 per cent of the self-employed in these countries (Floro and Bali Swain 2013). According to Floro and Swain (2013, p. 97), the 'occupational choice' of women working in informal food trade is also connected to their roles in the household as unsold food can be used for household consumption. The situation was similar in Cameroon where 42 per cent of traders are female in charge of care and household duties (Fonchingong 2005). In Horn's (2009) multi-city study, 54 per cent of female informal workers (including traders) were the primary

breadwinner. Provided as a reason for this greater proportion of women in the sector is that petty trade as self-employment offers greater flexibility when needing to accommodate varying household and care work demands (Lyons and Snoxell 2005; Asiedu and Agyei-Mensah 2008). The multiple roles of women traders were also cited by traders in Limbe, Cameroon (Fonchingong 2005). In Johannesburg, South Africa, however, the activities of women have 'been a function of gender inequality in the informal sector' as women were present in the less lucrative activities (Pick et al. 2002, p. 195).

The reviewed articles also underline additional functions or attributes contributing to the livelihoods of traders. Firstly, to sustain income in the long-term, traders must adapt to the short-term needs of their low-income clientele. This results in selling very small quantities at a time and offering credit (Asiedu and Agyei-Mensah 2008; Husain et al. 2015), often at the expense of greater short-term gains. Moreover, proximity to consumers appears to be of vital importance to the generation of sufficient income (Riley 2014; Bell and Loukaitou-Sideris 2014; Rengasamy et al. 2003). In a study on farmers' markets in cities of Tamil Nadu in southern India, Rengasamy et al. (2003, p. 30) report that low-income customers 'tend to use markets located within a relatively short walking distance from their homes or places of work'. They also establish themselves in proximity to pedestrian traffic and transport hubs, like those mentioned in a study on Beijing (Bell and Loukaitou-Sideris 2014), or next to busy formal shops, shopping malls or factories, such as those in Durban, South Africa (Horn 2009). Secondly, traders may occupy and defend a fixed location to benefit from its economic and social attributes. A fixed location assists in sustaining marketplace social capital (Lyons and Snoxell 2005; Salcido et al. 2015), subsequently allowing social control over the occupation of trading space (see Brown 2015 and Lyons and Snoxell 2005). Social capital also offers flexibility in working times (Eidse et al., 2016) and increases autonomy vis-à-vis other duties (Recio and Gomez 2013). To illustrate, a fellow trader may take care of a neighbouring

business while a trader is away for family reasons (Floro and Bali Swain 2013; Asiedu and Agyei-Mensah 2008; Lyons and Snoxell 2005; Salcido et al. 2015). As Lyons and Snoxell (2005) emphasize, these socio-economic benefits are based on location and trust in colleagues. Finally, maintaining stalls and supplying commodities are a significant part of business expenditure. Due to meagre profits, productive assets are often maintained at minimum operational levels (Husain et al. 2015; Fonchingong 2005; Horn 2009) or enhanced slowly over time (Asiedu and Agyei-Mensah 2008; Lyons and Snoxell 2005).

### ***Marketplace disturbances and impacts on petty traders and their households***

<Table 4 about here>

The reviewed papers mention shocks and stresses that affect traders (see Table 4) and many relate to the contested nature of informal trade. Their prime locations can be highly disputed, mainly by formal businesses, governments and social elites (Recio and Gomez 2013; Riley 2014; Bell and Loukaitou-Sideris 2014; Keck and Etzold 2013), making the associated functions and attributes insecure (Lyons and Snoxell 2005; Crossa 2009; Roever and Skinner 2016). A study on five different cities by Roever (2016) also shows that market traders who have permits can be less exposed than street traders without a claim to their trading space but are nevertheless still subject to harassment and evictions due to abuse of power from the authorities. In these cases, permits do not provide ‘effective’ protection (Roever 2016, p. 32). Losing a trading spot, permanently or temporarily, impacts incomes for various reasons, such as the reduction of customers (Horn 2009; Asiedu and Agyei-Mensah 2008) and the diminution of productive trading time (Roever and Skinner 2016). Lyons and Snoxell, based on a study on markets in Dakar, Senegal, and Accra, Ghana, argue that social capital based on proximity like that observed in marketplaces is not likely to survive a change of location and ‘would leave gaps in the networks of mutual dependence upon which most traders’

entrepreneurial strategies depend' (2005, p. 1318).

Evictions, forced relocations, fines and harassment are also often associated with the confiscation or the destruction of supplies (Asiedu and Agyei-Mensah 2008; Brown 2015; Keck and Etzold 2013) and were therefore the most cited disturbances to petty traders. They are also particularly common among women and they result in the erosion of women's productive assets (Roever 2016; Roever and Skinner 2016). While less cited in the reviewed literature, man-made hazards (e.g. fires) and meteorological hazards (e.g. tropical storms) can also cause significant damage to marketplace infrastructure and supplies (Etzold 2014; Roever and Skinner 2016; Smith 2016). Construction quality and storage security often remain weak (Musoni 2010, Keck and Etzold 2013) because of the high risk for traders to invest under such unpredictable conditions.

Nevertheless, these losses of trading locations, structures and supplies are significant burdens as rebuilding and restocking require considerable financial capital (Roever and Skinner 2016; Lyons and Snoxell 2005), limit profit margins (Keck and Etzold 2013) and in turn traders' household expenditures. Because of the dependency on informal trade for household income and the lack of social protection, women traders and their dependants are particularly vulnerable to variations in income and expenses (Asiedu and Agyei-Mensah 2008; Floro and Bali Swain 2013). A study on the impacts of evictions in Maseru, Lesotho, reports that the aftermath was 'unnerving, with traders reporting spending days without proper food, children being taken out of schools due to unpaid fees, loss of accommodation as a result of unpaid rent and so forth' (Setšabi and Leduka 2008, p. 233). In the worst case, traders may lose their primary source of income, as reported after an eviction campaign in São Paulo (Cuvi 2016).

### ***Strategies by traders and their households for building resilience***

<Table 5 about here>

When facing disturbances caused by the application of disruptive government policies, petty traders deploy a series of actions to maintain their activities (see Table 5). The selected papers remain vague about the number of traders that quit vending following evictions or harassment, besides a study in Sao Paulo estimating that 15 percent of the informal street vendors deserted the streets following an eviction campaign (Cuvi 2016). Most studies, however, imply that repressive policies remain largely unsuccessful in the long-term due to persistence and strategic efforts deployed by traders.

Traders may take the risk of returning to evicted locations under tougher conditions (Cuvi 2016; Turner and Schoenberger 2012). They can also adopt a hide and seek strategy by relying on various trading locations and sharing information about police patrol routines (Eidse et al. 2016; Meneses-Reyes 2013; Musoni 2010; Keck and Etzold 2013). Traders sometimes combine these strategies with informal arrangements or bribes with police officers, politicians or gang members (Etzold 2014; Cuvi 2016; Eidse et al. 2016).

Traders may also spend more working hours meeting household needs (Horn 2009) or diversify commodities, increasing daily risks but also creating opportunity for greater income (Lyons and Snoxell 2005; Horn 2009; Cuvi 2016). Women, in a study in Dakar, Senegal and Accra, Ghana are also more likely than men to change modes of production (e.g. from sale of cooked food to fresh vegetables) due to changes in their household and care duties (Lyons and Snoxell 2005). These women perceive the changes as providing opportunities, rather than constraints, 'seeing change and adaptation as an opportunity to remain in business' (Lyons and Snoxell 2005, p. 1309) and resulting in the betterment of household conditions in the long-term. When income is at its lowest, many women work longer hours, facing 'the unwelcome choice between more hours away from their children or less food for their children' (Horn 2009, p. 14).



Furthermore, in addition to the many aforementioned disturbances which directly or indirectly affect the economic conditions of traders, the further lack of access to financial support, social security and insurance slow the recovery in trade (Etzold 2014; Floro and Bali Swain 2013; Tevera and Simelane 2014). Small burdens in the household or in the marketplace may also be partly compensated by marketplace social capital, saving groups and welfare associations, thereby providing some economic relief (Brown 2015; Musoni 2010; Cuvi 2016). Saving groups were particularly present among women traders (Lyons and Snoxell 2005). Trust among traders and with suppliers is also vital for marketplace persistence (Peck and Etzold 2013), allowing the continuation of trade due to donating, sharing, borrowing and crediting resources whether working time or money (Lyons and Snoxell 2005; Husain et al. 2013). According to Lyons and Snoxell (2005, p. 1314), women, as well as well-educated traders, were ‘overwhelmingly more likely to give and take credit’.

Petty trading, however, comes with harsh consequences on working conditions, especially when crises persist. For example, returning to a location and enduring constant harassment can have a serious impact on traders’ physical and financial security. However, as cited in numerous papers (Crossa 2009; Recio and Gomez Jr 2013; Roever and Skinner 2016; Roever 2016), traders often also find themselves in situations of direct confrontation or, when politically organized, establish a power relationship and negotiate with the authorities with the aim of sustaining their source of income. Welfare associations may represent and defend their members against harmful governmental decisions such as in Johannesburg and Durban, South Africa (Benit-Gbaffou 2016; Çelik 2011), in Cusco, Peru (Mackie et al. 2014) and in Ahmedabad, India (Roever, 2016). In the short term, this helps traders maintain their economic activities and if they are successful, may secure their livelihoods, legalize and improve their conditions in the long term. However, trader associations are not always present, recognized and robust, as observed during Operation Murambatsvina in Zimbabwe

(Musoni 2010) and may not be successful at improving their members' conditions. Traders may not be organized to engage and challenge local and national governments (Horn 2009). Crossa (2016, p. 300) also discusses the different 'politics of resistance' on the part of different groups and trader associations within the same city, Mexico, with different levels of success in improving traders' rights. Over the long-term, recovery of trade may also be gendered such as in the case of post-Murambatsvina, as the businesses that resurfaced were mostly owned by men due to the loss of women's productive assets and the decision of evacuating women and children from the conflict area (Musoni 2010).

## **Marketplace resilience in customer studies**

### ***Marketplace functions and attributes for customers and their households***

<Table 6 about here>

The examined desired functions of the marketplace for customers and their households are listed in Table 6. Petty trade marketplaces are the chosen venue to access food and everyday commodities for low-income customers and households. In the few studies that specify the gender of customers, the majority of food buying is done by women, such as in Cape Town, South Africa (Battersby 2011a) and in Hanoi, Vietnam (Jensen and Peppard Jr 2007).

More specifically, households visit petty trade markets especially when incomes are at their lowest (Tevera and Simelane 2014; Battersby 2011b; Rudolph et al. 2012). One of the main given reasons is the possibility to 'negotiate [with traders] whatever smaller amounts of food their money would buy' (Tawodzera et al. 2012, p. 25). Many customers can only afford very limited quantities of food at a given time and may not have the financial capacity to buy greater quantities – at the supermarket for example – to benefit from a better price per unit. Moreover, customers often establish trusted relationships with traders that often form the basis of informal credit schemes (Lyons and Snoxell 2005; Mackie et al. 2014; Battersby

2011b). This allows some flexibility in buying options and contributes to maintaining a continuous access to basic commodities. Battersby (2011b, p. 551) argues that while ‘household-scale factors are important, ... extra-household factors, such as the location and type of market available, are an equally important indicator’ of food security. Therefore, customers should not need to travel far to access food and other basic commodities. This helps to save time and money as longer distances translate into increased travel expenses or reduced productivity (Rudolph et al. 2012; Tolossa 2010; Battersby 2011a; Jensen and Peppard Jr 2007). The marketplace also compensates for a lack of domestic assets, such as access to refrigeration and storage, as they offer a convenient physical access to a daily source of fresh food and consequently limit losses (Battersby 2011a, Rengasamy et al. 2003; Rudolph et al. 2012).

### ***Marketplace disturbances and impacts on customers and their households***

<Table 7 about here>

As the literature on customer studies focuses primarily on food security, much of the disturbances reviewed here (see Table 7) relate to events negatively impacting economic and physical access to food. Many of these disturbances come from beyond the marketplace physical boundaries, such as the slow or rapid increase of commodity prices and the disruption in food production and processing, such as the case of the price of coarse rice in Dhaka following floods and cyclones in Bangladesh in 2008 (Keck and Etzold 2013) and of the series of food price hikes over a few years that lead to a majority of surveyed households that ‘ha[s] gone without food due to unaffordability in the previous months’ in 2011 (Mvula and Chiwesa 2013, p. 14).

The fact that food insecurity may be gendered – and that women may be more dependent on marketplace attributes than men – depends on the context. In a study conducted

in Johannesburg, male-headed households were more likely to be food insecure than female-headed households (Rudolph et al. 2012). The study on food insecurity in Cape Town reported that despite gendered aspects of poverty in the city, the difference between female-centred households and other types of household, while being significant, was not as great as expected (Battersby, 2011a). However, food insecurity appeared to be gendered in Blantyre, Malawi, Harare, Zimbabwe, and in Manzini, Swaziland, where female-centered households were more likely to be food insecure than other types of households (Mvula and Chiwesa 2013; Tawodzera et al. 2016; Tevera and Simelane 2014). The lower levels of income, the multiple roles of women in society (i.e. production, reproduction and organisation) and discrimination in regulations and financial support are cited as causes of gendered disparity (Battersby 2011a; Tevera and Simelane 2014).

Only a few studies show that the same disturbances affecting the marketplace highlighted in trader studies, such as evictions and fires, also impact their customers (Floro and Swain 2013; Riley 2014). An example is the Operation Dongosolo in Blantyre, Malawi, where petty traders were evicted from the core urban areas relocated to ‘unplanned and marginal areas of the city’ (Riley 2014, p. 450). The new location of food markets resulted in a physical hurdle for low-income households living in the centre in accessing markets where affordable food was available, according to Riley (2014, p. 450), thus significantly impacting food security. The displacement of trading spots can affect food security as it may cause higher travel costs as well as disruption to valuable marketplace social networks with traders.

### ***Strategies by customers and their households for building resilience***

<Table 8 about here>

Strategies for coping with food insecurity can be categorized as those occurring within households and residential neighbourhoods and those unfolding in the marketplace (see Table

8). Adjusting food consumption patterns, reducing household expenditure and selling household assets are extensively documented coping strategies in the food security literature and were unsurprisingly mentioned in the reviewed papers. The strategies significantly impact long-term vulnerability and poverty but are necessary survival strategies in more severe and chronic cases (Battersby 2011a). Humanitarian aid and formal safety nets are mentioned as possible ways to reduce food insecurity in a few studies but remained the exception in most cases (such as in Tevera and Simelane 2014; Battersby 2011a) or did not target the urban population like in Manzini, Swaziland, and in Dhaka, Bangladesh where aid targeted mostly rural food producers rather than urban food traders and customers (Tevera and Simelane 2014, Keck and Etzold 2013).

As marketplaces are preferred sources of food for people with the lowest buying capacities, households increase reliance on petty trade marketplaces during a food security crisis (Tawodzera et al. 2016; Tawodzera et al. 2012; Mvula and Chiwesa 2013). They can provide flexible buying options and access to the small quantities customers can afford at that time. Therefore, in the marketplace, relying on social capital is the most cited strategy practiced during periods of food insecurity. Comparably to traders' social networks, relationships between customers and traders are used for crediting commodities (Lyons and Snoxell 2005; Husain et al. 2013; Roever and Skinner 2016; Keck and Etzold 2013). Such a mechanism remains useful when addressing occasional stresses but may, however, reach a threshold when traders are themselves affected in crises.

## **Discussion**

To demonstrate the need to include marketplaces in resilience assessments and in infrastructure studies, this section consolidates and discusses the findings from trader and customer studies, and relates them to literature on the use and provision of urban services and infrastructure during urban crises.

### ***Linking marketplace infrastructure with household needs***

Findings strongly establish the link between the activity of petty trading and the roles of traders and customers towards their households. The high dependency on marketplaces for generating household income and to access basic commodities during crises as well as their inherent attributes that facilitate trade among the poorest socioeconomic class of urban residents support considering marketplaces as one of the most vital infrastructure in cities of low-income countries. Court rulings in India summarize the situation well in confirming traders' rights to the city 'and have done so with reference to the role street vending plays in poverty alleviation, not only for the vendors themselves, but for residents who depend on vendors to access goods in small quantities and at low prices' (Roever 2016, p. 38).

Findings from this review show that the reviewed marketplaces, as an infrastructure, possess attributes that can positively influence meeting household needs. These attributes can be categorized in relation to proximity, solidarity and stability. Proximity relates to nearness in space and occurrence of socio-economic transactions between traders and customers, and within the trader community. Proximity to customers enhances the likelihood of more regular sales for traders – influencing the regularity of household income – (Riley 2014; Bell and Loukaitou-Sideris 2014; Rengasamy et al. 2003) and convenience for customers – reducing time and money spent on transport (Rudolph et al. 2012; Tolossa 2010; Battersby 2011a; Jensen and Peppard Jr 2007). Traders also form relationships with neighbouring colleagues as well as with customers and that appears to be useful in maintaining and sustaining trade over time (Peck and Etzold 2013; Lyons and Snoxell 2005; Husain et al. 2013). Solidarity is exposed in the buying capacities that traders offer to regular customers as well as in working-time autonomy, depending on their financial capacities and household obligations (Lyons and Snoxell 2005; Asiedu and Agyei-Mensah 2008). Stability relates to the regularity in sales or income, as well as in the frequency of trader-customer interactions that a fixed location contributes to unfold. Characteristics of proximity and flexibility therefore appear to be

conditional to a fixed location. This may explain why, in many studies, traders persist in keeping or returning to their trading spot when facing disturbances, often at great costs (Benit-Gbaffou 2016; Cuvi 2016; Turner and Schoenberger 2012). Therefore, these socio-spatial marketplace attributes, sustained by and for the low-income and often female populations, do aim to soften the double burdens of generating household income (production) and providing care and other household duties (reproduction).

Still, a detailed analysis of the characteristics of marketplace infrastructure that contribute to the roles and attributes of marketplaces mentioned above remain to be realized, as much the reviewed literature tends to overlook such physical and spatial features in their analysis. Still, existing research vulnerability of infrastructure and dwellings in low-income settlements show how building quality and location matters (da Silva et al. 2012). In the papers, the physical characteristics of the marketplace infrastructure were at best part of the context or background of the study and are yet to be fully considered as relevant factors in their own rights.

### ***Impact of marketplaces' infrastructural vulnerabilities on households***

The disturbances reviewed in this paper provide insights regarding the impact of the loss or damage of market assets, as well as of the loss of a trade location for traders, customers and their dependants. Impacts can be summarized in the reduction of household buying power and in the reduction of productivity. What findings seems to demonstrate, by the indirect link with the role of marketplaces, is that household vulnerability also extends into the marketplace, and vice-versa. First, the impact on household buying power, relates to the reduction of income induced by losing commodities, assets and regular customers for traders (Asiedu and Agyei-Mensah 2008; Brown 2015; Etzold 2014; Roever and Skinner 2016). For customers, the impact on household buying power relates to the higher costs caused by the loss of a regular trader, as well as the higher transport costs when the informal market geography

changes (Floro and Swain 2013; Riley 2014). Due to the lack of social protection and the cash-based provision of urban services, the drop in income or the rising costs in trade affect household budgets. For traders, for instance, business and household expenses are interconnected and an increase on one side often negatively impacts the trader's capacity to afford and invest on the other side (see Setšabi and Leduka 2008). Second, the impact on productivity relates to the reduction of working time for traders because of the inability to trade, the time loss while evading the authority and, in some cases, the extension of working hours that do not translate into an increase in income (Roever and Skinner 2016; Horn 2009). For both traders and customers, these conditions also mean reduced time for household tasks.

Similarly to barriers to home-based enterprises and deficiencies in infrastructural services in low-income residential settlements, findings suggest that marketplace vulnerability – mostly to repressive local government policies – impacts household levels of production and reproduction. In other words, the informal nature of trade undermines the stability of marketplace functions and attributes, and thus impacts the capacities of low-income traders and customers to meet household needs.

That argument is however mostly built upon research on the impact of repressive policies on traders and on household food security studies. Largely unexplored in the selected literature are the impacts of destroyed marketplace infrastructure following natural hazards or conflict on both traders and customers – research that could be particularly useful for humanitarian practice in contexts where marketplaces are not subject of suppression by authorities.

Also, perhaps due to traditional disciplinary interests, remain also largely undocumented the impacts of hazards that are more covered in petty trader studies but are overlooked in customer studies, for instance in relation to health and safety and to harassment and evictions. Similarly, food security studies primarily focus on households and remain



silent on the impacts of food crises on traders. Still, it is likely that traders and customers will be affected in such crises due to high levels of interdependency.

### ***Strategies to build marketplace resilience***

Strategies to maintain or rapidly return to trade are diverse and show how traders persevere in their activities despite great financial difficulties and pending threats. This results in the maintenance of trade and its functions of providing income and commodities for households, but can also require short-term sacrifices in households. The very fact that traders tend to resume trading in the marketplace over finding a new source of income when facing evictions (Benit-Gbaffou 2016; Cuvi 2016; Turner and Schoenberger 2012) and that customers favour informal markets over formal food shops during urban food security crises (Tawodzera et al. 2016; Tawodzera et al. 2012; Mvula and Chiwesa 2013) show how an infrastructure provided by and crucial for low-income groups tends to persist in the face of adversity.

To maintain or quickly restore trade after disturbances can however require sacrifices and trade-offs to be made in the household, not only to cope with the reduced household income as previously mentioned, but to refinance traders businesses (Roever and Skinner 2016; Lyons and Snoxell 2005; Keck and Etzold 2013). Therefore, similarly to the direct impact of shocks and stresses, the very strategies to sustain trade also impact the capacity to meet household needs. A parallel could be made in system thinking, as the most important systems tend to be the ones that survive and persist through disturbances (Meadows 2008). It also supports Graham's (2010) statement that urbanites, and in this case low-income city dwellers, have no alternative than to restore infrastructures they depend on, meaning the functions and attributes of the marketplace in the case of this paper.

Irrespective of the type of disturbances, findings show how trader and customer experience difficulty in securing trade over the long term and improving marketplace conditions because of existing unequal power structures. While urban dwellers – and women

especially – may be resourceful and active within their local communities (UN-Habitat 2013), their capacities to reduce the vulnerability of marketplace functions and attributes are proscribed by their lack of power and control over the urban public spaces they occupy – often conceived and governed ‘by patriarchal power relations and norms of female propriety’ (Chant and Datu 2015). As such, ‘inequalities in access to infrastructure and services with cities also reflect inequalities in political power, voice and capacity to hold government agencies to account.’ (Satterthwaite and Mitlin 2013, p. 6).

In fact, the review shows that most traders and customers of cities of low- and middle-income countries have no other tangible alternatives when it comes to finding ways to generate household income and to access food during crises. The apparent ‘resilience’ of petty trade found in the return or encroachment of traders to original trading locations and in the persistence of customers to shop in marketplaces conceals the lack of options and capacity to change a detrimental status quo. By definition, marketplace resilience is therefore incomplete, or as Keck and Etzold put it, ‘refused’ (2013, p. 88). A focus on marketplace resilience should not, as Satterthwaite and Bartlett put it, result ‘in a shift in burden from government to citizen, and [encourage] a mentality of coping with risk, rather than resolving it, which would necessitate addressing the social structures, legal apparatus and administrative practices that help produce and distribute vulnerability and risk.’ (2017, p. 4). As such, findings from this paper highlight the limits of self-reliance of traders and customers and calls for not only recognizing the rights of traders to occupy the urban public space, as argued in previous literature, but to support and improve infrastructural conditions of existing marketplaces in such ways that trade is facilitated and marketplace attributes strengthened.

## **Conclusion**

This paper has highlighted aspects of resilience taking place in the urban marketplaces of low- and middle-income countries, as well as their impact on the ability of traders and customers to

meet household needs. The methodological approach allowed the exploration of household/marketplace/disturbance interlinkages, both in terms of vulnerability and capacity, drawing from various publications. It is possible, however, that relevant publications were disregarded due to the systematic approach applied during the selection process. Nevertheless, the reviewed papers provided an overview of these links by assembling relevant fragments from the extensive empirical literature on petty trade.

It should be stressed, in conclusion, that while the role of marketplace infrastructure as it relates to traders' and customers' households tends to be universal across the reviewed literature, the disturbances as well as the strategies to cope varied according to the urban contexts being studied. This has implications for policy and practice as while the previously mentioned roles and attributes of marketplace infrastructure could be useful as preliminary guidance, local in-depth assessments involving the main users and stakeholders of marketplaces should be a prerequisite for any projects aiming to reduce vulnerability and enhance capacity in and of marketplaces.

To compensate for the limitations of the review and to support sensible infrastructural interventions aiming to build marketplace resilience, the paper therefore calls for further comprehensive case study research on the capacities of traders, customers and their dependants, as well as the vulnerabilities of marketplace infrastructure. Some of the limitations to research on low-income cities come from the disciplinary boundaries in urban planning, which is primarily concerned with issues surrounding traders and evictions *or* informal settlements, as well as in humanitarian studies, which is mostly interested in household food insecurity. Transdisciplinary studies on marketplaces would contribute to a greater understanding of marketplace infrastructures, and therefore would provide further insights on how actions and strategies undertaken by the marketplace users could be supported, and not undermined, by urban planning and humanitarian interventions.

## References

- Asiedu AB, Agyei-Mensah S. 2008. Traders on the run: Activities of street vendors in the Accra Metropolitan Area, Ghana. *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*. 62(3):191-202.
- Baker JL. 2012. Climate change, disaster risk, and the urban poor: cities building resilience for a changing world. World Bank Publications.
- Battersby J. 2011a. The State of Urban Food Insecurity in Cape Town. Kingston and Cape Town: Queen's University and AFSUN.
- Battersby J. 2011b. Urban food insecurity in Cape Town, South Africa: An alternative approach to food access. *Development Southern Africa*. 28(4):545-561.
- Beall J. 2014. Surviving in the city: Livelihoods and linkages of the urban poor. In: Devas N, editor. *Urban Governance Voice and Poverty in the Developing World*. London: Routledge; p. 53-67.
- Bell JS, Loukaitou-Sideris A. 2014. Sidewalk Informality: An Examination of Street Vending Regulation in China. *International Planning Studies*. 19(3-4):221-243.
- Benit-Gbaffou C. 2016. Do street traders have the 'right to the city'? The politics of street trader organisations in inner city Johannesburg, post-Operation Clean Sweep. *Third World Quarterly*. 37(6):1102-1129.
- Bhowmik S. 2005. Street Vendors in Asia: A Review. *Economic and Political Weekly*. 40(22-23):2256-2264.
- Bromley R. 2000. Street vending and public policy: a global review. *International Journal of Sociology and Social Policy*. 20(1/2):1-28.
- Brown A. 2006. Contested Space: Street Trading, Public Space, and Livelihoods in Developing Cities. Rugby: Intermediate Technology.
- Brown A. 2015. Claiming the Streets: Property Rights and Legal Empowerment in the Urban Informal Economy. *World Development*. 76:238-248.
- Caputo S. 2013. Urban resilience: a theoretical and empirical investigation [dissertation]. Coventry University.

- Çelik E. 2011. World Class Cities for All: Street traders as agents of union revitalization in contemporary South Africa [Conference Paper]. *Labour, Capital and Society*. 44(2):80-105.
- Chant S. 2007. *Gender, cities and the Millennium Development Goals in the global South*. London: LSE Gender Institute.
- Chant S. 2013. Cities through a “gender lens”: a golden “urban age” for women in the global South? *Environment and Urbanization*. 25(1):9-29.
- Chant S. 2014. Exploring the “feminisation of poverty” in relation to women’s work and home-based enterprise in slums of the Global South. *International Journal of Gender and Entrepreneurship*. 6(3):296-316.
- Chant S, Datu K. 2015. Women in Cities: Prosperity or Poverty? The Importance of Multidimensional and Multi-Spatial Analysis. In: Lemanski C, Marx C, editors. *The City in Urban Poverty*. London: Palgrave Macmillan; p. 39-63.
- Chant S, McIlwaine C. 2015. *Cities, slums and gender in the Global South: Towards a feminised urban future*. Abingdon and New York: Routledge.
- Chatterjee M. 2010. Slum dwellers response to flooding events in the megacities of India. *Mitigation and Adaptation Strategies for Global Change*. 15(4):337-353.
- Chelleri L, Waters JJ, Olazabal M, Minucci G. 2015. Resilience trade-offs: addressing multiple scales and temporal aspects of urban resilience. *Environment and Urbanization*. 27(1):181-198.
- Chen MA, Beard VA. 2018. *Including the Excluded: Supporting Informal Workers for More Equal and Productive Cities in the Global South*. Washington: World Resources Institute.
- Chen MA, Vanek J, Carr M. 2004. *Mainstreaming informal employment and gender in poverty reduction: A handbook for policy-makers and other stakeholders*. Commonwealth Secretariat.
- Companion M. 2008. The underutilization of street markets as a source of food security indicators in Famine Early Warning Systems: A case study of Ethiopia. *Disasters*. 32(3):399-415.

- Crossa V. 2009. Resisting the Entrepreneurial City: Street Vendors' Struggle in Mexico City's Historic Center. *International Journal of Urban and Regional Research*. 33(1):43-63.
- Crossa V. 2016. Reading for difference on the street: De-homogenising street vending in Mexico City. *Urban Studies*. 53(2):287-301.
- Crush, J., Frayne, B. 2011. Supermarket expansion and the informal food economy in Southern African cities: Implications for urban food security. *Journal of Southern African Studies* 37(4): 781-807.
- Cuvi J. 2016. The Politics of Field Destruction and the Survival of Sao Paulo's Street Vendors. *Social Problems*. 63(3):395-412.
- da Silva J, Kernaghan S, Luque A. 2012. A systems approach to meeting the challenges of urban climate change. *International Journal of Urban Sustainable Development*. 4(2):125-145.
- Eidse N, Turner S, Oswin N. 2016. Contesting Street Spaces in a Socialist City: Itinerant Vending-Scapes and the Everyday Politics of Mobility in Hanoi, Vietnam. *Annals of the American Association of Geographers*. 106(2):340-349.
- Etzold B. 2014. Towards fair street food governance in Dhaka: Moving from exploitation and eviction to social recognition and support. In: de Cassia Vieira Cardoso R, Companion M, Marras SR, editors. *Street Food: Culture, Economy, Health and Governance*. New York: Routledge; p. 61-82.
- Floro MS, Bali Swain R. 2013. Food Security, Gender, and Occupational Choice among Urban Low-Income Households. *World Development*. 42(1):89-99.
- Fonchingong CC. 2005. Negotiating livelihoods beyond Beijing: the burden of women food vendors in the informal economy of Limbe, Cameroon. *International Social Science Journal*. 57(2):243-+.
- Gaillard JC. 2010. Vulnerability, capacity and resilience: Perspectives for climate and development policy. *Journal of International Development*. 22(2):218-232.
- Gallopín GC. 2006. Linkages between vulnerability, resilience, and adaptive capacity. *Global Environmental Change*. 16(3):293-303.
- Graham S. 2010. *Disrupted cities: when infrastructure fails*. New York: Routledge.

- Grant U. 2010. Spatial inequality and urban poverty traps. London: Overseas Development Institute and Chronic Poverty Research Centre.
- Hewitt K. 1983. The idea of calamity in a technocratic age. In: Hewitt K, editor. Interpretation of calamity: from the viewpoint of human ecology. Boston: Allen & Unwin Inc.; p. 3-32.
- Horn ZE. 2009. No Cushion to Fall Back On: The Global Economic Crisis and Informal Workers. Online: WIEGO.
- Hughes KC, Wickeri E. 2011. A Home in the City: Women's Struggle to Secure Adequate Housing in Urban Tanzania. *Fordham International Law Journal*. 34(4):788-929.
- Husain S, Yasmin S, Islam MS. 2015. Assessment of the socioeconomic aspects of street vendors in Dhaka city: Evidence from Bangladesh. *Asian Social Science*. 11(26):1-10.
- International Labour Office. 2018. Women and Men in the Informal Economy: A Statistical Picture (Third Edition). Geneva: International Labour Office.
- International Labour Office. 2013. Women and Men in the Informal Economy: A Statistical Picture (Second Edition). Geneva: International Labour Office.
- Jensen R, Peppard Jr DM. 2007. Food-buying habits in Hanoi. *Sojourn*. 22(2):230-254.
- Juillard H, Mohiddin L, Péchayre M, Smith G, Lewin R. 2017. The influence of market support interventions on household food security: An evidence synthesis. Oxford: Oxfam GB.
- Keck M, Etzold B. 2013. Resilience refused: Wasted potentials for improving food security in Dhaka. *Erdkunde*. 67(1):75-91.
- Lyons M, Snoxell S. 2005. Creating urban social capital: Some evidence from informal traders in Nairobi. *Urban Studies*. 42(7):1077-1097.
- Mackie PK, Bromley RDF, Brown AMB. 2014. Informal Traders and the Battlegrounds of Revanchism in Cusco, Peru. *International Journal of Urban and Regional Research*. 38(5):1884-1903.
- Meadows DH. 2008. Thinking in systems: A primer. London: Earthscan.
- Meerow S, Newell JP, Stults M. 2016. Defining urban resilience: A review. *Landscape and Urban Planning*. 147:38-49.

- Meneses-Reyes R. 2013. Out of Place, Still in Motion: Shaping (Im)Mobility Through Urban Regulation. *Social and Legal Studies*. 22(3):335-356.
- Moser C. 1998. The asset vulnerability framework: Reassessing urban poverty reduction strategies. *World Development*. 26(1):1-19.
- Musoni F. 2010. Operation Murambatsvina and the politics of street vendors in Zimbabwe. *Journal of Southern African Studies*. 36(2):301-317.
- Mvula P, Chiwesa A. 2013. The State of Food Insecurity in Blantyre City, Malawi. Cape Town: AFSUN.
- Oliver-Smith A. 1996. Anthropological Research on Hazards and Disasters. *Annual Review of Anthropology*. 25(1):303-328.
- Pick WM, Ross MH, Dada Y. 2002. The reproductive and occupational health of women street vendors in Johannesburg, South Africa. *Social Science and Medicine*. 54(2):193-204.
- Recio RB, Gomez Jr JEA. 2013. Street vendors, their contested spaces, and the policy environment: A view from Caloócan, Metro Manila. *Environment and Urbanization ASIA*. 4(1):173-190.
- Rengasamy S, Devavaram J, Marirajan T, Ramavel N, Rajadurai K, Karunanidhi M, Prasad NR, Erskine A. 2003. Farmers' markets in Tamil Nadu: Increasing options for rural producers, improving access for urban consumers. *Environment and Urbanization*. 15(1):25-34.
- Riley L. 2014. Operation Dongosolo and the Geographies of Urban Poverty in Malawi. *Journal of Southern African Studies*. 40(3):443-458.
- Roever S. 2016. Informal Trade Meets Informal Governance: Street Vendors and Legal Reform in India, South Africa, and Peru. *Cityscape*. 18(1):27-46.
- Roever S, Skinner C. 2016. Street vendors and cities. *Environment and Urbanization*. 28(2):359-374.
- Rudolph M, Kroll F, Ruysenaar S, Dlamini T. 2012. The State of Food Insecurity in Johannesburg. Kingston and Cape Town: Queen's University and AFSUN.



- Salcido GT, Leglise MDP, Smolski A. 2015. Food distribution's socio-economic relationships and public policy: Mexico City's municipal public markets. *Development in Practice*. 25(3):293-305.
- Sanderson D. 2000. Cities, disasters and livelihoods. *Environment and Urbanization*. 12(2):93-102.
- Satterthwaite D, Mitlin D. 2013. *Reducing urban poverty in the global South*. London and New York: Routledge.
- Schilderman T. 2016. How does reconstruction after disaster affect long-term resilience. In: Sanderson D, Kayden J, Leis J, editors. *Urban Disaster Resilience: New Dimensions from International Practice in the Built Environment*. New York: Routledge.
- Setšabi S, Leduka RC. 2008. The Politics of Street Trading in Maseru, Lesotho. *Urban Forum*. 19(3):221-241.
- Silver J. 2014. Incremental infrastructures: Material improvisation and social collaboration across post-colonial Accra. *Urban Geography*. 35(6):788-804.
- Skinner C. 2008. *Street Trade in Africa: A Review*. Cambridge (MA) and Manchester: WIEGO.
- Skinner C, Haysom G. 2016. *The Informal Sector's Role in Food Security: a Missing Link in Policy Debates? Working Paper 44*. Cape town: PLAAS, UWC and Centre for Excellence on Food Security.
- Smith D. 2016. Petty trade and the private sector in urban reconstruction: Learning from Haiti's post-earthquake Iron Market. *Urban Disaster Resilience: New Dimensions from International Practice in the Built Environment*. p. 157-171.
- Tawodzera G. 2014. Household Food Insecurity and Survival in Harare: 2008 and Beyond. *Urban Forum*. 25(2):207-216.
- Tawodzera G, Riley L, Crush J. 2016. *The Return of Food: Poverty and Urban Food Security in Zimbabwe after the Crisis*. Cape Town and Waterloo: ASFUN and Balsillie School of International Affairs.
- Tawodzera G, Zanamwe L, Crush J. 2012. *The State of Food Insecurity in Harare, Zimbabwe*. Kingston and Cape Town: Queen's University and AFSUN.

- Tevera D, Simelane N. 2014. Food for the Urban Poor: Safety Nets and Food-Based Social Protection in Manzini, Swaziland. *Urban Forum*. 25(2):241-252.
- Tolossa D. 2010. Some realities of the urban poor and their food security situations: A case study of Berta Gibi and Gemechu Safar in the city of Addis Ababa, Ethiopia. *Environment and Urbanization*. 22(1):179-198.
- Turner S, Schoenberger L. 2012. Street vendor livelihoods and everyday politics in Hanoi, Vietnam: The seeds of a diverse economy?. *Urban Studies*. 49(5):1027-1044.
- UN-Habitat. 2013. *State of Women in Cities 2012-2013*. Nairobi: United Nations Human Settlements Programme (UN-Habitat).
- UNICEF, WFP. 2009. *Summary of Food Security and Vulnerability in Selected Urban Centers of Ethiopia*. Addis Ababa: WFP and UNICEF.
- Unterhalter E. 2009. Gender and poverty reduction: The challenge of intersection. *Agenda: Empowering Women for Gender Equity*.(81):14-24.
- Wisner B, Blaikie P, Cannon T, Davis I. 2004. *At risk: natural hazards, people's vulnerability and disasters*. Second edition. New York: Routledge.
- Wongtada N. 2014. Street vending phenomena: A literature review and research agenda. *Thunderbird International Business Review*. 56(1):55-75.
- World Bank. 2013. *Global Monitoring Report 2013: Rural-Urban Dynamics and the Millennium Development Goals*. Washington: The World Bank.

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<sup>i</sup> The percentage refers to street vending as urban employment in South Africa according to the ILO (2013: 47). In the same report, informal share of the total urban non-agricultural employment in South Africa is 28.2 per cent (idem: 167). The definition of street vendor from ILO refers to someone selling goods or services in the public space, regardless of its formal or informal status.

<sup>ii</sup> Literature on urban resilience focuses on systems.

<sup>iii</sup> Based on: The World Bank. 2016. *World Bank Country and Lending Groups* [Online]. Available: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups> [Accessed 01.12.2016].

- <sup>iv</sup> Many studies related to purchasing commodities in marketplaces have households as units of analysis. However, the phrasing ‘customers studies’ is kept throughout the paper to simplify the distinction between the preferred unit of analysis in customer studies and the general discussion on traders and customers and their respective households.
- <sup>v</sup> The account included Lyons and Snoxell (2005) were participants were majority women in Accra, Ghana but in minority in Dakar, Senegal.

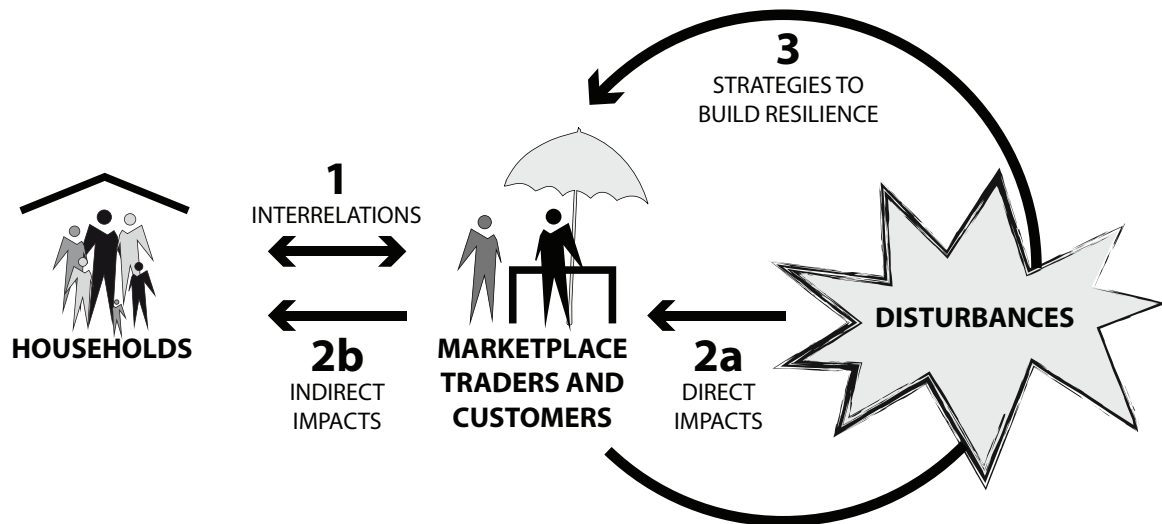


Figure 1 Marketplace resilience

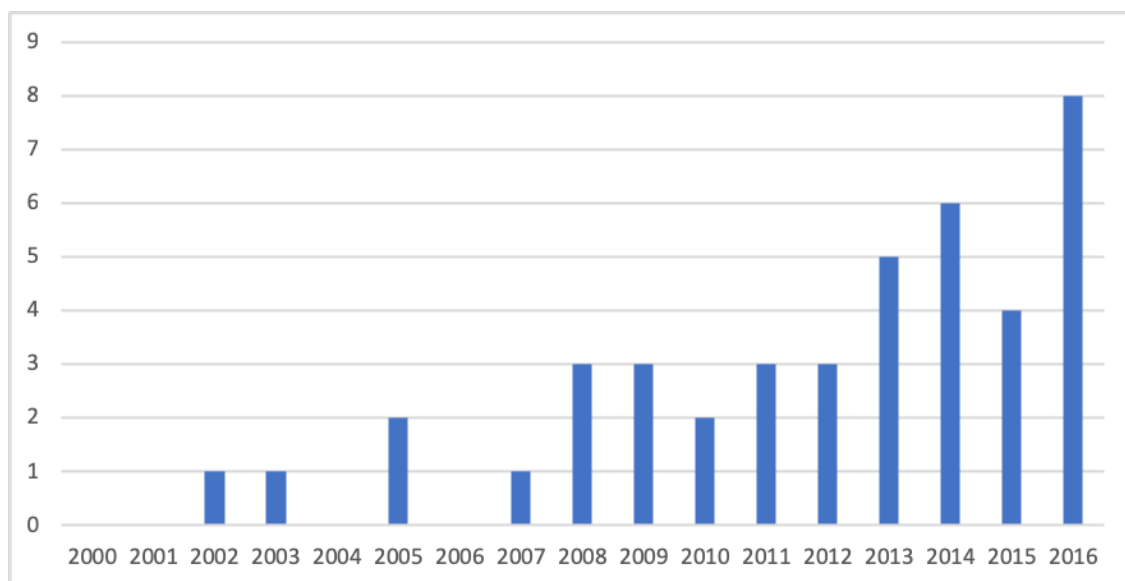


Figure 2 Number of selected publications per year (2000-2016)

Table 1 Database keywords

Marketplace keywords				Vulnerability and resilience keywords					
street	AND	vending	AND	open air market	AND	resilience	hardship	tornado	crisis
petty		trade		flea market		robustness	hassle	cyclone	trauma
informal		commerce		farmers market		adaptability	strain	tsunami	alarm
small		enterprise		public market		adjustability	tension	typhoon	urgency
micro		market		covered market		bouncing	epidemic	volcano	trouble
food		peddler		market hall		resist	disease	flood	extreme
		hawker		marketplace		tolerance	ill	drought	calamity
		access		urban space		improvement	expulsion	storm	collision
		buy		urban place		transformation	poverty	eruption	setback
		purchase		public space		preparedness	impoverish	outbreak	loss
		acquire		public place		absorb	lack	man-made	lost
		obtain		public square		cope	need	fire	losing
		procure		market street		holding on	difficult	war	affliction
		exchange		street		persist	famine	terrorism	impact
		food		road		transit	shortage	oppression	devastation
		goods		alley		mitigation	poor	bomb	ruin
				sidewalk		change	debt.	persecution	fall
				pavement		withstand	tension	crime	death
				urban		vulnerability	suffer	explosion	injuries
				city		exposure	worry	disaster	destruction
				neighborhood		sensitivity	sacrifice	accident	distress
				neighbourhood		contingency	privation	incident	pain
				slum		risk	dispossession	catastrophe	damage
				locality		stress	impoverish	collapse	hurt
				area		threat	low-income	crash	breakdown
				district		danger	shock	emergency	disruption
				zone		warning	hazard	failure	disturbance
				community		harm	quake	tragedy	food insecurity
				surrounding		burden	hurricane	casualty	plan
						fear			scarcity

Table 2 Reviewed publications related to marketplace resilience (2000–2016)

#	Author (date)	Data collection method	Empirical focus	City, country
<i>Peer-reviewed articles and book chapters</i>				
1	Asiedu and Agyei-Mensah (2008)	Interviews, participant observation and desk review	Traders (N= 120)	Accra, Ghana
2	Battersby (2011b)	Survey	Households (N= 1,058)	Cape Town, South Africa
3	Bell and Loukaitou-Sideris (2014)	Desk review, interviews and survey	Traders (N= 100)	Beijing, China
4	Benit-Gbaffou (2016)	Interviews and participant observation	Traders (N= N.A.)	Johannesburg, South Africa
5	Brown (2015)	Interviews	Traders (N= 513)	Dakar, Senegal Dar el Salaam, Tanzania
6	Çelik (2011)	Desk review and survey	Traders (N= 105)	Durban, South Africa
7	Companion (2008)	Participant observation and survey	Traders (N= 135)	Nazareth and Negelle, Ethiopia
8	Crossa (2009)	Interviews, participant observation and desk review	Traders (N= 20)	Mexico City, Mexico
9	Crossa (2016)	Interviews and desk review	Traders (N= 50)	Mexico City, Mexico
10	Cuvi (2016)	Interviews, participant observation and desk review	Traders (N= 50)	Sao Paulo, Brazil
11	Eidse et al. (2016)	Interviews, participant observation and desk review	Traders (N= 305)	Hanoi, Vietnam
12	Etzold (2014)	Interviews, survey, participatory methods and desk review	Traders (N= 190) and customers (N= 50)	Dhaka, Bangladesh
13	Floro and Bali Swain (2013)	Interviews and household survey	Self-employed workers including traders (N= 1,335)	Cities in Bolivia Cities in Ecuador Cities in the Philippines Cities in Thailand
14	Fonchingong (2005)	Interviews and survey	Traders (N= 50)	Limbe, Cameroon
15	Husain et al. (2015)	Interviews/ survey	Traders (N= 136)	Dhaka, Bangladesh
16	Jensen and Peppard Jr (2007)	Interviews	Customers (N= 339)	Hanoi, Vietnam
17	Keck and Etzold (2013)	Participant observations, interviews, participatory approaches, survey and desk review	Wholesalers (N= 448), traders (N= 120), customers (N= 50) and households (N= 207)	Dhaka, Bangladesh
18	Lyons and Snoxell (2005)	Interviews	Traders (N= 264)	Accra, Ghana Dakar, Senegal
19	Mackie et al. (2014)	Questionnaire survey, participant observations, desk review	Traders (N= 190)	Cusco, Peru
20	Meneses-Reyes (2013)	Interviews, participant observation, desk review	Traders (N= 35)	Mexico City, Mexico
21	Milgram (2015)	Interviews	Traders (N= 72)	Baguio City, Philippines
22	Musoni (2010)	Interviews, focus groups and participant observation	Traders (N= N.A.)	Harare, Zimbabwe
23	Pick et al. (2002)	Interviews, survey	Traders (N= 422)	Johannesburg, South Africa
24	Recio and Gomez Jr (2013)	Interviews, focus groups and participant observation	Traders (N= N.A.)	Caloán City, Philippines
25	Rengasamy et al. (2003)	Interviews and participatory methods	Customers (N= N.A.) and traders (N= N.A.)	Madurai, Tirunelveli and Virudunagar, India
26	Riley (2014)	Interviews, focus groups, participant observation, participatory methods and desk study	Households (N> 36)	Blantyre, Malawi
27	Roever (2016)	Focus groups, participatory methods, survey	Traders (N= 750)	Accra, Ghana Ahmedabad, India Durban, South Africa Lima, Peru Nakuru, Kenya
28	Roever and Skinner (2016)	Focus groups and participatory methods	Traders (N= 375)	Accra, Ghana Ahmedabad, India Durban, South Africa Lima, Peru
29	Salcido et al. (2015)	Interviews and participant observation	Traders (N= 10) and customers (N= 4)	Mexico City, Mexico
30	Setšabi and Leduka (2008)	Surveys, interviews, participant observation	Traders (N= 596)	Maseru, Lesotho
31	Smith (2016)	Interviews	Traders (N= 40)	Port-au-Prince, Haiti
32	Tawodzera (2014)	Survey, focus groups	Households (N= N.A.)	Harare, Zimbabwe
33	Tevera and Simelane (2014)	Survey	Households (N= 500)	Manzini, Swaziland
34	Tolossa (2010)	Interviews, focus groups and participant observation	Households (N= N.A.)	Addis Ababa, Ethiopia
35	Turner and Schoenberger (2012)	Interviews and participant observation	Traders (N= 40)	Hanoi, Vietnam
<i>Grey literature</i>				
36	Battersby (2011a)	Survey	Households (N= 1,060)	Cape Town, South Africa
37	Horn (2009)	Focus groups and interviews	Informal workers including traders (N= 164)	Blantyre, Malawi Durban, South Africa Lima, Peru Nakuru, Kenya Blantyre, Malawi
38	Mvula and Chiwesa (2013)	Survey	Households (N= 432)	Blantyre, Malawi
39	Rudolph et al. (2012)	Survey	Households (N= 996)	Johannesburg, South Africa
40	Tawodzera et al. (2016)	Survey	Households (N= 251)	Harare, Zimbabwe
41	Tawodzera et al. (2012)	Survey	Households (N= 462)	Harare, Zimbabwe
42	UNICEF and WFP (2009)	Surveys, interviews and focus groups	Households (N= 7,087) and traders (N= 1,840)	Addis Ababa and other cities, Ethiopia

Table 3 Functions for traders and their households

Desired functions	References
Provide primary or supplemental household income	[1, 3, 4, 5, 8, 9, 6, 7, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 24, 26, 27, 28, 30, 31, 35, 37]
Offer appropriate and affordable food and other commodities	[1, 3, 5, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 21, 24, 25, 26, 27, 28, 29, 31, 35, 37, 42]
Control access and occupation of space	[1, 3, 4, 5, 6, 8, 9, 10, 12, 14, 11, 16, 18, 19, 20, 22, 24, 26, 28, 31, 35]
Maintain, exchange and enhance working capital	[5, 8, 10, 11, 12, 13, 14, 15, 18, 19, 22, 24, 25, 28, 31, 35, 37]
Address household needs	[3, 13, 14, 15, 16, 19, 20, 25, 26, 30, 37, 42]
Maintain and enhance social capital	[7, 8, 10, 11, 18, 19, 24, 25, 29, 31, 35]
Permit autonomy and flexibility in working conditions	[1, 3, 11, 13, 15, 18, 24, 25, 29, 37]
Maintain food access and livelihood security	[10, 15, 18, 20, 27, 29, 31, 37]
Maintain and enhance household socio-economic mobility	[1, 5, 14, 15, 20, 24, 35]
Offer convenience for daily shopping	[16, 24, 25, 26, 29, 31]
Offer flexibility in buying capacity	[13, 18, 25, 37, 42]
Extend household assets and sense of home	[8, 11, 29, 31]

Table 4 Disturbances and impacts perceived by traders and their households

Documented disturbances and impacts	References
<i>Disturbances</i>	
Evictions and forced relocations (sales points)	[1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 26, 27, 28, 30, 31, 35, 37]
Damage or confiscation of supplies	[1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 24, 26, 27, 28, 30, 31, 35, 37]
Fines, arrests, harassment, conflicts with institutions and police	[1, 3, 5, 8, 10, 12, 13, 14, 15, 17, 20, 22, 23, 26, 27, 28, 30, 37]
Reduction in demand and customers	[1, 7, 15, 16, 18, 19, 25, 26, 28, 31, 37, 42]
Meteorological and natural hazard	[1, 8, 12, 15, 17, 31, 42]
Traffic and congestion	[1, 4, 15, 16, 18, 24, 35]
Petty crime, thefts, pickpocketing	[1, 8, 15, 18, 20, 23, 31]
Shortages and supply chain problems	[7, 15, 17, 29, 37, 42]
Financial and economic crises	[13, 15, 18, 37]
Increases in food prices	[13, 37, 42]
Loss or illness of household member	[18, 35, 42]
Evictions and forced relocations (housing)	[6, 28, 37]
Fire	[5, 31]
Health hazards and injuries	[1, 18, 23]
Demonstrations, urban violence and civil unrest	[15]
Increases in living costs	[14]
Physical or verbal abuse	[23]
<i>Impacts</i>	
Lost or reduced income	[4, 7, 13, 15, 17, 18, 19, 26, 28, 30, 31, 37, 42]
Food insecurity	[13, 14, 26, 28, 30, 37, 42]
Loss of trading location	[5, 8, 19, 22, 26, 28, 31]
Loss or damage to stock	[1, 5, 15, 18, 20, 21, 26, 28]
Damage or destruction of individual trading structures	[12, 14, 17, 22, 29, 31]
Loss of livelihood activity	[10, 28]
Disruption of kinship networks	[8, 19]
Loss of house location and displacement	[7, 22]
Loss of productivity and loss of productive assets	[17, 28]
Personal stress and physical harm	[17, 30]
Inability to pay household costs	[30]
Children being taken out of school due to unpaid fees	[30]
Loss of customers	[30]



Table 5 Strategies by traders and their households to build resilience

Documented strategies	References
Frequently change trading locations using mobile equipment	[1, 8, 9, 10, 11, 17, 18, 19, 20, 21, 22, 25, 28, 30, 35, 37]
Bribe and negotiate informally	[4, 8, 9, 10, 11, 12, 14, 15, 17, 19, 20, 22, 24, 28, 35]
Resist collectively and demonstrate	[3, 4, 5, 6, 8, 9, 10, 19, 20, 22, 24, 28, 30, 35]
Negotiate or advocate for change in legislation or in litigation	[5, 8, 9, 10, 19, 21, 24, 27, 28, 30, 35]
Share information	[7, 10, 17, 18, 22, 24, 35]
Return to trading location and encroachment	[4, 10, 17, 21, 22, 30, 35]
Change mode of production	[7, 8, 10, 18, 22, 29, 37]
Borrow cash or get supplies on credit	[7, 13, 17, 18, 37, 42]
Reduce and change food consumption patterns	[7, 13, 18, 37, 42]
Rely on social networks	[10, 13, 17, 18]
Start or increase trade	[7, 13, 15, 37]
Reduce prices	[22, 28, 37]
Sell of sub-let assets	[7, 13, 42]
Migrate to another trading location	[3, 17, 21]
Rely on trusted costumer	[15, 18]
Receive psycho-social support	[22, 31]
Rely on formal safety nets	[37, 42]
Diversify sources of income	[14, 42]
Change storage location	[21, 22]
Reduce supplies	[7, 28]
Rely on humanitarian aid	[42]
Share food	[13]
Receive financial support	[18]
Reduce other household expenditures	[42]
Begin urban agriculture	[42]
Diversify business networks	[17]
Reduce investments in expensive and fixed trading structures	[17]

Table 6 Functions for customers and their households

<b>Desired functions</b>	<b>References</b>
Offer appropriate and affordable food	[2, 13, 16, 17, 25, 26, 29, 32, 33, 34, 36, 39, 40, 41, 42]
Address household food needs	[2, 13, 16, 25, 26, 32, 33, 34, 36, 38, 39, 40, 41, 42]
Provide primary income and/or supplemental income	[2, 13, 16, 26, 32, 34, 36, 38, 39, 40, 41]
Offer convenience for daily shopping	[2, 16, 25, 26, 29, 31, 34, 36]
Offer flexibility in buying capacity	[2, 13, 25, 33, 34, 40, 42]
Maintain and enhance social capital	[25, 29, 34]
Extend household assets and sense of home	[29, 39]
Maintain food access and financial security	[29]

Table 7 Disturbances and impacts experienced by customers and their households

Documented disturbances and impacts	References
<i>Disturbances</i>	
Increase in price of commodities	[2, 13, 17, 32, 33, 34, 36, 38, 40, 41, 42]
Disruption in supply chains (food production and processing)	[29, 34, 40, 41, 42]
Evictions (point of sale)	[13, 16, 26, 32, 41]
Fines, arrests and harassment	[13, 26, 40]
Illness or death of household members	[36, 39, 42]
Traffic and congestion	[16, 34]
Economic crisis	[13, 40]
Increases in general living costs	[32, 34]
Unrest, instability, demonstrations, urban violence	[32]
Meteorological and natural hazards	[42]
Evictions (housing)	[41]
<i>Impacts</i>	
Food insecurity	[2, 13, 17, 26, 32, 33, 34, 36, 38, 39, 40, 41, 42]
Lost or reduced income	[2, 13, 26, 32, 38, 40, 41, 42]
Loss or damage to house	[32]

Table 8 Strategies by customers and their households to build resilience

Documented strategies	References
Reduce food consumption and change food consumption patterns	[13, 17, 33, 34, 36, 38, 39, 40, 42]
Borrow cash or get food and items on credit	[13, 17, 32, 33, 36, 39, 41, 42]
Diversify sources of income	[17, 33, 34, 36, 38, 40, 33, 42]
Rely on social networks (incl. marketplace social capital)	[13, 17, 33, 34, 36, 39, 41]
Begin urban agriculture	[33, 36, 38, 39, 40, 41, 42]
Start or increase informal economic activities (including trade)	[13, 34, 38, 39, 40]
Share food	[13, 33, 36, 39]
Sell or sub-let assets	[13, 17, 34, 42]
Rely on aid	[17, 33, 42]
Reduce household expenditure (other than food)	[14, 34, 42]
Rely on formal safety nets	[34, 36, 42]
Migrate	[34, 42]
Enhance use of petty trade markets as source of food and household items	[16]