

Viewpoint

Informal food systems and differential mobility during the COVID-19 pandemic in Arequipa, Peru

Introduction

The global pandemic of the novel coronavirus, COVID-19, has disrupted food systems and food security in many contexts. This Viewpoint examines how the pandemic has affected urban food supply and distribution in Peru, one of the most impacted countries in South America, which also has among the most ambitious response measures in the region. We examine official responses and informal reactions to understand how the Peruvian food system has changed during the pandemic. In many cases, official measures have been counterproductive, failing to secure food provision and distribution while also inadvertently worsening viral transmission. Informal responses have been more dynamic, such as the emergence of mobile produce vendors, but these informal food systems push the greatest risks onto vulnerable and disadvantaged members of society.

Informal economies are both celebrated and maligned – dynamic, vital lifelines, but also exploitative dead ends that stifle millions from reaching their full potential (e.g. Portes, 1996; Samers, 2005; Davis, 2006). Upon closer scrutiny, the distinctions between formal and informal often dissolve, revealing that the formal economy in many ways depends on the informal (Roy, 2009). Neo-liberal roll-back and austerity governance, while not explicitly embracing informality, increasingly count on the ‘resilience’ of the poor to fend for themselves without assistance (Reid, 2012). In the pandemic context, compulsory resilience leaves the poor and marginalised to face exposure to infection as they continue to work and circulate, while the affluent and professional classes remain safe at home. The mobility and immobility of different individuals and groups are intertwined, as always, raising questions of ‘mobility justice’ (Sheller, 2018). While mobility is most often conceived as a privilege, that is not always the case. ‘Mobility may not always be a form of freedom. It can also be coercion’ (Sheller, 2018, 18).

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In this Viewpoint, we engage the concepts of informality, resilience and mobility justice to analyse how policies enacted in response to the COVID-19 pandemic have impacted urban food systems in Arequipa, Peru. We document the informal responses that have emerged in the face of insufficient and poorly planned official measures. By emphasising the ways formal and informal responses interact, we are able to show that the pandemic's impacts on the food system disproportionately harm disadvantaged individuals and groups, reproducing and deepening existing inequalities and marginalisation.

Methods and study site

This Viewpoint draws from 21 informal interviews with market vendors, mobile vendors and their customers, conducted in person and by phone in Arequipa, Peru, during April and May 2020. All quotes were translated from Spanish by the first author. Interviewees' names are replaced with pseudonyms.

Arequipa is the second-largest city in Peru, with 1.3 million residents, and is the main hub of the country's southern regions. As elsewhere in Peru and across Latin America, most households in Arequipa buy their food in public markets consisting of independent stalls selling vegetable, fruit, meat, dairy and various other products. These markets supply the fresh foods that are a mainstay of Peruvian cooking, though the markets have long been criticised for poor sanitary standards. A recent census of Peru's public markets found that 80 per cent lack centralised garbage collection and 96 per cent lack large-scale cold storage (INEI, 2017).

COVID-19 in Peru and Arequipa

Official measures

The first case of COVID-19 in Peru was reported on 5 March 2020. The national government acted quickly to declare a health emergency on 11 March and a full state of emergency on 15 March. The Health Ministry established a national 'COVID Command', followed by the creation of regional COVID-19 commands, including in Arequipa on 8 April. Strict quarantine measures were put in place, with limited exceptions for basic needs like grocery shopping and workers in essential sectors.

Preliminary testing in Lima revealed that an astounding 45 per cent of market vendors tested positive for COVID-19 (MINSa, 2020). Comparable data are not available for Arequipa, but limited testing suggests that the situation is similar. In response to this information, the COVID Command ordered Arequipa's principal markets to reduce operations to only two days per week, and only in the mornings. However, the move proved counterproductive because larger-than-usual crowds flocked to the

markets during the few remaining operating hours, negating any possibility of social distancing. The restrictions were quickly eased, but the damage had been done. An unknown number of new cases are presumed to have arisen from the crowded markets during these chaotic early days, while perhaps more impactful was media coverage that cemented the public perception of markets as dangerous sites of contagion. Liz, a market vendor, described the situation: ‘At the beginning of the quarantine, with all the rumours about the virus, there were crowds and people buying in bulk. That’s when the [virus] transmission happened. Now, because of the transmissions, people don’t want to come [to the markets]’ (interview, 28 April 2020).

Vendors from one of Arequipa’s main markets released a statement criticising the official response as ‘arbitrary and without warning’, adding that ‘it is causing large economic losses and the loss of tons of perishable products, which are staple foods’ (Radio Yaravi, 2020). Vendors we interviewed complained that the haphazard response has worsened the situation. Alberto criticised, ‘the products spoil. There is no alternative supply plan, the Agriculture Ministry is not applying an emergency supply plan for agricultural products’ (interview, 3 May 2020). Unlike other sectors that can mothball production or store products indefinitely, Peru’s food system revolves around perishable fruits and vegetables and seafood, meat and dairy items that have limited shelf life.

Challenges in supply and distribution chains are interacting with other emergency measures, such as the closure of restaurants, to cause significant market swings in food prices. For example, Arequipa is famous for rotisserie chicken restaurants, which purchase large quantities of chicken and potatoes. With these restaurants closed, producers and wholesale vendors have looked for alternative outlets for their products and the price of chicken has fallen by nearly half. This reality threatens the long-term viability of distributors and producers, though tracing out these impacts is beyond our current scope.

Consumption patterns

Public perception of markets as sites of contagion has driven shifts in consumer habits. People are avoiding the largest markets, usually preferred for their variety, freshness and price, instead shopping in smaller neighbourhood markets closer to home (Figure 1). From her stall in one such market, Juanita noted, ‘In the district markets, sales have increased in comparison with what we sold before COVID. People don’t want to go to the big markets for fear of the coronavirus’ (interview, 28 April 2020). A shopper at a district market explained that she no longer travels to the central markets because ‘there are enormous lines for all of the products ... and nobody maintains social distance’ (interview, 26 April 2020).

The shift in consumer preferences toward local district markets has necessitated shifts in supply chains. Vendors in these markets traditionally sold relatively small



Figure 1 Due to virus fears and increased traffic in small, district markets, vendors have improvised protective measures. Nestora no longer allows clients to enter her stall to browse
Source: Photo by Anabel Taya Zegarra, 27 April 2020

volumes of food, which they purchased from wholesalers at the larger markets. With the larger markets restricted during the pandemic and with more people shopping at district markets, the vendors have needed to establish new supply arrangements. Some small-market vendors reported coordinating amongst themselves to purchase directly from agricultural producers. Others noted that the regional government established an alternative distribution point, a sort of open-air wholesale market, to allow vendors to purchase products diverted from the now-restricted main markets.

Public preference to avoid large, central markets has also been met with an official effort to promote 'itinerant fairs' that bring vendors to different neighbourhoods in a regular rotation for temporary, outdoor markets. Prior to the pandemic, a nascent movement had established local farmers' markets in some neighbourhoods beginning in 2019. Officials sought to expand the model as part of the pandemic response, though the vendors at the new travelling markets are mostly those who were displaced when the traditional markets closed, rather than farmers selling directly. Regardless, the fairs do not seem to have caught on. Participation of both vendors and the public is limited, and customers from three such fairs that we interviewed complained of limited selection and high prices.

Mobile vendors and informal responses

Shortcomings in the official pandemic response heightened disruptions in the local food system without providing functional alternatives. The resulting void has been filled by informal responses, most notably an increase in mobile food vendors.

Prior to the pandemic, there were a few mobile vendors who circulated in Arequipa selling fresh, perishable food items from pickup trucks, but it was a very minor segment of the food distribution system. The pandemic has provoked a dramatic expansion of this activity, for two main reasons. First, the normal food systems in Arequipa were disrupted without clear alternatives in place, as noted above. Second, economic disruption left many people searching for new means of subsistence, particularly those who already lived in poverty and/or worked in the informal economy. The reality is that most urban dwellers in Peru live day-to-day, according to Peruvian economist Hugo Ñopo Aguilar, and for them 'staying locked inside the house is not an option ... They have to go out and work' (*El Hilo*, 2020).

The result is that the previously rare sight of a mobile produce vendor has become commonplace in Arequipa, from the poorest to the wealthiest neighbourhoods. Héctor, one of the city's few long-standing vendors, described the situation: 'I've been selling produce from my truck for 25 years. Since COVID my sales have increased by about 30 per cent because people are more comfortable with the trucks, they don't want to go to the big markets' (interview, 28 April 2020). Customers we interviewed confirmed that preference. As one noted, 'personally I don't go [out to shop] because cars come to my neighbourhood selling vegetables at a good price ... We're following the quarantine ... the markets are chaotic, they don't have alcohol [hand sanitiser], nor face masks, nor gloves. They just care about overcharging and making money, nothing else' (interview, 29 April 2020).

The rapid increase in mobile produce vendors is an informal response that has helped maintain food distribution in the face of substantial disruption, while also allowing customers to limit their mobility and risk of infection. However, the customers' privileged immobility comes at the direct expense of the informal vendors' own increased mobility and risk of infection. As is often the case in informal economic sectors, dynamism goes hand in hand with the offloading of risk and negative externalities onto the most marginalised actors. The informal sector fills gaps and helps underwrite the viability of the formal sector, but also reproduces and intensifies inequality and deprivation.

Abrupt loss of income and inadequate social safety nets have driven people to take up mobile produce sales out of desperation, despite their own fears of infection. For example, out-of-work taxi drivers have begun using their taxis as mobile produce shops (Figure 2). Our interview with Lázaro highlighted these dynamics:

Before, I was a taxi driver, now I sell fish [from a car] together with my wife ... It has become our family business. I am scared of getting infected because our customers



Figure 2 Gregorio, a taxi driver converted to mobile produce vendor, Arequipa, Peru

Source: Photo by Anabel Taya Zegarra, 27 April 2020

might have the virus without symptoms, though I use a mask. Customers welcome these cars [mobile vendors] now, because they're afraid to go to the market and get infected. (Interview, 28 April 2020)

Another driver, now selling vegetables from his taxi, noted the same fear, and the same inevitable choice: 'I'm afraid of catching [COVID-19], but one must find a way to survive day by day' (interview, 29 April 2020). Taxi drivers, construction workers and others displaced from formal and informal employment all framed their decisions to take up mobile produce selling as a matter of survival for themselves and their households.

Conclusion

The global COVID-19 pandemic has caused dramatic disruptions of food systems, such as those we documented in Arequipa. Although Peru's pandemic response has been more proactive than that of many other Latin American countries, official

measures were largely ineffective or even counterproductive in securing the food system. The produce markets that are a mainstay of everyday life have been disrupted by official closures and by public fear of markets as foci of contagion. However, while fear of infection is widespread, people's responses to it are significantly shaped by their positions and resources. In Arequipa, a multitude of mobile produce vendors has emerged to fill the gaps created by the pandemic, consisting primarily of unemployed workers from the informal sector, for whom finding new sources of income is literally a matter of survival. These informal workers share the contagion fears that keep the more privileged classes sequestered in their houses, but do not have the option to stay home. Informal economic activities like these are sometimes praised as dynamic and resilient responses in the face of crises and failures in formal systems, but this resilience comes at a high price, and one that is borne disproportionately by the most marginalised members of society. Their informality and mobility, converting into impromptu itinerant vendors, have prevented the collapse of the city's food distribution system and made possible the privileged immobility of the middle and upper classes.

References

- DAVIS, M. (2006), *Planet of Slums*, New York, Verso.
- EL HILO (2020), 'La paradoja peruana' (podcast), 15 May 2020, <https://elhilo.audio/podcast/paradoja-peru/> (accessed 14 July 2020).
- INEI (INSTITUTO NACIONAL DE ESTADÍSTICA E INFORMÁTICA) (2017), *Censo nacional de mercados de abastos, 2016: Resultados a Nivel Nacional*, Lima, INEI, https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1448/libro.pdf (accessed 14 July 2020).
- MINSA (MINISTERIO DE SALUD) (2020), 'Minsa detectó más de 330 comerciantes positivos por Covid-19 en cuatro mercados de Lima' (press release), Lima, MINSA, <https://www.gob.pe/institucion/minsa/noticias/154702-minsa-detecto-mas-de-330-comerciantes-positivos-por-covid-19-en-cuatro-mercados-de-lima> (accessed 14 July 2020).
- PORTES, A. (1996), 'The informal economy: perspectives from Latin America', in S. Pozo (ed.), *Exploring the Underground Economy*, Kalamazoo, Upjohn Institute, 147–65.
- RADIO YARAVI (2020), 'Comerciantes de la plataforma Avelino Cáceres exigen la reapertura de los mercados formales', <https://www.radioyaravi.org.pe/noticia/Regional/comerciantes-de-la-plataforma-avelino-c%C3%A1ceres-exigen-la-reapertura-de-los-mercados-formales-6185> (accessed 14 July 2020).
- REID, J. (2012), 'The disastrous and politically debased subject of resilience', *Development Dialogue*, April, 67–79.
- ROY, A. (2009), 'Why India cannot plan its cities: informality, insurgency and the idiom of urbanization', *Planning Theory*, **8**, 76–87.
- SAMERS, M. (2005), 'The myopia of "diverse economies", or a critique of the "informal economy"', *Antipode*, **37**, 875–86.
- SHELLER, M. (2018), *Mobility Justice: The Politics of Movement in an Age of Extremes*, New York, Verso.